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Santiago de Chile, 2024

MODERN FUTURES

SUSTAINABLE DEVELOPMENT AND CULTURAL DIVERSITY

Editor

Horacio Torrent

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INTRODUCTION

The Faculty of Architecture, Design and Urban Studies (FADEU) of the Pontificia Universidad Católica and Docomomo Chile are honoured by the trust placed in us by Docomomo International and the community dedicated to modern heritage, to host the 18th International Docomomo Conference and Students Workshop from 4 to 14 December 2024, at the Lo Contador Campus, in Santiago de Chile, where we will discuss the theme "Modern futures: sustainable development and cultural diversity." This Conference seeks to highlight the exploration and development of new ideas for the future of a sustainable built environment, grounded in the past experiences of the Modern Movement, and address cultural diversity as one of a key aspect of any vision for the future.

Since accepting our proposal, we have worked tirelessly to ensure that this meeting, in a country often considered distant, feels closer to all who wish to join us. The Conference, Workshop, tours, pre-events and side events have all been organised with these objectives in mind. The 18th International Docomomo Conference will feature seven keynote lectures, 38 paper sessions, two roundtables, two workshop sessions, two MoMo EWI sessions, an international workshop (4-10 December) and MoMo tours in Santiago, Valparaíso, Viña del Mar, and Ritoque. To foster diverse approaches to the conservation, sustainable development and cultural diversity of modern heritage, the organisation launched a preliminary call for sessions, which proved to be a success, with 79 proposals received and 40 sessions accepted. The call for papers garnered 512 proposals, of which 226 were selected and reviewed for publication. This book is the result of a rigorous process of selection and review, carried out by a tireless and excellent Scientific Committee of experts from around the world, to whom we owe our deepest gratitude.

At this Conference, we have also established the Modern Movement Educational Worldwide Initiative (MoMo -EWI), inviting schools of Architecture, Urban Planning, Landscape, and Preservation to join this initiative by teaching courses, design studios, workshops, theses, or specific training experiences related to the conference themes. In this spirit, MoMo-EWI seeks to emphasise modern heritage as a central topic in teaching at a graduate and post-graduate level. This initiative will showcase various teaching and learning activities, presenting the outcomes of undergraduate, master's and doctoral courses. It has attracted many stakeholders from across the globe, and we believe it can be a powerful tool for educating future generations and for sharing knowledge in our field.

One of our key priorities has been the development of opportunities for student participation, because they will be the future protagonists in the field. Currently, 84 PhD students are participating in the Conference. The International Students Workshop has been carefully designed to address relevant urban and housing issues in Chile and other parts of the developing world. More than 40 undergraduate students will join us in this challenge, which was organised alongside the International Scientific Committee on Education and Training of Docomomo International. More than 20 teachers and tutors from various countries and universities have contributed to this effort. The Manifesto on Education has provided essential guidance for the International Students Workshop and has been well received by many universities that have joined us, recognising Docomomo's role in framing the architecture and urbanism of the Modern Movement as architecture's technical, formal, and ideological response to the contemporary world

We extend our heartfelt thanks to the Executive Committee and the Advisory Board for their trust and support over the past two years; the Scientific Committee, who did an outstanding job in reviewing session applications followed by academic papers; the tutors and professors of the International Students Workshop; the Docomomo chapters and everyone involved in the 16 pre-events organised throughout 2023 and 2024 to promote debate and present diverse works in which the community showcased its commitment to conservation, sustainable development and cultural diversity. Special thanks to the session chairs, authors and contributors who share their knowledge at the Conference and through this book; to the attendees from more than 40 countries; to our friends in Latin America, who have supported our work by accompanying us in this adventure; to the editorial staff of Ediciones ARQ and the proofreaders; and to the members of the organising committee here in Santiago, who have worked tirelessly to ensure everything runs as smoothly as possible.

We are also grateful to Docomomo International and its 80 —and growing— working parties around the world. With nearly three decades of existence, Docomomo has broad appeal and has gained an established position and global recognition. Docomomo Chile, founded 20 years ago, has since become a significant actor in the national context. Its seminars, publications, advocacy actions, responses in the face of national emergencies, and community engagement have given it a strong presence in Chile's cultural environment. International recognition reaffirms this long-standing work.

As the Faculty of Architecture, Design and Urban Studies of the Pontificia Universidad Católica, we are proud to welcome and support Docomomo Chile in its mission to promote the documentation and conservation of our architectural legacy and culture. Docomomo's collaboration with other cultural, political and social actors in Chile have made it as a key player in matters related to preserving our architectural and urban heritage. This work is becoming increasingly vital as Chile moves towards becoming a more sustainable and culturally diverse nation.

The organisation of the 18th International Docomomo Conference in Santiago is particularly relevant because of the attention and emphasis it brings to Chile's modern heritage, as well as that of Latin America and the South of the world, proposing a different future for modern heritage. During the 20th century, cities in South America saw extraordinary population growth, generating an accelerated urbanisation process and dramatic territorial transformations. Modern architecture played a critical role in shaping these cities and the buildings that society required. Early in the 1920s and 1930s, modern housing, schools, hospitals, and recreational centres were built in some of the most remote areas of South America. In Chile, the territory's particular geography implied the construction of modern architecture from the desert in the north to the frozen areas in the South. Modern architecture showed a different, more equitable possibility for society as a whole.

Today, Chile is at a turning point, with global change reshaping public policies. Society demands global care and greater justice in human relations, and the challenges of development and inclusiveness are keys to a better future. Modern architecture embodies standards and levels that current housing struggles to meet. Communities are reclaiming their relationship with green areas, low densities, and the presence of facilities as a part of their heritage. Chile is also strategically positioned as a key location where the needs of the Global South intersect with challenges of global integration, particularly in the Asia-Pacific region. Latin American culture, in turn, proposes new forms of social commitment through sustainable development and cultural diversity.

Our Faculty recognises, in the works of the Modern Movement, an enduring source of study and knowledge that is an example for our students. For many years, the modern buildings of Santiago, from the second half of the 20th century, have served as sublime references for generations of students. Thus, Chile, the "land of poets," copper, vineyards, and surprising landscapes, is also fertile in beautiful works inspired by the principles of the Modern Movement.

We hope that the Conference, the Workshop, and its activities will provide an excellent opportunity for the approximately 400 experts from around the world who meet in Santiago de Chile to share knowledge and contacts —as outlined in the Eindhoven-Seoul Statement— to "explore and develop new ideas for the future of a sustainable built environment based on the past experiences of the Modern Movement." Chile is the perfect place to do this. While you're here, we also hope you enjoy our landscapes, imposing geography, heritage, vibrant and diverse culture, friendliness, and desire to live better. Welcome.

Horacio Torrent
Professor of Architecture of the Pontificia Universidad Católica de Chile
Chair, 18th International Docomomo Conference and Students Workshop

Mario Ubilla Sanz
Dean, Faculty of Architecture, Design and Urban Studies of the Pontificia Universidad Católica de Chile

MODERN FUTURES: SUSTAINABLE DEVELOPMENT AND CULTURAL DIVERSITY

HORACIO TORRENT
CHAIR, 18TH INTERNATIONAL DOCOMOMO CONFERENCE

FUTURE

For some time now, the future has failed to spark any emotions. In fact, we appear to be so overwhelmed by the present that contemplating the future has become difficult. Yet, at the same time, we are becoming increasingly alarmed by the future as it has become clear that some actions taken globally are proving to be dangerous and worrying. Climate change, the uncertain future of our planet, social crises, the devaluation of democracy as a solution to our problems, the erosion of welfare ideals, and the material struggles faced by a large part of the world's population call into question the concept of the future. At the same time, some technologies foreshadow uncertain paths.

The future is not only a temporal condition but also a cultural construction. A profound understanding of the future as a cultural construct is revealed, as Arjun Appadurai has argued, "by examining the interactions between three notable human preoccupations that shape the future as a cultural fact, that is, as a form of difference. These are imagination, anticipation, and aspiration."[1]

There was no shortage of cultural practices that, at the dawn of the 20th century, addressed the imagination of the future. Literature, infused with technological optimism or social pessimism, envisioned possible worlds. Cinema boldly showcased alternative futures. Illustration and comics did their own thing as well. Frequently published, the image of a futuristic metropolis aimed to symbolise the future of many other cities such as Barcelona, New York or Buenos Aires. Imagination flourished in these depictions of the future city, anticipating its social and economic dimensions and territorial relationships as they sought to understand the new urban phenomena brought about by industrialisation.

The future city was the subject of extensive speculation across diverse fields, but primarily in architecture and urban planning. This exploration is not just an inherent anticipatory exercise within design; it gains significance through architects' ability to integrate a wide range of issues cohesively. It did so to such a degree that the very notion of modern architecture became inseparable from the city's project. The contributions of Garnier, Taut, Le Corbusier, Hilberseimer, Neutra and many others took shape in representations that contributed to understanding the city's future. Moreover, the technical analysis of a large sample of cities under the same framework has served as a basis for establishing some anticipatory rules.[2]

Aspirations for a better life were constitutive of the realities of modern architecture in countless places worldwide. Poor living conditions were a frequent feature of cities, housing needs were present in many settlements, and modern architecture made it possible to resolve them in a timely manner and in keeping with budgetary needs.

Modern architecture emerged from a mixture of social demands across different environments. The aspiration for a better society was always present, along with the need for aesthetic updates that would coincide with technological renovations reflecting basic aspirations in more than one place on earth. Modern architecture's social, cultural, and political dimensions have often been highlighted, even when the political convictions differed between protagonists worldwide.[3] However, the shared objective of preparing for the future remained a constant. These elements served as a cultural horizon that guided modern architecture.

Not so long ago, a wide variety of modern heritage essays, case studies in different geographical settings, and conservation projects illustrated the relevance of modern architecture elsewhere. In this sense, it is essential to note the exploration and development of new ideas for the future of a sustainable built environment based on the past experiences of the Modern Movement.

Sustainable development and cultural diversity challenge our knowledge and daily practice as architects and conservationists.

MODERN AND SUSTAINABLE

Modern architecture was undoubtedly the protagonist in an era rich in resources and inextricably linked to the material abundance of the Industrial Revolution. Various perspectives aimed to establish a technological relationship with this

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1. Appadurai, Arjun. *The Future as Cultural Fact: Essays on the Global* Condition (London: Verso, 2013).

2. Mumford, Eric Paul. *The CIAM Discourse on Urbanism, 1928-1960* (Cambridge, MA: MIT Press, 2000).

3. Goldhagen, Sara. "Coda: reconceptualizing the modern" In: Goldhagen, Sarah Williams, Réjean Legault. *Anxious Modernisms: Experimentation in Postwar Architectural Culture* (Montréal: Canadian Centre for Architecture, 2000), 301-323

new architectural style, which we observe in diverse instances of modern architecture. To deny the correlation between it and its effects on the environment would be irresponsible and misguided.[4] The relationship with technological innovation was of central importance on both a material and symbolic level.

The 20th century undoubtedly witnessed ecological transformations that radically changed the face of the earth. Infrastructure development for energy, transportation, and communications has historically gone hand in hand with architecture and urbanism. However, it is also true that many of these developments should not be attributed to Modern Architecture despite their significant contributions to its visual language. The phenomenon of urban growth has perhaps had the most significant impact on the very life of communities. The conversion of agricultural land or nature into the artificial condition of the city and its constant expansion, as well as the loss of urban legibility and the disintegration of communities and neighbourhoods, have been matters of concern. Many modern architects and urban planners raised concerns over the ecological transformations and urban phenomena, the latter of which was considered central to the Modern Movement's agenda. Urban issues often remained symbolic or disregarded contingent powers, though there were some notable exceptions. Climate played a pivotal role in urban construction concerning housing, as illustrated in Gropius' diagrams of block separation or Klein's or Hilberseimer's diagrams of insolation within the unit. Design directly related to climates, such as Wladimiro Acosta's Helios System or the various trials on porosity in modern Brazilian architecture, also reflects an approach to the scale of the architectural work. The dimension of landscape as part of ecological awareness was a determining factor in some of the non-central manifestations of modern architecture worldwide.

I am not setting out to prove they had a planetary or ecological conscience, but some certainly did. Richard Neutra warned about the responsibility of modifying the natural environment:

> "*All our expensive long-term investments in constructed environment will be considered legitimate only if the designers have a high, provable* index of livability. *Such designs must be conceived by a profession brought up in a social responsibility, skilled, and intent on aiding the survival of a race that is in grave danger of becoming self-destructive*."[5]

The phenomenon of sprawling cities has already become a global problem. At least half of the world's population resides in cities, and in some countries, the percentage of urban population is as high as 90%. Projections indicate that, globally, by 2050, 70% will live in cities. Today's situation is characterised by sprawling growth, air and waste pollution, pockets of extreme poverty, amounting to one-seventh of the world's population, and a lack of adequate public facilities and spaces.[6] At the same time, "cities occupy only 3 % of the earth's surface, but account for 60 to 80 % of energy consumption and 75 % of carbon emissions."[7] The international community claims that "by committing to sustainability, we choose to build cities where all citizens have a decent quality of life and are part of the productive dynamics of the city, generating shared prosperity and social stability without harming the environment." Although this may appear to be an illusion, it also represents a construction of a possible future where imagination, anticipation and aspiration come together once more. The goals for sustainable development provide us with a framework to consider the conservation of modern heritage associated with the necessary global transformations.

Sustainable development is a clear concept that focuses on improving life today while safeguarding the future. It involves conserving nature and the environment while ensuring their availability for future generations is not compromised. Essentially, we envision a future in which life thrives, we anticipate some measures to bring about the necessary improvement, and we hope future generations will benefit from what we value on our planet.

In this context, preserving modern heritage is essential for sustainability. During the 20th century, countless public facilities and social infrastructures were built, such as schools, hospitals, sports facilities, civic and cultural centres, churches and community centres, and places of work and residence. In several countries, modern architecture has reshaped the landscape. In quantitative terms, it has surpassed any dimension of previous cities and thus brought about both a change in their countenance and ways of life and social relations. Many housing estates produced using modern designs now face severe obsolescence regarding their sanitary infrastructures and energy consumption. Therefore, these areas require fundamental adaptation to maintain them in the future, not only as heritage but fundamentally as a place to live.

The world is becoming increasingly urbanised, and reusing spaces created by the modern movement becomes crucial for metropolitan and smaller cities, primarily because it introduced nature into the urban fabric. Communities

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4. Ibelings, Hans. *Modern Architecture: A Planetary Warming History* (Montreal/Amsterdam: The Architecture Observer, 2023).

5. Neutra, Richard Joseph. *Survival through Design* (New York: Oxford University Press, 1954), 5.

6. See: United Nations, *The Sustainable Development Goals Report 2024* (New York: United Nations Publications, 2024).

7. United Nations (UN). Sustainable Developlment Goals. In: https://www.un.org/sustainabledevelopment/es/cities/

inhabiting these areas advocate for their right to a more inclusive city and an improved quality of life. Moreover, the modern movement's designs provide a better environment than the city built today.

Promoting modern heritage conservation requires disseminating appropriate techniques and methods adapted to different circumstances, places, and climates. Adaptive reuse serves as a sustainable approach to achieve conservation. Sustainability involves not just materials and energy but also considers social and meaningful aspects. Our commitment and understanding of preserving modern heritage contribute to the broader international agenda for sustainability.

MODERN AND DIVERSE

It is not just about being aware that there are others in this world, that we are not alone, and that it is not just us and those with whom we share our daily lives. It is about embracing diversity that exists around us, allowing an unrestricted environment for everyone.

This is not about merely expanding our knowledge by incorporating forgotten, despised or rejected characters, cultures, genders, and places. It is essentially about recognition, and understanding others and their circumstances as we understand ourselves.

Culturally, hegemonic knowledge is not univocal. The term "discovery" always comes as a surprise. It is not a univocal word. It carries different meanings for those who discover and those who are discovered. The discovered person does not identify as such because they know themselves. Perhaps it is time to recognise that there are many different perspectives, various epistemologies of alterity, and multiple approaches to gaining knowledge.[8]

Diversity is already a global demand. It involves fostering environments for cultures to flourish and interact freely in mutually beneficial ways, promoting interculturality to build bridges and reaffirming the importance of the link between culture and development.[9]

It is undoubtedly a tremendous challenge, but in the meantime, it seems fundamental to accept and promote diversity on a daily basis. Recognising others goes beyond having respect for them or recognising their dignity. It is also an exercise in knowledge. Once again, it is a battle against ignorance, especially the ignorance of the discoverers, of those who are considered knowledgeable. This represents a central paradox in this world.

The architecture of the Modern Movement spread throughout the world, taking shape in various locations where architects discovered sources of innovation, fresh knowledge, and creative impulses. The Modern Movement is often considered in its unitary condition, with histories and theories often highlighting its universal meanings. Nevertheless, diversity was assumed to be one of its topics. Therefore, many kinds of modern architecture exist in so many places.

When modern architecture took shape in the most diverse places around the globe, diversity was not a claim but rather a way of situating differences. While some modern architects championed the industrialisation of mass production and technical rationality, it is also true that many others asserted their designs more in the context, materials, tectonic expression and social conception of the programme. Many established notable differences exploring various social and political approaches, appropriate forms and technologies in the search for a conception free of prejudice. Numerous modern architects found inspiration and guidance in diversity, revealing a reality that was far more diverse than the narratives have suggested.

The now traditional historical interpretations echoed two common facets of Western thought: the visual perception of appearance and the vertical sequence of modernisation. On the one hand, the stylistic conception of architecture presupposes greater importance of the characters of buildings and their resemblances, rendering the global experience a unitary fact and setting aside all differences - in the system of creativity and production, which for other disciplines would be crucial to the characterisation of material culture. This approach treats the city as a neutral space, contrasting sharply with the unexpected consequences of visual unity.[10] On the other hand, the vertical sequence of modernisation assumes a theoretical orientation in which modernity spread through hierarchical structures where the major cities played a key role, accentuating the regularity of experience from the centre to the margins.

These views have existed for a long time and remain relevant, even today. The argument that elsewhere, there was a reproduction worthy of a paradigm - even if there are individual cases - is no longer valid to assume diversity as a fundamental condition.

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8. See: Mudimbe, Valentin Y. *The Invention of Africa: Gnosis, Philosophy, and the Order of Knowledge* (Bloomington: Indiana Univ. Press, 1999).

9. UNESCO, *Basic texts of the 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions* (Paris: UNESCO, 2023).

10. Sennett, Richard. *The conscience of the eye: the design and social life of cities* (New York: W. W. Norton, 1992), 97.

Retro-transfers, crossings, and encounters have been studied for a long time, although their usual interpretation often remains unchanged. In a fundamental effort, it is necessary to focus on the specific events in each situation, considering the unique geographical and cultural contexts, rather than viewing them merely as reflections of what transpired elsewhere. The experiences of culture, including those of modern architecture, have much more diverse possibilities to explore and differences to focus on.

The debate on the legacy of the Modern Movement must address the differences, the diversity, and the need for a new global approach.

CODA

The cultural construction of a future for conserving modern heritage could engage the imagination, expectations and aspirations that characterised modern architecture. Imagination should be harnessed to reconstruct the material dimensions of the works and their alterations and to transcend form exploring unforeseen technological possibilities. The anticipation of the project will enable it to adapt based on a rich archive of past lessons learned. The aspirations represented by the ideas of human well-being and a fulfilling life are still valid.

The discomfort and uneasiness in the face of modernity have been present for a long time, partly because of some unitary historical interpretations and partly because of what it meant. In the 1980s, Jürgen Habermas reminded us not to abandon modernity and its project as a lost cause; instead, we should envision its possibilities for the future.[11]

While some of its components deserve to be revised and transformed in line with today's requirements, others require confirmation and continuity.

The belief in advancing modern architecture stems not only from the beauty of its works or the magnificence of its spatial transformations but also from the social aspirations and values that guided its actions in the different places where it was forged in response to local demands.

For years, modern architecture has been recognised as heritage in its many dimensions. Imagination must be present in the methods and ways of approaching the public and using new media.

Recording and valuing buildings, ensembles, sites, and landscapes of local, regional or global significance has been a fundamental proactive effort in recognising their social importance and transcendence in the quality of life of the people. It has been an exercise in recognition validated in the archives of collective memory.

The aspiration lies in making the values historically embodied by modern architecture more understandable in the different places in which it has acted, detaching itself from the very idea of its origin and responding to the diversity of practices and cultures in which its results were forged. There is no longer any possibility of maintaining a unitary interpretation of an event such as that of modern architecture, given its complexity, wide reach, and cultural variations.

Conversely, the reuse of the existing material values inscribed in the built assets and economic circularity conditions make sustainability a vital necessity for our efforts. We will encourage creative thinking by posing questions about the technical and technological processes for maintenance and restoration. Additionally, we will explore the design capacities to adapt modern heritage assets to current uses and conditions. An immense opportunity presents itself, allowing survival by design.

The recording, revising, and assessing of our proposed best practices over the years reflect an anticipatory understanding of the possibilities and restrictions of multiple conservation actions, adaptive reuse, or design integration with a new architecture.[12]

The aspiration is for modern architecture's teachings to remain relevant in our ways of life, in the urban fabric, and in the correspondence between the built and the natural. Furthermore, the works of modern architecture should point the way to its new possibilities, confirming that they serve as a foundation for its transformation.

With this basis, we can shape the future of modern heritage conservation culturally.

Horacio Torrent (Argentina, 1959) holds a PhD and MSc and is an architect, architectural critic and historian. He has researched modern architecture at institutions such as the Canadian Centre for Architecture, the Getty Institute for the Arts and the Humanities, the National Gallery of Arts in Washington, and the Iberoamerikanisches Institut in Berlin. His research focuses on the history of Modern Architecture and the city and on Latin American and Chilean architecture. Since 2004, he has served as Chair of Docomomo Chile and has been co-chair of the LA/EU Exchanges Interest Group of EAHN since 2017. Currently, he is a Professor of Architecture at the Pontificia Universidad Católica de Chile's School of Architecture.

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11. Habermas, Jürgen. "Modernity. An Incomplete Project" (1980), In: Hal Foster (ed.) *The Anti-aesthetic: essays on postmodern culture* (Port Townsend, Wash.: Bay Press, 1983), 2.

12. Torrent, Horaåcio (ed.) *Modern Heritage and best practices* (Santiago: Docomomo Chile, 2019).

MODERN FUTURES

THE ROLE OF TECHNOLOGIES IN THE MODERN MOVEMENT AND IN THE FUTURE OF DOCOMOMO INTERNATIONAL

UTA POTTGIESSER

The essay reflects on the profound influence of technology and technological advancements on architecture in the early 20th century and the 21st centuries-using. The observation starts in 1922, the year of Reyner Banham's birth, and one year before the first publication of Le Corbusier's book *Vers une architecture*, and ends in 2022. In this esssay, I took the opportunity to challenge the dominating technology of the 21st century —Artificial Intelligence (AI)— to elaborate on the future of Docomomo and to formulate recommendations.

Le Corbusier's influential book *Vers une architecture*[1], published in 1923, was a pivotal moment for architectural thinking in relation to technology. He called for a radical redesign of buildings influenced by the technological advances of the industrial age. At the center of his principles were efficiency and functionality (buildings should be like machines, serving practical purposes with efficiency), modern materials, (steel, concrete, and glass were favored for enabling new forms and designs impossible with traditional materials), and Functionalism (eesthetic considerations were secondary to a building's practical function, promoting streamlined, clean forms). The principles of the Modern Movement —functionalism, simplicity, and efficiency and social innovation— remained at the core of the architectural practice in the post-war period as a reaction to the huge challenges of the post-war housing crisis and economically growing nation-states in Europe.

In his 1960 book *Theory and Design in the First Machine Age*, Reyner Banham analyzed the relationship between technology and architecture, identifying two key periods of the first and the second machine age. In the first machine age (early 20th century), architects were inspired by industrial technology, leading to standardization and efficiency in construction. The era's optimism led to utopian designs such as Ludwig Hilbersheimers High-Rise City (1924) or Le Corbusier's Ville Contemporaine (1925) or Ville Radieuse (1933).

The second machine age (post-WWII) technology became integrated into daily life, influencing architectural features like climate control systems, mechanization, and electronics. Banham saw architecture and technology as deeply intertwined, with architecture continuously responding to and being inspired by technological advancements in different ways across these two eras. Again architects, such as Archigram's Plug-In City (1963-66), envisioned futuristic designs with adaptable, dynamic cities.

Banham critiqued modernism for not fully exploring the potential of new technologies, arguing that while modern architects spoke about technology, they often clung to formal aesthetic traditions. He praised movements like Brutalism and High-Tech architecture of the 1960s, which embraced technology's full possibilities, but at the same time stated that "we still lack a corresponding theoretical system for our own Machine Age, and we are therefore still working rather unsystematically with the ideas and aesthetic concepts that we have adopted from the First Machine Age."[2]

In 2022, Docomomo International moved its headquarters to TU Delft, a century after the beginnings of the Modern Movement. This shift marks a new chapter in the organization's mission to conserve modern architecture, focussing on digitization and digitalization in documentation and conservation processes and enhancing its advocacy for modern architecture as part of cultural landscapes. The advent of digital technologies should allow us to push this vision even further.

VISIONS ON TECHNOLOGY FOR THE FUTURE OF DOCOMOMO INTERNATIONAL[3] (FORMULATED BY AI)

As we look to the future of Docomomo International, it is important to assess the organization's current achievements, challenges, and opportunities in a rapidly evolving architectural and cultural landscape. With the advent of advanced technologies, Docomomo International is poised to enhance its mission and expand its global

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1. Le Corbusier. 1922 *Ausblick auf eine Architektur (Bauwelt Fundamente 2)*. [*Vers une architecture*] (Braunschweig, Germany: Vieweg, 1982).

2. Banham, Reyner. *Die Revolution der Architektur. Theorie und Gestaltung im ersten Maschinenzeitalter* [*Theory and Design in the First Machine Age*] (Reinbek bei Hamburg, Germany: Rowohlts deutsche Enzyklopädie Band 209/210, 1964), 279. Author's translation.

3. This text was partly generated by using AI ChatGPT.

impact. Technologies such as digital archives, 3D scanning, virtual reality (VR), artificial intelligence (AI), and collaborative platforms can revolutionize how Docomomo operates, improving documentation, conservation efforts, and public engagement.

Traditionally, this documentation relied heavily on physical records, photographs, and printed materials. However, digital archives and databases offer significant improvements in how this data is collected, stored, and accessed. By creating a comprehensive, globally accessible digital archive of moden architecture, Docomomo can provide members, researchers, and enthusiasts with seamless access to valuable information—ideally in the spirit of open source and citizen science. Digital archives could foster collaboration among architects, historians, and preservationists from different countries. By sharing resources in real-time, local chapters can contribute to a global database, enabling a more inclusive and diverse representation of modern heritage. Incorporating metadata tagging and AI-powered search capabilities within digital archives allows users to find specific information more efficiently, ensuring that Docomomo's vast documentation is easy to navigate and explore.

Docomomo International will likely see significant changes and advancements in the tools and techniques available for the conservation of modern architecture. The increased use of digital tools like 3D laser scanning, Building Information Modeling (BIM), and photogrammetry to create detailed, accurate digital replicas of buildings. 3D scanning technologies allow for the precise documentation of existing buildings, capturing intricate details and structural nuances that traditional methods might miss. Virtual Conservation (Management) Plans based on BIM can integrate design, construction, and operational data into a single model, providing a comprehensive view of a building's life cycle.

AI technologies have the potential to revolutionize research and analysis within Docomomo International, offering powerful tools for understanding architectural patterns, predicting conservation needs, and supporting historical studies. AI can analyze large datasets to identify common architectural features, stylistic trends, and regional variations. This data-driven approach allows for a deeper understanding of the Modern Movement and can help researchers uncover previously unnoticed connections between architects and design philosophies. AI models can analyze the structural integrity of buildings, predict potential areas of decay, and recommend conservation efforts. AI-powered algorithms can sift through vast amounts of historical documents, archives, and blueprints to extract relevant information quickly.

New advancements in materials science, sustainable materials and techniques, such as self-healing concrete, improved insulation technologies, and sustainable retrofitting techniques, will likely play a critical role in preserving these structures while addressing contemporary sustainability concerns.

As virtual and augmented reality (VR/AR) become more sophisticated, Docomomo could expand its outreach and education efforts by using these technologies to create immersive experiences. Engaging the public and educating them about modern architecture is essential for raising awareness and fostering appreciation for Docomomo's mission. Both technologies offer immersive ways to bring modern architecture to life for broader audiences. AR can provide enhanced on-site experiences. By using AR-enabled devices or smartphones, visitors can see overlays of original architectural designs, receive historical information, and visualize how buildings have evolved over time. This technology can turn any visit into an interactive, educational experience.

In an increasingly connected world, digital platforms that facilitate global collaboration are crucial for the organization's future success as is community engagement and social relevance. Conservation efforts must also take into account the communities who live in or around modern buildings. Docomomo will need to engage more directly with these communities to ensure that their needs and perspectives are included in preservation decisions. This is particularly important for modern housing estates, many of which have been criticized for fostering social isolation. Ensuring that these buildings are maintained in a way that serves the needs of current residents will be a key challenge moving forward.

DIGITIZATION, DIGITALIZATION AND SUSTAINABILITY

The future of Docomomo International presents both significant opportunities and challenges in its mission to preserve modern architecture. As technological innovations, cultural shifts, and environmental concerns reshape the landscape of architectural conservation, Docomomo must embrace adaptation and innovation. By leveraging digital tools, promoting sustainable preservation, and fostering greater inclusivity and diversity, the organization can maintain its leadership in the conservation of modern architecture for decades to come.

As urbanization intensifies and architectural values evolve, Docomomo's role in safeguarding the legacy of the Modern Movement will grow even more crucial. Strategic collaborations, sustained advocacy, and a commitment to inclusive conservation will ensure that modern architecture remains a vibrant, relevant part of our shared cultural

heritage. Technologies like digital archives, 3D scanning, VR/AR, AI, and collaborative platforms will play a pivotal role in the future of Docomomo International. These tools not only enhance documentation and conservation efforts but also engage the public in innovative ways, ensuring that the modern architectural heritage is preserved for future generations. As Docomomo leverages these technologies, it will be better equipped to protect, document, and celebrate the legacy of the Modern Movement, expanding its impact on a global scale.

In many ways, the current focus on digitization, digitalization and sustainability is a continuation of the Modern Movement's original mission of social progress. Just as early 20th-century architects used emerging technologies to improve living conditions and promote social equality, today's architects should employ digital innovations to address the pressing challenges of climate change and resource depletion. Reinstalling architecture and urban planning as relevant, holistic disciplines in academia and practice requires embedding sustainability, resilience, and inclusivity into their very foundations. Through interdisciplinary collaboration, technological integration, community-centered planning, and policy reform, architects and urban planners can lead the charge in creating cities and environments that are not only sustainable but also equitable and adaptable to future challenges. This is essential for ensuring the long-term health of our built environment and society—as it was in Modern Movement.

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THE ROLE OF MODERN ARCHITECTURE IN SHAPING TOMORROW

ANA TOSTÕES

Modernism is the defining architectural conception of the 20th century, a movement that transformed the built environment around the world in an unprecedented way. When pioneering architects first explore the symbiosis between new ways of living and emerging construction possibilities, they paved the way for contemporary architecture, guided by visionary concepts of form, space, technology, and social responsibility.[1] Modern Movement architecture embraced contemporary technology, expression, and, most importantly, the belief that the architect's social mission was to create a new and better world. It became a vehicle for social change, promoting collective aspirations and ambitions. As part of a global synthesis process, modern architecture had to adapt to specific contexts, allowing the identities of different places and cultures, as well as geographical regions and peoples, to become visible in their subtle diversity.

Today, more than 100 years have passed since the first built manifestations of the Modern Movement. Some values have been reassessed, adapted, or even rejected. Nevertheless, its founding spirit, intrinsically tied to the foundation of contemporary society, remains valid and, one could argue, is still evolving. After a period of significant unpopularity, the values of the Modern Movement have been rediscovered and are being put into practice by new generations of architects who are re-exploring the path of a reawakened modern architecture, learning from it and creating something new.[2] The principles of the Bauhaus continue to be relevant, with "the great issues of sustainability and democracy needing to be addressed through art and technology."[3]

With an optimistic faith in progress, modern architects aimed to achieve new heights in beauty, functionality, and flexibility of use. Today, as the original functions of many of these buildings are no longer required, or they face urgent repair needs, the challenge lies in addressing this modern legacy within a continuously evolving context. This includes physical, economic, and functional changes, occurring against an ever-shifting backdrop of sociocultural, political, climatic, geographic, and scientific factors.

Modernity has come to be recognized as world heritage and is now perceived "as a sustainable design tool, a project method, and finally, as being crucial to the future of architectural production and cultural debates."[4] Issues such as the reuse of materials and technology, spatial and functional transformations, and updating legislation, are increasingly becoming central to the contemporary agenda. Currently, its most pressing mission is the pursuit of a sustainable future.[5] Along with restoration and conservation, renovation and adaptative reuse are starting to "make history," embracing the concept that heritage transforms itself with us.[6]

To preserve the architectural heritage of the 20th century, we must recognize both the opportunity and obligation to reuse buildings that have lost their original function, are physically or technically obsolete, or no longer meet today's increasingly stringent standards. Subjects such as physical restoration, the need for spatial or functional transformation, and ensuring contemporary comfort and safety requirements within a framework of environmental sustainability are central to current discussions. This inevitably raises questions about the value of existing structures, which, while a valuable resource, require careful consideration of social, economic and environmental sustainability. Thus, intervention strategies are, in many ways, an artistic judgment that demands a deep understanding of a building's design history, a careful assessment of the materials and techniques used in its construction, and a thorough knowledge of its life and uses.[7]

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1. See *Docomomo Journal*, No. 44 – "Modern and Sustainable," Lisbon, Docomomo International, 2011.

2. Ana Tostões, "Wake up, sleeping beauty!", in Ana Tostões (ed.), *Modern Heritage. Reuse, Renovation, Restoration*, Basel/Lisbon, Birkhäuser/Docomomo International, 2022, 8–11.

3. Ana Tostões, "100 years back, 100 years forward," *Docomomo Journal*, No. 61 – "Education and Reuse," Lisbon, Docomomo International, 2019, 2–3.

4. Ana Tostões, "High Density and the Investigations in Collective Form," *Docomomo Journal*, No. 50 – "High Density," Lisbon, Docomomo International, 2014, 2–4.

5. See Ana Tostões and Zara Ferreira (eds.), *Adaptive Reuse. The Modern Movement towards the Future, Proceedings of the 14th International Docomomo Conference*, Lisbon, Docomomo International/Casa da Arquitectura, 2016.

6. See *Docomomo Journal*, No. 52 – "Reuse, Renovation and Restoration," Lisbon, Docomomo International, 2015.

7. John Lagae, "Ambivalent Positions on Modern Heritage. A Dialogue Between Wessel de Jonge and Réjean Legault," *OASE*, No. 69, 2006, 46.

Architectural preservation is a discursive practice that seeks legitimacy, not only by drawing on history, but also, and perhaps more importantly, on collective memory.[8] In this context, it is essential to remember that the collective memory and involvement of local inhabitants are crucial in keeping this modern heritage alive. Memory plays a significant role, not only in preserving monuments of modern architecture, but also in recording the oral histories of everyday life,[9] such as the experience of children happily exploring and playing within these spaces, with their promise of adventure and innocence. This was captured by Ernesto Nathan Rogers during a critical moment of Modern Movement architecture as "*la sperienza del architettura*."[10] The expansion process of information sources allows, in Juhani Pallasmaa's words, to admit that buildings not only provide shelter and sensory pleasure, they "are also mental extensions and projections, they are externalizations of our imagination, memory and conceptual capacities."[11] The raises the challenge of how to maintain the intensity and emotional impact of architecture when it becomes necessary to intervene in its materiality to renew and adapt it to the contemporary needs. In such cases, we must heed Wessel de Jonge's reminder "that our practice is informed by a historical consciousness and sensibility that goes beyond purely formal or technical dimensions."[12] Beyond economic considerations, the adaptive reuse of modern buildings continues to be recognized for its ability to enhance critical issues of identity and contribute to the sustainable life of buildings. As Pallasmaa highlights, "cultural identity, a sense of rootedness and belonging is an irreplaceable ground of our very humanity."[13]

While addressing the concept of reuse as a key factor in building a sustainable future, one must recall the Modern Movement's social commitment, which, for the first time, tackled the challenge of housing for the masses. It promoted an architecture that could provide not only provide a decent home for all,[14] but also the promise of a healthy life grounded in comfort and well-being.[15] In other words, it envisioned architecture as a decisive factor in the pursuit of happiness[16]; one of the Modern Movement's core themes was architecture as a tool for creating a new, egalitarian society. As Walter Gropius envisioned, architecture serves as an agent of civilization that helps "suppress the chasm between reality and ideology,"[17] positioning the architect as a professional who makes choices and seeks solutions, an instrument for a better society.[18] The architect is not merely a passive participant in progress but an active agent capable of influencing collective conscience and, in turn, guiding the process of progress. Today, architects carry the duty and power to preserve the legacy of modern architecture.

Hubert-Jan Henket's question "for those who are dedicated to the ideas of the Modern Movement, this attitude shouldn't come as a surprise. Isn't one of the driving forces of Modernity, ever since the Enlightenment, the dedication to dynamism and the constant new?"[19] points to the essence of any thoughtful modern-heritage reuse project. Any transformation must honour the original architect's intentions, maintaining a balance with the cultural significance of these intentions while enhancing the overall architectural quality. Furthermore, reuse, renovation, and restoration

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8. John Lagae, "Ambivalent Positions on Modern Heritage. A Dialogue Between Wessel de Jonge and Réjean Legault," 46.

9. Ana Tostões, "Why preserving memory matters for building a wonderful world" in Ana Tostões (ed.), *Modern Heritage. Reuse, Renovation, Restoration*, Basel/Lisbon, Birkhäuser/Docomomo International, 2022, 8–11.

10. See *Docomomo Journal*, No. 65 – "Housing for All," Lisbon, Docomomo International, 2021; and Ernesto Nathan Rogers, Esperienza dell'architettura, Milano, Skira, 2002.

11. Juhani Pallasmaa, *The Embodied Image: Imagination and Imagery in Architecture*, New York, Wiley, 2011, 19, cited by Harry F. Mallgrave, *Architecture and Embodiment. The Implications of the New Sciences and Humanities for Design*, London/New York, Routledge, 2013, 87.

12. Wessel de Jonge, in John Lagae, "Ambivalent Positions on Modern Heritage…," 58.

13. Keynote lecture held at the 12th International Docomomo Conference, Espoo, 2012, cf. Juhani Pallasmaa "Newness, Tradition and Identity – Existential Meaning in Architecture," *Docomomo Journal*, No. 49 – "For an Architect's Training," Barcelona, Docomomo International, 4–9.

14. See *Docomomo Journal*, No. 51 – "Modern Housing – Patrimonio Vivo," Lisbon, Docomomo International 2014; *Docomomo Journal*, No. 54 – "Housing Reloaded," Lisbon, Docomomo International 2016; *Docomomo Journal*, No. 65 – "Housing for All," Lisbon, Docomomo International, 2021.

15. See *Docomomo Journal*, No. 62 – "Cure and Care," Lisbon, Docomomo International, 2020.

16. See *Docomomo Journal*, No. 60 – "Architectures of the Sun," Lisbon, Docomomo International, 2019.

17. Lionello Venturi, *História de la crítica de arte*, Barcelona, Gustavo Gili, 1980 [1948], 321.

18. Giulio Carlo Argan, *Gropius e la Bauhaus*, Torino, Einaudi, 1951.

19. Hubert-Jan Henket, "Reuse, Transformation and Restoration," *Docomomo Journal,* No. 52 – "Reuse, Renovation and Restoration," Lisbon, Docomomo International, 2015, 12.

not only raise technical issues regarding materiality and physical obsolescence, but also provoke deeper conceptual considerations about the fundamental nature of buildings.

If Docomomo's initials stand for the documentation and conservation of buildings, sites and neighbourhoods of the Modern Movement, then we need to go beyond the practical cases of conservation and explore the documentational and theoretical aspects of Docomomo's mission. Despite the urgent and unprecedented environmental and climate challenges facing humanity, as well as a global pandemic that has shaken confidence in a peaceful, science-driven future, architecture remains optimistic about the future and about the creative potential of architects to meet the world's forthcoming demands.

History and life are two intertwining concepts embedded in our contemporary understanding of modern architecture. On the one hand, modern architecture has earned its rightful place in history; on the other, it is not a frozen relic. It continues to serve as the shelter for our daily lives and as the inspiration for the habitats of the future.

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DOCOMOMO. THEN, NOW, AND THE FUTURE

MARISTELLA CASCIATO

"*It is necessary to consider the past a historical present …and to forge another 'true' present*" — Lina Bo Bardi[1]

It was April 1989 when Italian architect Lina Bo, married Bardi, was addressing her speech to a small group of guests gathered together at the opening of her first retrospective exhibition, held at the University of São Paulo. She was then seventy five years old.

That same year, in November, the Berlin Wall was destroyed, ending the geo- political Cold War and creating the conditions for the collapse of the Soviet Union. It seemed that the tombstone of a dreadful past was laid down for ever; no route back to previous histories and an atmosphere of optimism.

Nowadays, reconsidering Bo Bardi's words, one also captures in her acknowledgement a kind of renewed optimism, in which the "now" is the "true" turning point. Doubtlessly, she was not alone in her awareness and confidence in the values related to architecture and to its global legacy in the broadest terms.

Now, it is my chance to look backward, to one year earlier, to the Fall of 1988; it may sound to be a coincidence, though it is not.

At the School of Architecture, University of Eindhoven, Dutch architect Hubert-Jan Henket, himself an optimist by nature, had gathered a number of local and international colleagues to launch a crusade aimed to foster the belief in the reconciliation of the cultural and social virtues of what was built under the banner of modernity, and the appraisal of its economic success.[2]

The acronym Docomomo (Documentation and Conservation of the Buildings, Neighborhoods and Landscapes of the Modern Movement) which designated the new organization, arose from a few days of intense confrontations;[3] it remained obscure for the many and for several years ahead, though it finally became effective in giving voice to an amalgam of visions, hopes, and utopias which were clearly kept in standby. In the year 2000, I began my tenure as international chair which lasted ten years.

Most recently, Horacio Torrent, chair of the conference to be hosted in Santiago de Chile in December 2024, approached me aiming for a critical, fresh reconsideration of the future of Docomomo.

His call surprised me. Which future was he considering? The future we envisioned then, at the end of the '80s, the futuristic past or the "future anterior," to echo the oxymoronic title of a successful magazine. The *hic et nunc* future or the future for perpetuity? Torrent's quest left me with a handful of uncertainties. It definitively opened a Pandora box.

Back from Utopia, the book that came out in 2002 celebrating the first decennia of Docomomo, brought up to date the spirit of the beginnings of the organization and created a shared ground, an encounter between masters (those still alive and those idealized) and young, motivated professionals. This publication remains for me a keystone, therefore I went back to dive into it and adopted it as a device for mapping my own responses about the "now," carefully avoiding any nostalgia for the past and any lure for future.

The forty five contributors to *Back from Utopia* were tight to a mission and to an ethos which proved to be professionally transformative and intellectually engaging; they promoted a very fruitful new wave and new knowledge in the field of architectural conservation. The concerns initially expressed by Henket seemed to have found enthusiastic accolades. "A new spirit" —*Un Esprit Nouveau*, he wrote rehearsing Le Corbusier's generative idea— "a new dynamism, and an integrated effort of science, technologies, and arts" was born[4]

In her coda to the book, historian Hilde Heynen set the tone for what could become my current assessment. Let's begin from the acronym —Docomomo— which intended to endorse and to foster the legacy of the modern

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1. Zeuler R.M. de A. Lima, *Lina Bo Bardi* (New Haven and London: Yale University Press, 2013), 2.

2. Hubert-Jan Henket, "Back from Utopia. The Challenge of the Modern Movement," in the eponymous book edited by Hubert-Jan Henket and Hilde Heymen (Rotterdam: 010 Publishers, 2002), 9–17.

3. About Docomomo, see: *The Modern Movement in Architecture: Selection from the DOCOMOMO Registers*. Dennis Sharp & Catherine Cooke eds. (Rotterdam: 010 Publishers, 2000).

4. Henket, "Back from Utopia…," 17.

heritage. The *where* and the *when* of that project were never put under scrutiny, nor any critical questioning of the *whose* legacy ever surfaced. Though in her essay Heynen discussed at length the constituencies of the modern discourse, borne from the cradle of the avantgardes, and examined the limitations embedded in the vision of the modern movement, the hegemonic power of the Eurocentric thinking and practicing remained unchallenged.

Today, at the dawn of the second quarter of the twentieth-first century, the neo- liberal drift of the postcapitalist societies and the encounter with the global histories of the postcolonial and decolonized nations call to think at architecture through frames of pursuits, and to "reflect the compulsion to advance the cause of a more accurate, just, and inclusive historiographic practice."[5]

What I argue is that the most advanced agency for sustainable programs should stay free from patronizing and grew out of learning from partnership; in the end, this requires the endorsement of new traditions and the return to craft.

In this perspective it is now time to exchange knowledge, to sustain the relevance of a new humanism, to foster changes in the professional fields, and to consider questions of technological capacities in a global approach to one of the pillars of Docomomo, the world of archives and documentation of sources.

In conclusion, I wish to touch upon a re-examination of the significance and evidence of the archive, and on the urgency of building a new knowledge that overcomes the conventional agenda of the archive as neutral depository. My aim is to engender a more expansive approach to the archives, on one side committed to the interdisciplinary nature of the art of building (materials, data, manuals, etc.) and to the intersectionality of the methods of designing and curating (models, robots, 3D scanning, AI and AR platforms, etc.), and on the other side orienting their physical exploration as object entangled in the subjectivity of the virtual narrative.
Consequently, I suggest the establishment of a diagram of practices and cultural structures, encouraging a conversation in which the architectural discipline is embedded.[6]

a. **What** does constitute the archive within the boundaries of the global, multi- and interdisciplinary professional practice?
b. **When** does the design ethos of the past merge with the more current challenges?
c. **How** do we interpret the specificity of the materials and the tools used in the design and construction apparatus in creating the archive?
d. **Where** does stand the physical space/building of the archive vis a vis the original power structures of the design(er)?
e. **Why** are architecture records held? Among the obvious responses, one can list memory, context, identity, legacy, etc. To some extent, Jacques Derrida's *Archive Fever* offers a definitive assessment to this query.[7]
f. **Who** are the custodians —authors, collectors, institutions— of the archives?

Los Angeles, Summer 2024

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5. See: Peter Scriver and Vikramaditya Prakash, "Between Materiality and Representation," in *Colonial modernities: building, dwelling and architecture in British India and Ceylon*. Peter Scriver and Vikramaditya Prakash, eds. (London; New York: Routledge, 2007), 3–25; "Global Modernism and the Postcolonial," in *Rethinking global modernism: architectural historiography and the postcolonial*. Vikramaditya Prakash, Maristella Casciato, and Daniel E. Coslett., eds. (Abingdon, Oxon, New York, NY: Routledge, 2022), 4.

6. See: *Fugitive Archives. A Sourcebook for Centring Africa in Histories of Architecture*. Claire Lubell, Rafico Ruiz, eds. (Montreal: Jap Sam Books, Canadian Centre for Architecture, 2023); Dirk van den Heuvel, F. Tanis, & W. van de Sande eds., *Architecture Archives of the Future*. Jaap Bakema Study Center, Tenth Annual Conference (Rotterdam: TU Delft/Het Nieuwe Instituut, 2023).

7. Read Derrida's inspiring opening note in *Archive Fever. A Freudian Impression* (Chicago: The University of Chicago Press, 1995), 1: "Let us not begin at the beginning, nor even at the archive.
But rather at the word 'archive'—and with the archive of so familiar a word. *Arkhé* we recall, names at once the *commencement* and the *commandment*. This name apparently coordinates two principles in one: the principle according to nature or history, *there* where things *commence* —physical, historical, or ontological principle— but also the principle according to the law, *there* where men and gods *command*, there where authority, social order are exercised, *in this place* from which *order* given- nomological principle. *There*, we said, and *in this place*. How are we to think of *there*? And this *taking place* or this *having a place* of the *arkhé*?"

REVALUING DOCOMOMO

HUBERT-JAN HENKET

THE MODERN MOVEMENT OUTDATED?

Many critics claim that the Modern Movement is an outdated phenomenon of the 20th century. I do not agree at all. The intention of the Modern Movement is more relevant than ever before. That intention is to create a better world for everybody, that means nobody excluded, through the implementation of innovative progress in culture science and technology. However, the conditions to reach this goal have dramatically changed. To paraphrase Cedric Price: Technology, science and culture are the answers, but what are the questions?

Due to out-of-control rationalization, fragmentation, productivity and scale maximalization, communication acceleration and a free for all marked economy, we are forced to drastically change our direction. The questions for today and for long after tomorrow are how to organize controllable technology, how to cope with climate change, energy neutrality, pollution, limited resources, decline in biodiversity, social cohesion etc. We are beginning to comprehend that we should stop dictating nature, nature is dictating us. As Mahatma Gandi warned us long ago, nature can provide everybody with sufficient food, but it cannot satisfy the greed of mankind.

An enormous task lays in front of us architects and planners to reunite ourselves with nature and rehumanize our built and unbuilt environments with sustainability as our global ethic. In other words, stop short term thinking, stop pollution, destruction and depletion. Embrace the long term, balance reason and emotion, reuse all qualities of the existing and realize this collective task through meaningful citizen participation. Welcome to the dynamic reality of a sustainable Modern Movement 2.0.

SUSTAINABLE CITIES, BUILDINGS AND LANDSCAPES

Cities first and foremost exist to satisfy the social needs of communities. Yet the necessary feeling of involvement, inclusion and security are eroding ever more. Today's world does not consist of one whole but a myriad of big and small groups with different origins and backgrounds. So, we are confronted with the growing needs of pluralistic demand. Yet all these groups and individuals can only be themselves if they get the possibility to feel at home, a place where they don't have to defend their convictions.

We should learn again that care creates trust, and that trust creates wellbeing and pride. These two are preconditions for renewing our environments with things that are there already. Environments where the old and new meet in harmony. Don't forget: "small is beautiful".

My teacher Aldo van Eyck always emphasized the key role the social and public realm play in any society and the necessity to recover their symbolism. Man communicates through language, gestures and form. These give information about the meaning system that we as a social group have developed, maintain and want to further. This dynamic system has two sides. On the one hand we experience fear and resistance to lose that what makes the identity we are used to. We love a sense of memory. On the other hand, there is the need to cope with continuous change and to accommodate the new in our search for progress.

To help the different individuals in a group feel at home, and outsiders to join, this meaning system should be as neutral as possible. Equally important are beauty, respect and therefore love for our buildings and neighborhoods, three essential ingredients for their appreciation in the social group and their longevity as desired companions. In search for a balance between the competing forces neutrality and unicity, creative imagination is one of the main conditions for anyone involved in construction and transformation.

We are assisted in this emotional endeavor by rational, technical, environmental and cost efficiency facts. Existing buildings and infrastructures normally have a built-in technical lifespan of at least 100 years just to meet structural safety requirements. When you add to this the energy embedded in the huge existing stock, then it makes perfect sense to reuse all that exists as much as possible for the development of a sustainable social future.

Besides, consider a few more aspects. To comply with energy efficiency and to neutralize our carbon footprint, to respond to long periods of drought and heavy rainfall and to create heat reduction we should change our ideas about the city plan. In future it should consist of green self-supporting yet integrated mini cities with a walking radius of say 15 minutes. They must be provided with the necessary public facilities, parks, bicycle lanes, efficient public transport, rainwater storage, vegetable gardens and meeting places of different scales.

As the key to managing the existing stock and new construction, our thinking should be based on the lifecycle of buildings and infrastructures. In other words, long-term structural life, renewable materials plus the demountabilty and reuse of components.

Landscapers should concentrate on the repair of natural order, in search of a renewed relationship between nature and culture. Not only the increase in financial value should be a driving force, but the capacity of the soil and the recreative quality of the landscape as well. Beauty, health and social wellbeing are vital factors for a humanized economy.

To achieve this, social cohesion and participation are essential. The approach should be "Not me and now, but we and our future." This will help to bring all stakeholders i.e. citizens, owners, developers, professionals, business and government together to form new partnerships. Fruitful consultation and discussion are only possible when all parties involved are prepared to ban extremism. After all, absolute ideas run the risk of becoming so unchanging that individual human intention is crushed in the subservience to the totality. Every stakeholder has its own interest, vision and input to reach the communal goals. The trick is to be able to respect each other, be prepared to compromise and appreciate the ironic.

CODOMOMO?

It is precisely in this context that the Docomomo network can form an important connection between vision and reality in the global effort to arrive at a sustainable future. Why?

Since 1990 we have shown, through output and presence, to be an accountable international organization, consisting of architects and planners both practicing or academics and architectural historians, operating in a large network of 78 national or regional working parties and five International Specialist Committees. Our mental guide is the Eindhoven-Seoul Statement.

In the last century more has been built worldwide under the banner of Modernity than the production of all previous centuries added together. We already know quite a bit about this huge building stock, and we could enlarge this knowledge considerably. Did we concentrate in the first years of our existence on the icons, later we moved to the sub-icons as well. In Rotterdam in 2008 we started discussions about sustainability, and in Seoul in 2016 we introduced the Eindhoven-Seoul Statement in which adaptive reuse and sustainability were added to our joint effort. The ISC on technology has produced an impressive number of informative dossiers on the conservation of modern materials and components.

The ISC on Registers and the *Docomomo Journal* have introduced us to the knowledge of the icons and sub-icons worldwide via documentation. Many case studies presented at conferences have broadened that knowledge. But a funny thing has happened since we started. When we were discussing an appropriate name for our initiative in 1988, we decided to put documentation in front of conservation, mainly because of the common negative appreciation of MOMO architecture and planning back then. We reasoned, documenting was a more effective way to save culturally interesting buildings and neighborhoods which were designed for a relative short functional lifespan. Conservation should be reserved for the cultural happy few. Today we have a totally different point of view. Now the sustainable conservation of both icons as well as the bulk of the ordinary are at stake, in various degrees of intervention. So today the abbreviation "CODOMOMO" would have been more appropriate.

FUTURE CHALLENGES

The question then is, how should we approach these challenges that match our character. Experience tells us that we should not try to expend our range of tasks too much, simply because we are a voluntary organization and because we don't want to fall in the bureaucracy trap. Besides, our network of working parties varies considerably due to different cultures, habits and circumstances.

- So rather than expend, my proposal is to strive for more efficiency and to focus on specific items within agreed timeslots.
- Make a long-term plan of action over a 10-year period, accommodating biannual tasks of homework for all working parties, in descending order of urgency. Give the ISCs, closest involved in a given subject, a guiding function.
- Put more effort in reactivating dormant working parties. We need everybody's input.
- Change our documentation effort from registers to informative case studies including both positive and negative experiences, according to a well-designed standard framework. We desperately need this practical information to convince non-believers that adaptive reuse of MOMO buildings and neighborhoods is worth their while.

- Stimulate all working parties to put more effort in enlarging contacts with communities, owners, developers and politicians by using the practical new case studies. And ask them to approach the media to inform citizens about the advantages of conservation of the largest part of their building stock for the sustainability task ahead.
- Stimulate closer cooperation with international organizations with similar goals.
- Education, education, education.
- Stimulate architectural historians to analyze and describe the cultural key factors of common MOMO buildings and neighborhoods of a particular period in their country. This helps architects and planners to redesign sustainable buildings and city plans.
- Stimulate architects, planners and architecture schools to stop sectoral thinking and use the complete lifecycle of objects as the integrated guiding principal. So together we can offer knowledge of conservation matters as an integral part of asset management.
- Gather information on the technical and functional life expectancy of conservation interventions and make it useful for specific areas in the world.
- Read the recent excellent book by John Allen *Revaluing Modern Architecture*. For non-British students and professionals most of its content is very informative.
- Keep enjoying the friendships in our Docomomo community. They will continue to be our most precious condition for our future contribution to better the planet for everyone!

August 20, 2024

Hubert-Jan Henket (1940) qualified *cum laude* as an architect at the Delft University of Technology. He worked for Aldo van Eyck, studied in Helsinki and worked for Reima Pietala and worked in London for the Housing Renewal Unit. In 1976 he founded his practice in the Netherlands, since 2010 known as BiermanHenket architects. He is emeritus professor of the Eindhoven and Delft Universities of Technology and co-founder as well as honorary president of Docomomo international.
He concentrates on the relationship between old and new. He was involved in the restauration of buildings by Berlage, Dudok, Rietveld, Duiker and Max Berg. He designed transformations and new museums, law court buildings and the Dutch Embassy in Bangkok. His pavilion for museum Boijmans van Beuningen in Rotterdam (1991) was recently added to the list of national monuments of the Netherlands. His latest work was the renovation of the royal palace Huis ten Bosch in the Hague. With Hilde Heijnen he edited the book *Back from Utopia* (010 Publishers, 2002). He received several national and international awards, such as the World Monuments Fund, Knoll Modernism prize for the restauration of Sanatorium Zonnestraal in the Netherlands together with Wessel de Jonge.

#01 Original Design Intent, Layers of History and the Need for Adaptation to a Changing World

#02 Notable Renovations in Ordinary Contexts

#03 Typological Exercises and the Singularity of Iteration

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SUSTAINABLE DEVELOPMENT

ORIGINAL DESIGN INTENT, LAYERS OF HISTORY AND THE NEED FOR ADAPTATION TO A CHANGING WORLD

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ABSTRACT

The Docomomo Eindhoven-Seoul Statement (2014) embodies aspiration that Modern Movement buildings can be adaptively re-used to both conserve the significance of the buildings and to extend their useful lives either beyond their original "use-by date" and/or beyond their original use. Often, however, the option of adaptively re-using a building is not adequately assessed in that the embodied energy, emissions and carbon of the existing structure are not accounted for in the feasibility for future options and neither is the full-lifecycle of the use of the existing or the proposed building assessed in terms of the emissions of occupation and the emissions involved in the demolition of the existing building.

Adaptive re-use often entails the total transformation of the building so that it is no longer the original building, even when the adaptive re-use is undertaken to maintain the original function, such as the thermal upgrading of an existing high-rise apartment building. The situation is even more complicated when the adaptive re-use is for the conversion of a building to a different use, such as the conversion of an office building into a residential building.

However, adaptive re-use need not require the loss of significance, especially if the significance of the building is adequately recognised and stated in a document such as a conservation management plan and the design intent of the original architect is respected and enhanced.

1. INTRODUCTION

The need to upgrade buildings so their existing use remains viable or to adaptively re-use them for another use generates a conversation regarding conserving their significance and ensuring their utility and survival into the future through compliance with current codes surrounding matters such as energy consumption, thermal comfort, and accessibility.

International charters such as the Venice Charter (1964) and national charters such as the Australia ICOMOS Burra Charter (1979, 2013) emphasize the retention of the layers of history as represented by the original physical fabric and accretions of physical fabric over time. Whilst such an approach may be applicable to international monuments that are preserved as static ruins, it is more difficult to apply to buildings and sites that are continuing as integral functional elements of current society. An example would be the Sydney Opera House which, despite being a recent construction and the youngest place inscribed on the World Heritage List, has undergone an extensive program of renewal to maintain its environmental and functional efficiency as one of the world's busiest performing arts complexes, including providing wheelchair access to parts of the building that have never before been accessible.

The Docomomo Eindhoven-Seoul Statement (2014) embodies this conversation and conflict within its wording in that it promotes the conservation and adaptive re-use of Modern Movement buildings and sites whilst opposing the disfigurement of significant works. How much change can be tolerated to a significant work to retain its efficient functioning without a loss of significance?

The Sydney Opera House is a special case in that its World significance has enabled a thorough process of examining and respecting the building's significance, down to the smallest elements in an award-winning Conservation Management Plan.[1] However, most government, commercial and private projects do not benefit from such a comprehensive assessment of significance and often come from a pre-judged position of downplaying or even denigrating the building's significance in order to justify demolition and redevelopment.

2. PRESSURES FOR REDEVELOPMENT

Mid-twentieth century Modern Movement buildings are under increasing threat of demolition for a number of reasons; original use no longer economically viable within the constraints of the current building, modern standards of space requirements not being met, current environmental standards not being met, accessibility or building regulation standards not being met, image and prestige requiring a "new" image, and political reasons (such as removal of social housing complexes from desirable areas), etc. These threats apply to all types of post-war buildings ranging from the simple, post-war single-family bungalow, to high-rise office blocks and residential blocks.

Population increase and the rapidly increasing cost of housing are bringing many pressures to bear on the conservation of important buildings

1. Croker, Alan, *Respecting the Vision: Sydney Opera House – a Conservation Management Plan* (Fourth Edition), 2017, accessed June 2024, https://sydneyoperahouse.com. The CMP was one of the Lasting Heritage award winners in the inaugural Docomomo International Rehabilitation Awards in 2021.

of the twentieth century. Increasingly, conservation of the past is being represented as an impediment for an up-scaling of residential densities and conflicts are now arising between those who want to preserve the urban and suburban character of their cities and those who need to increase an affordable housing supply to accommodate an increasing population as well as to introduce modern infrastructure.

Post-war high-rise office buildings pose a particular problem in that they are usually located in prime locations with sweeping views of natural features such as harbours or rivers and are located close to public transport hubs. In cities with geographical constraints there is greater pressure to increase height and density to maintain a competitive edge in commercial office space rentals. This is becoming even more pronounced in a post-Pandemic environment as many workers shun the city office and work from home either full-time or part-time.

Two office building examples resulting from declining office usage and the need to adaptively re-use the buildings are the former MLC office building in Sydney, Australia and the former Republic National Bank building complex in Dallas, USA.

3. RETENTION OF OFFICE BUILDING SIGNIFICANCE

3.1. FORMER MLC OFFICE BUILDING, SYDNEY, NSW, AUSTRALIA: DEMOLISH, UPGRADE OR ADAPT?

An example of a mid-century high-rise office building under threat is the former MLC Building at North Sydney located just north of Sydney Harbour (**Fig. 1**). The headquarters of the MLC insurance company was designed in 1954 by architects, Bates, Smart & McCutcheon, and completed in 1957. At the time of its completion, it was the largest office building in Australia and was certainly the tallest building in the then low-rise suburb of North Sydney.

In the mid-1990s, the MLC company revitalised and upgraded the building to accommodate the changing office working environment. Floors were opened up to one another with stairs and atria, the technology of the building was upgraded, and the important aluminium and glass curtain-walls on the long east and west façades were refurbished, as were the short north and south tiled façades. This adaptive re-use won architectural awards.

In 2020 the new owners of the building, even knowing that the building was a listed heritage item, submitted a development application to demolish the building and replace it with a new office building. The building is located immediately adjacent to a new metro station that will be operational by late 2024 and so a new building could be expected to command top rental returns.

The application to demolish was eventually refused but the government-appointed Independent Planning Panel stated that the distinctive aluminium and glass curtain-wall could be removed and replicated in any refurbishment of the building. In 2023 the building was finally listed on the State Heritage Register by the newly-elected left-of-centre Labor state government as an item of State environmental heritage. However, such a high level of protection can be ephemeral and ineffective in the state of New South Wales

as the same Labor government has maintained a policy from the previous right-of-centre Liberal government that important projects, that have been declared to be State Significant Development (SSD), automatically have heritage "switched off." In other words, heritage is no longer to be taken into consideration when considering the merits of the proposed development.

Recently, the owners of the former MLC Building have indicated that they will not refurbish the building as an office building but will submit the redevelopment of the existing building into what is called "build-for-rent" apartments as a State Significant Development. Such an approach is politically timely in that there is a housing shortage in Australia and a severe rental crisis in terms of availability and affordability. This type of project is likely to appeal to the state government and its SSD status will preclude heritage considerations.

A curtain-wall façade is difficult to be compatible with opening windows that art mandated by the codes for apartment buildings. Balconies are also desirable in the temperate Sydney climate. High-rise office buildings have usually been converted to apartments by the total removal of all cladding and the reduction of the building to its concrete floors and columns. Such drastic change is not envisaged by Docomomo's Eindhoven-Seoul Statement.

One of the problems is that the true economic and environmental cost of removal of original fabric is not adequately accounted for in assessing projects. The tools for such assessment do exist but, in Australia for example, they are not mandated and there are no national standards to determine maximum thresholds of embodied emissions or carbon that can be sacrificed in a building redevelopment proposal.

However, in the absence of any embodied emissions controls, another method of encouraging retention of building fabric and, therefore, cultural significance is to incentivise retention.

3.2. FORMER REPUBLIC NATIONAL BANK BUILDING, DALLAS, USA: INCENTIVISED CONSERVATION

In Dallas, Texas there is a combined State and City tax relief of up to 45% for retaining the external appearance and major internal features of significant buildings. Encouragement of the new and respect for the recent past go hand-in-hand because Capitalism has been harnessed to provide incentive. An example is the central tower of the former Republic National Bank complex which was converted from offices to the gables Republic Tower apartments, in 2005-2007 by Corgan Associates, without impacting the striking pressed aluminium panel-clad exterior of the tower. The Republic National Bank was originally designed by Harrison & Abramovitz in 1954 (**Fig. 2**).

The building contains one-, two- and three-bedroom apartments and communal facilities such as a roof-top swimming pool.

The retention of the office building façade in the apartment conversion ensured the aesthetic significance of the building was maintained but the habitability of the building's apartments relies on air-conditioning year-round to cope with the hot summers and cold winters of Dallas as well as

to provide air changes. Such a minimal impact adaptive re-use may not be suitable or even permitted in jurisdictions where natural ventilation via openable windows and/or balconies is a requirement.

4. SOCIAL HOUSING

4.1. UPGRADING SOCIAL HOUSING BUILDINGS FOR THE RICH: SIRIUS BUILDING, SYDNEY, AUSTRALIA

With the current housing supply and affordability crisis, government decisions regarding the disposal of social housing are of great concern. The Sirius building was designed and constructed by the NSW state government between 1976 and 1980 as social housing in The Rocks overlooking Circular Quay, Sydney Harbour and the Sydney Opera House (**Fig. 3**). Sirius was constructed as part of a deal struck in the 1970s between the state government and the Building Labourers Federation (ie trade union) to lift the work bans (known as Green Bans) in the area in exchange for the building to house the local residents that were being displaced by the government-sponsored and government-controlled commercialisation of The Rocks as an entertainment and tourist precinct. The building was an important Brutalist building in an extremely prominent location that can be seen from the Opera House and from the Sydney Harbour Bridge.

Despite the Heritage Council of NSW proposing that the building be listed on the State Heritage Register, the state government refused to permit the listing in order to maintain a high price when it was sold to a private developer. The developer retained the existing building but added copper-clad modules to increase the height and number of apartments and also copper-clad hoods and balconies to some of the apartments. The building was gutted internally and posed challenges for a contemporary upgrade to comply with codes such as sound transmission between units because of the existing minimal floor to ceiling heights. In addition, the design of the new apartments involved the conversion of social housing apartments to high-end, high-luxury, and high-cost apartments in a stunning location. The building has been further gentrified by the smoothing out of the rough-sawn board formwork marks on the concrete walls. But after this renewal, the new, aesthetically pleasing building is no longer the original.

The Sirius building has been "saved" but at the cost of the loss of its original aesthetic authenticity, the loss of its social significance as public housing, and the loss of its historical significance as social housing to accommodate the displaced local residents. Its retention as housing has done nothing to alleviate the lack of affordable housing and has displaced and dispersed residents, some of whose families had lived in the area for over 120 years.

4.2 UPGRADING SOCIAL HOUSING BUILDINGS FOR WHOM? PUBLIC HOUSING TOWERS, MELBOURNE, AUSTRALIA

Like its NSW counterpart, the Victorian state government is intending to decant social housing tenants from 44 high-rise towers dispersed throughout Melbourne and demolish them in order to redevelop the areas for a mix

of social, affordable and market-price housing. However, an alternative approach of retaining and refurbishing social housing has been shown to be successful as demonstrated by the Melbourne-based OFFICE, a charitable not-for-profit design and research practice, who produced a report on development options for one Melbourne public housing estate, the Barak Beacon Estate. The report emphasised that OFFICE's Retain Repair Reinvest (RRR) approach of retaining existing communities, repairing existing buildings to reduce environmental impacts of construction, and reinvest the savings to improve comfort and to upgrade public housing.[2] The report established that the RRR model provided a 25% increase in site occupancy, retained the existing community, saved the government the cost of relocating and rehousing the existing community and, compared with the demolish and rebuild strategy, the RRR strategy provided a 54% reduction in embodied energy and 46% reduction in global warming potential.

In March 2024 OFFICE produced a further report, *Life-Cycle Impacts of Public Housing in Victoria*, that examined different social housing renewal strategies and their environmental and social impacts for the entire government social housing portfolio in Melbourne.[3] The report emphasised the use of a Life-Cycle Approach of cradle-to-cradle (as contained within European life-cycle Standard EN 15978) when assessing the impact of various redevelopment models. In other words, the report was recommending the holistic analysis of the life-cycle of the building including the social, environmental and economic impact of a development from inception through construction, use, demolition and recycling, rather than simply seeking a supposed short-term economic gain by selling the sites to developers. The cradle-to-cradle Life-Cycle analysis typically has 14 stages covering the full life-cycle of the building, including its operational emissions, but such an approach is not mandated in Australia. Only one state of Australia, New South Wales, requires analysis at the inception of a project of the embodied emissions in the first 3 stages of the Life-Cycle Analysis approach: raw material supply, transport, and manufacturing. Because of this limited approach the feasibility and total environmental, social and economic impact of projects is only partially analysed and accounted for.

The OFFICE report examined the benefits and costs of three redevelopment models; Demolition & Rebuild, Retrofit, and Retrofit & Rebuild against four criteria: Built outcome; Climate resilience; Health, wellbeing and community; and Economic impacts. The report cited three examples of European redevelopments that illustrated the three redevelopment strategies:

Demolition & Rebuild: Hygate Estate, London, England
Retrofit: *Cité du Grand Parc*, Bordeaux, France
Retrofit & Infill: Ellebo Garden Room, Copenhagen, Denmark

Of the three, the demolition and rebuild option provided the least satisfactory result against many of the criteria. Importantly the economics were disastrous for Southwark Council that had owned the housing estate.







Figure 1. Bates, Smart & McCutcheon, Former MLC Building, Sydney, Australia, 1954-1957. © Scott Robertson, 2020.

Figure 2. Harrison & Abramovitz, Former Republic National Bank Building, Dallas, USA, 1954, central tower adapted to apartments 2005-2007 by Corgan Associates. In the foreground is Thanksgiving Square Chapel by Philip Johnson, 1964-1976. ©Scott Robertson, 2017.

Figure 3. Teo Gofers (Housing Commission of NSW), Sirius Building, Sydney, Australia, 1978-1979 with 2022-2024 assitions by BVN Architecture. ©Scott Robertson, 2024.

Southwark Council sold the site to the developer for £50 million. Southwark Council spent £44 million relocating and rehousing the 3000 tenants and £22 million on other development costs. The new development provided 82 social housing units in lieu of the original 350 residences and the remainder of the development was sold primarily to overseas investors.

5. UPGRADING THROUGH CONSERVATION. CITÉ DU LIGNON, GENEVA, SWITZERLAND

The upgrade of post-war housing estates need not involve demolition or the Lacaton & Vassal-type additions that transform the building into someone else's architectural creation. Other European examples can provide exemplars of good conservation practice that respect original fabric as well as provide a model of how to upgrade environmental performance and compliance with current regulations.

An important example is the *Cité du Lignon*, perhaps the world's longest and largest apartment complex containing 2,870 dwellings, that was designed by architects Georges Addor, Dominique Julliard, Louis Payot and Jacques Bolliger, and constructed between 1963 and 1971. The site was heritage listed in 2009. The heritage-listing of the aluminium and timber curtain walling and the introduction of new thermal building regulations were the catalyst for research into how to upgrade the complex. From 2008 to 2012 the research on

how to improve the building's thermal performance was undertaken by Franz Graf and Giulia Marino of the Laboratory of Techniques and Preservation of Modern Architecture (TSAM) in Lausanne. In 2011 Jaccaud Spicher Architectes Associés (JSAA) was appointed as architect for the refurbishment project that lasted 12 years. The works involved the fire and thermal upgrading of the exterior walls and the upgrade of services within apartments.

The rehabilitation works at the *Cité du Lignon*, are a paramount example of how the cultural significance of the building, including its aesthetic significance, has been maintained whilst the thermal comfort, the energy consumption, the services and safety of the building have been upgraded in compliance with current standards. This project is an exemplar of what can be achieved if the significance of a place is understood and respected as part of the upgrade process.

6. CONCLUSION

Projects such as the *Cité du Lignon* prove that retention of significance through conservation on one hand, and the upgrading of a building's thermal and overall environmental performance on the other, need not be mutually exclusive. What is required is a combination of humbleness of approach involving the sublimation of ego in order to permit the original design intent to remain or to be regained, as well as a regulatory environment that comprehensively values the social, environmental and economic impacts of the different models of building development and refurbishment. Only if such conditions are met can the ideals of the Eindhoven-Seoul Statement be met in the conservation and (re)use of buildings and sites of the Modern Movement so that those conservation and reuse works do no destroy or disfigure those significant examples of the Modern Movement. ■

2. OFFICE & Miriam McGarry, *Retain Repair Reinvest – Barak Beacon Estate: Feasibility Study and Alternative Design Proposal*, 2022, accessed June 2024, https://alastairswaynfoundation.org.

3. OFFICE, *Life-Cycle Impacts of Public Housing in Victoria*, University of Melbourne, Melbourne Centre for Cities, 2024, accessed June 2024, https://unimelb.edu.au.

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BIOGRAPHY

Scott Robertson is an architect in private practice in Sydney. He lectured and tutored at the University of NSW and the University of Sydney for a period of 20 years and has delivered a number of public lectures, architecture tours and a national TV appearance on architectural styles and conservation. He is the author of a state-wide study of interwar housing as well as studies for the Heritage Council of NSW on sites in NSW used as part of the war effort in both World Wars and a recent survey of significant architecture of the last quarter of the twentieth century.

DECLINE OF DEPARTMENT STORES AND THE ISSUE OF 'THIRD PLACES' IN GERMAN INNER-CITIES: DECLINE, OBSOLESCENCE AND REUSE POTENTIALS

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ABSTRACT

The paper explores the rise and fall of the Karstadt department stores, which used to be the focal points of many German inner-cities throughout the twentieth century. The paper addresses the current issues of their obsolescence, decline and a recent increase in vacancies of the buildings. The desolation of those, once vibrant 'third places' – commercial entities, but also communal spaces, where people could meet and socialize – is asking for reuse scenarios, and thus requires an assessment of those buildings, understanding of the layers of history, analysis of their values, but also their potentials to adapt to changing circumstances and societal needs. While focusing on this particular typology of the inner-city department stores and the specific case of Karstadt buildings, the paper aims to address the issue of decline of various retail facilities, but also a general decline of 'third places' in cities. The term 'third places' was coined by a sociologist Ray Oldenburg in 1989, and denotes places beyond home (the primary place) and work (the secondary place) such as community centres, cafes, public libraries, theatres, public parks, etc. The study aims to better understand both causes and socio-spatial effects of their decline, correlating it with the digitalisation shift, changes in retail culture, but also blurred conventional separation between the first, the second and the third places (emergence of the so-called co-living, co-working and co-mingling spaces). It presents several case studies and research focusing on reuse potentials. The paper argues that the 'third places' have an important role in the well-being of local communities, in enhancing social cohesion, civic engagement and sense of belonging, and therefore need to remain focal in adaptive reuse proposals.

1. INTRODUCTION

The emergence of post-war ´modernity´ in Europe is commonly portrayed as "intimately entangled with state-driven actions", as noted by Gosseye and Avermaete.[1] Nevertheless, apart from the state, civil society and the private sector contributed to the introduction of the modern elements in the built environment. Amongst other products of modernity, the private sector particularly contributed to development of consumption spaces, including the shopping centre. However, as argued by Gosseye and Avermaete, "the role that corporate and commercial modernism played in reforming post-war Europe is still astonishingly understudied"[2]. In particular the typology of the shopping centre is under-represented. Therefore, this paper aims to contribute to the gap and shed light on this "other modernity", particularly focusing on the development of the inner-city Karstadt department stores in German cities.

2. COMMERCIAL COLLECTIVITY AND THE INNER-CITY DEPARTMENT STORES IN GERMANY

The conception of the department stores to function as the focal points of German inner-cities differed from the commercial complexes based on the American model of suburban shopping malls. The inner-city department stores emerged as a "tool for urban revitalization", "called upon for its (assumed) capability to renew the city and re-establish urban vitality" – as well as a modern consumer society.[3]

The emergence of the inner-city department stores in German cities followed the rise of global mass consumerism, which introduced more inclusive patterns of consumption, aligned with the "social market economy" or *Soziale Marktwirtschaft*. Their design was to embody it. The Karstadt department stores were designed and built as architecturally coherent facilities, predominately enclosed structures in the high-dense, central urban areas. As such, they offered a new urban experience to the ´consumer-citizens´, an experience of ´commercial collectivity´ in urban context.

One of the largest department stores built by this leading retail company of the post-war period in Germany – Karstadt AG – was built in 1964 in the heart of the city of Bielefeld, as the 54. department store of this retail chain in Germany. The four-story building, located in the main pedestrian street, was designed by the construction department of the Karstadt AG in cooperation with the local architect Karl Obbelode. The facade of the building was designed by the architect Hanns Dustmann. In April 1964, the department store was festively opened followed by a music band standing on the canopy above the main entrance, with around 80.000-90.000 visitors[4] (see **Fig. 1**).

The department store served for a multitude of needs and activities of the modern ´consumer-citizens´. It acted as a focal point for the "other" functions, fulfilling necessities and leisureliness beyond the "primary" (housing) and the "secondary" (work) places, as phrased by a sociologist Ray Oldenburg. Oldenburg[5] coined the term "third places" to denote places beyond home (the primary place) and work (the secondary place) such as community centres, cafes, public libraries, theatres, public parks, etc.

1. Janina Gosseye and Tom Avermaete, "Shopping towns Europe, 1945-1975", in *Shopping Towns Europe: Commercial Collectivity and the Architecture of the Shopping Centre, 1945-1975*, ed. Janina Gosseye and Tom Avermaete (Bloomsbury Publishing, 2017), 1-21.

2. Gosseye and Avermaete, "Shopping towns Europe, 1945-1975", 2017.

3. Gosseye and Avermaete, "Shopping towns Europe, 1945-1975", 2017.

4. Andreas Martin Vohwinkel, "22. April 1964: Eröffnung der Karstadt-Filiale an der Bahnhofstraße", Stadtarchiv Bielefeld, accessed May 03, 2024, https://historischer-rueckklick-bielefeld.com/2024/04/01/01042024/.

5. Ray Oldenburg, *The Great Good Place: Cafes, Coffee Shops, Community Centers, Beauty Parlors, General Stores, Bars, Hangouts, and How They Get You Through the Day*. New York: Paragon House, 1989.

There was a need for the "other" functions, or the "third" places, and in particular places of collectivity in the urban environment. This need was recognised and commercialised, thus incorporated in the setting of the shopping centres, or in this case department stores, offering an "alternative definition of the collective realm".[6]

Besides retail, the Karstadt department stores included entertainment and programs such as photo-laboratories, DIY sections, as well as exhibition spaces and spaces for socialisation, as it was the case of the Karstadt department store in Bielefeld. One of the exhibitions was a four-week exhibition of the Art and Culture of the Continent, opened in August 1970 with 2.500 objects from 14 countries presented and offered for sale – including dance drums and masks from Nigeria and instruments from Bali.[7] The cultural activities acted in the service of commerce and contributed to the sales annual result (almost 160 million DM annually in the mid 1970s, as reported by the archive of the city of Bielefed).[8]

3. DECLINE OF THE KARSTADT DEPARTMENT STORES

After the peak in the 1970s, around 10 years later, the department stores faced the first crisis. In order to maintain the attractiveness, in the following years the company invested in renovations of the department stores. However, despite those efforts, by the end of the 1980s the department stores faced de-growth in terms of the annual results in sale, as well as in the number of employees (e.g., the department store in Bielefeld had a decrease from 1.200 to 570 employees in 1989, as reported by Vohwinkel).[9] Further investments in modernisation of the department stores followed in the beginning of 2000s, but the trend of decline remained. Eventually, the Karstadt company faced insolvency, and the department stores changes in ownership, further decline in sale and the number of employees (e.g., in 2014 the department store in Bielefeld had around 170 employees, as reported by Vohwinkel).[10]

Currently, the Karstadt department stores – in total 90 stores (or, after the merge with Galeria, in total 129 stores) throughout Germany – are facing vacancies and gradual desolation. In some cases, e.g., in the case of the Karstadt department store in Hamburg, the city bought the building, and a temporary purpose is planned until the competition for the new concept is conducted. Some of the department stores, e.g., the department stores in Dresden, Chemnitz, Erfurt and Magdeburg are expected to remain and be modernised in the upcoming period.

Some of the buildings, e.g., the building in Magdeburg designed by Karl-Ernst and Anne-Monika Zorn in 1970, have very recognisable appearance and facade design. (see **Fig. 2**) Also, the size of the buildings, which is usually much bigger compared to the surrounding, contributes to them remaining remarkable within the urban landscape they were built in.

The altered patterns of consumption, changes in the retail culture and the digitalisation shift have an additional impact on the plans to dissolve the department stores and re-purpose the buildings.

6. Tom Avermaete, "Collectivity in the prison of plenty: The French commercial centres by Claude Parent, 1967-1971", in *Shopping Towns Europe: Commercial Collectivity and the Architecture of the Shopping Centre, 1945-1975*, ed. Janina Gosseye and Tom Avermaete (Bloomsbury Publishing, 2017), 110-121.

7. Vohwinkel, "22. April 1964: Eröffnung der Karstadt-Filiale an der Bahnhofstraße", 2024.

8. Vohwinkel, "22. April 1964: Eröffnung der Karstadt-Filiale an der Bahnhofstraße", 2024.

9. Vohwinkel, "22. April 1964: Eröffnung der Karstadt-Filiale an der Bahnhofstraße", 2024.

10. Vohwinkel, "22. April 1964: Eröffnung der Karstadt-Filiale an der Bahnhofstraße", 2024.

Due to the scarcity of the 'third places' and community spaces in German inner-cities, in particular the non-commercial ones, the conversion or adaptive reuse plans for the vacant department stores need to consider involvement of different spaces for leisureliness and collectivity in order to improve the vitality of the inner-cities, enhance social cohesion and sense of belonging. In that way, the buildings would preserve their primary role as places of collectivity in the urban environment, yet de-commercialised and suited to the contemporary needs of the citizens and local communities.

An additional change that has an impact on the use and reuse of those spaces is that the conventional separation between the first, the second and the third places is becoming more blurred, leading to the emergence of the so-called co-living, co-working and co-mingling spaces. This too needs to be considered when creating future reuse scenarios.

4. REUSE POTENTIALS FOR THE KARSTADT DEPARTMENT STORES

Possible reuse of the Karstadt department stores was set as a task and explored within a research-oriented Master module "C5 Conference and Communication", at TH OWL in Detmold (Germany), led by the authors. In total 16 interdisciplinary student groups conducted a study on reuse potentials while focusing on different case studies of Karstadt department stores. (see **Fig. 3**)

The groups were focusing on different aspects of past, present and future of the Karstadt department stores, in particular exploring the questions of urban identity, the role of digitalisation and altered shopping behaviour; as well as developing an analytical and assessment framework applicable to the department stores, and assessment of facade components through a digital facade autopsy.

The facade autopsy method is involving comprehensive documentation, disassembly, material identification and testing, which provides a deep understanding of the existing facade components, perceived as a "material bank". The method is crucial in identifying potential for material reuse and recycling in case of buildings not recognised as architecturally significant, and in assessing the environmental impact of facade materials, providing architects with valuable insights for informed decision-making in the reuse process.

Furthermore, some of the groups were exploring what are decisive measures for creating a sense of belonging in reuse scenarios and how to transform the buildings into vibrant community hubs.

The students particularly recognised the capacity of the buildings to re-emerge as catalysts of urban revitalization, community development and overall well-being of the citizens. Transforming the vacant department stores into community centres and cultural hubs can provide opportunities for social interaction, facilitate community engagement and foster community cohesion.

One of the groups recognised a critical factor for reuse of the department stores, which is their closed facades, and explored possibilities of increasing the amount of natural light in the buildings. Depending on the new program





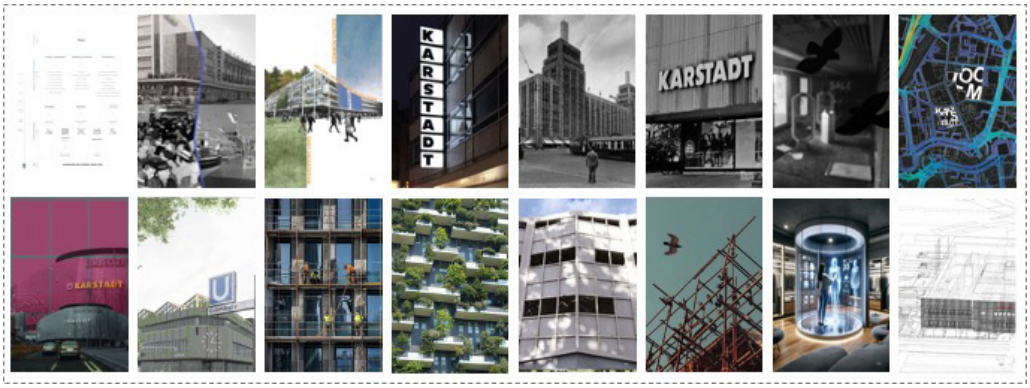


Figure 1. Karstadt construction department and the architects Karl Obbelode and Hanns Dustmann, Karstadt department store, Bielefeld, Germany, 1961-1964, photo from the opening in April 1964. © Stadtarchive Bielefeld, 400,3/ photo-collection, Nr. 11-342-152, photo: Rudolf Möller, Freie Presse, source: https://historischer-rueckklick-bielefeld.com/2024/04/01/01042024/

Figure 2. Karl-Ernst, Anne-Monika Zorn, Centrum Warenhaus/ Karstadt, Magdeburg, Germany, built between 1970–1973. ©B.A.C.U., Socialist Modernism, 2015, source: https://www.facebook.com/SocModernism/photos/centrum-warenhauskarstadtmagdeburg-germanybuilt-between-19701973architect-karl-e/588711577938254/

Figure 3. MID/MIAD Master students TH OWL, 16 teams – research study on Karstadt Reuse. © Authors, 2024, source: results of the C5 module, 2023/24.

for the building, they proposed daylight optimisation to suit the new function, e.g., creating a light shaft and re-designing the facade.

Additionally, in order to improve visual connectivity with the city and mitigate the closed-off atmosphere often associated with the large department stores, it is necessary to open up the building, re-design its facade as a more porose structure and re-configure pedestrian paths to optimize the flow and accessibility, as concluded by one of the groups.

5. CONCLUSION

The study explored the inner-city department stores as one of the typologies of the "commercial" modernism, which played as well an important role in reforming urbanity in the post-war Europe. These commercial facilities strongly contributed to the creation of the modern consumer society, offering a new urban experience to the 'consumer-citizens', an experience of 'commercial collectivity' in urban context.

The study of the past, present and future of the Karstadt department stores shows how those once vibrant 'third places' – commercial entities,

but also communal spaces – became obsolete and are facing increase in vacancies. Although some of the buildings have very recognisable appearance and remain remarkable within the urban landscape they were built in, they urge adaptation in order to suit the changing circumstances and societal needs.

The paper presents findings from the Master module, which was assessing and exploring reuse potential for the Karstadt department stores in German inner-cities. The findings highlight the capacity of the buildings to re-emerge as catalysts of urban revitalization, community development and overall well-being of the citizens. This needs to remain focal in adaptive reuse proposals. Possible multifunctional cultural hubs and comparable programs, which were the most commonly addressed in the student works, could facilitate diverse activities, including social gatherings, workshops, cultural events, and tailored services, addressing the nuanced needs of the citizens.

Nevertheless, as noted by one of the student groups, development of the transformation process for the department stores necessitates meticulous city-specific analysis, the formulation of a comprehensive space catalogue, and the strategic planning of interventions for optimal effectiveness. ■

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ADAPTIVE REUSE OF MODERN HERITAGE: ATTITUDES IN RELATION WITH THE MATERIALITY OF DÉJÀ LA. CASE STUDY OF THE CITROËN GARAGE (1934) BECOMING KANAL (2018)

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ABSTRACT

In adaptive reuse, we can assume that the existing site is an open work that questions and can be questioned. From this perspective, the strategy chosen by an architect/designer depends on the context. The existing elements are there as memories of a past to be reused, rewritten[1], reactivated.

This article investigates the relationship between the materiality of the *déjà la* (and the need to transmit it) and the practices of architects, through the analysis of design proposals from the *Kanal* international competition in Brussels. This analysis investigates the project strategies of architectural proposals, focusing on their conceptual and representational aspects. It compares architectural production with texts written by and about architects. The aim is to understand how teams of architects preserve and enhance the memory of the "Kanal lieu (Garage Citroën Yser)", while responding to the requirements of a museum of modern art and a public space.

1. INTRODUCTION

The Icomos charters and documents have influenced the practice of intervention in existing buildings since the *Athens Charter* (1931). The *Venice Charter* (1964) refers to aesthetic and historical values, linked to a materiality based on the image to be transmitted. *The Nara document on authenticity* (1994) states in point 13 that, when faced with a site, we must verify and analyze a series of sources which, in the end, will give direction to the architectural intervention. Therefore, what is the best way to intervene, bearing in mind that in some projects new elements have to be introduced by necessity or simply to revitalize sites?

Architects also have a personal background that they bring with them and that influences their choices. This background comes from their culture, from their practice, and from their memories.

In the publication, *A Feeling of History* (2018), Peter Zumthor describes to project on a specific site in terms of its emotional reconstruction: "it stimulates empathy and curiosity about the place". Zumthor underlines the importance of the chosen materiality and sees architecture as a medium for revealing history. According to architecture critic Pierre Chabard, through architecture Peter Zumthor does not transmit history (as the past of the present), but memory (as the presence of the past). "Emotional reconstruction does not provide a sense of history, but orchestrates the dramatized spectacle of a theatre of memory" [2].

The competition for the site of *Kanal* was launched by the Fondation KANAL[3] in 2017 with the aim of transforming the modernist *Citroën* garage (Alexis Dumont, 1934) into a new kind of cultural site hosting the two institutions partners (CIVA[4] and Centre Pompidou[5]), intended for neighbors, inhabitants of Brussels and tourists alike. It is planned to design a museum of modern and contemporary art, a museum of architecture, a library with architectural archives, as well as public spaces dedicated to various artistic and recreational activities.

The competition was won by the architects' association noAarchitecten (BE), EM2N(CH) and Sergison Bates architects (UK); the other six finalist teams were: Advvt(BE), 6a(UK) and AgwA(BE); OMA/AMO(NL) and Wessel de Jonge architecten(NL); JDS(BE) and Diller Scofidio Renfro(USA); Office KGDVS(BE) and Christ and Gantenbein(DE); Lhoas & Lhoas(BE) and Ortner & Ortner(DE); 51N4E(BE), Caruso St-John(UK), l'AUC(FR) and Thomas Demand(DE). In this article, for reasons of format, we analyse and compare the proposals of 3 teams: OMA/AMO and Wessel de Jonge architecten; OFFICE and Christ & Gantenbein; 51N4E, Caruso St-John, l'AUC and Thomas Demand.

The garage is not considered as a monument, but its architecture is significant for the community and the intention was therefore to preserve it.

How to transform what was formerly a symbol of modernity, a garage where cars were not only designed and manufactured, but also showcased, into a cultural container?

By identifying topics that guided the different strategies (heritage, new ecology, phenomenology, effacement, etc.), adaptive reuse attitudes in relation with the materiality of the building will be highlighted.

1. Rodolfo Machado, "Old Buildings as Palimpsest", *Progressive Architecture* (November 1976): 46–49.

2. Pierre Chabard, "L'Architecture Contre l'Histoire", *D'Architectures*, no 266 (Paris, October 2018), 62.

3. Created by the Brussels-Capital Region, the primary mission of the KANAL Foundation is to successfully complete the conversion of the Citroën garage.

4. CIVA is the Brussels-Capital Region's center for information, documentation and exhibitions on the city, architecture, landscape and urban planning, CIVA is a museum, archive center, library, meeting place and forum for mediation and discussion on architecture, landscape, urban planning and ecosystems.

5. The *Centre national d'art et de culture Georges-Pompidou* (CNAC) - better known as the 'Centre Pompidou', its main location is in Paris.

2. THE ORIGINAL GARAGE

The Citroën garage, built in 1934 by Alexis Dumont (1877-1962) covers an area of 16500 m2 and consists of two units, the showroom and the workshops. The workshop, which occupies the majority of the site, was the production area and consists of a repetitive metal structure of prefabricated latticework. The structure is covered by a roof made up of glazed elements, and enveloped by a curtain wall, also glazed, that runs around the perimeter of the plot.

The showroom on the boulevard, Citroën's showcase, was intended to be an attractive space representing the brand's spirit of innovation. This is reflected in the 21-metre-high, curved, all-glass volume.

The Citroën garage is a typical example of the *licht-architektur*[6] era. The technical nature of the structure and the massive use of glazed surfaces give a feeling of lightness to the whole, creating a continuous, flexible space bathed in light.

In its early days, the garage was a free space in its entirety, ready to be used and capable of accommodating several functions around car production and sales. One of André Citroën's concepts was to create hybrid buildings, cities within cities, combining not only showrooms, administrative areas, services and workshops, but also other facilities for customers, such as petrol stations, newspaper stands, hairdressing salons, restaurants and even cinemas and temporary exhibition areas under the same roof.

In 2017, the garage is presenting two mains modifications. In the post-war period, a concrete intermediate floor was added to the workshop section. Structurally, the original building "had the load-bearing capacity and height to accommodate a concrete floor, without the need to modify or reinforce the original structure". In the 1950s, on the showroom side, five concrete floor levels were added, this time with a concrete structure completely detached from the existing structure.

3. CASE STUDIES

3.1. OMA/AMO AND WESSEL DE JONGE ARCHITECTEN: ELIMINATION AND HYBRIDISATION - THE EFFACEMENT

During a lecture at Columbia University in 2009, Rem Koolhaas says that the act of preservation has become a refuge for architects to escape the derisive label of "starchitect" that is attached to them. Rem Koolhaas talks of preservation as a revolutionary act against the economic system, against the ecological system that encourages the destruction of historic buildings, by financing the purchase of new materials to rebuild in a sustainable way, rather than guaranteeing the preservation of existing resources.

In line with this 2009 statement, OMA/AMO and Wessel de Jonge architecten show a certain self-effacement in its project proposal for Kanal. Three main eliminations are made in order to "free up what will become the key spaces of the project"[7]. The first elimination removes all non-structural elements from the central axis that connects the site east-west. The second elimination empties the north-south corridor, allowing a direct connection

6. Workshop & Showroom group, IPW3, RLICC - KU Leuven Academic year 2013-2014, *Garage Citroën Brussels* (Leuven: Raymond Lemaire International Centre for Conservation, 2015), 13.

7. Oma, *Kanal le garage du XXIème siècle*, Competition dossier for Kanal (Brussels : Oma, 2017), 5.

between the showroom and the museum. The third elimination consists of removing all the floors in the showroom, except the last one.

What remains of these more or less extensive eliminations will, by default, define the forms of the institutions: theatre, showroom, museum, offices, etc. In these places found, or rather searched for and defined in the garage environment, architects insert functional technical elements and lightweight structures to keep these spaces modular. Among the elements that catch our eye, because they are foreign to the original garage, are the orange-red portal frames. These are overhead travelling cranes on wheels, used to hang stage backdrops adapted to the various events at the cultural center. By their very presence, these frames become architectural elements that help to characterize OMA's intervention. In the Zollverein Museum in Essen and the *Fondaco dei Tedeschi* in Venice, in addition to the attitude of formal effacement, it is also possible to find the introduction of color by OMA, red or orange, to underline the new technical elements, in both cases staircases. Another feature borrowed from a previous project is the steps in the museum area and the showroom. The same proportions can be found as in the Prada boutique in New York. The museum steps use the same spatial configuration in conjunction with an elevated walkway.

With the principle of elimination, OMA/AMO and Wessel de Jonge architecten manage to recover certain meanings of the original garage (showroom volume, clear axes). Compositional erasure makes it possible to preserve the phenomenological characteristics of garage by default. The punctual installation of devices taken from the OMA vocabulary (bridges, steps) constitutes the last stage in the rewriting of the site through its own vocabulary, and is inserted in a way that is detached from the existing structures, leaving a certain degree of reversibility.

3.2. OFFICE AND CHRIST & GANTENBEIN - RETURNING TO THE ORIGINAL STATE, A PICTURESQUE AND RADICAL POSTURE

The strategy adopted by the team of OFFICE Kersten Geers David Van Severen and Christ & Gantenbein for the renovation of the Citroën garage is to free the space of any additions in order to restore the garage to its original state, and to concentrate all the functions in two pure, identifiable volumes.

The qualities looked for, such as "height, magnitude and light"[8], are those intrinsic to the building state of 1935. Additions from successive eras are considered impure and uninteresting. It is therefore necessary to free the existing building of all elements considered to be obstructions, such as floors and partitions added after the date of construction, in order to restore the original structure.

Once the purity of the pristine state has been restored, the showroom serve as a showcase for artistic installations. The spaces cleared from the workshop are similar to *halles* and will be used as protected outdoor spaces, with a pleasant but uncontrolled climate.

Two main volumes have been inserted to accommodate all the functions that require air and light control: a parallelepiped and a cylinder. The

8. Office and Christ & Gantenbein, *Quartier Kanal*, Competition dossier for Kanal (Office and Christ & Gantenbein, 2017), 6.

parallelepiped, based on a warehouse typology that develops over five floors, hosts the museum. In return for this sublimation of the existing structure, a large part of it will have to be demolished in the workshop part to insert the two volumes.

The architects evoke a parallel with the Cordoba mosque as a generative approach. While the source of inspiration seems appropriate from a philosophical point of view, the proportions between the existing regular structure and the new volumes are not quite the same as those of the Mesquita in Cordoba. The sculptural nature of the new volumes is reinforced by their size and language: solid walls punctuated by voids inserted at specific positions, like in the Swiss National Museum extension by Christ & Gantenbein in Zurich.

In OFFICE and Christ & Gantenbein project, the relationship with the past is contemplative, with a nostalgic note suggested by the planting associated with the existing building, as in a picturesque image. However, by its very nature, the garage, a symbol of technical progress and optimism, is intended to be used for activities rather than to be contemplated. From our point of view, this example shows that even if the phenomenological characteristics of a place are retained, its meaning can still change. The way a place is perceived can be radically different depending on how it is exploited.

3.3. 51N4E AND CARUSO ST-JOHN, L'AUC AND THOMAS DEMAND; EXISTING AS A RESOURCE - THE QUEST OF MEMORABLE PLACES

In their proposal for the Kanal museum, architects 51N4E, Caruso St-John l'AUC and Thomas Demand consider the museum as a public infrastructure.

Their project is described in three strategies[9]. The first, linked to the existing building, consists of maintaining the building envelope as a kind of 'mantle' covering the cultural entities and events. This envelope is treated in an open and casual way, with modifications possible according to need. For example, all the glazing on the façade is replaced and new openings are created to break up the monotony of the original frame design. The roof can be modified, sometimes removed, sometimes preserved as it is, depending on what it shelters. The second strategy is to add identifiable architectural entities: the long gallery, the building dedicated to architecture, the showroom, the productive courtyard, the interval and the reservoir. Each of these entities has a different relationship with the existing building, creating a multitude of relationships with the existing structure. The third strategy is a temporal one, enabling synergies between cultural players. The project therefore remains open and adaptable, and the systems put in place should not be considered fixed.

Adam Caruso and Peter St John's practice is guided, among other things, by the search for new forms which, by analogy, provoke collective emotional responses. Here they propose six different spaces, memorable places each with its own characteristics, so that they are directly recognizable, allowing the cultural entities that settle in them to be identified. From the point of view of the design of these spaces, the existing structure becomes a background

9. 51N4E and Caruso St-John, CITRÖEN the soft museum, Competition dossier for Kanal, (51N4E and Caruso St-John, 2017).



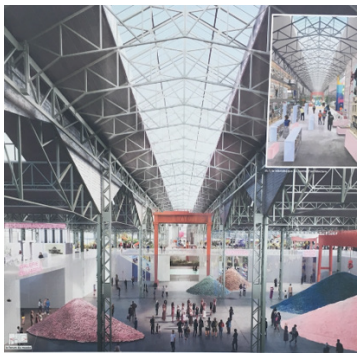






Fig. 1, Alexis Dumont, garage Citroën, Brussels, Belgium, 1934, interior view of workshop building.
© C. Fucelli, 2019.

Fig. 2, OMA, competition *Kanal*, Brussels, Belgium, 2017, view of the aisle from the Museum (former workshop building): extract from competition sheet 4.
© OMA, 2017.

Fig. 3, OFFICE and Christ & Gantenbein, competition *Kanal*, Brussels, Belgium, 2017, view of the *halles* (former workshop building).
© OFFICE, 2017.

Fig. 4, 51N4E, Caruso St-John and l'AUC, competition Kanal, Brussels, Belgium, 2017, Le reservoir. © Caruso St-John, 2017.

where these different objects, which we can compare to follies, take place.

The implementation of various devices in existing buildings will bring with it constraints that will be dealt with on a case-by-case approach. In this series of approaches, the existing remains in the background, when it is not totally hidden or transformed.

In the *The Triple Folly* in Ebeltoft, Denmark 2017-2022, a project by Caruso-Saint-John in collaboration with the artist Thomas Demand, formal similarities can be found with the entities designed for Kanal.

In accordance with the intentions expressed in the competition dossier, the architects consider the existing as a resource; their primary intention is therefore not to sublimate the existing, but to safeguard it in order to create devices that create different relationships with it. The existing, as a resource, is at the service of the project and even if the materiality of the *déjà là* is safeguarded, reasonable doubts may arise as to the preservation of the intrinsic spatial and formal characteristics of the garage.

4. CONCLUSION

All projects fulfilled the specifications, defined with the intention to preserve the existent. However, this analysis allows us to identify different approaches/attitudes to the materiality found on the place. While in the project by 51N4E, Caruso St-John, l'AUC and Thomas Demand the existing matter is a support behind the new features, in the proposal by OFFICE and Christ & Gantenbein the same matter returns to the forefront in opposition to the new devices. In the OMA/AMO and Wessel de Jonge architecten proposal, the intervention strategy goes beyond material as permanence; the

locus is considered in the wholeness of its multitude of phenomena; existing matter is neither behind nor besides, but "in" new devices.

In OMA/AMO and Wessel de Jonge architecten proposition, the elements that characterize the place participate (and are) in the new devices. The new devices are designed to take advantage of the specific characteristics of the existing space. The existing is in the new and vice versa. The old and the new are thus intertwined.

In OFFICE and Christ & Gantenbein proposition, the elements that characterize the place stand side by side with new devices. The new devices refigure the existing space. The old and the new coexist in a new way, while maintaining a dialogue fundamentally based on contrast, and thus remaining identifiable.

In 51N4E, Caruso St-John, l'AUC and Thomas Demand proposition, the elements that characterize the place stay in the background of new devices. What already exists becomes a support for the introduction of new features. Existing elements remain in the background, visible or hidden by the new devices.

It is also noteworthy that the more the characteristics of the site are consciously taken into account in the design process, the less the architects' distinctive design elements take space. ■

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BIOGRAPHY

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THE OCEAN TERMINAL COMPLEX, DURBAN: THE SEARCH FOR MEANING IN AN IRREVOCABLY CHANGED CONTEXT

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ABSTRACT

The buildings and related infrastructure comprising the Ocean Terminal complex at Durban harbour, South Africa, were completed in 1962. The design of the new complex had been awarded to Zakrzewski & Partners Consulting Engineers in 1958, with Architect Janusz Warunkiewicz appointed as architect in 1959.

Despite being one of the key modernist works in South Africa, the entire complex is now earmarked for total demolition to accommodate open storage of container units and motor cars, key elements of modern maritime trade.

The objective of this study is to consider the historic and contemporary meaning and significance of the place, its relevance in a society that has undergone fundamental change and its role in an economic context markedly different from its original function.

The paper is derived from a research project the author undertook to establish the heritage significance of the place and to explore prospects for conservation. Detailed on-site work as well as archival research was undertaken.

The outcomes of the study demonstrated that the degree of architectural, technical and artistic innovation and excellence suggest that its total removal should not be considered, despite loss of function and context.

Ultimately however, the political and economic arguments held sway and the likely outcome is total demolition, leading to a loss of an iconic set of structures in the Durban harbour. While the heritage process and study ensured that the significance of the complex was placed centrally in the debate, another economic and political model would be required to realise a different outcome.

1. INTRODUCTION

1.1. AIM OF THE STUDY

The Ocean Terminal complex situated on the T-Jetty at Durban Harbour, South Africa, is an approximately 800m long sequence of built spaces including road interchanges, ramps, cargo handling facilities, port operations, passenger embarkation and disembarkation amenities, public piazzas and a promontory, with a vast passenger terminal at its centre, sited adjacent to cruise liner berths. The building complex represents an inventive, coherent and masterful interplay between civil engineering, architecture and art. However, despite the very high (Grade II)[1] heritage grading and recognition as one of the key modernist works in South Africa, the entire complex is now earmarked for total demolition to make way for open storage of container units and cars, key elements of modern maritime trade.

The objective of this study is to consider the historic and contemporary meaning and significance of the place, its relevance in a society that has undergone fundamental change and its role in an economic context markedly different from its original function.

The paper is derived from a 2022 research project[2] the author undertook to establish the heritage significance of the place and to inform and explore prospects for conservation. Detailed on-site work as well as archival research was undertaken.

1.2. ORIGINS OF THE OCEAN TERMINAL COMPLEX

The design of the new Ocean Terminal Complex was awarded to Michal S Zakrzewski & Partners Consulting Engineers in 1958, while Polish architect Janusz Warunkiewicz[3], recruited by Zakrzewski, was appointed as project architect in 1959. The overall structure was completed in 1962[4]. The multi-disciplinary team included architect Hans Hallen, engineer Milek Masojada, and artist John Hooper. Hooper's quirky and colourful sculptures throughout the complex provide a counterpoint to the modernist detailing and materiality.

The work was initiated to facilitate the growing export industry and also steam ship passenger travel between South Africa and UK, driven by the Union-Castle Mail Steamship Company which docked weekly at Durban and departed with passengers and 4000 tons of fruit. The proposed terminal had to provide storage for cargo in transit, as well as fruit (including pre-cooling facilities to slow the ripening process during the long journey North), and facilities for embarking and disembarking passengers, together with their baggage and cars. This multi-functional role was fulfilled by designing an ingenious building complex that performed its various functions from different levels of a single structure aligned along the wharf edge, with a stratified sectional profile very like the cruise liners it serviced.

1.3. DESCRIPTION OF THE BUILDINGS

The Ocean Terminal Complex encompasses a site-wide intervention stretching the entire length of the c1945 constructed T-Jetty with space being organised both horizontally and vertically. The layout stretches from the raised circular

1. The National Heritage Resources Act (NHRA) of South Africa (1999) has a three-tier system of grading with Grade I being National Heritage Sites, Grade II Provincial Heritage Sites, and Grade III, locally managed heritage resources.

2. Rennie Scurr Adendorff, *Durban Harbour Heritage Scoping Report as a Precursor to S.34 and/or S.38 Submissions to AMAFA*. Unpublished Report, 2022.

3. Docomomo South Africa (2023). Warunkiewicz emigrated to Canada shortly after this project, where his notable projects include the design of metro stations Place-d'Armes and Henri Bourassa, Montreal and 'La Pyramide' apartments on Nuns' Island, Montreal). He died in Toronto in 2015 a few weeks short of his 105th birthday.

4. Rennie Scurr, *Durban Harbour Heritage Scoping Report as a Precursor to S.34 and/or S.38 Submissions to AMAFA,* 2022.

roadway interchange in the north, allowing goods trains to pass unhindered underneath, with a series of raised goods and parking decks atop which sit the two iconic centrepieces of the complex, running along to the end of the pier terminating in a circular car ramp and a sculptural stair and viewing pavilion.

Space was organised horizontally in plan with duplicated and segregated spaces for 'Europeans' and 'Non-Europeans'[5], thereby spatially entrenching the Apartheid ideology of the era. Vertically, goods and passenger handling happened simultaneously in one building. The terminal hall was raised to be level with passenger decks and so passengers traversed from the parking area, through the grand volume of the Ocean Terminal itself to check-in and then across to telescopic gangways connected to the ocean liners. Spatially, the inventive and unique design has more in common with modernist rail terminals such as Termini in Rome and contemporary railway and airport designs than it does with other wharf-side structures of the 1950s and 1960s, such as its 1950 counterpart in Southampton, England.[6]

While the roadways, ramps and the first two building levels are largely functional, they nonetheless integrate inventive engineering as well as thematic architectural detailing that ties into the remainder of the complex. However, it is in the two centre-piece buildings where the architectural and engineering virtuosity is most clearly seen. These designs have links with international Modernism, notably Brazilian Modernism and clearly reference the work of both Le Corbusier and Oscar Niemeyer. The Durmarine administration/ Port-Captain's tower building and the Ocean Terminal itself, represent a high point of modernism in Durban and are richly detailed with an array of architectural forms and devices.

In the case of the Durmarine tower, these elements include V-shaped columns and a raised and recessed entry level, facade-wide metal sun screening on the North facade and curtain glazing with coloured spandrel panels on the South facade. The roof level has wrap-around glazing for the Port Captain's control area.

The Ocean Terminal building is richly imbued with mosaic and sculptural art offset against the clean concrete, glass and terrazzo interior. The main public space is conceived as a vast transport hall with precast tapered concrete columns and a sweeping, folded V-shaped concrete roof, with expansive glazing looking directly onto the docked cruise liners. The exterior is somewhat less refined than its interior, but also relies on alternating facade treatments; full glazing facing east onto the ocean liners and a facade comprised of metal sun screening on the West, carpark facade. Punctuating the linear entry facade is a marine-inspired sculpture by John Hooper[7].

A vital component contributing to the design and built excellence lies in the inventive and seamless integration of engineering, architecture and art, all in a building complex driven by an exacting functional programme.

1.4. SOCIAL AND ECONOMIC CONTEXT

The Ocean Terminal complex was informed by key events that impacted South Africa's economic and political history. The global boom that followed the end

5. Terminology as per racial classification of the South African population in the apartheid era.

6. The Southampton Ocean Terminal, designed by JH Jellett, opened in 1950 and was demolished in 1983. https://southamptonstories.co.uk/story/ocean-terminal/ Last accessed 2024.06.10.

7. The artworks integrated in the complex include mosaics and sculptures by Armando Baldinelli from Italy, John Hooper from England and James O Hall from New Zealand. https://www.worldofinteriors.com/story/ocean-terminal-building-durban-south-africa-modernist-architecture Last Accessed 2024.06.10.

of World War II and, locally, the impact of the 1948 ascension to power of the National Party government in South Africa created the need for the large, modern terminal but also informed its programme and purpose.

Durban was well positioned to respond to the boom in globalised trade, and by the early 1970s it was the country's biggest seaport and the 11th largest commercial port worldwide, handling more cargo than all other South African ports combined.[8]

Alongside this growth, apartheid legislation entrenched in law the policies of segregation and exclusion that had been in place from the mid-1800s. A suite of legislation determined where black South Africans may live, their movement, and restricted them to unskilled labour. In June 1958 Durban was zoned as a White Group Area and the city reserved for white people, with all people of colour relocated to racially designated areas to the north and south.

In 1960, because of these policies, South Africa was pushed to leave the British Commonwealth and in 1961 became a Republic. However, while policies promoting separate development and white supremacy were criticised outside of South Africa, neither trade in cargo nor tourism was immediately impacted until the sanctions era of the 1970s and 80s. Durban Port embarked on a decade of intense expansion and development. The Union-Castle line with its weekly Royal Mail service continued to promote South Africa as an exotic, fun-in-the-sun destination.

The Ocean Terminal Building's design and programme, however virtuosic from a technical and design point of view, remains essentially a product of the politics and economics of this period.

2. FUNCTIONAL AND SPATIAL CHANGES OVER TIME

2.1. END OF AN ERA

The demise of the Ocean Terminal was hastened by the concurrent impacts of commercial air travel, increasing containerisation as well as international sanctions imposed on the South African Apartheid state in the mid to late 1970s onwards. By then the hey-day of the mail-ship was over, and passenger demand for sea travel declined with the introduction of the Boeing 747 in 1971 as well as other larger commercial aircraft which made air travel both more accessible and more affordable. The buildings fell into increasing redundancy following the termination of the last Union Castle mail ships between the UK and South Africa in 1977, only 15 years after the construction of the Ocean Terminal complex. General administration, cargo and logistics functions continued and, in order to find a use for the grand space, the terminal hall was repurposed as offices in the early 1990's. Interestingly, the resurgence of cruise ships in more recent years resulted firstly in one of the older warehouses on T-Jetty being converted to serve passengers and, more recently, in the construction of a brand new cruise terminal[9] nearby in another part of the harbour and which opened in 2023.

2.2. A SECOND LIFE

In the early 1990s, as part of a business rationalisation process, the Ocean Terminal building was converted to provide over 5000 square metres of

8. As noted in the Standard Encyclopedia of South Africa (1972).

office space for a staff of 300 people.[10] Two mezzanine levels provided additional floor space either side of the row of central columns; these floors were set back from the outer walls to create double volume edge spaces that allowed natural light to penetrate in, and to provide extensive views over Durban Bay out towards the Bluff.

The conversion was done with some care and consideration for the existing building and its materiality: the terrazzo and mosaics were cleaned and conserved, hardwood from the customs counters was recycled as stair treads, and overall, the new insertion reads as secondary in character set apart from the original 1962 composition. However, the extent and programme of the insertion required new steel beams to be fixed to the central columns to support a new concrete mezzanine slab laid across the previously open area. Furthermore, the thin shell-like roof was obscured with an insulated ceiling slung underneath, while the space was fully air-conditioned and serviced. The overall clutter and heaviness of the 1990s detailing foregrounds the new "layer" and overwhelms the original.

While this development allowed the building to be used for another three decades (roughly twice the period of its first incarnation), and even though the physical intervention can be regarded as 'reversible' and 'lightweight', the true impact on heritage is clear. The programme and reuse of the space failed to respect the form, function and spatial quality of the original composition. The original design's inspiring interior volume and functional interconnectedness has been fully obscured and lost, existing only in memory and in archival images, despite the building still standing.

The over-riding heritage impact of this adaptive reuse has been to neutralise the building's spatial power and render it simply as real estate. In this way, any hope of saving it now becomes even more difficult.

3. CONTESTATION OF VALUES

3.1. CONTEMPORARY MEANING AND SIGNIFICANCE

The Ocean Terminal complex lies at the intersection of contested views on significance. Highly valued by the architectural community primarily, this author graded the key buildings and elements as Grade II heritage sites.

The Statement of Significance for both the Durmarine Building and the Ocean Terminal noted inter alia that "the building is one of the modern movement masterpieces in South Africa".[11]

The significance of the complex overall derives from its masterful spatial organisation (both horizontally and vertically), clear concept, highly skilled engineering and technical solutions and modernist detailing as well as the integration of mosaic and sculptural artworks throughout.

Ordinarily, such deemed significance could be expected to afford a level of protection and curb the development pressures. However, countering this is the fact that the complex lies beyond the port security cordon and is no longer publicly accessible. Apartheid legislation ensured that, by and large, only black South Africans who laboured in the complex experienced it, and latterly its removal from the public realm and conversion to mundane office

9. The Nelson Mandela Cruise Terminal, https://www.kcterminal.co.za Last Accessed 2024.06.10.

10. Laurie Wale "Ocean Terminal Durban". *Architect and Builder*, (July 1993): 6-10.

11. This proposed Grading was also endorsed by the Kwa-Zulu Natal Provincial Heritage Resources Agency, AMAFA, who also granted the Permit for the Demolition; Rennie Scurr, *Durban Harbour Heritage Scoping Report as a Precursor to S.34 and/or S.38 Submissions to AMAFA*, 2022.

space further consigned it to irrelevance to the broader public. Coupled with loss of function, the desire to demolish it is perhaps not hard to understand.

3.2. HERITAGE INFORMED SCENARIOS AND RECOMMENDATIONS

The outcomes of the author's study demonstrated that the degree of architectural, technical and artistic innovation and excellence suggest its total removal should not be considered, despite loss of function and context. Despite this, and understanding the political and economic will to achieve *tabula rasa*, a series of scenarios were proposed which would retain the two core buildings but lose the road and parking infrastructure portions in the hope that a future use could still be found. As one example, the return of the terminal to its open, bare shell state could potentially transform the space into a conference venue, or vehicle facility allied to the export trade. One such example offered is Saarinen's TWA Terminal at JF Kennedy airport in New York. There, the iconic nature and architectural innovation and excellence allowed the terminal to survive rampant airport development and emerge recently as a destination hotel, restored to showcase its 1960s design. This approach applied in Durban would require there to be a degree of economic viability and some consensus as to significance and value even to be considered.

Such a compromise in retaining only the core however neither satisfies architectural purists who see value in the whole composition, nor the Port Authority for whom the only viable option is in expanding the open container terminal loading areas and entrenching the no-public access secure zone.

4. CONCLUSION

While the heritage process and study ensured that the significance of the complex was placed centrally in the debate, another economic and political model would be required to realise a different outcome.

The result of the planned demolition will be a total erasure of the memory of the site as well as the loss of the highly significant and rare 1960's transport complex, and along with it, unique elements of South African architectural, engineering and artistic heritage. Countering this are arguments related to job-creation in a developing country, redundancy in the design and programme and the need for Durban port to meet the demands of worldwide trade in the 21st century.

Recent attempts to stave off demolition have been made in response to demolition Permits being granted. Ultimately however, the political, developmental and economic arguments held sway and the most likely outcome is total demolition, leading to a loss of an iconic set of structures in Durban harbour.

The role of Docomomo to document the building prior to its loss is recorded, but ideally this needs to extend to input into the planned Museum reflecting aspects of the building in a meaningful manner, and potentially even to identify elements for retrieval and reuse in the envisaged display.

In the South African socio-political context, the need to reframe the history of the Ocean Terminal Complex is also paramount. Instead of focussing only

Figure 1. Architect Janusz Warunkiewicz with Michal S Zakrzewski & Partners Consulting Engineers. Durmarine Building, Durban, South Africa (1958-1962). North elevation of Durmarine administration tower. ©Transnet Heritage Library Photo Collection ref. N76079. Unknown photographer, 1966.

Figure 2. Architect Janusz Warunkiewicz with Michal S Zakrzewski & Partners Consulting Engineers. Ocean Terminal, Durban, South Africa (1958-1962). Entrance facade of the Ocean Terminal building with sculptural art and metal sun-screening. ©Transnet Heritage Library Photo Collection ref. PB2718_004. Unknown photographer, 1962.

Figure 3. Architect Janusz Warunkiewicz with Michal S Zakrzewski & Partners Consulting Engineers. Ocean Terminal, Durban, South Africa (1958-1962). Interior volume. ©Transnet Heritage Library Photo Collection ref. PB2718_008. Unknown photographer, 1962.







on the architectural narrative of the design, the history also needs to address the role of black South Africans who laboured in the harbour and who built the complex, as well as the spatial apartheid which existed throughout the lifespan of the Ocean Terminal, thereby providing some opportunity for redress. Demolition and economic development alone can never achieve this. ■

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BIOGRAPHY

Mike Scurr is an Architect, heritage consultant and Director of Rennie Scurr Adendorff in Cape Town, South Africa. He graduated from UCT with a degree in Architecture and later an MPhil in Conservation. Mike has over thirty-five years' experience working on heritage and conservation projects. Current commissions include the post-fire rebuilding of the Parliamentary complex in Cape Town, conservation work in the historic old town of AlUla, Saudi Arabia and a range of projects involving significant Cape buildings and landscapes. Mike's primary interest and research focus lies in adaptive reuse and exploring ways in which meaning can be layered and interpreted in changing contexts.

NARRATING THE LAYERS OF HISTORY: EXPLORING TEMPORAL CHANGES AND PRACTICAL REALITIES IN SCHOOL BUILDING RENOVATIONS

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ABSTRACT

This contribution explores architectural renovations of selected school buildings in Amsterdam from various periods within the Modern Era, each designed by different architects. It entails a thorough investigation of interventions spanning from initial design and construction up to 2010, categorizing them by shared themes and distinctive features. The authenticity and unique attributes of each project are central, influencing the intervention strategies implemented. Emphasis is placed on employing a visual research tool to deeply understand the various interventions shaping the historical narrative. Interventions – harmonizing heritage preservation with contemporary renewal imperatives – are chronologically sequenced, forming the core of the tool.

Methodologically, the research utilizes Amsterdam municipality's digitized data on all buildings until 2010. The selection prioritizes school buildings designated as national or municipal monuments, anticipating access to comprehensive data through official publications and secondary sources. Through a detailed historical analysis, individualized historical trajectories for each building are constructed on a timeline, highlighting technological integrations while uncovering real-life scenarios and practical necessities.

The timeline, more than a chronological record, becomes an intricate storyline and contextual history. 'Breaking points', marking significant interventions, are crucial for understanding transformative changes impacting perception, utilization, and adaptation to contemporary requirements. Integrating textual materials, action descriptions, and analyses of construction documents and technical drawings, the timeline provides a comprehensive representation of the buildings' evolutionary journey.

In conclusion, the study proposes a multi-layered, time-adjusted monitoring dashboard to track architectural renovations. The devised flexible timeline functions as a record-keeping instrument, a streamlined information tagging system, and an integrated visual overview. This chronological data registry synthesizes different information layers within a broader historical context, thus assisting the exploration, structuring, and understanding of the complex building transformations. By complementing the documentation, archiving, and analytical processes, it could potentially serve as a forecasting tool to regulate in future actions in heritage management and planning.

1. INTRODUCTION

Architectural renovations of historic school buildings present a compelling intersection of conservation and contemporary adaptation within the urban landscape. Prior to renovation planning and design stages, it is fundamental to obtain a comprehensive overview of past interventions and analyze the current condition.

Information visualization aims to uncover the underlying structure of extensive datasets by employing graphical elements to represent objects and relations. This process involves substantial schematization, which discards the specificity of objects and 'reduces' data, to extract patterns across their characteristics.[1] Employing a timeline as a research, exploration, and analysis tool is essential, as it offers a visual representation of a building's historical evolution. This approach resonates with the insights derived from Grandjean's[2] exploration of data visualization in historical contexts, which underscores their pivotal role in effectively conveying historical narratives and, moreover, as heuristic tools for exploration and analysis. In contemporary historical perception, the timeline serves as a unique graphical embodiment of history, representing and quantifying chronological connections while encapsulating the essence of the historical era.[3]

Timelines, as visual and art-based data collection methods,[4] are indispensable tools in constructing narratives, conceptualizing and understanding personal or collective histories within qualitative research methodologies, serving as both final outputs and catalysts for additional reflection.[5] Utilizing timelines for retracing individual journeys or documenting narrative interviews demonstrates their potential in comprehending a building's historical evolution and transformative moments, akin to how a physician uses a patient's medical history for diagnosis and treatment planning.

In the context of this study, timeline - as a visual research tool - facilitates a chronological exploration of a building's history, enabling researchers and viewers to navigate through its temporal layers and uncover patterns or transformations that might not be immediately apparent from textual sources alone – by simplifying the complex historical information.

This approach ensures the building's perpetual evolution is presented comprehensively, with the integrity of meaning intact. The timeline functions as a catalyst for researchers and decision-makers in interpreting and evaluating past interventions through documentation and analysis. To transcend the limitations of a purely linear historical flow, and to enrich the timeline with multiple informative layers, approaches relating to building systems and layers, and conservation and renovation practices have been examined.

A decisive complement to this chronological record is identifying the 'where' or 'what' of the intervention, by specifying the object, fabric, or layer undergoing modification.

In construction and architecture, interpreting a building as a complex system involves analyzing how its components interact, from exterior to interior, including connections to service systems and municipal infrastructure, evaluating their performance over time. The conceptualization

1. Lev Manovich, "What is visualisation?" *Visual Studies* 26, no.1 (2011): 36-49. https://doi.org/10.1080/1472586X.2011.548488

2. Martin Grandjean, "Data Visualization for History," in *Handbook of Digital Public History*, eds. Serge Noiret, Mark Tebeau and Gerben Zaagsma, (Berlin, Boston: De Gruyter Oldenbourg, 2022), 291-300. 2022.https://doi.org/10.1515/9783110430295-024

3. Daniel Rosenberg and Anthony Grafton, *Cartographies of Time: A History of the Timeline* (New York: Princeton Architectural Press, 2010).

4. Valentina Baú, "Viewing Life as a Timeline: Digital Visual Research to Retrace People's Journeys," *Qualitative Research*, (February 8, 2024). https://doi.org/10.1177/14687941241230233

5. Francis Guenette and Anne Marshall, "Time Line Drawings: Enhancing Participant Voice in Narrative Interviews on Sensitive Topics." *International Journal of Qualitative Methods* 8, no. 1 (March 2009): 85-92. https://doi.org/10.1177/160940690900800108

of building performance through a systems approach was established and put into practice during the early 1970s by the US National Bureau of Standards.[6] Since then, it has been the subject of discourse in numerous publications and has evolved into a foundational framework for built environment studies.

Aligned with this perspective, the principle of 'layering' highlights the varied rates of change among a building's constituents, reflecting their service lives. The concept of shearing layers illustrates the dynamics of change and adaptation within buildings. Brand suggests that buildings have different layers (i.e., site, structure, skin, services, space plan, and stuff), each with its own pace of change, ranging from rapid shifts within short periods to potentially enduring changes over time.[7]

Brand's concept has been highly influential, extensively utilized and reproduced in the field. The relationship between the layers and temporality is revisited in various sources, with 'replacement cycles' being reinterpreted and re-estimated for different recurrence intervals.[8-9]

A further aspect to support and enrich this chronological record is identifying the rationale behind the intervention, specifically the 'why' or 'what for' in relation to the building's storyline and contextual integrity. The issues, deficiencies, or requirements addressed can be incorporated as an additional layer into this historical narrative.

International literature regarding building conversion strategies reveals diverse findings across various contexts and dimensions. Broekhuizen[10] suggests that a commonly employed standard model for conversion delineates four intervention levels applicable to existing buildings: physical/material change, spatial change, alteration of building volume, and functional adjustment. In the Atlas of School Building *(Scholenbouw Atlas)*, Boekhuizen outlines nine strategies grounded in material-spatial criteria for adapting existing schools through physical-spatial interventions, noting partial overlaps among them.[10-11]

Alternatively, from a conservation standpoint and based on impact evaluation, the ERM *(Stichting Erkende Restauratiekwaliteit Monumentenzorg)*[12] has introduced the 'Restoration Ladder' inspired by the Venice Charter, outlining three prioritized intervention levels: preservation/ maintenance, repair, and reconstruction. In implementation, these steps are guided by principles such as minimal intervention, solidity/durability, compatibility, material principle, and replacement with similar materials or techniques.[12-13]

A timeline can therefore be employed as a multi-layered record-keeping instrument, a streamlined information tagging system, and an overview that synthesizes and integrates diverse layers of information within the broader historical context. By facilitating the documentation, archiving, and analytical processes, it has the potential to guide or inform future actions.

2. METHOD FOR EXPLORING THE LAYERS OF HISTORY

For the selected case-study buildings, an initial review and examination of the construction and environmental files available in the archives of the Amsterdam municipality were conducted. Interventions were depicted

6. Neil Gallagher, ed., *Building research at the National Bureau of Standards 1968-1974* (Washington, D.C.: National Institute of Standards, Department of Commerce, 1979), https://doi.org/10.6028/NBS.BSS.75

7. Stewart Brand, *How Buildings Learn: What Happens After They're Built,* (Penguin Books, 1994).

8. World Business Council for Sustainable Development, *The Building System Carbon Framework: A common language for the building and construction value chain* (WBCSD Publications, 2020), https://www.wbcsd.org/resources/the-building-system-carbon-framework/

9. "10 – Existing Building Reuse," LMN Architects, accessed Oct 11, 2023, https://lmnarchitects.com/lmn-research/10-existing-building-reuse

10. Dolf Broekhuizen, Monique Arkesteijn, Peter de Jong, and Frido van van Nieuwamerongen, "Conversion Strategies for Dutch Primary Schools: Practice and Refinement," *Journal of Architecture and Urbanism* 44, no. 1 (August 21, 2020): 69–77. https://doi.org/10.3846/jau.2020.11448

11. Dolf Broekhuizen, *Scholenbouwatlas: Verbouwen als nieuwe opgave voor basisscholen en kindcentra [School Construction Atlas: Renovation as a new task for primary schools and child centers]* (Nai010 publishers, 2015).

12. "Stichting Erkende Restauratiekwaliteit Monumentenzorg," Home - Stichting ERM, accessed Nov 6, 2023, https://www.stichtingerm.nl/

13. Barbara Lubelli, Uta Pottgiesser, Wido Quist, and Susanne Rextroth, *Dealing with Heritage: Assessment and Conservation (*BK Books, 2021).

on timelines based on the years of relevant documents, establishing a chronological narrative for each building and highlighting pivotal moments in its history. The development of these timelines involved consulting the image bank of the Municipality of Amsterdam City Archives *(Gemeente Amsterdam Stadsarchief)*[14] and other supplementary sources. The primary objective of this stage was to clarify each building's narrative by synthesizing information sourced from various outlets, including primary construction files and additional reference materials.

During the data collection phase, interventions identified were documented as textual descriptions, referred to as 'action descriptions' in this study, and compiled into separate datasheets using Excel for each case-study building. The organization of these interventions were essential, employing an analytical approach to identify shared themes. Initially, the location of each intervention was determined, following a two-level categorization, inspired by the building systems approach and 'layering' principles. This grouping describes the part of the building affected by the intervention. The second category, also structured into two levels, explores the impact of the intervention concerning updates and enhancements to the building condition, addressing the rationale or objective for improvement. Given the diverse nature and level of detail in the action descriptions, a thematic categorization of interventions was needed. The action descriptions themselves guided the creation of these shared themes, implemented through an iterative process. Consequently, the identified action descriptions for each building were organized under a three-level hierarchy. These additional organization and categories are expected to further enhance the visualizations for different purposes.

To test and design the applicability of additional layers to the historical narrative, a secondary timeline was created based on the identified significant intervention times (i.e., 'breaking points') and the concept of shearing layers. Brand's renowned diagram was employed as a data-driven label to visually link the documented interventions and their associated shearing layers to the timeline. Each line running from the inside out represents a different building layer, similar to the original diagram. Different colors indicate different temporal cycles and periods, expanding the chronological record with supplementary information, addressing the 'where' or 'what' questions, and illustrating the temporal sequence of these interventions across the various layers. Additionally, icons were integrated into the historical narrative to provide a third informational dimension, which addresses the 'why' behind the intervention.

3. COMPARISON OF CASE-STUDY CARIABLES

An essential criterion for selecting the case study buildings is the availability of specific data related to the structures and interventions. Furthermore, the national or municipal monument status of these buildings is significant, as it ensures easier access to a broader range of information. Through detailed historical analysis, the research aims to uncover temporal similarities or differences, distinct historical processes and characteristics, among the

14. Stadsarchief Amsterdam [Amsterdam City Archives], accessed December 12, 2023, https://www.amsterdam.nl/stadsarchief/amsterdam-city-archives/

selected architectural case studies: *Openluchtschool*, 1930; *Buitenveldertse Montessorischool*, 1975; *SBO De Kans*, 1952; *Amsterdamse Montessorischool en Willemsparkschool*, 1983; and *5e Montessorischool*, 1931.

Of the five selected school buildings, one holds national monument status, while the remaining four are municipal monuments. These buildings are situated in various parts of the city, some within protected areas.[15] The Open-air school, located within a nationally protected cityscape, has undergone six notable interventions. Positioned towards the north of the city, the Buitenveldert Montessori School has undergone one major intervention. SBO De Kans is situated within a reconstruction area of national importance and has experienced three notable interventions throughout its historical timeline. The Apollo Schools, situated within a nationally protected cityscape, consist of two independent structures and have undergone three notable interventions. Finally, the 5th Montessori School has experienced two notable interventions.

4. FINDINGS

The study has focused on developing and testing the multi-layered timeline through a selective exploration of five distinctive Amsterdam school buildings, driven by the municipality's comprehensive digital database. Leveraging these documents, construction timelines were delineated, creating detailed chronological accounts of each building's evolution. This methodical approach highlights the significance of utilizing available digital resources and establishes a crucial foundation for temporal analysis within the broader context of the study.

As anticipated, each building exhibits distinct timelines featuring varying numbers of 'breaking points,' equivalent to significant interventions. These timelines present diverse levels of detail in terms of information, reflecting different life spans. Various aspects, issues, or narratives take prominence for each case, highlighting the uniqueness of these buildings. The interventions, regardless of their technical or practical nature, are intricately connected to the individual stories and contextual history of each building.

Illustrated in (**Fig. 1**) the Open-Air School, one of the oldest school buildings among the selected cases, features a particularly informative timeline. This data richness can be attributed to the building's construction year and age, its national monument status contributes significantly to the wealth of available information. In contrast, SBO De Kans, depicted in (**Fig. 2**), presents a less-dense timeline, indicating either fewer interventions or less available information. Notably, identifying pivotal moments relies on both data availability and subjective judgments. Some intervention points marked on the timeline, such as roof terrace repairs, were noted from written documents rather than architectural drawing, emphasizing the subjective nature, flexibility, and inclusivity of the timeline approach.

The multi-layered, time-adjusted monitoring dashboard (**Fig. 3**) illustrates alterations and interventions in the Open-Air School's historical process, associating them with building layers through data-driven labels. The relevant years' interventions are indicated in the color-coded layers. Nevertheless,

15. Gemeente Amsterdam – Interactieve kaarten [Municipality of Amsterdam – Interactive maps], accessed January 18, 2024, https://maps.amsterdam.nl/cultuurhistorie/

the limited number of documented interventions makes pattern identification challenging, rendering forward predictions based on a singular timeline infeasible. The temporal sequence for a single case building should be refined by incorporating data from multiple cases to reveal observable and reliable patterns, thereby reinforcing the 'estimated' replacement cycle of layers with real-life data.

An overall detailed analysis of intervention locations highlights the 'Building Envelope' (skin) as a significant focus area. Additionally, the interventions are primarily designed to enhance inhabitability, functionality, and technical compatibility of the buildings.

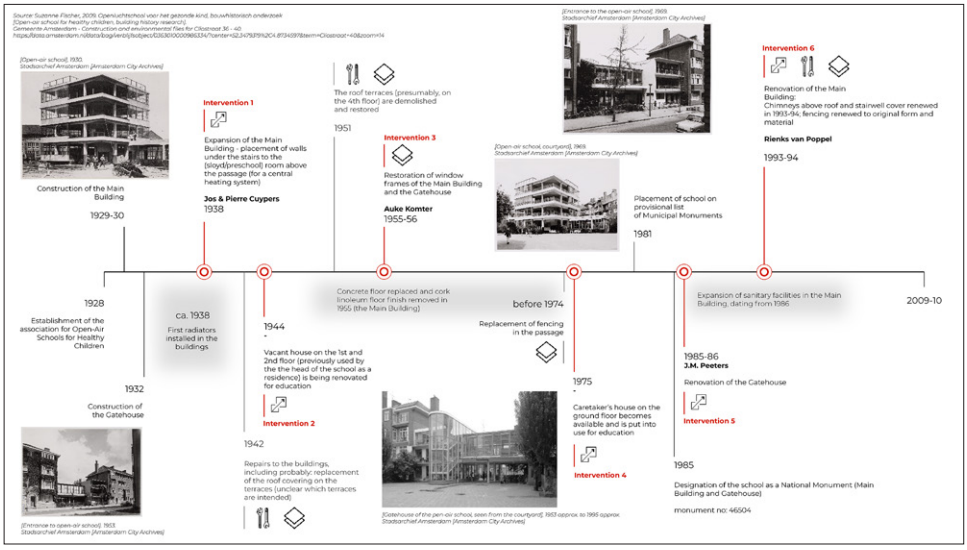
While certain topics may appear prominent in this discussion, they do not imply a quantifiable measure or hierarchical ranking of intervention importance. Rather, their prominence reflects broader relevance within the context of architectural renovations and their potential representations on timelines. In this study, they serve to explore the feasibility of incorporating additional layers onto timelines, potentially enriching historical narratives. Through color coding and iconography, these categories could be integrated into timelines for a more nuanced and comprehensive understanding of a building's history.

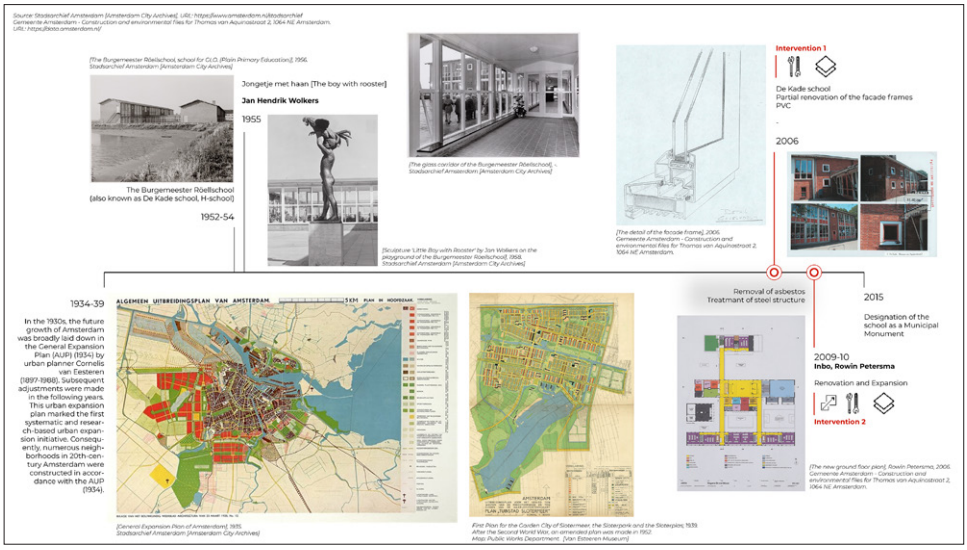
5. DISCUSSION

The presented study, which examined specific case studies to develop a systematic approach to understanding intervention processes, constituted a precursor exploration to the doctoral thesis. It utilized authentic data derived from real-life scenarios to consolidate disparate information layers through a temporal lens. Further case studies would facilitate the implementation of data-driven approaches to pattern recognition and prediction.

Each building and renovation project is unique, influenced by a complex interplay of its historical significance, structural condition, functional requirements, and societal implications. Variations in data availability and information quality further complicates the examination of real-life scenarios. Therefore, a holistic yet refined analysis is crucial to comprehend the multifaceted nature of architectural interventions and their implications.

Visualized historical layers facilitate understanding of past uses, architectural alterations, and adaptations, thereby informing decision-making processes in conservation, restoration, and adaptive reuse projects. Analyzing patterns and trends across different renovation projects reveals common themes, challenges, and opportunities within the field and practice. This enables the development of best practices and guidelines for sustainable heritage management, ensuring the long-term preservation of built heritage for future generations. The proposed multi-layered, time-adjusted monitoring dashboard could potentially be a valuable tool for predicting forthcoming interventions, aiding systematic resource allocation and intervention management planning. Accordingly, it may assist to prioritize heritage management activities, by discerning probable future interventions and forecasting their timing, location, layers affected, and any possible deficiencies based on observed patterns and replacement cycles. In turn,


Construction of the Main Building
1929-30
Intervention 1
Expansion of the Main Building - placement of walls under the stairs to the (lloyd)preschool] room above the passage (for a central heating system)
Jos & Pierre Cuypers
1938
The roof terraces (presumably, on the 4th floor) are demolished and restored
1951
Intervention 3
Restoration of window frames of the Main Building and the Gatehouse
Auke Komter
1955-56
Placement of school on provisional list of Municipal Monuments
1981
Intervention 6
Renovation of the Main Building:
Chimneys above roof and stairwell cover renewed in 1993-94; fencing renewed to original form and material
Rienks van Poppel
1993-94
2009-10
1928
Establishment of the association for Open-Air Schools for Healthy Children
1932
Construction of the Gatehouse
ca. 1938
First radiators installed in the buildings
1944
Vacant house on the 1st and 2nd floor (previously used by the the head of the school as a residence) is being renovated for education
Intervention 2
1942
Repairs to the buildings, including probably: replacement of the roof covering on the terraces (unclear which terraces are intended)
Concrete floor replaced and cork linoleum floor finish removed in 1955 (the Main Building)
before 1974
Replacement of fencing in the passage
1975
Caretaker's house on the ground floor becomes available and is put into use for education
Intervention 4
Expansion of sanitary facilities in the Main Building, dating from 1986
1985-86
J.M. Peeters
Renovation of the Gatehouse
Intervention 5
1985
Designation of the school as a National Monument (Main Building and Gatehouse)
monument no: 46504


The Burgemeester Röellschool (also known as De Kade school, H-school)
1952-54
Jongetje met haan [The boy with rooster]
Jan Hendrik Wolkers
1955
1934-39
In the 1930s, the future growth of Amsterdam was broadly laid down in the General Expansion Plan (AUP) (1934) by urban planner Cornelis van Eesteren (1897-1988). Subsequent adjustments were made in the following years. This urban expansion plan marked the first systematic and research-based urban expansion initiative. Consequently, numerous neighborhoods in 20th-century Amsterdam were constructed in accordance with the AUP (1934).
Intervention 1
De Kade school
Partial renovation of the facade frames
PVC
2006
Removal of asbestos
Treatment of steel structure
2015
Designation of the school as a Municipal Monument
2009-10
Inbo, Rowin Petersma
Renovation and Expansion
Intervention 2

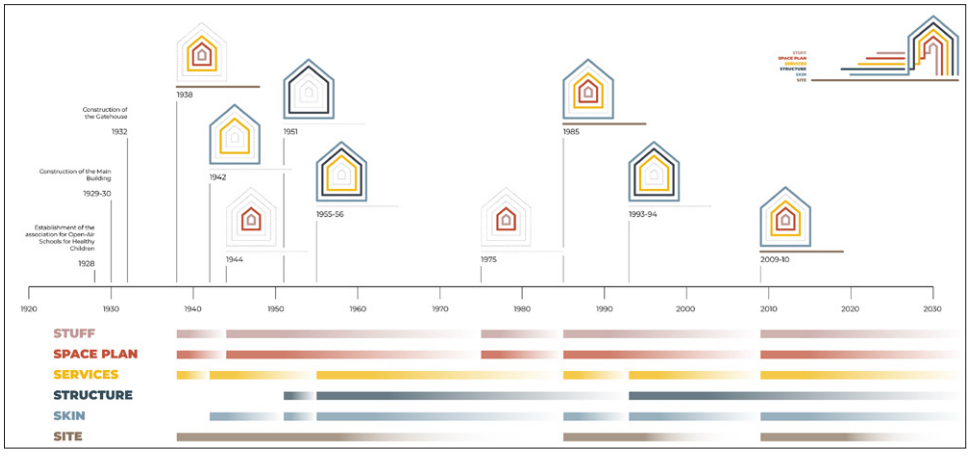

1938
1932
Construction of the Gatehouse
1951
1942
1929-30
Construction of the Main Building
1928
Establishment of the association for Open-Air Schools for Healthy Children
1955-56
1944
1985
1975
1993-94
2009-10
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
2030
STUFF
SPACE PLAN
SERVICES
STRUCTURE
SKIN
SITE

Figure 1. Building evolution timeline: Open-Air School © Authors, 2024.

Figure 2. Building evolution timeline: SBO De Kans © Authors, 2024.

Figure 3. Draft for multi-layered, time-adjusted monitoring dashboard (Legend label is adapted from Brand's shearing layers diagram[7]) © Authors, 2024.

this could support the planning of technological and budgetary resources for heritage management initiatives.

The proposed dashboard and labelling system can be developed and implemented on a local scale (e.g., neighbourhoods), thereby providing decision-makers with a tool to guide inspection and maintenance efforts. This approach offers a prospective and directional framework for heritage management, aiding the timely surveillance and targeted detection of buildings or regions needing attention. In the context of urban planning and development, the insights gleaned from building timelines can inform strategies for revitalizing historic neighborhoods and integrating heritage conservation into urban regeneration initiatives. Additionally, the utilization of visualized information has been demonstrated to improve decision accuracy and quality, directing attention towards uncertainty, and expediting cognitive processing.[16] Consequently, timelines would contribute to reflection of subjective judgements by prompting enquiry into the relative significance of different elements.

Looking ahead, future research could further explore the potential relationships and correlations between intervention locations, building performance aspects, and thematic categories to inform decision-making processes and prioritize interventions for improved building performance – renovation practices and overall protection. ■

16. Karin Eberhard, "The effects of visualization on judgment and decision-making: a systematic literature review," *Management Review Quarterly* 73 (2023): 167–214. https://doi.org/10.1007/s11301-021-00235-8

BIOGRAPHY

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THE WEISSENHOF ESTATE FROM THE POINT OF VIEW OF THE STATE RESEARCH SOCIETY FOR ECONOMICS IN CONSTRUCTION AND HOUSING

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ABSTRACT

After World War I, the Weimar Republic tackled the housing issue amid challenging economic conditions, constructing new housing estates that set a model for modern solutions. The influx of foreign capital under the Charles Dawes Plan in 1924 fuelled the German economy during the "golden twenties." Public organisations focused on rational housing estates were established and financially supported by city and state governments. On December 14, 1926, the State Research Society for Economics in Construction and Housing (RFG) was founded in Germany. It aimed to conduct research, finance development projects, and support exemplary housing implementations. RFG, which comprised architects, politicians, scientists, and non-profit construction representatives, addressed apartment layouts, materials, technologies, and healthy living conditions. It published special issues on apartment plans, kitchen design, and housing estates, including the Weissenhof estate. Despite initial admiration, negative opinions were voiced, criticising design flaws and the creators' attitudes towards housing and residents. The report highlighted design errors affecting residents' comfort and safety. Critics expressed astonishment when comparing the architects' designs with the final outcomes. Eventually, the Weissenhof estate was deemed a 'stain of shame' as the Neues Bauen architectural trend faded in Germany. However, the estate, despite its flaws, left an indelible mark on the history of architecture. It marked the beginning of industrial construction methods and a new lifestyle, significantly influencing modern architecture in Europe. Weissenhof, with its imperfections, inspired similar projects and spurred further innovation in housing development, a testament to its enduring influence.

1. INTRODUCTION

On July 23, 1927, an exhibition organised by the Werkbund called "Die Wohnung" in Stuttgart was opened. The exhibition's main focus was an experimental housing estate located on the slope of one of the hills in Stuttgart, consisting of 33 diverse houses: multi-family, single-family, row houses, and detached houses, in which 63 model apartments were furnished. The model homes were built in a record two weeks and showcased new forms, constructions, and a new way of organising living space. Over the following 11 weeks, approximately 500,000 visitors toured the exhibition, mainly focusing on the theme of housing in its various aspects. Prominent architects of the interwar period responded with their designs to the question of how to live and dwell in modern post-war times.[1] The history of creating the experimental housing estate is directly linked to post-World War I state policy, when the Weimar Republic, facing economic difficulties, took action to solve the housing problem. Despite resource exhaustion and the need to pay war reparations, the country began building new settlements that served as a model of modern housing. Thanks to the Dawes Plan of 1924, foreign capital was introduced into the German economy. The beginning of the plan is considered the inauguration of the so-called "Roaring Twenties." After the end of World War I, many cities came under the rule of social democratic environments, which enabled the implementation of ambitious housing projects for the working masses. In 1926, there was a plan to finance around 1,600 new apartments through funds collected from property taxes and loans provided under the plan. The amendment to the building law introduced in 1925 in Berlin and later in all German cities, aimed to improve housing conditions, which increased the need to construct new residential complexes. The law also defined standards for apartment size, quality of sanitary equipment, lighting and ventilation conditions, and protected tenants from excessively high rents.[2]

During this period, public organisations were established, such as DEGEWO (Deutsche Gesellschaft zur Förderung des Wohnungsbaus), GAGFAH (Gemeinnützige A.G. für Angestellten Heimstätten), and GEHAG (Gemeinnützige Heimstätten Spar- und Bau A.G.), which were involved in the construction of rational residential estates, financially supported by municipal authorities and the governments of individual states. Architects of the European avant-garde at that time emphasised the need for applying strict, scientific methods in designing rational housing. In 1926, the Reichstag passed a law promoting residential construction to counter housing shortages. In the same year, a commission was also established to examine new methods of rationalising and financing construction.[3] [4] [5] [6]

2. RFG

2.1. THE ESTABLISHMENT AND ACTIVITIES OF RFG

The Research Society for Economic Efficiency in Construction and Housing (Reichsforschungsgesellschaft für Wirtschaftlichkeit im Bau- und Wohnungswesen - RFG) was a significant entity in the early 20th

1. Christiane Flüscher, Inken Gaukel, Friedemann Gschwind, Anja Krämer, Herbert Medek, "Modern Weissnhof Estate in Stuttgart (1927)", in: In: A Way to Modernity, The Werkbund Estates 1927-1932, Jadwiga Urbanik (ed.), Wrocław, Muzeum Architektury, 2016, 42-43.

2. Jadwiga Urbanik, "RFG I ergonomia w architekturze w okresie międzywojennym", 1. Accessed June 9, 2024, https://www.gdynia.pl/aktualnosci-3,3709/nr-8-pl-en-architektura-przemyslowa-portowa-i-miejska-xx-wieku-industrial-port-and-urban-architecture-of-the-20th-century,571641

3. Urbanik, "RFG I ergonomia w architekturze w okresie międzywojennym", 1.

4. Wanda Kononowicz, Wrocław – Kierunki rozwoju urbanistycznego w okresie międzywojennym, (Wrocław : Oficyna Wydawnicza PWr 1997), 8-9.

5. Wanda Kononowicz, "Ewolucja osiedla mieszkaniowego we Wrocławiu okresu Republiki Weimarskiej – Księże Małe", in: Architektura Wrocławia, t. 2, Urbanistyka, ed. Jerzy Rozpędowski (Wrocław: Oficyna Wydawnicza PWr, 1995, 453–454.

6. Jadwiga Urbanik, "2009, 1929 WUWA 2019. Wrocław Werkbund" Exhibition, (Wrocław: Muzeum Architektury we Wrocławiu, 2009), 86.

century. The society was officially registered on January 21, 1928, after a year of establishing its regulations. It operated until June 5, 1931, and was dedicated to conducting and financing research on rational construction and supporting model housing projects, making a substantial impact on the field. In its first year of existence, the RFG received 10 million marks from the state for research on housing rationalisation and construction cost reduction. Some Reichstag committees partially implemented the programmes developed by RFG. The structure of RFG included the assembly of members, the administrative council, the expert council, and the management. Working committees developed specific research topics. RFG had 15 such committees, with members consisting of architects, politicians, scientists, and representatives from the non-profit construction sector. Among the members were well-known architects such as Walter Gropius, Ernst May, Bruno Taut, Max Taut, and Martin Wagner, as well as politicians like Marie-Elisabeth Lüders, Ludwig Landmann (Mayor of Frankfurt on the Main), and Riepert. RFG dealt with issues related to the internal layouts of apartments and their surface area, as well as the introduction of new materials and technologies to reduce home construction costs. There were also discussions on the proper orientation of the cardinal directions to ensure rational sunlight exposure in rooms and thus provide healthy living conditions[7].

2.2. SPECIAL ISSUES

The first special issue was published in April 1928 and dedicated to the design of small and medium-sized apartments ranging from approximately 28m2 to 48m^2. The second special issue , published the same year, focused on kitchens. Subsequent issues were centred on the housing estates, which were a key area of focus for RFG, the organisation spearheading these developments.

The issue concerning the Weissenhof estate was released two years after its completion, allowing for identifying flaws in the proposed solutions. RFG conducted inspections on the estate to assess the residents' comfort with the designed buildings. The experimental buildings were completed in August 1927, and the first residents moved in during the winter of 1927/1928[8].

3. POSTULATES AND THEMES OF THE EXHIBITION IN STUTTGART

The exhibition in Stuttgart combined the exhibition with the newly built model estate on Weissenhof hill. Among the 17 invited architects representing the European avant-garde were Ludwig Mies van der Rohe, Adolf G. Schneck, Walter Gropius, Ludwig Hilberseimer, Bruno Taut, Max Taut, Hans Poelzig, Richard Doecker, Adolf Rading, Peter Behrens, Hans Scharoun, Jacobus Johannes Pieter Oud, Mart Stam, Victor Bourgeois, Le Corbusier, Pierre Jeanneret[9]. The idea behind organising the Die Wohnung exhibition combined with the model estate was formulated in a manifesto and programme of the entire undertaking, published in December 1926. This document emphasised that the critical issue in housing construction is to shape the building plan with the current needs of the residents in mind. Housing should be comfortable and practical and occupy as little space as

7. Kononowicz, "Ewolucja osiedla mieszkaniowego we Wrocławiu okresu Republiki Weimarskiej – Księże Małe", 453-455.

8. Bericht über die Siedlung in Stuttgart am Weissenhof, RFG, Sonderheft 6, vol. 1, April 1929.

9. Flüscher, Gaukel., Gschwind, Krämer, Medek, "Modern Weissnhof Estate in Stuttgart (1927)", 34, 38.

possible. Therefore, an innovative approach to the functional design of a small apartment was necessary, considering the limited financial resources allocated for its construction, which needed to be optimally utilised. Another important aspect is to change the approach to construction by using new structures and materials. It was noted that construction had relied too long on traditional methods, and failed to embrace processes of industrialisation and standardisation. There was a call for engineers, chemists, and industry collaborate to seek new constructions and materials to find new, rational solutions in construction. One of the main goals of the exhibition was to test existing materials and new constructions proposed by engineers, with a particular focus on the "dry" assembly of buildings. This system allowed for the transfer of the construction process from the building site to the factory, enabling faster occupancy of homes. It was emphasised that the key aspect of industrialisation must be the standardisation and normalisation of all building components[10]. The exhibition programme did not emphasise any formal characteristics of the new architecture. The presented apartments were to serve as prototypes for mass production. Architects aimed to prove that industrialisation did not have to lead to the complete standardisation of houses and the loss of individuality. The choice of the terrain on the hillside provided a magnificent view of the city. The spatial layout involved alternative placement of single-family housing flanked by high-rise buildings, culminating in multi-family housing at the top of the hill.Ludwig Mies van der Rohe and Peter Behrens designed rental apartments in larger buildings, while Jacobus Johannes Peter Oud, Adolf G. Schneck, and Mart Stam proposed row houses[11] [12]. The estate also featured semi-detached houses designed by Le Corbusier, Pierre Jeanneret, and Josef Frank. The remaining projects focused on diverse, more exclusive single-family homes that initially did not fit in with the estate concept. In the preliminary analysis report by RFG, it was noted that some apartments were unsuitable for most of the population because their area exceeded typical sizes for small and medium-sized apartments. Only the buildings designed by Behrens, Mies van der Rohe, Oud, and Stam were thoroughly evaluated. Critics saw the potential for serial prefabrication in them at relatively low costs. The other projects were not analysed because they were considered unsuitable for economic mass production and were of no interest to the RFG. However, all houses were thoroughly analysed regarding construction methods, structure, and materials. The RFG special issue contained not only the report materials of the organisation's scientific committee but also excerpts from press and specialist publications, book excerpts, and statements from the estate architects[13].

10. Flüscher, Gaukel., Gschwind, Krämer, Medek, "Modern Weissnhof Estate in Stuttgart (1927)", 35.

11. Flüscher, Gaukel., Gschwind, Krämer, Medek, "Modern Weissnhof Estate in Stuttgart (1927)", 48-49.

12. Weissenhof Museum, "The 1927 Exhibition", Accessed June 9, 2024, https://weissenhofmuseum.de/en/siedlung/#die-ausstellung-1927

13. Bericht über die Siedlung in Stuttgart am Weissenhof, RFG, Sonderheft 6, vol. 1, April 1929.

4. COMMUNITY EVALUATION

4.1. CRITICAL OPINIONS

Despite receiving sponsorship from the RFG, the settlement did not escape scrutiny from experts at this esteemed organisation. Their negative opinions, backed by their extensive knowledge and experience, mainly focused on the simple roofs and the creators' approach to housing and residents.

Franz Hoffman-Johannisthal, a renowned architectural critic, wrote in Die Bautwelt (1927, Issue 41) that "these houses are already being rejected by sensible people today, let alone after 10 years...". The flat roofs of single-family houses, often used as gardens, were not just a matter of design, but also practicality. They were criticised for the high maintenance costs of such a garden (a traditional ground-level garden was much cheaper) and issues with leakage due to imperfect construction quality. The first residents, mainly scientific workers, were among those to experience these issues firsthand. Dr. Grünbaum's (RFG) report from a visit from July 9 to 14, 1928, titled "Who is the settlement built for?" indicated that the Weissenhof buildings were not just unsuitable for children, but even hostile to them. The location of the settlement outside the city was intended primarily for large families, but there was a lack of children's rooms, and there was no space for cribs in the parents' bedrooms. Low railings and lack of window protection posed a danger to the youngest, leading young women to avoid pregnancy until they moved out of Weissenhof. Franz Hoffurun-Johannisthal criticised the location and dimensions of the windows. For example, in the Ouda project house, the windows were set too high up, making it impossible to open them for ventilation. The author pointed out problems with the partition walls used by van der Rohe, which became unsightly and caused noise. Additionally, many visitors needed to understand the concept of openings in the walls and asked about the possibility of adding doors. Hoffurun-Johannisthal also criticised the lack of windows in the child's room designed by Professor Behrens, which prevented natural ventilation and compromised the safety of children who could wander into the garden unnoticed at any time of day or night. The RFG's B8 report contained detailed observations regarding the usability for domestic use. The document highlighted, among other things, the lack of a pantry.

Furthermore, the kitchens were located in the south, forcing housewives to run to the cellar for supplies. The design was commended for its foresight in including spaces such as a laundry room, storage room, and drying. However, it was noted that their potential could have been more utilised due to poor placement. The unfortunate layout of the apartments was criticised, where the bathroom sink was placed directly under the window, which could lead to discomfort for its users, and there was a risk of the pipe freezing. The magnificent balustrade made of nickel pipes, which left almost no marks when touched, was admired. A common issue in many houses was the location of the windows - they were placed so high that it was difficult to access them from both the outside and inside for cleaning purposes. Opening them often required absurd preparations, such as jumping over the sink and climbing onto a chair taken from the bedroom and placed in the bathtub. As accurately noted in the analysis: "Anyone moving into these houses must purchase a window cleaning subscription from a window cleaning company, as it cannot be expected that the housewife or maid will perform this acrobatic task." Le Corbusier and Pierre Jeanneret's house was the most expensive and farthest from the original goal of designing housing for people with low to medium incomes. Although the RFG report did not

focus on this particular building, experts did not fail to mention the house designed by the famous architect. The design flaws were harshly criticised, beginning with the entrance to the house, leading to its central heating; as written, it was a repulsive sight. The dangerous staircase was highlighted, from which falling was easy. Negative comments were made about the chimneys running through the centre of the rooms on each floor. According to the report, dividing rooms with full-height walls was a luxury for Corbusier. The designer used concrete walls 1.6m high - the rooms were interconnected, causing food odours from the kitchen and noise from other rooms to reach the main living room. The beds on wheels (which could be stored in a particular niche when not in use) were criticised, pointing out the lack of comfort for the user in sleeping 30 cm above the floor. The location of the sink at the end of an undecorated corridor was deemed senseless. The windows in this corridor were compared to those found in refrigerators or warehouses. Walter Gropius's plans for house number 16 were considered thoughtful but could have been more impressive. Safety concerns for the youngest users resurfaced - the railings were designed in such a way that it would have been easy to fall off the stairs. The plywood exterior doors were considered a misguided idea. The balcony doors could have been better made. The housewife praised the solid terrazzo floor, while the floor covering was deemed too delicate[14].

4.2. STEP INTO MODERNITY

The advocates of the housing development emphasise the modernity of the adopted solutions and endorse a modern lifestyle - a garden on the terrace is not only a place for relaxation and drying laundry but also equipped with gym equipment - after all, a healthy mind results in a healthy body. The numerous existing extensions to the buildings can be used in various ways to meet diverse needs. Residents decide for themselves what they need and what has a real influence on their living space. A small kitchen does not have to be an uneconomical solution - a smaller kitchen means short distances, as well as careful and thoughtful selection of furniture. This room also ceased to be the most important for the housewife - 'Today, the homemaker wants to finish her work as quickly as possible (...) the saved time can be used for better things.' There was a shift in mentality from the typical German 'Hausfrau', to that of a working woman aware of her social utility[15]. Bedrooms also do not necessarily require a large area - it is a matter of good room organisation and placing appropriate furniture. The room furnishings are simple, unpretentious, and inexpensive - enabling mass production. Undoubtedly, the design of the houses and their arrangement were a significant step towards modernity – although not all residents were ready for it. As the report states: 'housewives from Weißenhof settlement have both praise and complaints. There were no indifferent comments[16].

4.2. CONSTRUCTION EXPERIMENT

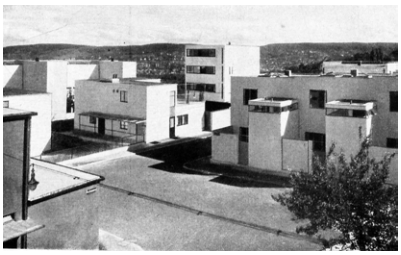
Although experimenting with new materials and construction methods was considered a positive development, some critics raised concerns that the

14. Weissenhof Museum, "The 1927 Exhibition."

15. Urbanik, 2009, 1929 WUWA 2019. Wrocław Werkbund Exhibition, 82.

16. Bericht über die Siedlung in Stuttgart am Weissenhof, RFG, Sonderheft 6, vol. 1, April 1929.





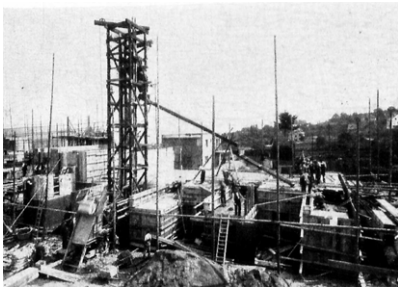


Figure 1. Plan of Weissenhof Estate, illustration from *Bericht über die Siedlung in Stuttgart am Weissenhof*, RFG, *Sonderheft* 6, *vol.* 1, *April* 1929, 6.

Figure 2. Weissenhof Estate, authors of houses from left: Oud, Le Corbusier and Jeanneret, Gropius and once again Le Corbusier, illustration from *Bericht über die Siedlung in Stuttgart am Weissenhof*, RFG, *Sonderheft* 6, *vol.* 1, *April* 1929, 12.

Figure 3. Weissenhof Estate, Oud's houses under construction, illustration from *Bericht über die Siedlung in Stuttgart am Weissenhof*, RFG, *Sonderheft* 6, *vol.* 1, *April* 1929, 102.

practicality and cost-effectiveness of these innovations were uncertain and may only reveal themselves over time. Some reports highlighted technical flaws and execution problems in the construction of buildings in Weißenhof, which could impact on the overall quality and functionality of the homes. The cost of implementing new construction methods, materials, and designs may have been higher than traditional methods, raising numerous questions about the economic feasibility and accessibility of such innovations for the average population.

Critics rightly note, however, that these were new solutions - previously unused – and therefore, it is unsurprising that the time required for completion extended beyond the initial assumption and builders faced shortcomings - after all, it was their first encounter with this technology.

5. SUMMARY

Critics in the RFG often expressed surprise when they compared the exquisite drawings and designs by renowned architects with the final results. As the architectural trend of Neues Bauen fell out of favour in Germany, the Weißenhof Estate was harshly criticised and branded a "stain of shame"[17]. Nonetheless, the estate symbolises two profound shifts - the adoption of industrial construction methods and a glimpse of a new way of living. Its significant impact on the evolution of modern architecture in Europe cannot be understated. Intended as the dawn of a fresh era unbound by traditional construction practices and a catalyst for a new lifestyle, Weißenhof, despite its imperfections, influenced and inspired the development of other similar projects. ■

17. Urbanik, „RFG i ekonomia w architekturze w okresie międzywojennym", 1.

BIOGRAPHY

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NOTABLE RENOVATIONS IN ORDINARY CONTEXTS

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ABSTRACT

Retrofitting, remodelling, rehabilitation, refurbishment, reconstruction, and reuse encompass a wide range of design operations in existing buildings. Although these terms may appear vague as concepts, they all entail a departure from, or even a transcendence of, classical canons of restoration. Nevertheless, all these terms could be unified under the umbrella of "renovation". Renovations, in their turn, are as common as they are unjustly undervalued by contemporary criticism and historiography. Unlike entirely new buildings, which establish a form of order within a given reality, and unlike restoration, which aims to re-establish some authentic or ideal state (not always clearly determined), renovation is rooted in conservatism but fuelled by transformative original intent. Renovation treats the existing text as a pretext and interacts with it more freely than restoration, involving actions such as cutting, adding, pasting, and remaking. A renovation begins with an examination of the pre-existing condition and a practical need for the sustainable utilisation of built infrastructure. Demolition and disposal would not only generate more solid waste but also presuppose an unsustainable consumption of natural resources for reconstruction. Tailored to diverse requirements for permanence, and primarily economic purposes, the renovation process dispenses with a specific grammar or predictable outcomes. Renovation is liberated from a subordinate role, as it integrates pre-existing elements into a new reality where to paraphrase Riegl, novelty becomes a heritage value capable of surpassing antiquity. In this way, this session gathers contributions addressing architectural projects capable of stimulating academic discourse on this common yet frequently overlooked design operation: renovation.

1. INTRODUCTION

Intervening in pre-existing architectures is a design operation that usually presupposes a hierarchy of values. Since the Venice Charter, the prevailing stance has been that the new architecture should not rival the existing structure, which under no circumstances should lose its role as the protagonist. This session, however, aims to explore a different approach to the subject, focusing on notable renovation operations carried out on ordinary architectures.

2. OUT-OF-TIME ARCHITECTURES

It is common to attempt to regulate or evaluate new architectures designed to transform or co-exist with older ones by using criteria similar to those adopted in restoration procedures—such as distinguishability or reversibility. Both address materiality and are related to plasticity and construction techniques. The greatest concern seems to be that the newer architecture may harm or compromise the enjoyment of the older, and seldom is the opposite considered: that, at least since the Aloïs Riegl's Modern Cult of Monuments[1], novelty has also been recognised as a value of heritage and may even surpass the importance of antiquity.

Unlike restoration, renovation does not have a specialised field of knowledge, which exacerbates the misunderstanding between purpose and prescription. This is a more sensitive issue when dealing with a listed building, which may require the proponent of the new architecture to comply with the recommendations of the heritage protection authority. Such indications generally also—and primarily—follow the content of those concerning restoration procedures.

"*Tempus edax rerum*"[2]. Ovid's phrase expresses the inexorable nature of time and its effects. However, the concern related to the deterioration of living beings and their creations predates the Roman poet. Since the myth of Zeus restoring his siblings who were devoured by Cronus, there have been numerous attempts to reverse aging and decay.

The enduring existence of a building implies prolonged exposure to weathering and wear from use, requiring adaptation to cultural, economic, environmental, and social changes. In architecture, resisting the effect of time is generally achieved through two main approaches: restoration or renovation. In the former, the aim is typically to preserve or reinstate past aesthetics and often the original materiality, with a focus on the past. In the latter, alterations in both appearance and materiality are accepted to ensure the persistence or revitalisation of the structure, with a focus on the future.

Preserving architecture, therefore, may require not only conserving it but also adapting it. In some cases, the premise is not "how to maintain" but rather "how to transform" the built environment through an architecture that is chronologically independent of a pre-existing structure and whose level of excellence may surpass that of the former. The design approach presented here considers that heritage value may originate from the new architecture, the new design within the old construction, or the new construction based on the old design, and suggests that architectures detached from a specific

1. Alois Riegl, "The Modern Cult of Monuments: Its Character and Its Origin," *Oppositions*, no.25, (Fall 1982), 21-51.

2. "Tempus edax rerum, tuque, invidiosa vetustas, omnia destruitis, vitiataque dentibus aevi paulatim lenta consumitis omnia morte". Ovid, *Die Metamotphosen Des P. Ovidius Naso : Für Den Schulgebrauch ErkläRt, 2, Aufl*, trans. Hugo Magnus (Gotha: F.A. Perthes, 1892), 234.

reference time—such as that of a pre-existing building—are capable of conferring new status upon the past.

3. RENOVATED PAST

The design procedure discussed here is far from being unheard of or exclusive to modern times. One of the most recurring themes in the History of Conservation—the Christian basilicas—originated from the adaptation of an ancient typology, the Roman basilica.[3] The ancient Hall of Justice was originally a large, oblong building, typically consisting of a nave, two side aisles, and one or more apses. The side aisles are lower in height to avoid obstructing the high windows in the upper part of the nave, features that were retained in the early Christian basilicas, as observed in the Basilica of Old St. Peter's (A.D. 324) and San Paolo Fuori le Mura (A.D. 385), both in Rome[4].

Dating back to at least the Renaissance, there have been records of architectural commissions aimed at transforming buildings and urban spaces through new projects. In the mid-15th century, in Rimini and Florence, Alberti undertook interventions in medieval churches. In Rimini, he renovated a Franciscan church built in the 13th century with Gothic features. Alberti's renovation aimed to transform the small and modest church into a monument that would attest to the power of Prince Sigismondo Malatesta, who had commissioned the work. The work likely began in 1453, but construction was interrupted due to Malatesta's death in 1468. Although the church remained incomplete, what stands out is the addition of a layer of white stone that covers the main façade and sides, creating a façade mask with regular fenestration that is set apart from the plane of the old façades revealing the materiality of the original building. In Florence, Alberti's intervention took place in a Dominican church begun in 1279 whose façade remained unfinished until the mid-15th century. The completion project was commissioned between 1458 and 1460 by Giovanni di Paolo Rucellai, an important Florentine patron (in whose residential palace Alberti also carried out a renovation project). Through his design, Alberti aimed to harmonise the pre-existing characteristics—such as part of the ornamentation, the step between the heights of the naves, and the large central oculus—with rigorous geometric principles of composition. The result is the famous frontispiece in light and dark marbles, with a base marked by pointed arch niches and crowned by a triangular pediment, juxtaposed like a scenography against the previous façade.[5]

Throughout the history of architecture, the conversion of buildings from Ancient Rome into churches was not limited to transforming basilicas. Other examples include the conversion of the Roman Pantheon into the Church of Santa Maria dei Martiri in 608[6] and the Mausoleum of *Santa Constanza* into the Church of *Santa Constanza* in 1256[7]. In the 16th century, Pope Pius IV commissioned Michelangelo to convert part of the ruins of the Baths of Diocletian into the Church of *Santa Maria degli Angeli e dei Martiri*.[8] This may be considered a radical programmatic transformation enabled by interior design, as the church nave would occupy the space previously reserved for the *Tepidarium*. While the façade retained the appearance of a ruin, the

3. Alfonso Corona-Martínez, Ensayo sobre el Proyecto (Buenos Aires: Kliczkowski, 1998), 145.

4. Christian Norberg-Schulz, *Arquitectura Occidental* (Barcelona: Gustavo Gili, 2004), 65.

5. For the historical facts on Italian Renaissance and Baroque architecture in this section, see Leandro Manenti, Intervenções Reabilitadoras do Período Renascentista Italiano (Porto Alegre: PROPAR-UFRGS, 2004).

6. Banister Fletcher, *A History of Architecture on the Comparative Method, for Students, Craftsmen & Amateurs*. 16th ed. (London; New York: Batsford; Charles Scribner's Sons, 1954), 158.

7. Christian Norberg-Schulz, *Arquitectura Occidental* (Barcelona: Gustavo Gili, 2004), 67.

8. Liliane Wong, *Adaptive Reuse. Extending the Lives of Buildings* (Berlin: Birkhäuser, 2017), 67-69.

interiors underwent restrained intervention. The dividing walls were smooth, and colours used sparingly, enhancing the monochromatic vaults and the pre-existing columns of reddish granite. The current state of the church has, therefore, been greatly altered compared to the 16th-century intervention, as the walls were decorated in the Baroque style by Luigi Vanvitelli in 1749. (**Fig.1**)

Previously, around 1539, Pope Paul III commissioned Michelangelo to transform the degraded public area on Capitoline Hill into a civic centre befitting the papal capital. The space had already undergone several modifications since Antiquity and featured two pre-existing buildings of different eras and appearances. Michelangelo revamped their façades, adopting the same formal language for both. However, the work had not yet been completed at the time of his death. Their completion was overseen by Giacomo della Porta, while the fundamental construction of the third palace, appropriately named *Palazzo Nuovo*, was initially led by Girolamo Rainaldi and later by his son, Carlo Rainaldi, who completed it in 1653.

The Palladian example of renovation refers to the typology from Antiquity described at the beginning of this section. It pertains to the project for the Basilica in Vicenza. Records indicate that a communal palace existed in the city as early as the 13th century. Over the following two hundred years, a series of incidents necessitated repairs and adaptations to the building. After a severe fire in 1444, the structure was reconstructed under the direction of Domenico da Venezia and was renamed *Palazzo della Ragione*. Construction began in 1451 and was completed in 1460. After undergoing embellishments by Tommaso Formenton between 1481 and 1496, part of the west façade collapsed, prompting other architects to provide consultancy on a new reconstruction. Over nearly five decades, several renowned architects submitted their proposals until Andrea Palladio's design was chosen. Work commenced in 1549 and continued throughout the late 16th century. Palladio died in 1580 and did not live to see his work completed, which occurred around 1617.

As seen, the co-existence of projects conceived by different architects and executed at different periods in the same building or plot is far from being considered exceptional or new. On the contrary, the further back in time one goes, the more common the combinations of layers that constitute a single building or complex of buildings become, given the extended time required for their construction. As for the preceding examples, it cannot be stated that they originated from ordinary pre-existing structures, as originally all were buildings endowed with some degree of monumentality. However, all cases had their significance enhanced and came to be featured in the books of architectural history thanks to out-of-time interventions, as seen more recently with the work of Carlo Scarpa in the Castelvecchio Museum and the Querini Stampalia Foundation[9], or of Daniel Libeskind in the Jewish Museum and the extension of the Military Museum of Dresden[10]. (**Fig. 2; Fig. 3**)

Lina Bo Bardi, a contemporary of Scarpa, carried out a remarkable renovation in an ordinary context in Brazil. Alongside the collaboration of architects Marcelo Ferraz and André Vainer, she conceived the project for

9. Jean-Louis Cohen, *O Futuro da Arquitectura* (São Paulo: Cosac Naify, 2013), 424.

the Leisure Complex of SESC Pompeia. Commissioned in 1976, the project involved adapting an existing set of industrial buildings and constructing new modern architectures. Although not institutionally protected, Lina recognised that the warehouses had value and were suitable for the proposed use, even though they did not fully accommodate it. The programme to be implemented on the site exceeded the space available in the pavilions, and therefore part of the activities was allocated to new buildings to be constructed in the free area of the L-shaped plot, which is crossed by a watercourse and designated as a non-buildable area. The pool, sports courts, changing rooms, dance studios, and a cafeteria were distributed between two reinforced concrete towers with no coating, utilising *béton brut*, and connected by walkways suspended over part of the wooden deck that now covers the pre-existing watercourse. In addition to these new volumes, the architect envisioned a third structure: the cylindrical water tank tower, referencing the factory's destroyed chimney. The warehouses accommodated a restaurant, theatre, library, exhibition and performance areas, as well as workshops for ceramics, tapestry, painting, woodworking, and more. SESC Pompeia was an immediate and enduring public success. Not only was the architectural intervention of undeniable quality, but the community's engagement was also extensive and enthusiastic.[11] In 2015, the National Institute of Historic and Artistic Heritage (IPHAN) listed the complex as a heritage site. (**Fig. 4**)

4. RENOVATED AUTHENTICITY

Admitting renovation as a viable approach to heritage intervention is a controversial stance. For many, renovation carries the stigma of being a secondary design endeavour, diverging from high culture and operating outside clear rules and objective parameters, as supposedly exclusive to the field of restoration.

Regarding the prescriptions on how to intervene in architectural heritage, the Charters of the International Council on Monuments and Sites (ICOMOS) have become *de facto* dogmas in the field of restoration — and often also in renovation projects. These documents have become the preferred tools of the hermeneut on duty, who are willing to conveniently interpret the precepts of these writings, whether to justify their own practices or to discredit those of other professionals (especially those supposedly external to that field).

The prescriptions of the Venice Charter—the reference charter to this day—may appear cohesive, but they present contradictory principles, a natural result of the need for consensus in broad agreements that originated them[12]. For example, while Article 9 states that restoration "aims to conserve and reveal the aesthetic and historical values of the monument and is based on respect for the original material and authentic documents", Article 11 emphasises that "valid contributions from all periods to the building of the monument must be respected, since unity of style is not the aim to be sought in the course of restoration"[13]. It is therefore up to the interpreter to decide what constitutes a restitution of the "original material", based on "authentic documents", and what qualifies "valid contributions" from the historical trajectory of the work.

10. Liliane Wong, *Adaptive Reuse. Extending the Lives of Buildings* (Berlin: Birkhäuser, 2017), 49 and 217-219.

11. For further information, see (*Cidadela da Liberdade*. São Paulo: SESC, 1999)

12. BM Kühl, "Notas sobre a Carta de Veneza," *Anais do Museu Paulista: História e Cultura Material* 18, no. 2 (2010): 287-320.

13. "The Venice Charter." Icomos — International Council on Monuments and Sites, 1964, https://www.icomos.org/en/participer/179-articles-en-francais/ressources/charters-and-standards/157-the-venice-charter.

Such apparent ambiguity lends itself well to criticisms of interventions in cultural heritage, depending on the perspective of those articulating them.

"Criticism" is a key term in the dialectical logic underlying the Venice Charter, which requires an interpretative stance from those involved in the work. It serves as an analytical tool, not a dogmatic manual. After all, like all architecture, a restoration or renovation project involves positioning oneself relative to a pre-existing reality and a material, political, economic, and social context, which is always contradictory.

In "Parallel Lives", Plutarch (46-120 AD) recounts the "Ship of Theseus Paradox". The Athenians are said to have preserved the hero's ship for centuries, and over time "they removed the aging wood and replaced it with sturdy planks, fitting them to the others in such a way that, for philosophers, this ship provided an apt example for discussing the 'growth argument,' with some arguing that the ship remained the same and others that it was no longer the same"[14]. In this context, defining what constitutes "respect for the original materiality" of a built cultural asset is vague. Similarly, the notion of "authenticity" to be recovered or maintained through restoration work remains fluid.

Renovation is also often associated with disfigurement, frivolity, and lack of commitment, and is generally attributed to economic and utilitarian concerns—as if these were lesser motivations. Regarding the issue of authenticity, some argue that renovation produces falsely new and falsely old outcomes, leading to the irreparable loss of the original.

Building, restoring, or renovating are human actions carried out through design and, therefore, imbued with explicit and implicit intentions and contradictions. The confrontation and comparison of different ideas and solutions to achieve new responses is a common practice in architectural design. There are no easy or single truths to guide any design process beforehand in an unquestionable way. Designing a new building, as well as proposing its restoration or renovation, is an open task with results that are not entirely predictable in advance. Fickleness, instability, contradiction, and the adoption of criteria for continuous transformation are inherent to the architect's profession and inevitable when it comes to intervention in built heritage.

Preservation actions regarding heritage are ambivalent because, to conserve, they must transgress and defy chronology. They counteract natural decay, helping to create an apparently ordered cosmos in contrast to the inherent chaos, allowing memory and contemporaneity to coexist within the same building.

Unlike restoration, which aims to return a building to an authentic or ideal state (not always clearly determinable), renovation is based on a conservative foundation but has a transformative purpose. It could be argued that renovation possesses an ambiguous character since its motivation is twofold: to preserve elements of the pre-existing structure(s), in which value is clearly recognised, and to achieve a new form, resulting in renewed plasticity, spatiality, and/or materiality. However, the term "ambiguity" implies doubt, uncertainty, imprecision, and misunderstanding, often suggesting fragility. In light of this, it seems more appropriate to

Figure 1. Interior and façade of Santa Maria degli Angeli e dei Martiri Church, Rome, Italy. ©Ana Carolina Pellegrini, 2008.

Figure 2. Façade and interior of Querini Stampalia Foundation, Venice, Italy. ©Ana Carolina Pellegrini, 2016.

Figure 3. The Jewish Museum, Berlin, Germany. ©Ana Carolina Pellegrini, 2007.

Figure 4. The renovated warehouses and the new buildings of SESC Pompéia, São Paulo, Brazil. ©Ana Carolina Pellegrini, 2014.

14. Plutarch, *Vidas Paralelas - Teseu e Rómulo*, trans. Delfim F. Leão; trans. Maria do Céu Fialho (Coimbra: Centro de Estudos Clássicos e Humanísticos da Universidade de Coimbra, 2008), 20.









speak of dialectics, as the dialogic method acknowledges and embraces complexity and counterpoint, thus indicating a strength that, from a Platonist perspective, is integral to the process of seeking truth.

Undoubtedly, these issues warrant further study and exploration, free from prejudices, to advance the field of disciplinary culture and achieve new perspectives, as "dwarfs standing on the shoulders of giants".

> *To assert that something is wrong or false, or that it results from falsification, one must have a clear notion of what is correct, true, or authentic. Naturally, there are different levels of truth and various methods to verify whether something is the case.*[15] ■

15. Umberto Eco, *Nos ombros dos gigantes* (Rio de Janeiro: Record, 2018), 250.

BIOGRAPHIES

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A CHURCH CHANGES CONFESSION – A TRANSFORMATION PROJECT WITH AESTHETICS BETWEEN EAST AND WEST IN MUNICH (1980-1995)

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ABSTRACT

The case study presented demonstrates how a building's architecture was transformed through the influences of different religious communities. The modern "All Saints" Greek-Orthodox Church in Munich was originally a Catholic church built in the 1920s. It was converted to its present appearance starting in 1993. The Catholic church was planned as a two-stage construction featuring a lower and an upper church situated at the expanding city border of Munich. The design adhered to the simple aesthetics of classicistic modernism. However, due to the world economic crisis in 1929 and the Second World War, only the lower portion was completed. In the 1980s it was offered to the growing Greek-orthodox community of Munich, which was in need of a church. The Greeks quickly became the primary users of the building, despite its relatively poor condition. As a result, the construction of a new church was discussed with the Catholic church, which owned the site.

The project history for this new Greek-Orthodox Church illustrates how various actors influenced the result. The transformation was mostly financed by the Catholic Church and planned by a German Catholic architect. He collaborated closely with the Greek-Orthodox tenants, incorporating some elements of the existing structure to facilitate the process of obtaining the construction permit.

The resulting all-white church reflects how stereotypical Greek architecture inspired the modernist movement from 1930's CIAM to this day. Its appearance is the confluence of diverse narratives: local Catholic architecture converges with Orthodox building language, translating it into a unique architectural amalgamation.

Architecture of (religious) minorities often faces challenges in being seen and recognised in mainstream society. This case study, based on new archival source material, aims to trace a path for proactively recognising and protecting overlooked cultural heritage.

1. THE GROWING GREEK-ORTHODOX COMMUNITY IN MUNICH AFTER 1960

The special relationship between the Greek-Orthodox community and the city of Munich is historically marked by the cession of the Salvator church in the centre of Munich by Bavarian King Ludwig I, in 1828. Following the Recruitment Agreement between Germany and Greece from 1960, numerous Greeks came to Munich as so-called "guest workers". In 1963 the Ecumenical Patriarchate of Constantinople founded the Greek-Orthodox Metropolis of Germany in the former capital Bonn. While the Greek-Orthodox community in Munich was more in need of suitable spaces for the service, the situation became much more pressing when the Salvator church was occupied in 1977 by a splinter group for several years. The Greek-Orthodox Metropolis intensified their efforts to find an alternative church by seeking help from the Protestant Church and the Catholic Church to address their spatial shortage. In this context, the Catholic Church offered the Greek-Orthodox community to co-use the church "Allerseelen" in the Schwabing neighbourhood in the North of Munich, starting from Christmas 1980 onwards.

2. THE CATHOLIC CHURCH "ALLERSEELEN" BY RICHARD STEIDLE 1929

In the early 20th century, the urban area where the Catholic church "Allerseeen" would later be built was dominated by the main building of the Northern cemetery and the working-class district "Alte Heide," designed by architect Theodor Fischer and built between 1919 and 1928. A Catholic pastor bought a piece of land in front of the cemetery in 1923 and transformed the basement of the existing gardener's house on the site into a temporary prayer room. In 1926, the need for a church quickly became apparent. In 1928, architect Richard Steidle designed a two-stage construction featuring a lower and an upper church for the site. Shortly before the construction of the lower church began, the building commission of Munich requested a significant alteration in the design: the flat roof of the temporary section required a "proper" roof. In response, the Catholic Church replied: "It should be noted that a lack of understanding of art was by no means the reason why no roof was originally planned, but the guiding idea was: the more the church gives the impression of a temporary structure - and that is what it is supposed to be - the more likely it is that the church is finished and something whole is created."[1]

This is a specific example of how the City of Munich tried to hinder any tendencies of modern architecture in the cityscape. In the end, the lower church was built with a hipped roof (Fig. 1). However, the construction of the upper part was never realised due to the economic crisis in 1929 and the outbreak of the Second World War that followed soon after. The church survived several bombing attacks during the war, which caused repairable damage.

Eventually however, it lost its significance for its community in the 1950s, when the Catholic parish decided to build a bigger church a few blocks further North on an empty piece of land. As the Allerseelen church

1. Letter from the Church organisation to the city council of the City of Munich, 2nd May 1929, Archive of the Zentralregistratur der Lokalbaukommission München

was rarely used and in poor conditions, the Catholic Church offered it to the Greek-Orthodox community for their services in 1980.

3. THE EVOLUTION TOWARDS A TRANSFORMATION PROJECT

The Greeks quickly became the primary users of the building. As a result, the construction of a new church, replacing that from 1929, was discussed in 1983 with the Catholic Church to fit the needs of the orthodox liturgy better. As the project would be financed mainly by the Catholic Church which owned the site, a local Catholic architect who had previously collaborated with the ordinariate on numerous restorations was commissioned. Initially, a newly constructed church made up of three separate buildings – church, parish office and rectory – was envisioned by architect Robert Brannekämper in 1986, but the idea was abandoned in favour of the Catholic Church, who preferred to alter the existing church rather than demolishing it. The following project was developed in close collaboration with the Greek-Orthodox tenants: the existing volume of the church was elevated with higher walls and a new roof and joined by a new building between the existing church and rectory. The walls of the Allerseelen church have been incorporated into the new construction, not only for nostalgic reasons but firstly to adhere to the law of building on the existing footprint (Fig. 2). In accordance with the orthodox cult's building rules, the altar of the new church is oriented towards the east, which means that the existing entrance was moved further west towards the interior of the site.

When the building permit was requested, the conservation department halted the process to evaluate whether the existing Catholic church from the 1920s could be considered a monument. After several months and following pressure from influential local politicians, the conservation department – without any further research on the building – concluded that the existing church did not represent any further value as a heritage.

4. ENTANGLED REFERENCES: FROM GREECE TO WHITE MODERNISM, ELAPSED POST-MODERNISM AND CATHOLIC ARCHITECTURE

When the architect Robert Brannekämper received the commission to plan an Orthodox church in Munich, he was well aware that the design language needed to be different than that of Orthodox churches in Greece, since the implementation of the construction required the approval of the neighbours and the local building authority.[2] Within this research, three different influences were identified for the unusual shape of the church: Catholic (local) architecture after 1950 in Bavaria, stereotypical "white" architecture from Greek islands and post-modernism. The main components of this building are therefore decoded and related to their references in the following.

The most striking element in the design of the Gr.-Orth. Church Allerheiligen is the proportionally narrow tower, which is unusual for a Greek-Orthodox church (Fig. 3). Free-standing bell towers, if they exist at all, are set lower in volume because of earthquake risks; The Greek cityscape is rather dominated by the domes that are commonly used in

2. Interview with Robert Brannekämper by the author, 03rd June 2022, Munich.

church architecture since the Byzantine period. The bell tower in Munich is more reminiscent of local Catholic Churches from the second half of the 20th century, with sound openings in the upper area.

The main volume of the Gr.-Orth. Church of All Saints bears a striking similarity in form and materiality to the Monastery Church Herz-Jesu designed by architects Alexander von Branca and Herbert Groethuysen in Munich. Brannekämper is familiar with the work of Branca, who he considered one of the "best church designers in Bavaria".[3] Planned and built between 1953 and 1955, the Church Herz-Jesu was part of a monastery complex including a girls' dormitory and was the first church in Munich to be constructed with a raw reinforced concrete skeleton. The geometry with a barrel shell above the main nave and stitch caps above the side aisles can also be found in the Gr.-Orth. Church Allerheiligen, although with a different lighting. The facades of both churches are structured by downpipes at the low points of the stitch caps. This detail in both churches reminds us of the works by architect Hans Döllgast, who was a master to both, Branca and Brannekämper: Von Branca studied drawing with Döllgast, whose "drawing style shaped an entire generation of architects"[4] Brannekämper met Döllgast through his construction work while drawing in the Basilica of St. Boniface in 1962 and Döllgast will remain a "role model for extraordinary drawing art"[5]. It is nevertheless a genuine Munich architectural language in which Brannekämper grew up and by which he was influenced.

Another connection to Brannekämper's architectural language can be found in the work of another Döllgast student, the architect Karljosef Schattner, who, as head of the diocesan building office in Eichstätt, shaped the architectural style of buildings commissioned by the Roman Catholic Church in Bavaria over three decades. Brannekämper is familiar with Schattner's work "from literature" but, according to his own statement, has never met him personally.[6] The combination of deliberately placed, visible dark steel elements in contrast to white plastered surfaces in Brannekämper's designs is reminiscent of Schattner's style. In Brannekämper's design process, the steel elements only appeared during the final planning stage in 1995. They need to be understood as gestures of tectonics to highlight some constructive elements, such as lintels. The skilful use of individual steel parts and entire steel structures at the Gr.-Orth. Church Allerheiligen in Munich can only be seen as influenced by Schattner, considered an architectural role model in the Catholic ranks of the 1980s.

The contemporary churches in Greece speak a completely different architectural language in their shape and materiality to that of the Greek-Orthodox church Allerheiligen in Munich. Newly built churches in Greece continue to be dominated by cross-dome constructions as has been common since the Byzantine era.[7]

With its white plastered facades, the Gr.-Orth. church Allerheiligen also evokes stereotypical images of a radiant "white" architecture, most common on the islands Cyclades and Sporades. Brannekämper deliberately chooses smooth white plaster because in his understanding this corresponds

3. Interview with Robert Brannekämper by the author, 20th October 2022, Munich.

4. Alexander von Branca, *Facetten eines Lebens* (Bad Tölz: Verlag Urfeld, 2001), 46.

5. Robert Brannekämper, *Faszination Türme* (Munich, 2019), 1.

6. Interview with Robert Brannekämper by the author, 6th June 2023 on the phone.

7. Friedbert Ficker, „Tendenzen religiöser Kunst in Griechenland", in *Das Münster*, Nr. 49, 1996, 152–154, here 153.

to the pure image of a "Greek church" that Greece is known for on "every postcard".[8] In particular, the white churches on Santorini, which are based on simple geometries and have blue domes, are perceived around the world as being stereotypical of Greece's regional architecture, which is due, among other things, to years of targeted campaigns by the National Greek Tourism Organisation.[9] The dominant white colour in the architecture on the islands is mainly due to a decree by the dictator Ioannis Metaxas, according to which the houses in the Cyclades had to be painted uniformly white in order to contain the outbreak of cholera. Previously, the buildings were plastered in more natural colours as a visual protection against pirates.[10] The charming image of the Greek island architecture of the Cyclades and Sporades captivated architects at the CIAM Congress in 1933 thanks to photographs by Sigfried Giedion, which demonstrated his "appreciation of the unity between the built artefact and its natural environment"[11]. In his text "Le voyage en Grèce", first published in 1939 Le Corbusier also praised the Cycladic houses stating: "…[I] ignored the fact that the houses of the Cyclades, these bright white flowers, were still in bloom as proof, to our great consolation."[12] The contemporary image of the Cyclades is the complex product of historical development, tourism and the retrospective projections of architects and scholars.[13] In fact, the "white" architecture of the Cyclades represents only a small part of the diverse architecture of Greece from which most people of Greek descent in Munich can claim their origins. It is more remarkable that Brannekämper uses the "white" architecture of Greece in the design as a reference. Plastered facades like those in Gr.-Orth. Church Allerheiligen not only blend into Munich's cityscape but also align with the constrained budget of the construction project. Those of Greek roots who visit the Gr.-Orth. Church Allerheiligen regularly, feel reminded of their home country and consider the building to be a success, even if it speaks its own, usual architectural language.[14]

The design of the Gr.-Orth. Church Allerheiligen draws from both religious and local influences as well as broader trends of contemporary architectural language. The conversion project in the 1990s fell into the era of the so-called "second modernity", which "left behind the decorative narrative joy of a historicising postmodernism"[15]. The different stages of design for the façades between 1993 and 1995 can be seen as an example of fading post-modernism: with each new plan, Brannekämper approaches an architectural style of the early 2000s, which is characterised by even simpler forms. The Gr.-Orth. Church Allerheiligen was built prior to the Federal Chancellery in Berlin, designed by the architects Axel Schultes and Charlotte Frank. The competition in Berlin was announced in the same year that the church's foundation stone was laid in 1993 and was completed in 2001. The slender, high supports with narrowed capitals, wall slots and semi-circular motifs, as well as the white colour of the outer walls on both buildings, speak a similar architectural language. At the same time the design process of the Gr.-Orth. Church Allerheiligen is on the cusp of a new era, without crossing it: All plans continued to be drawn by hand by Brannekämper and his employees.

8. Interview with Robert Brannekämper by the author, 28th March 2023 on the phone.

9. Myrto Stenou, "Live your Myth in Greece: Towards the Construction of a Heritage Identity", in *Heritage*, Nr. 2, Basel 2019, 1640–1661; doi:10.3390/heritage2020101.

10. Stenou, "Live your Myth in Greece: Towards the Construction of a Heritage Identity", 1647.

11. Martina Kousidi, „Through the Lens of Sigfried Giedion – Exploring Modernism and the Greek Vernacular in situ", in: *RIHA Journal*, Nr. 0136, 15th July 2016, [23].

12. Giorgos Simioforidis (Ed.), Le Corbusier – Texte zu Griechenland, Athen 1987, 161.

13. Myrto Stenou, "Live your Myth in Greece: Towards the Construction of a Heritage Identity", in *Heritage*, Nr. 2, Basel 2019, S. 1640–1661; doi:10.3390/heritage2020101, 1649.

14. The author conducted several informal conversations with various community members of Greek origin who confirmed this hypothesis.

15. Heinrich Klotz, Architektur der Zweiten Moderne – Ein Essay zur Ankündigung des Neuen, Stuttgart 1999, 10.

Nevertheless, some post-modern, historicising forms remain in the execution of the church. It is in the spirit of post-modernism to combine stylistic elements from different eras and cultures. However, the design in Munich is more "sober" and elegantly reserved to provide space and surface for the religious paintings that were added after the completion of the interior.

5. A NEW APPROACH FOR YOUNG MONUMENTS: PROACTIVE PRESERVATION

Buildings from the post-modernist period (1970s, 1980s, 1990s) are starting to be slowly considered as worth preserving. They are still relatively young and numerous, and so the core question becomes how the criteria will be set for buildings from this generation to be classified as monuments.

According to the Bavarian Monument Protection Act, monuments are classified as "of people created things or parts of them from the past, that are worth to be preserved because of their historical, artistic, urban planning, scientific or folklore significance in the interest of the general public"[16].

The Gr.-Orth. Church Allerheiligen is an outstanding example of a sacred building from the 1990s, that - in addition to artistic and design aspects - also offers a unique history in terms of ecumenical cooperation and social value for integrating a minority into a larger community. It is also a remarkable example for "renovating" an exciting church: while a restoration would not allow for adhering to the necessary liturgical requirements in the architecture, and an entirely new building would have been subject to new building rules, meaning that the footprint would be smaller.

At the same time, the church is relatively unknown to those who do not belong to this minority. Greeks from all over the city come to this church, especially on Sundays and religious holidays. On Sunday service, the church is visited by an average of around 300 people. While more and more people have been leaving the Catholic and Protestant church in Germany in recent years, Greeks abroad are increasingly turning to the church of their ancestors, "with which the life of their nation and their own are historically, spiritually and sentimentally linked."[17]

Finally, the Gr.-Orth. Church Allerheiligen in Munich illustrates how broad the scope for interpretation is for the term "renovation" in the 1990s. The project of the Gr.-Orth. Church on the footprint of the Catholic Church Allerseelen is essentially a new building in terms of its implementation and appearance. To what extent the term "renovation" might be justified in this context could be critically questioned because apart from the dismantled external walls, nothing from the previous building has been preserved. And yet, in a certain way, the previous building had a significant influence on the design process because the architect ultimately had to work within the constraints of the existing architectural "corset".

The Gr.-Orth. Church Allerheiligen therefore represents a radical transformation of an existing architectural structure, which serves the "pragmatic" purpose of bypassing building regulations rather than

16. Bavarian Monument Protection Law, Art. 1 Abs. 1 BayDSchG.

17. Anastasios Kallis, „Griechische Identität und Orthodoxie", in *Dienst am Volk Gottes*, Herten 1992, 77–93, here 86.



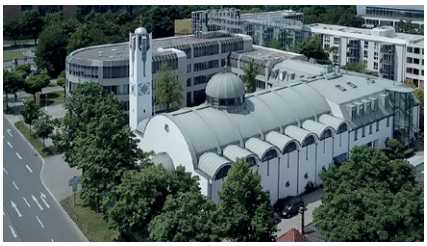






Figure 1. Richard Steidle, Allerseelenkirche, Munich, Germany, 1929. © Manfred Lamberty, 1958.

Figure 2. Robert Brannekämper, Gr.-Orth. Allerheiligenkirche, Munich, Germany, 1993-1995. Interior view during construction. © Archiv der Gr.-Orth. Allerheiligenkirche München, 1991.

Figure 3. Robert Brannekämper, Gr.-Orth. Allerheiligenkirche, Munich, Germany, 1993-1995. Aerial view of the complex. © Fotios Marantos, 2018.

Figure 4. Collage of a plan by Robert Brannekämper, (1993) from overlayed with a plan of the catholic church by Richard Steidle (1929) Original material from: Archive Lokalbaukommission München. Credits: ©Korinna Zinovia Weber, 2023.

exploiting the material value of the building structure or following the romanticism of continuing to use venerable walls.

Church conversions have been a common construction project for decades. However, it is uncommon for an existing place of worship to be converted to another denomination.

The architecture of (religious) minorities often struggles to be seen and gain recognition in mainstream society. The recently published book[18] on the history of this church, presenting exclusive archival material, is also an early wake-up call for local authorities to start considering its potential as a future monument before any renovation measures need to take place (Fig. 4). The more information publicly available about the history of a building, the more value and appreciation it can attract. ■

18. Korinna Zinovia Weber, *Die Griechisch Orthodoxe Allerheiligenkirche München* (Lindenberg im Allgäu: Kunstverlag Josef Fink, 2023).

BIOGRAPHY

Korinna Zinovia Weber studied architecture at TU Munich and ENSA-Paris-La-Villette. She received the Theodor-Fischer-Preis from the Zentralinstitut für Kunstgeschichte in 2022. Until 2023, she was lecturer, project manager and research assistant at ETH Zurich, at the chairs of Prof. Markus Peter and Prof. Tom Avermaete. Until 2024, she worked as a scientific collaborator at EPF Lausanne. Her book on the history of the Greek-Orthodox Church in Munich, financially supported by the Geschwister- Boehringer Ingelheim Stiftung, was released in fall 2023 at Kunstverlag Josef Fink. She has been a member of Docomomo Switzerland since 2019.

PINACOTECA CONTEMPORÂNEA

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ABSTRACT

This article aims to present Pinacoteca Contemporânea, an intervention in pre-existing structures whose scale and architectural characteristics may be understood as ordinary, especially when compared to its neighbour, the monumental building of Pinacoteca de São Paulo, designed by architects Ramos de Azevedo[1] and Domiziano Rossi in 1896.

Pinacoteca Contemporânea is the third unit of the Pinacoteca do Estado de São Paulo, the largest Brazilian museum, located in the city of São Paulo. It is an intervention in buildings remaining from two public schools, the first - Escola Modelo da Luz -, also designed by Ramos de Azevedo, was partially demolished after a fire in the 1930s, and the second - Escola Pública Prudente de Moraes, designed by Helio Duarte[2] – is a modern building erected in the 1950s and in use until 2015. The school was part of a public programme called Convênio Escolar (the School Covenant), and was in a state of near abandonment, with accelerated obsolescence when a public call was made for conceptual proposals for converting that structure into a new museum unit. Some of the main issues that required addressing included the urban degradation in the surrounding area, the potential of integration with the public park where it is located - Parque da Luz – the first public garden in the city, and the need to redefine the opening and accessibility of the building, as well as to expand areas for exhibitions, events, and collections[3].

1. INTRODUCTION: DESIGN PRINCIPLES

The project for Pina Contemporânea[4], carried out between 2018 and 2021, and constructed in 2022, is based on the following principles:

- an acknowledgement of place, recognising the urban scale of the pre-existing structures, which informed the overall integration of the new museum with Parque da Luz, its vehicular and pedestrian accesses, as well as its relationship with the original building of Pinacoteca, the Casa do Administrador do Parque (park administrator's house), and the various surrounding areas of listed properties in the urban ensemble;
- a creation of a public urban connection space, constructing a large open and public space for urban connection and articulation between the various volumes that constitute the ensemble;
- an acknowledgement of architectural scale - recognising the historical remains and their distinct periods, from the construction of Escola Modelo da Luz by Ramos de Azevedo, which was burned down in the 1930s, to the modernist building constructed in 1950 in the context of Convênio Escola - by dedicating activities compatible with their original structure and spatiality. This spatial organisation also guided the definition of the entire new intervention to constitute a unified cohesion with;
- design of flexible spaces to expand the possibilities of exhibitions and uses (both indoor and outdoor areas);
- physical and visual integration with open spaces, emphasising the public character of the institution and its openness to the immediate context through physical and visual integration with open spaces. This includes the qualification of the designed, sheltered, and open spaces for appropriation, both in Institution-programmed events and in free situations, to shape the ensemble as an extension of the public space of the park;
- adoption of sustainable solutions, using, for example, industrialised construction for the roof and circulation ring, with a structure made of glued laminated wood and steel to minimise the impact of implementation on both existing buildings and Parque da Luz. In addition, various engineering strategies will be employed to reduce energy and water consumption according to LEED recommendations.

2. RECOGNISING THE PLACE

Recognising an axis of urban articulation, and introducing a route that crosses the terrain connecting the park to the street, is the main foundation that guided the design of the ensemble. This square, dedicated to pedestrians, is positioned along the axis defined by the Pinacoteca building, whose intervention, carried out in the 1990s by architect Paulo Mendes da Rocha, reversed the internal articulation of the original neoclassical building. The interpretation, on an urban scale, of that architectural axis of the neighbouring building is the main organiser of the flows of access to the new spaces of Pinacoteca Contemporânea.

1. Francisco de Paula Ramos de Azevedo (1851-1928) was a Brazilian architect and professor who designed several public buildings in São Paulo.

2. Hélio de Queiroz Duarte (1906-1989) was a Brazilian architect, urban planner and full professor at FAUUSP - Faculdade de Arquitetura e Urbanismo da Universidade de São Paulo. As a specialist in school architecture, he coordinated the Convênio Escolar.

3. Comprehensive documentation regarding the intervention project can be accessed at https://arquitetosassociados.arq.br/pina-contemporanea/

4. Designed by Arquitetos Associados - Alexandre Brasil Garcia, André Luiz Prado, Bruno Santa Cecília, Carlos Alberto Maciel e Paula Zasnicoff - with the participation of Silvio Oksman.

It reconstitutes, on a different scale and with a more refined ambience, with landscaping that is a continuation of the park. The idea of the schoolyard was originally defined by the parallel implantation of two distinct built elements that can be recognised as ordinary architectures of small scale and different times.

The need to respect the scale and low height of the remaining buildings guided the creation of a basement level for the exhibition area and technical areas. The listed building regains its presence from an urban point of view through the removal of walls and the opening of gardens to the avenue.

3. RECOGNISING THE MODERNIST BUILDING

Recognising the structure and spatiality of the main building of Escola Pública Prudente de Moraes, which was designed by Hélio Duarte[5], played a role in guiding project and restoration decisions. The original building, organised in two longitudinal bodies articulated by a central hall, and features two different modular orders of the reinforced concrete structure, both of small-scale and small-span openings.

The first, in regards to the one-story southern block, had a central circulation that provided access to the school's administrative and support spaces. This block was mostly dedicated to the activities of the Library and Documentation Centre. The independent structure allowed for integrating the main spaces into two naves, concentrating all support spaces in the central span of the former circulation without conflicts between the new uses and the structure. This approach frees up the facades, opening the spaces for the public and workstations to the inner square to minimise the negative impact of noise and environmental pollution from Avenida Tiradentes while, at the same time, activating the connection with the main public area, the covered square. Located facing the front garden of Avenida Tiradentes, the collections are more isolated from public spaces, with strict temperature and humidity control.

The second structural order of the building, of the two-story northern block, which is entirely dedicated to the technical reserve of the artistic collection, presents vertical circulation adjacent to the central body and horizontal circulation facing the inner square. The rigorous structural pattern corresponding to the layout of the classrooms, with two structural modules and two windows per room, is also present.

In this block, the central classroom's floor slab was removed to create a double-height internal space to display large-scale collection items. Additionally, the walls dividing the classrooms were removed, taking advantage of the independence of the reinforced concrete structure to allow for greater flexibility in the management of the collection. The original flooring patterns were preserved, clearly marking the original compartmentalisation and the location of the removed partitions. The larger and heavier collections were placed on the ground floor, while smaller and lighter objects were located on the second floor to match the load capacity of the original structure.

The central block serves as the main welcoming and information space of the new museum. It defines an axis of architectural articulation, that resonates in the new roof, the mezzanine, the Grande Galeria (larger exhibition space

5. The first publication of the modernist project was made in the Habitat magazine, under the editorial guidance of the duo Lina Bo and Pietro Maria Bardi, in 1951. This issue brought an extensive dossier on the activities and projects of the Convênio Escolar ongoing in São Paulo. Two texts published in this edition, signed by Lina Bo Bardi and Hélio Duarte, argued strongly for the need for modern architecture to be adapted to urban school buildings in the contemporary society of that time. The original design of the Convênio Escolar for the Prudente Moraes School was not fully executed, encompassing plans for the demolition of the remnants of the Escola Modelo da Luz.

at the basement), and provides access to the Pavilion on the west side of the site. The internal organisation and materiality of the entrance hall - a space that contributes to defining the identity of the original building by associating the filtered light of the latticed element of the front facade and the curved wall that defines the viewing plane and axis of symmetry of the main entrance - were fully preserved, and a reception counter introduced (**Fig. 1**).

4. RECOGNISING THE REMNANTS OF THE ESCOLA MODELO DA LUZ

The buildings on the west facade that define the front of the park were restored based on the recognition of their primary constituent elements, assigning them uses compatible with their spatiality focused on their potential for activating the square. They now house an exhibition gallery, studios, a shop, restrooms, and administrative space.

In the eclectic annexe, a remnant of the first school - Escola Modelo da Luz -, a lower addition along Rua Ribeiro de Almeida was demolished. Its dissonant design detracted from the symmetrical order of the building, which was characterised by the prominent main door, emphasised by the original design of its roof. The demolition of this side section improved the visual integration of this remnant with another existing building outside the intervention area, the Casa do Administrador do Parque, a listed building of a similar scale, typology, and construction pattern. Its use as administration is consistent with this understanding of the ensemble. Its internal layout creates a distinctive room, reinforcing the reading of the ample space with generous ceiling height, defined by the clear geometry of its roof, which has been fully restored with a new wooden structure and French-style roof tiles. The original fenestrations were restored, whenever possible, based on traces present in the remaining walls. The colours of both the masonry and the joinery followed those identified in the oldest layers among those indicated in the survey.

The second element of this preserved ensemble is the pavilion defined by the sequence of steel portal frames, whose geometry and materiality were identified and mapped in the surveys conducted in compliance with the guidelines of the municipal preservation agency (DPH). Due to the absence of records of its original conformation, the project is based on the existing rhythm of the portals and the appreciation of this exceptional element - a steel structure from the early years of the 20th Century - to define the ambience of the ensemble of spaces. The existing compartments and construction elements that walled and concealed the metal elements were removed in their entirety to make room for a pavilion with greater internal visual permeability and greater integration with the immediate surroundings, both on the side facing the new square and on the sides facing Parque da Luz, in order to redefine the undesirable back appearance that this building presented at the interface with the Park. A specific aspect of the portal geometry defines the entire intervention: the height of 2.50 metres is determined by the differentiation between the generic concrete pilasters from which the steel structure develops. A new envelope is constructed independently of the delicate structure to

accomplish this. This is achieved through two operations: the raising of a wall to a height of 2.50 metres, using the same material as the square floor and extending the material of the metal roof above that height.

This differentiation avoids the need for a third material for the facades, accentuating the horizontal and elongated character of the pavilion, which contributes to defining the fronts to the square and the park. This strategy seeks to minimise the abundance of forms, volumes, and materials to preserve the hierarchy and importance of the pre-existing delicate and small-scale elements. In this pavilion, the two smaller ends are fully open. On one side, the exhibition hall located on the south face - Galeria Praça - provides a view of Parque da Luz with the Pinacoteca brick building as a backdrop. On the other side, it opens the staff living area to a private courtyard that separates the small annexe of the Escola Modelo da Luz, intended for administration, from this pavilion. This separation is intentionally designed to restore the unity of each section, each with its own ordering principles. At the same time, it maintains a subtle continuity between both by extending the lower wall of the pavilion to the annexe, ensuring the continuity and linearity of the square boundary **(Fig. 2)**.

5. INTEGRATING THE ENSEMBLE: BASEMENT, SQUARE, MEZZANINE, AND NEW ROOF

Promoting the integration of such distinctive buildings constituted the main challenge of the project. Therefore, the emphasis is on designing the void: a generous square at ground level, which is shaped by the overlap of three levels of use: first, the Grande Galeria located in the basement, whose underground location avoids the creation of a new dissonant volume that could compromise the ordinary scale of the pre-existing elements; second, the public square at street level; and third, the mezzanine, on the upper level, six metres higher, overlooking the front garden and to the park, partially overlapping the south block of the modern building at a level that fully preserves all its enclosing walls, with the minimal possible impact, and at the same time, offering a new experience of integrated vision, previously unavailable, which restores the visitor's understanding of the ensemble. This overlap is crowned by the new illuminated roof, a fundamental element in constructing the new unit of the ensemble.

In addition to the exhibition, the basement houses technical, support, and service spaces under part of the pavilion. During its construction, care was taken to avoid approaching both the modern building and the foundations of the eclectic annexe. The process involved the removal of the steel portal frames, which were restored outside the construction site and reassembled. Such an approach was taken because it aligns with the tectonic logic based on the assembly of lightweight elements, making it the simplest and most effective solution for their restoration. The new underground infrastructures reduce the impact of building infrastructures on this delicate pavilion, ensuring that the remaining metal elements stand out.

The mezzanine is designed as an independent steel structure, which interfaces with the south wing of the modern building. It provides support

and access points for the light structure on the central pillars of the existing building, allowing for structural reinforcements to be made without compromising the integrity of the facades and main architectural elements that characterise the modern building. The lightweight metal structure minimises assembly time and impact on those pre-existing ordinary constructions.

For the vertical articulation of this set of public spaces, four elements were constructed: the bleacher staircase next to the central walkway, which, like a redesign of the floor, provides access to the lower level of the exhibition area within the square; two metal staircases provide access to the mezzanine, offering views of the square and Pina Luz; and the main element for vertical articulation that provides universal accessibility: a panoramic pair of elevators that offers, in the central void of the square, providing an analogous - now open, and urban-scale - experience similar to that of the elevator designed by architect Paulo Mendes da Rocha in the third courtyard of Pina Luz.

Finally, the design features an illuminated ceiling made from high environmental performance and low impact material - glued laminated timber – on the one hand is inspired by the illuminated ceiling designed by Mendes da Rocha for Pinacoteca Luz while, on the other hand, incorporates the heterogeneity of shade through variation in the spacing and profile of the beams, echoing both the experience of visiting the internal space of Pina Luz and the experience of walking under the forest canopy of Jardim da Luz. By presenting itself as a new roof in the open space, it reverses the introspection of the glazed ceiling of Pina Luz, visible only from its interior spaces, and shapes a new element in the urban landscape. Its discreet presence is ensured by its position set back from the main facade of the modern building, which maintains its hierarchical dominance in the ensemble seen from Avenida Tiradentes. Seen from the other side, from the Park and within the square, it signals the emergence of a new public space. Said space is characterised by programmatic indeterminacy, sustainability, and high urban potential in an effort to create a "significant unnamed space"[6], as professor Flavio Motta once defined some spaces in Brazilian modern architecture. These spaces do not have a pre-determined function but present a generosity in terms of scale and urban integration, allowing them to form important urban fragments along with architectural artefacts.

Figure 1. Helio Duarte, Escola Pública Prudente de Moraes, São Paulo, Brazil, 1950, Frontal view after renovation. © Nelson Kon, 2023.

Figure 2. Arquitetos Associados, Pinacoteca Contemporânea, São Paulo, Brazil, 2018-2022, Plans. © Arquitetos Associados, 2024.

Figure 3. Arquitetos Associados, Pinacoteca Contemporânea, São Paulo, Brazil, 2018-2022, View from the park. © Nelson Kon, 2023.

6. THE IMPORTANCE OF RENOVATION

It is worth highlighting that the Pinacoteca Contemporânea, although situated within a designated heritage context, differs significantly in material quality and the integrity of its pre-existing structures when compared to the original Pinacoteca building, designed by Ramos de Azevedo and later intervened by Mendes da Rocha, which holds high historical and architectural value. On the other hand, the remnants of the original school hold substantial historical value but lesser architectural importance. This discrepancy justifies the fact that its heritage designation focuses on its volumetric preservation. The materials used are quite ordinary, and given that the original design was only partially implemented and, at the time of intervention, it presented numerous remnants

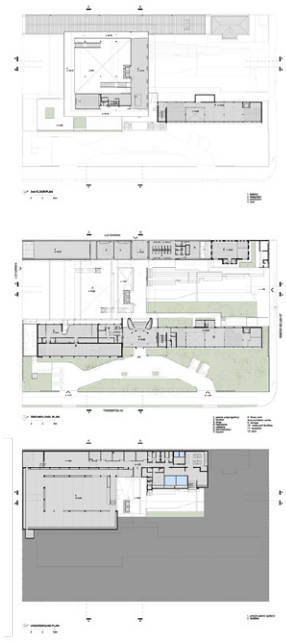
6. Flavio Motta, "Paulo Mendes da Rocha," in *Textos informes*, 2.ed. (São Paulo:FAU USP, 1973)



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from other periods, coupled with several low-quality buildings improvised to meet immediate functional demands, the overall structure allowed for a higher degree of intervention. This opportunity is evidenced by the addition of a large underground floor, the full opening to the immediate context, and the articulation of the remaining elements through the illuminated ceiling defining the Central Square. Consequently, the more extensive intervention seeks to balance different levels of preservation according to the distinct parts, allowing substantial modifications to better enhance its public use and its ability to articulate and contribute to the renewal of the immediate context, including the city and the park. It is not difficult to imagine that this would be quite unlikely in a complex of high architectural value protected by the most stringent integral preservation regulations, which would likely hinder or prevent a comprehensive redefinition of the complex as undertaken **(Fig. 3)**. ■

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BIOGRAPHY

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WEST BUND SHANGHAI: THINK TANK FOR ART

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ABSTRACT

The Tank Art Center is one of the centrepieces of the West Bund, an art- and landscape-driven urban renewal project along the southwestern banks of the Huangpu River in Shanghai. The area bears evidence of the city's productive past, including large-scale loading cranes, warehouses, wharves, runways, and technical facilities. In the redevelopment, former industrial and infrastructural sites have turned into design opportunities for international firms and Chinese independent architects called to work on new cultural containers along the river, either by public clients or private entrepreneurs.

Beijing-based OPEN Architecture (founders and principals Li Hu and Huang Wenjing) was tasked with the design of the Tank Art Center in 2013. Construction took place between 2017 and 2019. The program of the Center unfolds in and around a cluster of five decommissioned aviation fuel tanks built in the 1980s to serve Shanghai's former Longhua Airport—China's first major aviation hub and once the largest international airport in the Far East. Of all new cultural venues along the West Bund, the Tank Art Center most closely interweaves the two urban themes of the redevelopment project: building and landscape, park and museum. More critically, in OPEN's design, the preexisting infrastructural heritage is turned into a substantive element of the contemporary layout, neither hindering the new nor being subordinate to it.

This paper begins by framing the Tank Art Center within the recent transformations of Shanghai's riverfronts. Site visits, web research, and access to the architects' archive allow close reading of the grounds before and after renovation. OPEN's approach to the adaptive reuse of the fuel tanks is thoroughly described and analysed, offering critical and comparative insights on the design.

1. WEST BUND

Only 3 out of the 150 km of Shanghai's riverfronts were open to the public until 1990, the banks of the Huangpu River and its tributaries being primarily used for trade and heavy industry. Ensuing efforts to make these banks publicly accessible meant providing a dense and overpopulated urban core with a network of open spaces, while freeing up long stretches of waterfront property. By demolishing or repurposing industrial sites along the Huangpu, renewal reflected the municipal government's ambition to transition Shanghai from a city of production to a city of consumption.

One of the most successful instances of riverfront rehabilitation is the West Bund, a 9.4 square kilometres former brownfield site in the Xuhui district, nestled to the south of the old city, between Shanghai's middle and outer ring highways. Although this area represents only 5% of the city's renewed watersides, it is the only one that has established itself as an urban destination, effectively drawing citizens and tourists away from the central districts of Shanghai.

The West Bund area has a long history. In pre-industrial times, it was covered by gardens and orchards, dominated by the pagoda of the Longhua Temple and Monastery (built 242 CE, then destroyed, reconstructed, and restored multiple times until 1954). The area housed a Kuomintang prison in the interwar period, memorialised by the Longhua Martyrs' Hall (1995). During Japanese occupation (1937-45), it served as detention camp for foreign residents. Most notably, the Xuhui riverfront was the seat of two crucial modern transport infrastructures, now dismissed: the Nanpu Railway Station, used both for cargo and passenger transport, and the Longhua Airport, one of the cradles of Chinese aviation. Longhua occupied most of the Xuhui riverbanks. Established as a military airfield (1922), with both land and water runways, it evolved into a passenger hub (c.1930). By the mid-1960s, air traffic had largely shifted to Hongqiao. Longhua gradually declined and finally closed (2008). The city fabric had enveloped the once remote airport.

Renovation in the area started in 2013, the first buildings and open spaces completed as early as 2014. Both urban renewal and urban rebranding, the West Bund program was to rival international landmark districts such as London's South Bank, Paris's Rive Gauche, and New York's Museum Mile. Aiming to conjure the appeal of a deterritorialized international hotspot, its very name was inspired by these precedents. The program's economic drivers are multifaceted. Nonetheless, it is broadly a culture-led urban redevelopment that is not aimed at promoting the specific cultural heritage of Shanghai or the Xuhui district, but rather at fostering an abstract and polished idea of culture that aligns with global models in the arts, media, fashion, and design industries.

At the core of the program is the so-called "Cultural Corridor": a tight sequence of public and private art museums, ateliers, and galleries adjacent to the riverfront, enjoying tax incentives and rent-free leases. The Corridor—marketed as the largest outdoor art-exhibition area in the world—caters to the aspirations of the growing high-income transnational

middle class of the Chinese metropolis while simultaneously leveraging the burgeoning growth of its art ecosystem.

Since the 2010s, Shanghai has progressively become an international centre for the display, storage, and commerce of ancient and contemporary art. As of October 2021, Shanghai had 96 active museums—25 state-owned and 71 private—and hosted an average of 2,000 exhibitions per year. The number of art galleries increased from only 47 in 2001 to 770 in 2019; in 2021, the West Bund alone featured as many as 110 galleries.

How does this broader program relate to the adaptive reuse of industrial and infrastructural heritage? The riverbanks of the West Bund bear substantial evidence of the area's productive past, including large-scale loading cranes, warehouses, wharves, runways, and technical facilities. International firms and Chinese independent architects were involved in designing new cultural institutions on the former industrial or infrastructural sites, commissioned either by public institutions or by Chinese entrepreneurs and collectors such as Liu Yiqian and Wang Wei (Long Museum), Budi Tek (Yuz Museum), He Juxing (START Museum), or Qiao Zhibing (Tank Shanghai). The architects have each dealt differently with the context and material traces of the site's past. Within a span of a few kilometres, one can witness a wide range of approaches, from the formal re-evocation of demolished buildings—Jean Nouvel's START Museum mirroring the position, plan, and silhouette of the former Nanpu Railway Station—to the staged isolation of historical fragments—the Beipiao Wharf in Atelier Deshaus's Long Museum—, or the assimilation of old disjointed parts within new architectural ensembles—the Longhua aeroplane hangar and the glass façade in Sou Fujimoto's Yuz Museum.

The Tank Art Center (Tank Shanghai for short, 2013-19) by OPEN Architecture (founders and principals Li Hu and Huang Wenjing) stands out. Of all new designs along the riverfront promenade, it most closely interweaves the two main urban themes of the West Bund: park and museum. More critically, here the preexisting infrastructural heritage is effectively turned into a substantive element of the contemporary layout, neither hindering the new, nor being subordinate to it[1].

2. ART TANK

Tank Shanghai occupies a 4,75 ha L-shaped lot on Longteng Avenue. Made up by a big and a very small trapezoid, the site is two metres lower than the avenue. The brief foresaw both new building and the reuse of five ordinary cylindrical aviation fuel tanks within the lot **(Fig. 1)** but was otherwise fluid until Qiao Zhibing became boss (2017).

The site extends between the riverfront to the east and Longteng Avenue to the west, the Longhua Helicopter Airport (renovated 2016-19) to the north and the Longyao Road Tunnel (completed 2010) to the south. The five 15-metre-high tanks date from the 1980s and form three rows. The row comprising tanks 1 (in the small trapezoid) and 2 (in the big trapezoid) fronts Longteng Avenue. The row comprising tanks 2, 3 and 4 is roughly

1. We thank OPEN Architecture for providing us with firsthand information and images on the project.

perpendicular to the first. The diameter of tanks 1, 2, and 3 is 24 metres, that of tanks 4 and 5 is 28 metres. The third row comprising the wider tanks forms an obtuse angle with the second. The east-west axis of tank 5 bisects the big trapezoid lengthwise in roughly equal areas; its north-south axis crosses the site halfway. At the site's southernmost vertex, the ventilation tower for the tunnel serves as a signpost, framing the big trapezoid together with tank 2. A big dome, once a cement factory, rises in the neighbouring site south of the tunnel **(Fig. 2)**.

OPEN's straightforward scheme merges cultural venue and urban park. For architects Li and Huang, an art centre need not be temple, palace, factory, or depot, but develop below and beside greenery, recalling caves and/or garden pavilions. The Geffen Contemporary at MOCA in Los Angeles by Frank Gehry (1979-83), a former warehouse, is less of a precedent than the Louisiana Museum of Modern Art near Copenhagen by Jørgen Bo and Wilhelm Wohler (1955-58/66/76/82/91) and the Oakland Museum of California by Kevin Roche, John Dinkeloo, and landscape architect Dan Kiley (1962-69). Nevertheless, the Shanghai site leads to a diverse use of greenery, paving, and architecture both to characterise border conditions and to create geometrical order within the site's irregular perimeter.

With direct public access, tanks 1 and 2 form a duo although assigned to live music and a restaurant, respectively. On the northern border, a side street runs along the heliport's fence to provides parking space and service access to tanks 3 and 4, the main exhibition galleries. Tanks 1, 3, and 4 appear in full height from the street, relating in scale to the heliport buildings. In contrast to this hard edge, a forested expanse bordered and crisscrossed by pedestrian pathways covers the tunnel and blurs the limit between Tank Shanghai and the neighbouring site. Given the transverse disposition of tanks 4 and 5 as well as their peripheral and central location, respectively, plus the distinct qualities of riverfront and city front, the design highlights two elements in a Yin-Yang relationship: a 55-metre paved square and a 45-metre-long freestanding gallery for special exhibits between an internal green and a riverside forecourt. Typological progression, complementation and polarity apply.

The square—the architects call it "urban plaza"—is defined primarily by two elements. One is a Z-shaped garden surface adjoining the tanks and the forested expanse. The other is a complex of landings, stairs, and cascading pools—the architects call it a "stepped waterscape"—that develops between the outer row of tanks and a diagonal ramp starting next to the tunnel tower and ending at the square's southwestern vertex. The Z-shaped garden is partly planted on ground, partly on a one-story-high roof slab **(Fig. 3)**. Below it, the exhibition wing runs east-west, while the entrance wing runs north-south. Window walls giving onto the square enclose both wings. A multipurpose space, tank 5 is extended by a long stage flush with the square's edge and a short one towards the green, both reinforcing axiality.

Tank Shanghai is a cut-and-fill operation: visitors go up to enter tanks 1, 2, and the rooftop garden planted with waist-high vegetation **(Fig. 4)**; down the stepped waterscape to access the square and the art centre, either by circuitous

stairs or directly via the ramp at one end and narrow steps at the other. To increase the interest of static forms for moving bodies, the southern border of the cascading pools is on axis with the projecting stages and a large circle on the square defined by misting devices; besides create a cooling, foggy microclimate in summer, the devices recall a demolished sixth tank. Fronting both the circle and tank 3, a boxy outbuilding with a niche-like platform open to the square replaces part of the forested expanse's outer pathway, reinforcing spatial enclosure while allowing for access to the freestanding gallery—the architects call it "Project Space"—and its surroundings.

The striated metallic eastern facade of the Project Space is the blank backdrop to a green comprising level and sloping lawns, separate seating areas for performance at the river stage. The green—the architects call it "event plaza"—is defined by tank 5, the Project Space, and two additional elements. The level lawn's northern side turns into a grassed over hip roof rising from the ground, a camouflaged service facility like its counterpart to the south amidst the forest, the "Reflecting Gallery" clad in shiny metal on an irregular hexagonal plan. The green is geometrically less strict than the square. The level lawn's eastern side diverges from the entrance wing, for the Project Space rectangular plan parallels an existing pool fronting the river. Once used by Longhua Airport firefighters, the pool is now inscribed into a rectangular lawn partly occupied with an olive grove **(Fig. 5)**.

Like the tanks, the Project Space has two faces. Re-proportioned by the new construction, the tanks crown the rooftop garden, evoking both elementary church domes and flat-topped hills, ready-mades gracing a man-made landscape. From the internal street, their utilitarian lineage shows. From the green, the serrated roof profile of the Project Space cries "factory," each triangle corresponding to one band of skylights. From the river, the industrial allusion gives way to a long, elegant portico supporting a monopitch roof that slopes inwards; the green—and watery—forecourt adds to the Project Space presence. Scale manipulation helps to highlight the transformation of elements associated with pragmatic infrastructure into semantically loaded superstructure, from the realm of need to that of desire. New portholes in the tanks allude to ships anchored nearby while reviving Purist architecture's infatuation with movement in the 1920s.

Visitors can go directly to the riverfront by the rooftop garden or by the forested expanse pathways. But going inside is rewarding. Each tank interior is renovated with a different functional and formal perspective, variations on how to decompose a drum, how to combine archetypal circularity with linearity. Radial spaces are accessed in the art centre by itinerant spaces of Neo-Purist allure, parading the free plan behind the window walls. Curvilinear ramps and staircases act as expanded and sometimes conical bases for the tanks, respecting their structural limitations. Conflating need for lighting and structural autonomy of the tanks, roof slabs are separated from the tanks by glazed bands. Walls and ceilings are white, cement floors are grey, cylindrical columns expose their concrete mostly upright (the 1920s way) but at times inclining (the 1950s proposal).









Fig. 1. Aviation fuel tanks, Longhua Airport, Shanghai, PRC, 1990s. From: ShanghaiWOW. Image courtesy of OPEN Architecture.

Fig. 2. OPEN Architecture, Tank Art Center, Shanghai, PRC, 2013-19, aerial view. © Qingshan Wu. Image courtesy of OPEN Architecture.

Fig. 3. Tank Art Center under construction: tanks and roof slab. © OPEN Architecture. Image courtesy of OPEN Architecture.

Fig. 4. Super-surface: rooftop garden. © Fangfang Tian. Image courtesy of OPEN Architecture.

Fig. 5. From the Huangpu River: forecourt, Project Space, event plaza, and Art Center. © NSAW Image. Image courtesy of OPEN Architecture.



OPEN manages well the balancing of elite art and popular leisure at the same time it integrates existing ordinary elements into a new composition of far higher aesthetic status. In this sense, Gehry's MOCA is definitely a precedent, maybe not as close as Lina Bo Bardi's SESC Pompeia Leisure and Culture Center in São Paulo (1976-86), in which the adaptive reuse of a drum factory as a multipurpose covered plaza with library and exhibition spaces is associated to the creation of significant recreational space, both enclosed and open. Concrete grain silos, so dear to Le Corbusier and Walter Gropius, have been recycled as housing, and the brick-clad Vienna Gasometers too. Yet, the contemporariness of the Shanghai tanks (1980) and the relative newness of steel oil storage tanks in general (they appeared in the market around 1900-20) are remarkable, not to mention the fact, that like silos and gasometers, they were not supposed to become human activity containers.

Tank Shanghai makes one reflect about current disciplinary culture and recognize how much it still relies on the academic design tradition. OPEN uses a-stylistic techniques to create order within the irregular site. The obligatory reference is the succession of axially symmetrical pieces (façade, entrance, and *cour d'honneur*) in Antoine Le Pautre's Hôtel de Beauvais (1657), to which OPEN replies with the entrance wing's axially symmetrical elevation, the presence of Tank 5 strong enough to compensate for the near-symmetry or incomplete regularity of the plaza. Shifting axes of movement, as prompted by the Project Space, points to another academic staple, Auguste Choisy's analysis of the Parthenon (1865).

Nevertheless, if the techniques can be said a-stylistic, the result is not. Tank Shanghai is eclectic and historicist in a subtle way, as it prefers formal integration to contrast. It is a subdued temporal patchwork. Most of it revives modern architecture of the 1920s (and a bit of the 1950s) to go with tanks of the 1980s, which many deem timeless given their elementary geometry, but realistically date to the 1900s. Incidentally, the first Venice Architecture Biennial happened in 1980 to celebrate the postmodern past. Stubbornly, modern architecture as a formal system refused to die, having shed its International Style uniform even before its postwar hegemony. It became historicized as pluralist, and survived, historicist or eclectic in a contemporary way, and kept expanding, as OPEN intimates by bringing to the party the folds of the 1990s.

Typological recall enriches the temporal patchwork by giving a cross-national dimension to the marriage of forms transient and long-lasting, if not timeless. One may link the urban plaza to Michelangelo's three-sided Campidoglio (1534-1653) and its palaces renovated as museums, and the green one to Anglo suburbia. But it is equally valid to see them as the updating of the traditional Chinese courtyard, singular or successive, palatial and domestic, the tanks playing big roofs, love of the garden always alive. Relations can be established with the classic villas where drums and boxes interact, from Andrea Palladio's Villa Rotonda (1567-90) to Le Corbusier's Savoye (1926-31). But drums and boxes also interact in Beijing's Temple of Heaven (1406-20) turned into a park (1918) and tourist draw. Whether the word is contemporariness or modernity, the subject is change within continuity.

Refreshingly, OPEN does its job without extravagant forms of easy iconicity, endorsing maybe President Xi Jinping's indictment of "weird" architecture (2014). The limitless, tragic sublimity of a derelict site is replaced by a controlled mix of pastoralism and stateliness that provides understated, refined delight, and it would be preposterous to assert that only the "transnational capitalist class" can appreciate understatement and refinement. Chameleon-like it is because of its simplicity, institutionally consolidated Tank Shanghai is now also a venue for fashion events and corporate gatherings, a scenic setting for wedding photography, a destination for both picnickers and art-goers. In global travel parlance, worth a detour. ■

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CORPORATE ARCHITECTURE IN BRUSSELS: FROM OBSOLESCENCE TO HERITAGISATION. LA ROYALE BELGE AS CASE-STUDY

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ABSTRACT

Brussels is host to many national and international institutional and private corporate office buildings. The construction of office buildings on a massive scale in the second half of the 20th century was the most striking feature of Brussels' urban structure. This period also saw major infrastructure works and the development of the green periphery, with the emergence of new monofunctional office districts.

This typology is particularly fragile due to its rapid obsolescence and confronted with poor sustainability and strong economic constraints, too often reduced as an object of consumption lacking in image. In recent times, some examples of Corporate architecture have become protected as heritage sites, while many others are being repurposed for new uses, often without much respect for their heritage values. This paper intends to present a brief overview of the heritagisation and urban policy related to office buildings in Brussels (IBM, WTC, ING, Generali,…), with a focus on the more recent significant intervention on La Royale Belge.

La Royale Belge (1967-1970) insurance company is an emblematic office building in Brussels' green periphery. Thanks to its audacious architecture, its integration into the landscape and the quality of its interior design, La Royale Belge is certainly an icon of international Corporate architecture. When the building faced a possible demolition, it was officially listed in 2019. The building then underwent a substantial and delicate renovation-restoration-transformation in a successful multifunctional programme.

1. INTRODUCTION

Brussels is host to many international and national institutional and private corporate office buildings. With its 1.24 million inhabitants, around 1.700 office buildings and some 12.5 million m² of office space[1], Brussels has remained at the heart of office architecture since the second half of the 20th century.

This typology is particularly fragile due to its rapid obsolescence and confronted with poor sustainability and strong economic constraints, too often reduced to an object of consumption lacking in image.

In the years following World War II, Brussels took a resolutely functionalist turn, and the construction of office buildings contributed significantly to this irreversible urban transformation. The context was one of unlimited growth, unbridled mobility and tertiary development: The establishment of international institutions, numerous national and international company headquarters, the proliferation of Belgian administrative bodies and preparations for Expo 58 had a drastic impact on the morphology of Brussels, with new axes and completely redesigned districts.

Today, the refurbishment of office buildings is a topical issue that involves heritage value, sustainability, contemporary urban policy issues (densification, diversification, mobility) and economic requirements (real estate, relation private-public, usages).[2]

Recent debates on the extension of the notion of heritage to recent architectural production in general and to the office building typology in particular are undoubtedly contributing to the heritagisation and valorisation of these symbols of consumer society through their contextualisation.[3]

In Brussels, there is a favourable regional policy towards recognising recent heritage recognition; with the need to abandon the single-purpose constraints of most office buildings in favour of multifunctional solutions that better respond to new societal needs. Such a shift is influenced by changing working habits due to the COVID 19 Pandemic and the need for less office space. Real estate players are learning to leverage the 'design' or 'vintage' potential of an office building, contributing to various emerging approaches in this ongoing development.

2. OFFICE BUILDINGS AND MODERN URBAN PLANNING

The construction of office buildings on a massive scale in the second half of the 20th century was the most striking feature of Brussels' urban structure, accompanying major infrastructure works and the development of the green periphery.

2.1. THE BRUSSELS NORTH-SOUTH RAILWAY JUNCTION

In Brussels, the development of the tertiary sector was initially linked to the major infrastructure works of the North-South railway junction. These titanic works, which cut through the medieval urban fabric, began in 1911 and were interrupted by the First and Second World Wars. They were finally completed and inaugurated in 1952[4]. It has redesigned part of the historic centre, creating

1. perspective.brussels Département Connaissance territoriale, *Observatoire des Bureaux* no.40, (March 2024).

2. Sven Sterken, "Au-delà de la « Bruxellisation ». Le renouveau des complexes de bureaux des années 1960," *A+* no. 295, (April-May 2022).; Kristiaan Borret, "Should I stay of should I go?," *A+* no. 270, (February-March 2018).

3. Susan Marsden, and Peter Speariti, *The Twentieth-Century Historic Thematic Framework*, (Los Angeles: Getty Conservation Institute, 2021); *International Symposium on Young Heritage (1975-2000)*, (Brussels: Vrije Universiteit Brussel, urban.brussels, 2024), 6-7.

4. Start of the works in 1911 till 1914 and the beginning of World War I. Works restart in 1936 and continue partially during the World War II. Inaugurated by King Baudouin in 1952. 3,1 km long : 200 m viaduct + 2.000 m tunnel + 900 m viaduct ; 6 train tracks ; 5 new train stations : North, Congress, Central, Chapel, South ; around 1.500 trains per day.

new axes and new building blocks, in short, a new urban morphology in which the service sector will dominate. A comprehensive collection of office architecture from the 1930s to the present day is being developed along these new axes. One of the most illustrative examples is the so-called Ravenstein block, which encompasses the Shell building (Alexis Dumont, Marcel Van Goethem, 1931-34), Generali (same architects, 1934-36), Ravenstein Gallery (Alexis and Philippe Dumont, 1954-58), former Belgolaise bank (Jean and André Polak, 1952-54), bordered by the Central Station (Victor Horta, 1936-45), Palais des Beaux-Arts (Victor Horta, 1922-29) and Mont des Arts. In the 1930s, the town-planning regulations for these new buildings in these newly redesigned blocks called for commercial ground floors to have large windows and be well-lit at night, to ensure an urban life after office hours.

2.2. THE INNER RING

After World War II, Belgium launched a major initiative to modernise its road network[5], providing Brussels with urban motorways. Such development was spurred on by Expo 58[6]. The redevelopment of the Inner Ring[7], an 8 km stretch of 21 boulevards and avenues transformed into an urban motorway, was inaugurated in 1957. Most of this new building front was given over to office buildings in the dominant International Style : Winterthur (Philippe Dumont, José Vandenbossche, 1954), mutual insurance Prévoyance Sociale (first curtain wall in Belgium, Hugo Van Kuyck, 1954), the iconic bank BBL (Gordon Bunshaft SOM, 1964) (**Fig. 1**), Madou Tower (Robert Goffaux, 1965), IBM Tower (Walter Bresseleers, 1978)[8], …

2.3. INTERNATIONALISATION

The decision to host the European institutions in 1959, and the new NATO headquarters in 1966, established Brussels as the stronghold for office buildings and office districts.

The first emblematic buildings of the European institutions -Charlemagne building (Jacques Cuisinier, 1967), Berlaimont building (Lucien de Vestel, Jean Gilson, Jean et André Polak, 1967)- as well as the axes Rue de la Loi - Avenue du Berlaimont will make up the new 213-hectare European District[9]. Several dozen buildings here comprise a collection of architecturally diverse structures built since the 1967s, embodying real-estate (post)modernism, as well as the stakes of vast real-estate operations and large-scale rehabilitation efforts aimed at breaking the monofunctional character of the district[10].

2.4. PASTORAL CAPITALISM IN THE GREEN PERIPHERY

After the Second World War, the Outer Green Belt developed thanks to an efficient road network combining radial and concentric roads linking these newly built areas to the Inner Ring. Many companies intend to install their new offices in this green and quiet periphery. Development plan no. 6 of Watermael-Boitsfort 1964-67 aims to regulate new constructions and promote high-quality free-standing architectural objects and their integration within the green environment. This area is home to the most emblematic references

5. Creation in 1955 of the Road Traffic Service and the Autonomous Roads Fund within the Roads Administration of the Ministry of Public Works. *Bruxelles Carrefour de l'Occident*, Ministry of Public Works, 1956.

6. Brussels World's Fair: candidacy in 1948, attribution in 1953, initially previewed in 1955 but postponed to 1958 due to the Korean war.

7. The Inner Ring outlines the so-called Pentagon, second medieval wall 1356-1383, dismantled at the end of the 18th century and transformed into large tree-lined boulevards by Jean-Baptiste Vifquain 1820's-1850's.

8. Following the same vertical white stripes pattern of the Seattle Head Office designed by arch. Minoru Yamasaki, 1962).

9. Sven Sterken, "Bruxelles, ville de bureaux. Le Berlaymont et la transformation du Quartier Léopold", *Bruxelles Patrimoines*, no.15-16, 102–117.

10. In April 2024, the Belgian state investment fund SFPIM bought 21 buildings from the European Commission for 900 million €. 300.000 m² obsolete office buildings from the 1960s-1990s to be transformed for 70% into sustainable office space, 30% for commercial, residential and public facilities. https://ec.europa.eu/commission/presscorner/detail/fr/ip_24_2329

of 1960s-1970s corporate architecture in Brussels, including the headquarters of glass producer Glaverbel (designed by Renaat Braem, 1963-67), cement producer CBR (designed by Constantin Brodzki, 1967-70) and the offices of insurance company La Royale Belge (1967-70). These buildings are considered important heritage landmarks and are protected as such.

2.5. "BRUXELLISATION" AND NEW AMBITIONS

The Manhattan Plan drawn up by Groupe Structures in the 1960s to clean up the Northern Quarter was approved in 1967. 53 hectares of urban land were used to reproduce a business district similar to that of New York, linked to the rest of the continent by heliport and motorway. This project involved hundreds of expropriations and demolitions of buildings, as well as the displacement of several thousand residents. Popular protest grew against this "anti-urban" functionalist vision as it was considered the peak of unbridled and traumatic functionalist urban planning known as "*Bruxellisation*". The plan proposed 54 towers, including eight 28-storey World Trade Centre towers. Eventually, with the oil crisis in 1973, the WTC was reduced to three towers (Groupe Structures, 1968-83). In the 1980s and 1990s, the federalisation and regionalisation of the Belgian state resulted in an urgent need for office space that came to the rescue of the Northern Quarter[11]. These buildings are now the target of several innovative renovation scenarios based on sustainability and mixed functions, in line with pressing needs that depend on urban policies. The ongoing ZIN project - the major transformation of two WTC towers with an audacious new building linking both towers - is indicative of the contemporary approach for serial office buildings: retrofitting, circular economy, multifunctionality.[12]

3. A FRAGILE LEGACY AT THE FOREFRONT OF INNOVATION

Today, office buildings may now seem outdated in terms of taste and functionality, but at the time they were built, they represented some of the most innovative architecture on the market. The use of new construction methods (PREFLEX beams[13], curtain wall,…) and new materials (architectural concrete, aluminium, COR-TEN steel, Stopray glazing, sandwich panels, plastics, etc.)[14]. Additionally, they incorporated new techniques, such as ventilation and computerisation, alongside the functional and rational distribution systems. However, the innovative and experimental nature of these buildings weighs heavily on their future. Technology and finishing were becoming increasingly important; structures becoming less and less expensive, to the detriment of the longevity of the building as a whole. In the 1970s, offices became a cost-effective investment product that had to be cheap and flexible, evolving from corporate tropes to a utilitarian, speculative objects, meaning a decoupling of the building's overall lifespan (50 years) from the interior lifespan (15 years). Standardisation, efficiency and market conformity are the focus. In terms of interior layout, most are characterised by a central circulation core surrounded by open plan or partitioned offices (1.8 x 5.4 metre module with a central corridor). The building lifespan (50

11. The 1980 state reform created the regional institutions in Flanders and Wallonia. Brussels Capital Region was officially created in 1989. Urban planning and heritage policies have since been regionalised.

12. ZIN. n.d. "The Future Is HERE | ZIN." Zin.brussels. Accessed July 31, 2024. https://zin.brussels/.

13. The PREFLEX beam was developed by engineer Abraham Lipski and patented in Belgium in 1950.

14. "Post-War Building Materials." n.d. Post-War Building Materials. http://postwarbuildingmaterials.be/.

years) and the interior (15 years) were decoupled to make it fully responsive to the market. This resulted in generic office boxes with changeable decors, a literal architectural manifestation of the throwaway culture.

4. AN EMERGING ARCHITECTURAL HERITAGE

The fate of office buildings remains the domain of real estate companies and the private sector.

Some major buildings have already been torn down, such as the hurried demolition in 2001 of the Rogier Tower (Jacques Cuisinier, 1958-61). This urban landmark included offices, shops, passageways, housing, bars and restaurants, exhibition areas, a theatre and bus stops. As part of the redevelopment of the North-South railway junction (Robert Goffaux, 1962-63), the Lotto Tower was demolished in 2003 and rebuilt with eight fewer floors. The Foncolin building (André Jacqmain, 1955-57), which was the first building with an exposed structure and internationally praised, was demolished in 2001 and rebuilt as a postmodern Sapphire in 2003 by the same architect and his Atelier de Genval[15].

On the other hand, urban policy issues and the conservation of heritage and office buildings in particular are matters for the competent authorities and encourage participative involvement of local residents and associations (such as Docomomo.be).

The creation of an autonomous Brussels Capital Region in 1989 gave i.a. new competences in terms of urban planning and heritage management. Urban.brussels, in charge of heritage, urban renovation and building permits, recently focused on a thematic inventory of the built heritage from 1939-1999. Concerning office buildings, the first item -the rectorate of Vrije Universiteit Brussel- was protected in 2007 and is currently being restored respectfully; CBR in 2018 and La Royale Belge in 2019 were listed to save them from irreversible transformation or demolition; BBL bank saw itself as listed in 2021 before the ongoing renovation works; Glaverbel in 2022, garage and D'Ieteren (VW) headquarters followed in 2024.

5. REINVENTING THE OFFICE BUILDING

Aside from their cultural significance, most office buildings need renovation to become sustainable and functional. The regional legislation favours a circular economy with subsidies for adaptive re-use[16], while demolitions are discouraged, due to their high cost and environmental impact. The current policy is to prioritise adaptive re-use to provide affordable housing. The main constraints for transformation into housing are the floor-to-floor height, which often measures less than 3 metres, as well as the depth and accessibility to the vertical circulation core with the elevators and the emergency exits. Other considerations include the need for opening windows, the post-COVID obligation for a balcony for each apartment, accessibility for disabled people, external insulation, and the reuse capacity of structural elements. Around 30% of the office building stock can enter into this category[17]. About 20% of recent new housing is today the result of the older office buildings being

15. Atelier de Genval was founded by André Jacqmain in 1967.

16. "Be.exemplary." n.d. Accessed July 31, 2024. http://beexemplary.brussels/.;"Renolution ! | Renolution." 2024. Renolution.brussels. 2024. https://renolution.brussels/fr.ROTOR Deconstruction & Consulting cooperative company since 2014.

17. Study day April 17 2024 Observatory of Offices, Perspective.brussels.

repurposed. Those interventions significantly alter the outer appearance; for example, adding balconies and outside insulation is often the pretext for a new exo-structure (BASF, The Cosmopolitan (**Fig. 2**), Leopold Views). The typical office building interior configuration consisting of a 1.8 x 5.4 metre module - a 1.8 metre-wide corridor with 5.4 metre deep rooms on either side- can limit the variety of apartment typologies.

But reallocation into housing -not to say social housing- is still more expensive and less profitable than using the space for office purposes. It is even less so as there is still a demand for updated contemporary office spaces. Renovation into the same monofunctional usage is the main reason, with the focus being placed on improving energy performance. Some renovations do take into account the architectural expression if it aligns with the desired image such as in the cases of Generali, CBR, IBM, and PS. However, the question remains as to the degree of 'respect' to be shown for the preservation, for instance, of the lobby and integrated furniture. But most concern the 'generic office boxes with changeable decors' mentioned earlier. They undergo serious retrofitting and redesigning of new façades and interior layouts. Recent legislation requires that new office buildings be previewed in design and materials to be reallocated subsequently into multiple reuse possibilities.

6. LA ROYALE BELGE (1967-70)

Cramped in their historical buildings in the centre of the city, La Royale Belge Insurance Company decided to change its headquarters for good in the 1960s. The company was growing steadily, modern life brought with it new demands to the organisation of its services, and its urban location was now imposing more and more constraints on its activities, and it also required new "branding". After having considered a high-rise building on the Inner Ring, the board bought in 1965 a plot of land of about 8.5 ha in Watermael-Boitsfort at the edge of the Sonian Forest.

Designed by the architects Pierre Dufau (Paris) and René Stapels (Brussels) and landscape architects Jean Delogne and Claude Rebold (Brussels), the building is directly inspired by the John Deere & Company headquarters in Moline (USA), designed by architect Eero Saarinen and landscape architecture firm Sasaki, Walker and Associates (1957-1963). It is characterised by its cross-shaped design and its exposed structure made of concrete beams, COR-TEN steel and Stopray Gold reflective glazing, placed on a large square all-glass base, in the setting of a pond in the middle of a sloping landscaped park. Its design was influenced by the most avant-garde construction methods, materials and technology of that time. The interior is luxurious and modern, focusing on efficiency and employee well-being. The monumental white marble ground floor hosts a large auditorium decorated with an 800 m^2 brass mural, treated by acid dripping, by French sculptor Pierre Sabatier. Thanks to its audacious architecture in terms of its composition, structure, and materials, its integration into the landscape and the quality of its interior design, La Royale Belge is an iconic example of international Corporate architecture. An extension was









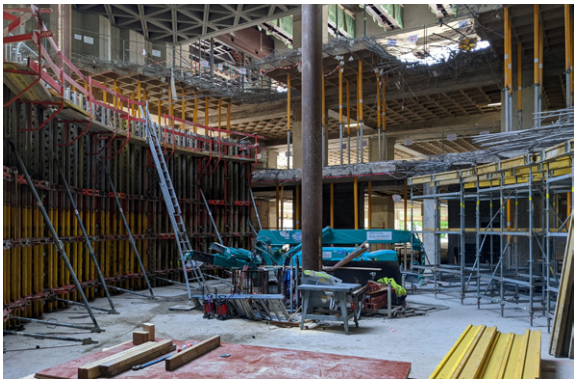


Figure 1. Gordon Bunshaft SOM, bank BBL, Brussels, Belgium, 1959-64. Marcel Vanhulst © urban.brussels, 2012.

Figure 2. An outlived office and polyclinic from the 1964 (arch. Charles Verhelle, Henry Profiter) transformed into the fashionable The Cosmopolitan, housing and offices with a new exo-structure with balconies. © Bogdan & Van Broeck, 2019.

Figure 3. Pierre Dufau, René Stapels, Jean Delogne, Claude Rebold, La Royale Belge, Watermael-Boitsfort, Belgium, 1967-70. Aerial view before renovation and demolition of the extension. © Private archives Benoît Berdoux, 2017.

Figure 4. La Royale Belge renovation. Detail from the replacement of the Stopray Gold glazing and the non-structural COR-TEN steel elements. © Jean-Marc Basyn, 2022.

Figure 5. The new 22 metre diameter circular hall connects on three storeys to a new shared space for the mixed usages.
© Caruso St John Architects, 2022.

built by the same team of architects in 1983-87, linked by a covered aerial footbridge, which was later demolished in 2020 (**Fig. 3**).

In 2017, there were plans to demolish the building as it sat empty (US embassy). In 2019, the building and its park received official heritage protection as a monument and site, thanks to a spontaneous popular awareness with the support of heritage organizations such as Docomomo.be and ICOMOS. That same year, an international competition for a vast programme of restoration-renovation-repurposing was won by Bovenbouw Architectuur, in association with Caruso St John Architects, DDS+ and MA2. Extensive works (2021-2023) involved a. o. the replacement of all the glazing for energy efficiency reasons and of the non-structural COR-TEN steel elements due to wear and tear (**Fig. 4**).

In spite of this, significant concessions were made in order to strike a balance between new needs and heritage policy. Such changes were thoroughly analysed and validated by the heritage authorities. They included an audacious 'geste' for a new adapted circulation to the new functions (**Fig. 5**), large openings in the original marble walls of the monumental entrance hall for the new restaurant, and supplementary access to the park.

The Mix is a newly inaugurated building that features five levels of offices, three levels of hotel rooms, co-working facilities, wellness areas, bars and restaurants and hosts many events thanks to its restored auditorium. This multifunctional concept is a sustainable contemporary solution to the challenges of reconciling heritage, addressing environmental (EPB) concerns and dealing with economic issues relating to the future of corporate architecture buildings from the second half of the 20th century. ■

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PRESERVING THROUGH TRANSFORMING. EXPLORING THE CONVERSION PROCESSES OF EMERY ROTH AND SONS' POST-WAR OFFICE BUILDINGS IN MANHATTAN INTO RESIDENTIAL SPACES

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ABSTRACT

Manhattan is currently undergoing a substantial effort to renovate its post-war high-rise buildings. Rather than opting for replacement, the focus is on transforming existing office towers, especially during times of crisis. The renewed interest in adaptive reuse, dating back to the 1990s with the Lower Manhattan Revitalization Plan, blurred the boundary between conservative and transformative approaches to Modern built legacy. Interventions in adaptive reuse have sparked a new phase in the ongoing debate about discovering alternative uses for struggling office buildings.

Despite the considerable attention devoted to factors influencing the conversion of these buildings, such as adherence to urban codes, historical and social significance, and energy efficiency, there remains a noticeable gap in understanding the correlation between fundamental conservative intent that stands on morphological features, and their impact on future transformations within a large building stock.

This contribution analyses and compares the conversion of modern office buildings by Emery Roth, and Sons, initiated in the 1990s, specifically examining the transformation from 110 Wall Street to the recently completed 180 Water Street and the ongoing project at 55 Broad Street. These cases function as pilot studies, providing insight into the ongoing debate surrounding the transformation of non-listed modern office buildings in Manhattan. They offer a critical perspective on the potential alliances between heritage preservation and environmental sustainability through adaptive reuse practices.

This methodological approach encompasses examining morphological features to highlight the transformation process dynamics from an architectural design perspective. This paper offers insights into the adaptive reuse of Manhattan's modernist office buildings, to contribute to ensuring their legacy endures while meeting contemporary demands.

The proposed approach is instrumental in comprehending the intricacies of the potential of conserving through transforming and bridging the gap between history and design disciplines to foster an interdisciplinary framework.

1. INTRODUCTION

Renovating and adapting historical buildings is of paramount importance in the context of climate change as it effectively addresses the urgent need to mitigate greenhouse gas emissions, adapt to a dynamic climate, and simultaneously preserve our built heritage through their continued utilisation. The potential for conversion of office spaces is a matter of analysis in the last decades[1]. Over the last few years, vacancy levels in office markets worldwide have risen to unprecedented levels[2]. At the same time, almost 30 million sqm of office space in the United States is predicted to be obsolete by 2030[3].

In New York City the phenomenon is radical. The city houses the largest office real estate market in the world by area. With more than 42 mln sqm of office space, Manhattan's stock alone is larger than the amount in all other U.S. cities.[4] In the aftermath of the COVID-19 pandemic, the increase in office vacancy rates has reached levels not seen in New York City for several decades. Driven by the rise in home working and general economic uncertainty, Manhattan office space available for rent has increased from 10% pre-pandemic to approximately 20% in November 2022. Moreover, the office building stock is mostly an outdated urban heritage, and approximately 70% of New York commercial tall buildings were built before the 1980s, and will soon need to be replaced or renovated.[5] To address this issue, a massive movement to regenerate Manhattan's high-rise estate is underway.

If building replacement is one of the ways in which New York City responds to typological and functional obsolescence right from the origins of the tall building[6], during times of crisis, the renovation of the existing office building stock to meet emerging needs is a more common choice.

Furthermore, the decline in the use of office space coupled with the urgency of high-demand uses – such as housing – has triggered a new phase of the debate on finding alternative uses for struggling office buildings. The adaptive reuse of office buildings, a field of research that has already been explored in Manhattan particularly since the 1990s, i.e. Lower Manhattan Revitalization Plan[7], in the last year has been strengthened both by private investments and municipal policies. The foundation of the Office Adaptive Reuse Task Force in 2022 constitutes perhaps the most effective action of New York City municipality to support this regeneration movement[8].

However, a combination of legal, logistical, and financial challenges threatens the possibility and profitability of conversions, severely limiting the number of buildings suitable for conversion. This is especially true for modern large-floor plate skyscrapers, whose future is uncertain and at risk. As the first report of the task force points out, the office buildings built after World War II, especially after the 1961 Zoning Resolution, constitute an outdated and rather critical heritage in terms of their transformative potential. Due to both the regulatory system and the architectural typologies, these buildings are generally more difficult and very expensive to reuse.

Drawing inspiration from the shearing layers of change theory, this pivotal research aims to reveal how these buildings can be reconfigured to accommodate new uses[9]. In this paper, we are focusing on the adaptation

1. Francis Duffy, *The Changing Workplace*. London: Phaidon Press, 1992; Gann, D. M., Barlow J.. "Flexibility in Building Use: The Technical Feasibility of Converting Redundant Offices into Flats". *Construction Management and Economics* 14, no. 1 (1996): 55–66; Remøy, H., Theo van der Voordt. "Adaptive Reuse of Office Buildings into Housing: Opportunities and Risks". *Building Research & Information* 42, no. 3 (4 May 2014): 381–90.

2. CommercialEdge. "National Office Report", March 2023.

3. Cushman & Wakefield. "Q4 2022 U.S. Office MarketBeat", 2023.

4. DiNapoli, T,. "The Office Sector in New York City". Office of the State Deputy Comptroller for the City of New York, 2022.

5. Joshua Chaffin, "New York's "Zombie" Office Towers Teeter as Interest Rates Rise". Financial Times, December 2022; Colliers. "The Future of Office", 2023; CBRE. "Manhattan Office Figures May 2023", 4 May 2023.

6. Daniel M. Abramson, *Obsolescence: An Architectural History. University of Chicago Press*, 2016.

7. Robert A. Beauregard, "The Textures of Property Markets: Downtown Housing and Office Conversions in New York City". *Urban Studies 42*, no. 13 (2005): 2431–45.

8. Office Adaptive Reuse Task Force. "Office Adaptive Reuse Study". New York City, Jan. 2023.

9. Stewart Brand, *How Buildings Learn: What Happens After They're Built*. Penguin Publishing Group, 1995; Duffy, Francis. The Changing Workplace. London: Phaidon Press, 1992; Bernard Leupen, *Frame and Generic Space : A Study into the Changeable Dwelling, Proceeding from the Permanent*. Rotterdam: 010 Publishers, 2006.

challenges related to building morphology from an architectural design perspective to contribute to answering the question "How did these modernist offices learn to be residential?"[10]

To unveil this potential for adaptation of post-WWII office skyscrapers in Manhattan, and its many spatial challenges, we employ a comparative analysis of the morphological features of three office buildings part of the Emery Roth, and Sons' built legacy in Manhattan: 110 Wall Street, 180 Water Street, and the ongoing project at 55 Broad Street.

The cases are discussed by focusing on key morphological features that are highlighted as "critical" in the ongoing debate about office-to-residential conversion in Manhattan. The physical adaptability[11] involves specific design actions focused on their primary features: the façade, depths, and services. This contribution examines typological layout shifts, internal circulation, plan depth, natural light and ventilation strategies, tight and long units, interior partitions, services, amenities, and hybrid spaces.

2. THE LEGACY OF EMERY ROTH AND SONS

Emery Roth and Sons was one of the most prolific architectural firms for office buildings in the Second Post-War Manhattan development boom. From 1947 - when the firm, in its new format, was established - to the late 70s - when reorientation was taken over by a new principal - the design office directed by Richard Roth contributed with more than 100 buildings, mainly speculative office buildings, to the Midtown and Lower Manhattan skyline, with pitches of 10-11 buildings per year[12]. According to a list of the largest architecture firms in New York published by *Crain's* in 1994[13], Emery Roth and Sons buildings accounted for almost 9.5 mln sqm of project space, landing the firm at number 7 of 25.

Working closely with real estate developers - such as the Uris Corporation, Tishman Group, Diesel Construction, Durst Organisation, and Helmsley-Spear, Inc. - they increasingly specialised in commercial space.

Their buildings, mostly pure prism of wedding-cake office towers, were designed with steel and glass curtain walls, and facing plazas, struggling to fit the market requirements for speculative buildings and embodying the sleek, modern, Post-war style.

Throughout its practice, the firm specialised in large-scale design production oriented towards meeting the demands of the real estate market. Consistently, the firm provided designs tailored to meet market needs, skilfully navigating zoning code regulations to maximise the rentable area.

The firm's legacy encompasses a broad spectrum of buildings reflecting real estate demands, ranging from a few iconic landmarks to numerous average market-oriented buildings. However, with some exceptions, these buildings are not considered heritage-listed. As time progresses, typically between 50 to 70 years, many of these office buildings begin to exhibit signs indicating the need for repositioning and potential conversion.

10. Brand, *How Buildings Learn: What Happens After They're Built*.

11. James Douglas, *Building Adaptation*. Butterworth-Heinemann, Oxford, 2006.

12. Robert A. M. Stern, et al.. *New York 1960: Architecture and Urbanism between the Second World War and the Bicentennial*. New York: The Monacelli Press, 1995.

13. Ylonda Gault, "Architects Draw Map To Regain Faded Glory: Emery Roth Tries To Rebuild Shaky Empire", *Crain's New York Business*, June 5, 1995.

3. CROSSING MORPHOLOGICAL SHIFTS

The selected buildings, including 110 Wall Street, 180 Water Street, and 55 Broad Street, are but a few examples of Roth's office buildings designed between the late 1960s and early 1970s as part of the "new city emerging Downtown"[14], that have undergone or are currently undergoing office-to-housing conversions. Other notable examples could include 200 Water Street and 10 Hanover Square.

The selection is based on their primary design approaches, addressing specific issues that render them relatively prominent in ongoing debates. For instance, 110 Wall Street represents a unique case of hybrid programming, blending co-living and co-working spaces. 180 Water Street serves as a case study for its design approach aimed at resolving challenges posed by large-depth floor plans. Meanwhile, 55 Broad Street stands out as one of the largest office-to-residential conversions in New York City.

3.1. A MATTER OF DEPTH

180 Water Street is a 26-story office building with over 40,000 square meters of space. Completed in the early 1970s, the building underwent a transformative conversion into housing in 2017 under the direction of developers Metro Loft Management and Vanbarton Group. Avinash K. Malhotra Architects served as the main architectural firm, with CetraRuddy handling the interior design[15]. This conversion resulted in the creation of more than 570 market-rate luxury residential units alongside a comprehensive array of upscale amenities - such as 24-hour doorman, a rooftop terrace boasting a pool, a fully equipped fitness centre, a children's playroom, and a tenant lounge.

This case holds particular significance because of the architectural challenge posed by large-plate structures. The considerable depth from windows to the building's core, measuring up to 22 m, presented a huge obstacle, surpassing the ideal depth for conversion into residential apartments. To overcome this challenge, a strategic solution was devised: a 9-by-12 metre courtyard was obtained by digging the building's core. This new open space served multiple purposes, including the introduction of natural light and ventilation to numerous apartments and mechanical areas while minimising the impact on structural columns. Notably, this courtyard facilitated the creation of a double-loaded corridor, with apartments lining both sides, including "studios" with windows facing the courtyard.

What might initially appear as a bold and expensive move is, in fact, grounded in careful economic analysis and strategic planning. By taking advantage of zoning regulations relaxed in the 1990s to encourage conversions in the financial district, the developers seized the opportunity to convert the entirety of the building's floor area into housing. The inclusion of the courtyard effectively compensated for the space lost from the building's centre, enabling the addition of floor area — and consequently, additional rental income — to the building's upper levels, turning a 26-story office building into a 30-story apartment building. This approach extended to the

14. Ada Louise Huxtable, "A New City Is Emerging Downtown", *New York Times*, March 29, 1970, pp. 239, 242.

15. Emily Badger, and Larry Buchanan, "Here's How to Solve a 25-Story Rubik's Cube", *New York Times*, April 15, 2023, p B1; Lauren Elkies Schram, "Office-to-Residential Conversions Are Tough. Here's How You Do It.", *Commercial Observer*, March 11, 2024.

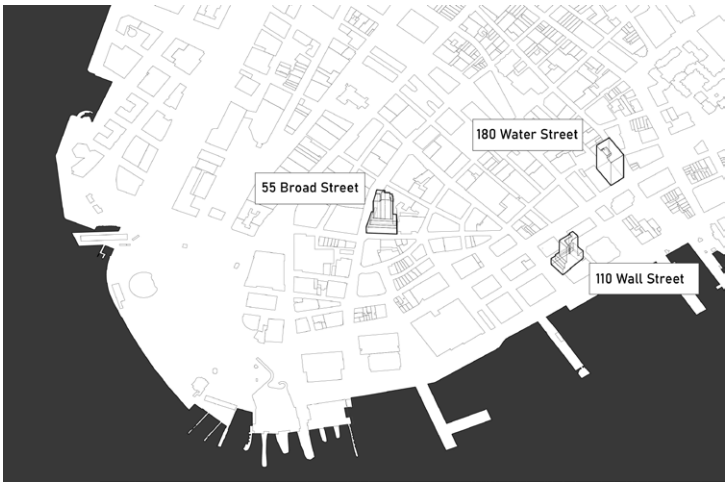
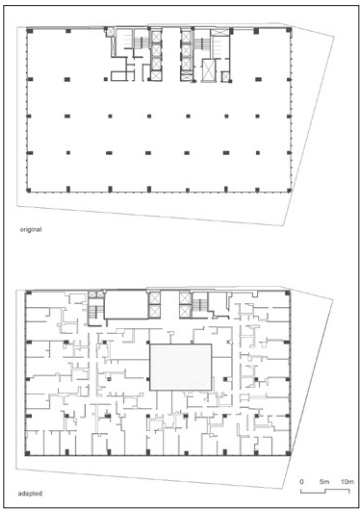


Figure 1. The selected sample from the built legacy of Emery Roth and Sons. Redraw from the authors. 2024

Figure 2. 180 Water Street, Typical plan, original and adapted to residential. Redraw from the authors, 2024.

Figure 3. 110 Wall Street, Typical plan, original and adapted to residential. Redraw from the authors, 2024.





rooftop, where modern amenities such as a pool, rooftop deck, gym, and other facilities were seamlessly integrated, further enhancing the appeal and functionality of the revitalised structure.

3.2. A MATTER OF INTERIOR RATIO

110 Wall Street, a 27-story, 20.000 sqm building designed by Roth's firm, opened in 1961. After Hurricane Sandy caused significant damage in 2012, owner William Rudin was forced to cancel office tenants' leases and reconsider the building's future[16]. Almost a year later, WeWork took control of the building, transforming it into the first "WeLive" co-living space, with ARExA and Perkins Eastman S9 leading the design[17]. WeLive proposed a community-driven concept aimed at young renters seeking a sociable lifestyle. The adaptive reuse project resulted in a mixed-use building that combines neighbourhood-oriented retail and food/beverage options with collaborative workspaces, on the 5-story building base and a progressive

16. Jessica Dalley, "Sandy-Damaged 110 Wall Street May Convert to Apartments", *Curbed NY*, Dec 13, 2012; Michelle Goldchain, "Startup WeWork Planning 205-Unit Wall Street Tower", *Curbed NY*, Oct. 19, 2015.

17. Matthew Haag, Rebecca Liebson, Andrea Salcedo, "WeWork Planned a Residential Utopia. It Hasn't TurnedOut That Way", *New York Times*, Oct. 13, 2019; Stephen Smith, **"**Permits Filed: 110 Wall Street's WeWork-Led Mixed-Use Conversion", *New York Ymby*, Dec. 9, 2014; Michelle Cohen, "WeWork's Communal Living Concept on Wall Street Gets Its First Residents", *6sqft*, Jan. 13, 2016.

new residential concept for the upper floors. The conversion features 205 fully furnished and serviced residential units, designed mainly for short-term rentals and to reduce costs for residents by sharing space, similar to WeWork offices.

Billed as a "disruptive alternative to the way people live" and "Nirvana for Millennials," the WeLive experiment received both criticism and praise, earning mentions in several newspapers, including Time magazine[18].

The architectural reuse incorporates studio, one to four-bedroom units, integrated with collective spaces like kitchens, lounges, and bathrooms. Large communal areas and redesigned staircases, extending into small lounge spaces on various floors, foster resident interaction.

Despite the current challenges of the building's manageable depth, internal circulation, and space usage, it has led to narrow, long residential units - with an average area of 40 sqm - with limited natural light in the inner part. The interior spaces are reconfigured to include study areas, storage, and sleeping alcoves on the unit's windowless side. This conversion could be seen as a modern reinterpretation of the 19th-century railroad apartment model, offering (upscale) accommodation for young professionals. Architect Avinash Malhotra, experienced in office-to-residential conversions, notes that such projects often transform office towers into numerous small units, humorously referring to them as "slums for the rich."[19]

3.3. A MATTER OF FACADE SYSTEM

The former Goldman Sachs headquarters at 55 Broad Street, which opened in 1967, has seen its occupancy levels drop to just 60% due to the rise of remote work since 2020. Acquired by Silverstein Properties and Metro Loft Management, the almost 40.000 sqm building is now undergoing a major transformation designed by Cetra Ruddy Architects[20]. Construction began in the summer of 2023 and is expected to be completed by 2025.[21]

Similarly to the approach taken with the 180 Water Street project, architects at 55 Broad Street are converting commercial space into residential use by reclaiming floor area, thus allowing for additional square footage at the top of the building. At 110 Wall Street, however, the setback design posed programmatic challenges, especially on the lower floors with longer lease spans, requiring some apartments to be deeper than typical residential units. Despite these challenges, the setbacks facilitated the creation of a variety of apartment sizes and types, ranging from efficient units to loft-like layouts with generous terraces. The depth issue was ingeniously addressed by incorporating flexible spaces or home offices near the building's core, a highly desirable feature in today's remote and hybrid work environment. Additionally, the setbacks allowed for the inclusion of terrace spaces for select units.

Despite the shape differences with 180 Water Street and programme differences with 110 Wall Street, a common challenge remains: rethinking the curtain wall. Glass curtain-wall facades, characteristic of modern American skyscrapers, must be adapted for residential use by incorporating

18. Anna Winston, "Co-working company WeWork unveils its first co-living apartments in New York", *Dezeen*, 6 April 2016. Alex Fitzpatrick, "Inside the NYC Building That Offers Nirvana for Millennials", *Time*, April 4, 2016.

19. D.T. Max, "Can Turning Office Towers Into Apartments Save Downtowns?", *The New Yorker,* April 29, 2024.

20. Joe Weisenthal, Tracy Alloway, and Isabel Webb Carey, "What it Actually Takes to Turn an Office Building Into Apartments", *Bloomberg News*, July 7, 2023.

21. Max, "Can Turning Office Towers Into Apartments Save Downtowns?"

operable windows, significantly increasing conversion costs and altering the original facade's linear appearance. However, this adaptation encourages energy-efficient approaches to climate management, replacing forced air conditioning with openable, customisable systems. This shift aligns with the concept of "After Comfort," promoting a change in expectations for internal thermal comfort.[22]

4. CONCLUSIONS

The conversion of post-World War II office buildings to residential uses raises important questions about the intertwining of preservation and transformation of modern architecture.[23] This is particularly true for skyscrapers designed by Emery Roth and Sons, which form part of Manhattan's 'ordinary'[24] architectural fabric but face uncertain futures without the protection of heritage preservation agencies. Converting office spaces to residential use helps mitigate the risk of abandonment and decay caused by low occupancy rates. However, these transformations frequently entail substantial alterations to internal circulation, curtain walls, and sometimes structural elements, posing challenges to conventional concepts of modern architectural preservation.

A second issue concerns the urban role of modern architecture. As Robert Stern stated in a 1996 Times interview, "Who doesn't want to live in a skyscraper?"[25] Although office buildings are not typically considered the main solution to the housing crisis, their conversion has a notable impact on the use and perception of modern urban structures. Such transformations can foster cultural diversity through mixed uses and diverse resident profiles, keep buildings and neighbourhoods vibrant beyond office hours, and repurpose ground floors from lobbies to communal spaces and services. This "city of quantity" prompts a re-examination of the relationship between preserving memory, promoting sustainable development, and adapting to new uses, not as opposing forces but as parts of a unified process in a world where "preservation is overtaking us."[26] ■

22. Daniel A. Barber, *Modern Architecture and Climate: Design before Air Conditioning*, Princeton, 2020; Daniel A. Barber, "After Comfort", *Log 47*, 2019.

23. Donald Albrecht, Andrew S. Dolkart, with Seri Worden (edited by), *Saving Place : 50 Years of New York City Landmarks*. New York: Museum of the City of New York, The Monacelli press, 2015.

24. Ash Amin, Stephen Graham, "The Ordinary City". Transactions of the Institute of British Geographers 22, no. 4 (1997): 411–29. N. John Habraken, *The Structure of the Ordinary: Form and Control in the Built Environment*. Cambridge, Mass: MIT Press, 2000.

25. Robert A. M. Stern, "An Architect's View: Who Doesn't Want to Live in a Skyscraper?", *New York Times*, February 4, 1996, Sec.4, P. 4.

26. Rem Koolhaas, Jorge Otero-Pailos, Mark Wigley, and Jordan Carver. *Preservation Is Overtaking Us*. GSAPP Transcripts. GSAPP Books, 2014.

BIOGRAPHY

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TYPOLOGICAL EXERCISES AND THE SINGULARITY OF ITERATION

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ABSTRACT

This article explores the development of modern architecture by examining its engagement with typology, emphasising the search for new forms that reflect contemporary society. Rooted in the Industrial Revolution, modern architecture sought innovative solutions to urban challenges while adhering to established typological constraints. It delves into how architects, inspired by the transformative energies of modernity, created a diverse range of typologies, such as schools, airports, and gasometers. Each typology embodies both repetition and singularity, demonstrating that even within constraints, architecture can achieve remarkable creativity and innovation. The article discusses several case studies, including Bayardo's Ossuary, Von Schmidt, Aicher, and Heifer's gasometers, mat-building schools in Brazil, and mid-sized airports in Chile, illustrating how these structures transcend typological boundaries. Ultimately, it argues for a reevaluation of modern architecture's legacy, emphasising the richness found in iterative design processes that balance tradition with contemporary needs.

One of the key expressions of modern architecture was its exploration of new forms and dispositions that would constitute what modern architects referred to as the expression of the times. This search for new forms was viewed as an opportunity for new propositions and professional development, and it accompanied the Industrial Revolution by giving physical form to buildings and facilities that required new dimensions and materials. As is common in architecture, they had to work within the constraints of typologies. What started out as the pursuit of a small group of architects in the early days had a global impact in what could be described as a modern culture that sprang up in different countries and cultures where the energies of modernity were assumed by inspired architects. As modernity changed the old ways of working, moving and living, architects had to devise new solutions to old and new challenges. In that sense, the vast majority of architectural typologies are not modern but are part of a long human history. When new programmes had to be created ex-novo, like the airport, new typologies were created as "containers" of constraints to meet the demands of apparent absolute freedom.

Typology, though, is not unique to modern architecture: the classical world had numerous typological series, and in a way, it made the development of types a key factor in its success. The Greek and Roman worlds introduced the first concept of a true "international style." The repetition of forms and functional dispositions was seen as the embodiment of the true spirit of the times, as expressed in architectural form. In the 20th century, this idea of iteration spurred modern architecture to experiment with new forms and materials. The text provides a representative (although obviously incomplete) set of typologies: the school, the airport, the cemetery and the gasometer. Additional examples could include the hospital, the prison, the church or the temple, the grain elevator, the house, the residential complex, the office building, and so on.

The history of modern architecture and catalogues of practising architects are filled with particular expressions of typologies—these and others. But what is in a typology? What can we learn from this iterative system where design freedom is constrained by the very limits of what makes a typology what it is? First, a typology has a name, a generic title that encapsulates and allows us to understand the essence of form even before we set our eyes on the drawings or photos of a specific building. We have come to identify what we can expect when we encounter, for example, a gasometer. In such a case, it has a certain size and shape attached to its name. And we know that there are gasometers all around the world and that they follow these same rules of shape and size, but they are all, in their own way, different.

That is the singularity of iteration. It is the notion that within the confines of repetition, every building of a certain type retains a singularity specific to its location, the identity of its creator, and the circumstances (historical, social, political, economic) surrounding its design, construction, and eventual demolition. These unique elements allow us to be surprised by

special and extraordinary details in a Gothic cathedral, a Greek temple, or a Haussmannian building in Paris.

Centring on this singularity, we can move away from the usual critiques made of modern architecture (such as being boring, always the same, or lacking creativity, etc.) and instead begin concentrating on the details that make it rich.

In this session, we have four representatives of architectural typologies. Each of them breaks free from the constraints of its type and showcases stunning creativity, whether it may be in the details or in the systemic organisation of the programme. What makes them noteworthy is also that they show how architecture can be interesting just by expanding its propositions without being forced to establish new patterns at all times. Architects design within the definitions of a culture and along a historical continuum to which they belong or against which they can revolt.

Bayardo's Ossuary (1959-1962), as presented in the paper by Jorge Gambini, is rooted in the history of funeral architecture, the above-ground cemetery, a typology adopted by modernity due to specific constraints related to urban and economic conditions. It is an extension of the more ancient mausoleum or the underground cellar for reduced tombs, similar to the Paris catacombs, but taken from its individual purpose to the scale of a building. Perhaps a sub-typology in itself, it incorporates several leitmotivs of modernity to compensate for the iterative conditions of the commission, and the result is surprisingly unique. It is true that the sacred has given modern architecture the pretext for some of the most magnificent bursts of creativity and mastery from architects around the world (from Le Corbusier's Ronchamp church in France to Itala Fulvia Villa's Chacarita cemetery in Argentina, to name just two). In this sense, modern architecture simply follows a historical trend, implying that when energy is devoted to the service of the spiritual world, we see architectural masterpieces that transcend the passing of time.

Von Schmidt, Aicher and Heifer's gasometers (1896-1899), presented by Markus Tomaselli, are a typology in themselves. There are four of them, emphasising the notion of iteration. They are strong expressions of the Industrial Revolution and the new technologies that were put to the service of modernity in fin-de-siècle Europe. They are an example of the historical continuity of what has become one of Docomomo's leading occupations: adaptive re-use. The obsolescence of technology is just a pretext for the reutilisation of the buildings that housed them when societies look for the preservation of collective memory and the reduction of contamination and energy waste due to demolition. Another sub-typology can be found here, that of the re-used facilities of industrial infrastructures, such as recycled grain elevators turned into apartment complexes. Tomaselli defines the project as "a testament to the innovative spirit of adaptive reuse and sustainable design," illustrating contemporary architects' efforts to bring new uses to historical structures. Some of these actions required alterations to listed buildings, giving way to the debate on the limits of legal protection

and how accepting alterations can help preserve obsolescent structures by projecting new forms, uses and materials onto them.

Mat-building schools in Pernambuco, studied by Leao and Moreira in their paper, introduced a new consideration to the concept of typology. They highlighted the systematisation of the design process, emphasising a typology of action rather than function or form. They presented the idea that mat-building is a way of designing, rather than a repetitive form dedicated to a specific function. It was suggested that we could list the cases that fit within the typology of buildings designed using the mat-building conception, which has been described as a system rather than an aesthetic, where typology operates on several levels. There is the systematic organisation of a programme financed by the United States to strengthen the educational system of Brazil (as has occurred in other Latin American countries due to the "good neighbour" policy), the school in itself as a typology that we can follow along historical and geographical lines, and the mat-building way of designing. The extraordinary forms that emerge from a simple system based on rules of design are a demonstration that the boundaries set by a typology give the architect more freedom.

Last but not least, Cvitanic and Galeno, in their paper on the airports built in mid-size cities in Chile, demonstrate how locally adapted conditions can enrich a typology by stressing the tension between the changeable and the permanent. A programme so defined by use and by the flux of people and goods like an airport can, in the hands of a skilled architect, become an expression of typological creativity despite the apparent contradiction.

All these cases focus on typology. Hundreds of other cases could be added to each selection presented here. As illustrated earlier, typology and iteration are fundamental elements of architecture, likely responsible for transforming a simple way of constructing shelter into a culturally specific human activity and, eventually, a tradition. In this sense, singularity must not be considered a value in itself, as creativity is not limited to unique and extraordinary designs. On the contrary, when viewed as a manifestation of design freedom within the constraints of typology or tradition, even the most repetitive designs can attain a higher level of quality. ■

BIOGRAPHY

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THE CONFINES IN THE ARCHITECTURAL TYPE DEFINITION: THE MODERNITY OF AIRPORT TERMINALS IN THE EXTREME REGIONS OF CHILE

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ABSTRACT

The 20th century witnessed a significant evolution in global aviation, leading to the emergence of airport terminals as a new architectural typology aligned with the Modern Movement. This development, considered crucial for migration and the spread of technical knowledge and modern ideas between peripheries and centres of power, had a notable impact on Chile, an extremely elongated and confined country.

During the second government of Ibáñez del Campo, airport architecture became institutionalised in Chile through the National Aerodromes Plan implemented from 1954 to 1956. This programme aimed to connect the confined ends of the country with the centre by implementing runways and suitable infrastructure for the technological advances in aviation. The execution of this plan led to the emergence of a new modern architecture developed by the Ministry of Public Works up until the 1970s.

Around 1956, emphasis was placed on airport construction at the extremities of the territory, notably Chabunco in Punta Arenas and Chacalluta in Arica, followed by El Tepual in Puerto Montt and Cerro Moreno in Antofagasta.

Despite aviation's historical and technical relevance and its impact on territories, the architectural expression of airports has received less attention, except for specific references.

The analysis of public archives, press, and institutional memories has been crucial for reconstructing and understanding the evolution of these projects and their use as public spaces, revealing their historical and social meanings and significance. Initially, the first air terminals in remote areas became identity markers. They were not merely connection points but represented gateways to modern life, witnessing the activities of travellers and significant social and political events.

1. INTRODUCTION[1,2]

The 20th century witnessed a significant evolution in aviation, leading to the emergence of airport terminals as a new architectural typology, on a global level. Due to its association with technological progress, this typology was linked to modernity and, architecturally, to the Modern Movement.[3]

Aviation has generated significant attention in historical and technical terms,[4] while its architectural expression has not enjoyed the same level of attention.[5] In Chile, the situation has been similar, and historical perspectives[6] have not been accompanied by architectural, territorial, or urban approaches, except for specific mentions,[7] discussions of their materiality,[8] or contemporary projects.[9]

In Chile, the consolidation of an aerodrome system was institutionalised during the second government of President Carlos Ibáñez del Campo (1952-1958). At that time, a plan was established to connect the entire country functionally and, particularly in symbolic terms, link the remote regions with the centre. The National Aerodrome Plan was an ambitious initiative to provide standardised infrastructure suited to aeronautical requirements, new aircraft and technological advances across a large part of the national geography.

Due to their strategic value, the first terminals projected were those in the extreme areas. Thus, the plan developed by the Ministry of Public Works (MOP), consisted of planning, designing and constructing the airports of Chacalluta in Arica, Cerro Moreno in Antofagasta, and Chabunco in Punta Arenas. Generally, projects were made up of two stages. The first focused on planning the complex, including runways, taxiways, and expansion areas and the second centred on designing the main facilities, such as the operations building, control tower, cargo hold, and passenger terminal.

It is hypothesised that the development of airport projects in the extreme areas of the country established the passenger terminal building as an unprecedented architectural typology in Chile. Its technical requirements, uses, and spatial configurations coincided radically with the principles of modern architecture.

The general purpose is to investigate the first passenger terminals projected in the extreme regions in the context of the National Aerodrome Plan, which was established from the 1950s to the 1970s.

For this research, several archives and libraries have been consulted, including: the General Directorate of Civil Aeronautics, the National Aeronautical and Space Museum, the National Archive, and the National Library; as well as certain local sources. These included the Historical Archive of Arica's Municipality, the Vicente Dagnino Historical Archive (UTA), the Arica Municipal Works Directorate, the Antofagasta Regional Directorate of Airports (MOP), the Isaac Arce Library of Antofagasta's Municipality, El Mercurio de Antofagasta, the Gabriela Mistral Municipal Library of Punta Arenas, and the Magallanes Regional Directorate of Airports (MOP), among others.

In turn, surveys and records of the terminal buildings were conducted, complemented by the review of bibliographic sources on the subject. Through

1. Fondart National Research, folio 701688: The confines in the definition of the architectural type. Extreme regions and airport architecture. Chile, 1953-1973.

2. This research was made possible by the support of the ANID Fondecyt 1240135 project.

3. Concepción Bibián, "Arquitectura de aeropuertos. Cuatro ejemplos de terminales aeroportuarias de la década de 1930," *Cuadernos de Notas* 15 (2014): 18-36.

4. Alastair Gordon, *Naked Airport. A Cultural History of the World's Most Revolutionary Structure* (Chicago: University of Chicago Press, 2008).

5. Janna Eggebeen, "Airport age: Architecture and modernity in America" (PhD thesis, The City University of New York, 2007).

6. Enrique Flores. *Historia aeronáutica de Chile* (Santiago: Fuerza Aérea de Chile, 1950); Luis Page, *Historias de la aviación* (Santiago: [s.n.], 1987); Alberto Fernández, *La aviación en Magallanes* (Santiago: Dirección General de Aeronáutica Civil, 1994); Alberto Fernández, *Ese singular sentido de proteger al vuelo. Una historia ilustrada* (Santiago: Dirección General de Aeronáutica Civil, 2000).

7. Boris Cvitanic-Díaz and Pilar Fernández-Hechenleitner, "Aeropuerto y arquitectura moderna, una tensión entre global y local: el caso de Punta Arenas," *AUS*, 33 (January, 2023): 85-95; Claudio Galeno-Ibaceta, "Modern architecture between ocean and desert," *Docomomo Journal*, 37 (September 2007): 24-29.

8. Francis Pfenniger and Horacio Borgheresi, *Arquitectura y acero* (Santiago: Instituto Chileno del Acero, 2002).

9. Stantec Architecture+Amunátegui Barreau, "Aeropuerto Arturo Merino Benítez," *ARQ*, 99 (August, 2018):138-147.

this integration of approaches, historical and archival information was cross-referenced with the materialisations implemented, addressing the initial assumption, interpreting the problem in question, and refining the reflections.

2. THE NATIONAL AERODROME PLAN

The National Aerodrome Plan was, in reality, a bill presented by the government of Carlos Ibáñez del Campo to modify the aeronautical institutional framework, establish financing, and facilitate the formulation and construction of infrastructures of various conditions and sizes for the establishment of a nationwide air communication network.[10] The Law established the creation of the Permanent Board of Aerodromes and an Airports Department, which would be under the MOP. The Board would be responsible for the annual approval of the Plan, while the Department would prepare the respective projects and execute the works.[11] However, the runway projects were prepared by the MOP Highway Directorate.[12]

The initial MOP plan determined the need to build seventy-four airports in three categories: international,[13] national,[14] and regional/emergency.[15] In this regard, the guidelines of the International Civil Aeronautical Organisation (ICAO) around 1951 highlighted the need to address the planning, design, operation and equipment of aerodromes, areas that were institutionalised in Chile only in 1956.[16]

Due to technical and economic factors, particularly the Valdivia earthquake of 1960, the plan underwent modifications that led to a shift in priorities. Consequently, for geopolitical and practical reasons, priority was given to the extreme regions. Thus, the construction of regulated runways in Antofagasta (1954), Punta Arenas (1956), Arica, and Puerto Montt (1958)[17] were followed by terminal projects in Punta Arenas (1956), Antofagasta (1959) and Arica (1960).

Precisely, in 1959, in an article written by the architect Gonzalo del Canto, the MOP Architecture Department explained the technical aspects involved in the planning of an airport project.[18] The document highlighted the selection of the land for constructing buildings, the building area consisting of the passenger terminal area and the terminal building (in addition to airline and cargo hangars), and the operations system. The text introduced three projects:

the Cerro Moreno airport terminal in northern Antofagasta, the Chabunco terminal in southern Punta Arenas, and the expansion of the Cerrillos terminal in Santiago.

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3. ARICA: CHACALLUTA AIRPORT TERMINAL

In Arica, the aerodrome used until the 1950s was El Buitre, located on the hills southeast of the city. The region's growing population, its strategic location between Antofagasta and Lima, along with its role as a traditional crossing point to Bolivia, its border situation, and the enormous national and international air traffic[19] necessitated a new airport. Thus, a new facility was constructed in the Chacalluta sector, north of the city.[20] This new airport

10. DFL 36, March, 1953.

11. "Plan Nacional de aeródromos," *La Nación*, 02 February, 1956.

12. Eduardo Paredes and Leopoldo Contreras, "La Dirección de Vialidad del Ministerio de Obras Públicas construye una moderna red de aeródromos," *Revista de Caminos* (First Trimester, 1956): 21-28.

13. Eight A category international airports (capable of receiving DC-8 aircraft). With 2,500-metre-long concrete runways: Chacalluta (Arica), Cerro Moreno (Antofagasta), González Videla (La Serena), Pudahuel (Santiago), Hualpencillo (Concepción), Tepual (Puerto Montt), Balmaceda and Chabunco (Punta Arenas).

14. Eleven national airports, with paved or asphalted runways 1,500 metres long, for regional routes and national service landings. It was expected that these would have navigation aid equipment, allowing day and night operation. These would be: Iquique, Copiapó, Ovalle, Valparaíso, Chillán, Los Ángeles, Victoria, Temuco, Valdivia, Osorno and Castro.

15. Fifty-five regional aerodromes, with paved or stabilised material runways. It was expected that they would be enabled to serve as emergency airfields for aircraft operating national routes.

16. DS 3 N°1141, 24 July, 1956.

17. Alberto Fernández, *Ese singular sentido de proteger al vuelo. Una historia ilustrada* (Santiago: DGAC, 2000), 171.

18. Gonzalo del Canto, "Edificios terminales de aeropuertos," in *Arquitectura, publicación de la Dirección de Arquitectura, MOP* (primer semestre 1959), 26-29.

19. Boris Espinoza, "Nuevo aeropuerto de Arica en Chacalluta," *Revista de Caminos* 30 (segundo trimestre 1956): 111-114.

featured a category C runway, 2,200 m long and 45 m wide, suitable for international flights as per ICAO standards,[21] which was completed by the company Longhi y Cía. Ltda. in November 1958.[22]

Subsequently, the project for the passenger terminal **(Fig. 1)** was carried out by architect Gonzalo del Canto,[23] from the Studies Department of the Architecture Directorate of the MOP[24] in August 1960.

The terminal was designed as an elongated two-story prism, measuring 24.7 m wide by 87 m long and 6.5 m high. It runs parallel to the runway, with the control tower extending by 5 meters from the southwest end. It included three areas with differentiated functions: the largest for passengers, a court service area, patio and covered parking, and the operations area at the base of the tower.

Upon entering, and crossing the threshold beneath a marquee, one would step into the central hall, a huge double-height space, surrounded by circulations that accentuated its spatial and visual display. This would be a very significant space, which would host the public activities that would take place in the building.

In October 1964, with construction still underway, President Jorge Alessandri held a symbolic inauguration of the airport.[25] The final inauguration took place in July 1965, with the visit of President Eduardo Frei, returning from an extensive tour of Europe. On this occasion, the architecture was described as "imposing and luxurious", and it was considered one of the best air terminals in the country.[26]

In this sense, a photographic record from the time showed the impact and use of the terminal,[27] particularly its versatility as a new hub for the transit of modern life. It was the perfect stage for massive events that required large public spaces of apparent freedom, coexisting with the absolute and necessary control of bodies and their mobility determined by the aeronautical authority.

4. ANTOFAGASTA: CERRO MORENO AIRPORT TERMINAL

Antofagasta has been a fundamental port in the vast mining region in the Atacama Desert. Due to its historical significance and strategic location, it became an important stopover point on international route stopovers for airlines such as Panagra and the Chilean LAN (National Air Line).[28]

Initially, the Portezuelo airfield and later the Chimba aerodrome, established by LAN to the north of the city in 1941, served as the main landing points.[29] Later, on November 18, 1954, a new mixed-use airport was inaugurated. It featured a runway measuring 2,500 m long and 50 m wide, suitable for continuous commercial and military operations, but still lacked a passenger terminal.[30]

In 1959, architect Gonzalo Rudolphy from the MOP Architecture Department developed a terminal for the Cerro Moreno airport which remained unbuilt. The design included 5,140 square meters and was conceptualised as an elongated two-level prism, a terrace roof, and a control tower above it. The regularity of the main volume was interrupted by a projected staircase and a marquee defining the main entrance, which also

20. Humberto Crosa B., "Cuadrimotores de LAN aterrizarían en Tacna y no en Arica por falta de un buen aeropuerto; se haría uno en Chacalluta," *La Gaceta de Arica*, 3 June, 1955, 4.

21. "En Chacalluta se construiría nuevo moderno aeródromo de Arica," *La Gaceta de Arica*, 23 June, 1955, 1.

22. Dirección de Vialidad, "Memoria anual correspondiente al año 1960," *Revista de Caminos* 34 (First Trimester, 1961): s/p.

23. Del Canto specialised in airports, studying at the CAA (Civic Aeronautic Administration) in the USA, and working at the MOP since 1953.

24. Archivo DOM Arica.

25. "Fugaz visita a Arica durante tres horas y media hizo en la mañana de hoy el Presidente Alessandri," *La Defensa de Arica*, 10 October, 1964, 1.

26. "Terminal aérea de Chacalluta," *La Defensa de Arica*, 21 July, 1965, 1.

27. "Hasta el instante de la partida Pdte. Frei recibió el cálido afecto de Arica," *La Defensa de Arica*, 24 July, 1965, 5.

28. Claudio Galeno-Ibaceta, "Antofagasta, Chile: modern architecture between ocean and desert," *Docomomo Journal* 37 (September 2007): 24-29.

29. El Mercurio de Antofagasta, *Testigos del Siglo XX* (Antofagasta: El Mercurio de Antofagasta, 1999), p.47.

30. El Mercurio de Antofagasta, *100 años: las 100 más impactantes noticias* (1906-2006), (Antofagasta: El Mercurio de Antofagasta, 2006), p.56.

served as a balcony and circulation space, allowing for access to the deck and providing views of aircraft and passenger movement.

Subsequently, in November 1969, architect Jorge Patiño, who was working at CONEST (Construction and Stability Ltd.), developed a new and larger terminal project **(Fig. 2)** for the Studies Department of the Airports Directorate of the MOP. Construction of the project began in 1970.[31]

Although the project was confined to a volume measuring 48 m wide by 108 m long, the control tower stood out as an isolated element with a differentiated expression. The project zoning thus included passenger handling, cargo, and services in the main structure, while operations were housed separately in the control tower.

From a technical perspective, the steel roof was notable. It consisted of two suspended one-metre-thick plates made from coated stereometres, supported by hollow steel beams and expressive concrete columns. The elevated walls, placed parallel behind the columns, formed a large glass volume that contained a shaded space, facilitating seamless connections with the desert landscape and the runway with the aircraft.

The extensive roof planes, the expressive nature of its structure, and the distinctive control tower accentuated its monumentality and emphasised its isolated presence in the desert.

5. PUNTA ARENAS: CHABUNCO AIRPORT TERMINAL

The strong winds of the southern region necessitated the construction of an airport with three intersecting runways, arranged in an "A" shape, determining the location and arrangement of the buildings in an overall proposal developed by the MOP Planning Directorate in 1955. The proposal involved merging four blocks into a single structure through a glazed gallery, incorporating a cargo warehouse, the airport building (serving as the passenger terminal), the operations building (which included the control tower), and the Meteorological Service and Radio Station.

The project **(Fig. 3)** formulated in 1956[32], utilised a reinforced concrete structural module, measuring 4 m in its longitudinal direction and 7 and 8 m in the transversal direction. This module was used for sections of one level, and two levels, and to vertically form the control tower. A curved roof with small inverted eaves was placed on top of this module. Remarkable features of the complex were the access points defined by marquees made of concrete slabs with irregular contours.

The layout of the central block (airport building) was organised with passenger reception, baggage control, offices, and wet areas on the first level. Meanwhile, the second level featured a series of bathrooms, a cloakroom, a bar, a kitchen, and rooms for service personnel, including bedrooms and a large living room. The visual and functional connection between the two levels was achieved through a central double-height distribution space.[33]

In the operations block and control tower, offices were located on the first, second and third levels, while equipment was installed on a fourth level and the control tower on the fifth floor. Meanwhile, at the end of

31. Construction was interrupted by the military coup of September 1973, and was completed in 1975.

32. It was developed by the architects Augusto Iglesias, Gonzalo del Canto (Head of Workshop) and Humberto Gramegna (Head of Studies), from the Studies Department of the Directorate of Architecture of the MOP.

33. Boris Cvitanic-Díaz and Pilar Fernández-Hechenleitner, "Aeropuerto y arquitectura moderna, una tensión entre global y local: el caso de Punta Arenas," *AUS*, 33 (January, 2023): 85-95.



Figure 1. Gonzalo Del Canto, Arica's airport passenger terminal, Arica, Chile. © DGAC.

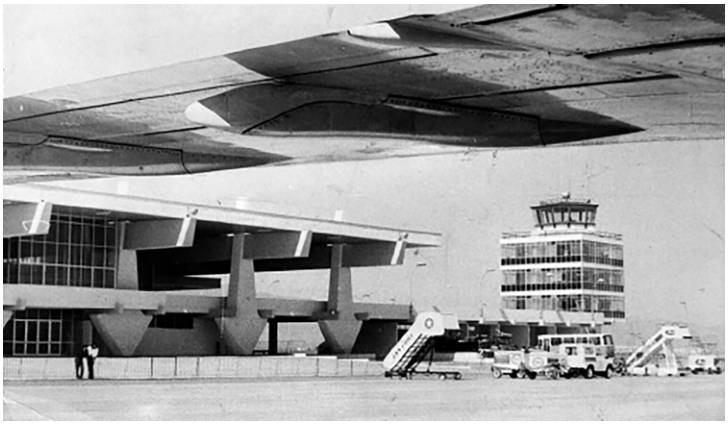


Figure 2. Jorge Patiño González, Antofagasta's airport passenger terminal, Antofagasta, Chile. © El Mercurio de Antofagasta (1975).



Figure 3. Augusto Iglesias, Punta Arenas's airport passenger terminal, Punta Arenas, Chile. © Pedro Almonacid Archives.

the complex was the Meteorological Service and Radio station, with dormitories for staff on duty.

The project underwent significant modifications between 1967 and 1969[34] when the central block was expanded to accommodate increased demand for flights, cargo and passengers. This transformation did not significantly alter

34. It was developed by the architects Francisco Torres, Ricardo Fernández and Jorge Patiño González (Head of Workshop), from the Studies Department of the Airports Directorate of the MOP

the building's zoning, which was based on simple access sequences from the vehicle to the plane for passengers and luggage, as well as a sectorisation of the building between the first floor, dedicated to the entry and control of passengers and cargo, and the second, dedicated to waiting and observing the boarding, take-off and landing of aircraft. However, the expansion did alter the building's appearance, obscuring the structural framework with a new façade around the perimeter of the first level.

6. CONCLUSIONS

The National Aerodrome Plan, conceived and centrally developed in the country's capital but executed at its extremities, aimed not only to establish connectivity between different regions but also to introduce a new architectural type through modern architecture, creating a unified and recognisable national image.

Implementing these facilities directly led to the emergence of a new architectural type in Chile. This type was subject to changes and adaptations due to varying geographical and climatic conditions, as well as evolving operational requirements over the years. Notably, the functional and volumetric design of the control tower varied in the three locations: it was compact in Arica, divided in Antofagasta, and compartmentalised in Punta Arenas.

This diversity in responses, despite the standardised global technical requirements for air navigation services, underscores how projects adapted to local conditions, reshaping the architectural type.

As a result, the airport terminals evolved into architectural and symbolic spaces of representation, creating a tension between global modern life scenarios and regional characteristics, and defining specific local places.

Airports in general, and particularly those built in the extremes of Chile, reflect both global and local challenges as well as the changes they undergo due to natural obsolescence. However, their status as significant and distinctive landmarks within the constitution of territories is noteworthy. Given their significance and the tendency for these structures to be transformed or replaced due to evolving aeronautical needs, documenting, preserving, and enhancing them is vital. ■

BIOGRAPHIES

Boris Cvitanic-Díaz is an architect with a Master's in Theory and History of Architecture and a PhD in Architectural Projects from Universitat Politécnica de Cataluña. His research focuses on the history of architecture, industrial heritage and modern architecture in the Magallanes region (Chile). He serves as an Associate Professor at Universidad de Magallanes's School of Architecture and has directed research projects for the National Research Agency (ANID) and the Ministry of Culture, Arts and Heritage (MINCAP). He is the author and editor of books in the discipline.

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#03

FLEXIBILITY IN SCHOOL ARCHITECTURE: THE 1970S MAT-BUILDINGS OF RECIFE, BRAZIL.

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ABSTRACT

Under pressure to improve basic education, Brazil promoted a broad expansion of the public-school network in the 1950s and 1960s. However, since educational policies were state-implemented, regional gaps persisted, particularly in the north and northeast. During the military regime (1964-1985), the government took on a more active role in funding state programmes, with the technical and financial support of the United States Agency for International Development (USAID). From the late 1960s onwards, this movement led to the mass construction of school buildings with the incorporation of rationalist techniques aiming for economy and speed in the construction process. This resulted in the construction of remarkable buildings, that historiography has yet to fully explore, such as those built in the State of Pernambuco in northeastern Brazil in the 1970s.

This article analyses school buildings in the Metropolitan Region of Recife in the 1970s, guided by MM Roberto's principles for schools in impoverished areas of Brazil's Northeast. It highlights how some of these schools align with Alison Smithson's mat-building concept and effectively employ flexibility principles.

1. INTRODUCTION

Under pressure to improve basic education, the 20th century witnessed a broad expansion of the Brazilian public-school network. However, since educational policies were state-implemented, regional gaps persisted, particularly in the north and northeast. During the military regime (1964-1985), the government took on a more active role in funding state programmes, with the technical and financial support of the United States Agency for International Development (USAID).

From the late 1960s onwards, this movement led to the mass construction of school buildings with the incorporation of rationalist techniques aiming for economy and speed in the construction process. During this period marked by Modern experimentation, architecture of great significance to this historiography was produced.

This article studies the role of flexibility in modern school architecture in Pernambuco, a state in northeastern Brazil. Flexibility is understood as a building's ability to accommodate necessary changes, whether these may arise from shifting user needs or evolving social standards.[1]

The flexible schools of Pernambuco in the 1970s were designed following the guidelines proposed by MM Roberto Architects in 1972. Their compositional strategies were aligned with the so-called mat-buildings, a concept created by Alison Smithson (1928-1993) to designate structures formed by the joining of courtyards, covered paths, and spaces for gathering. The concept was centred on grid organisation, based on connections, associations in the mesh, and possibilities for transformation.[2]

This programme resulted in fifteen schools of different educational levels, as indicated by Loureiro (2000).[3] Within this sample, some examples are quite adept at the concept of mat-building, incorporating some adaptations to the local climate, such as open circulation and the distribution of school space within an organisation by branches, not always conforming to conventional enclosed European school projects.

Initially, the article discusses the origins rooted in the Brazilian educational reform before addressing MM Roberto's guidelines for schools in impoverished northeastern areas. Finally, it delves into the production of flexible schools in the Metropolitan Region of Recife, analysing various school projects, and how they incorporate flexibility and align with the concept of mat-building.

2. PREMEM

Established in 1968, the Programme for the Expansion and Improvement of Secondary Education (PREMEM) was funded by the United States Agency for International Development (USAID) as part of a larger programme to develop educational plans for five northeastern states, including Pernambuco.[4]

The PREMEM aimed to "encourage the quantitative development, structural transformation, and improvement of secondary education".[5] PREMEM's action would enable the expansion and improvement of the public secondary education network through implementation of state-developed plans supported by educational technical assistance.

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We wish to thank the Coordination for the Improvement of Higher Education Personnel – Brazil (CAPES) and the Department of Education of Pernambuco for their support.
We would like to thank Celina Borges Lemos for her contributions to this study.

1. Tatiana Schneider, Jeremy Till. *Flexible housing* (New York: Architectural Press, 2007).

2. Alison Smithson,. How to recognize and read Mat-Building. *Architectural Design*, London, (September 1974): 573-590.

3. Claudia Loureiro. "Classe, controle, encontro: o espaço escolar." (Doctoral Dissertation in Architecture and Urbanism). São Paulo: University of São Paulo, 2000.

4. José Arapiraca. *A USAID e a educação brasileira: um estudo a partir de uma abordagem crítica da teoria do capital humano*. (Rio de Janeiro: Fundação Getúlio Vargas, 1979).

5. José Arapiraca. *A USAID e a educação brasileira: um estudo a partir de uma abordagem crítica da teoria do capital humano*. (Rio de Janeiro: Fundação Getúlio Vargas, 1979).

The programme ended in 1976 due to financial issues, as a result of the costs of construction and maintenance of the schools, as well as the salaries of their now specialised staff. Another reason for the programme's end was tied to the non-implementation of compulsory professionalisation at secondary level, leading to its abandonment in the early 1980s.

3. THE EDUCATIONAL POLICY IN PERNAMBUCO

Education in Pernambuco has been precarious since colonial times, and it has always been subject to the political whims of local elites. The demand for public schools significantly outstripped supply, particularly with the population growth experienced in the capital, Recife.

In 1964, with the establishment of the Military Dictatorship, one strategy for consolidating the new regime was the establishment of greater administrative control over the federated states, particularly in Pernambuco, known for its emerging social movements. In this context, education became the means that would help both the materialisation of the political project and the imposition of control through the attempt to consolidate ideological control.

Between 1968 and 1971, a set of educational policies and discourses were structured to praise vocational education. This was because the Regime sought to link the need for progress to forming a workforce. With the Education Reform of 1971 for primary and secondary levels, a model of compulsory professionalisation was imposed.

The state's education bases mirrored national demands, including the necessary restructuring to implement a new educational project with multi-purpose gymnasiums. This new model would guide the production of Pernambuco's school architecture in the 1970s.

4. GUIDELINES FOR FLEXIBLE SCHOOLS

Following the provisions of PREMEM, the architects Maurício and Márcio Roberto developed guidelines for multipurpose gymnasiums in impoverished areas of the Northeast, which were published in 1972 **(Fig. 1)**.

The type suggested by the architects resulted from using a modular system in the sizing, structure, and composition of the school building. The module started from the classrooms, each with a capacity for thirty-five students, at a ratio of 1.2 m^2 per student. This proportion led to the demand for large plots of land that would allow for accommodating a greater number of rooms and offer the possibility of extension.[6]

The proposals demonstrate alignment with the so-called mat-buildings. Initially, there is a common juxtaposition of uncovered internal spaces, covered spaces, and circulations. The architects' guidelines emphasise the freedom of placement of these elements according to the pre-existing trees. The guideline does not break with the general proposal of multifaceted extension but rather makes the form less predictable, allowing for better use of local conditions.

Despite the apparent standardisation of plans, this policy permitted vernacular features and elements of local tradition, such as exposed brick

6. Loureiro, *Classe, controle, encontro: o espaço escolar.*

and a four-slope ceramic tile roof. These features are closely aligned with those suggested by Armando de Holanda, in his 1976 *Guidelines to Design in Northeast*,[7] which were very popular among local architects, including those designing schools. His guidelines advocate the use of ceramic elements, ventilated enclosures to take advantage of natural lighting and ventilation, the use of light tones on external walls for cooler temperatures and shading of surfaces with greater exposure to the sun. Thus, despite originating from a centralising measure, the production was infused with local architectural identity.

5. FLEXIBLE SCHOOLS' DESIGN

The schools were distributed in six of the nine municipalities that made up the Metropolitan Region of Recife during that period. The greatest concentration of new school facilities occurred in the southern portion of Recife, in line with the urban expansion policies of the time.

Upon identifying these schools in Claudia Loureiro's doctoral dissertation, we pursued research in the State Education Department archive and discovered others with similar characteristics. We then visited these schools, which are detailed in the table below **(Fig. 2)**.

The first school was the Santos Dumont School, built in 1973 in the Boa Viagem neighbourhood of Recife, which until then was a summer resort area, but, since the mid-1960s, has been permanently occupied. Its design includes units of covered spaces established according to a module and distributed along linear circulations, making the paths more predictable. The circulation areas are configured in a straight, continuous form, within a certain formal rigidity. The school's sectorisation is established in an atypical way, with its administrative sector located peripherally to the blocks and its living spaces distributed on opposite margins. A second school was built on the land, adopting the same modulation and rhythm, continuing the existing mesh and modular coordination.

Another school located nearby is found in Pina, a neighbourhood characterised by its shantytowns. João Bezerra School dates back to 1978 and was designed by architect Anselmo Luiz Campelo, who adopted the classroom as a module and arranged them diagonally, establishing small courtyards between them. The classrooms are distributed in two blocks, accessed through central circulations. The school presents a very simple architectural programme; in addition to the classrooms, it includes a library, administration office, secretary's office, cafeteria, pantry, rooms for medical and dental care, teachers' room, and a centrally located covered hall. The service and administrative sectors are positioned next to the hall. Regarding the flexibility of the project, the potential for multipurpose use through modular coordination and extensibility is evident.

Dom Sebastião Leme School, built in COHAB, a peripheral area of Recife, also shares these characteristics. The author of the project and its year are unknown; however, it bears a strong resemblance to Áurea Cavalcanti School, located in Olinda and designed in 1973 by Anselmo Luiz Campelo. The use of modular units can clearly be seen in the plan. Each of the rooms

7. Armando de Holanda. *Roteiro para construir no Nordeste*. (Recife: Federal University of Pernambuco, 1976).

is covered by a four-slope roof, and there is no grouping under a single roof in any of the blocks. This strategy reinforces the idea of the mat building, opening up diverse possibilities for expansion or reduction of the building.

Thus, its form closely resembles the projects associated with the structuralist movement in architecture, featuring alternating independent units and uniformly distributed courtyards. The passages present in these courtyards are arranged diagonally to the rooms, aligning with the large, covered hall at the centre of the ensemble.

The mesh is quite flexible and receptive to any alterations if the modular unity is preserved. There are also gains in multipurpose use as the environments can be freely relocated. The project also provides clearer indications for users about the locations of their environments.

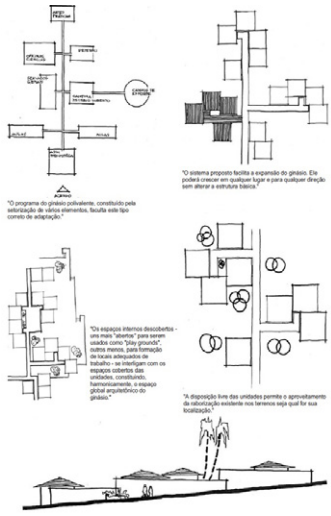
However, this type of project sectorisation may limit the form's freedom. There is a loss of the freedom that extensibility could offer if the sectorisation were less rigid, a context that would allow for more unpredictable construction adaptation. This characteristic is particularly useful in areas of urban expansion, where there is no clear prediction in terms of how the surrounding occupation will occur. Over time, alterations in the environment have restricted the building's growth potential.

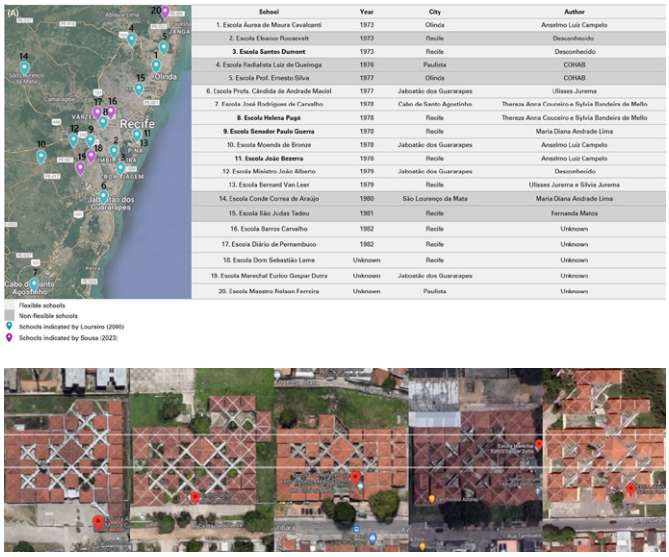
This type was identified in schools located in various areas of the Metropolitan Region of Recife, although only one of them is mentioned by Loureiro, the Áurea Cavalcanti School. Figure 3 illustrates this similarity and highlights the positioning of the covered hall, which is uniform in five buildings. Such similarities suggest the existence of an architectural type in this production.

The buildings exhibit specific differences in their formal distributions. However, these differences primarily arise from variations in size and programmatic requirements. Furthermore, they have been situated in distinct urban contexts, which influences openness to modifications.

Another example from this production is Senator Paulo Guerra School, located in Barro, Recife. The building is structured in three blocks: the administrative and technical teaching sector near the entrance, a block that houses laboratories, a hall, and the service sector, and a third of the classrooms. Similarly to other school projects previously presented, the module corresponding to a classroom is used, subdivided into administrative and service sectors and doubled in laboratories. The only element that deviates from this modulation is the covered hall. A main path connects the blocks, and these are again cut longitudinally in centralised circulations, although there are external circulations. This layout allows the building to grow both in the direction of the main path and by expanding the existing blocks at the ends.

Located in San Martin, a working-class neighbourhood in the western area of Recife, the Helena Pugó School was designed by Thereza Couceiro and Sylvia Bandeira de Mello. Unlike other schools, it uses a small scale and groups its spaces into well-defined quadrangular modules, rather than treating each classroom as a modular unit.





School	Year	City	Author
1. Escola Áurea de Moura Cavalcanti	1973	Olinda	Anselmo Luiz Campelo
2. Escola Eleanor Roosevelt	1973	Recife	Desconhecido
3. Escola Santos Dumont	1973	Recife	Desconhecido
4. Escola Fadialista Luiz de Queiroga	1976	Paulista	COHAB
5. Escola Prof. Ernesto Silva	1977	Olinda	COHAB
6. Escola Profa. Cândida de Andrade Maciel	1977	Jaboatão dos Guararapes	Ulisses Jurema
7. Escola José Rodrigues de Carvalho	1978	Cabo de Santo Agostinho	Thereza Anna Couceiro e Sylvia Bandeira de Mello
8. Escola Helena Pugó	1978	Recife	Thereza Anna Couceiro e Sylvia Bandeira de Mello
9. Escola Senador Paulo Guerra	1978	Recife	Maria Diana Andrade Lima
10. Escola Moenda de Bronze	1978	Jaboatão dos Guararapes	Anselmo Luiz Campelo
11. Escola João Bezerra	1978	Recife	Anselmo Luiz Campelo
12. Escola Ministro João Alberto	1979	Jaboatão dos Guararapes	Desconhecido
13. Escola Bernard Van Leer	1979	Recife	Ulisses Jurema e Silvia Jurema
14. Escola Conde Correa de Araújo	1980	São Lourenço da Mata	Maria Diana Andrade Lima
15. Escola São Judas Tadeu	1981	Recife	Fernanda Matos
16. Escola Barros Carvalho	1982	Recife	Unknown
17. Escola Diário de Pernambuco	1982	Recife	Unknown
18. Escola Dom Sebastião Leme	Unknown	Recife	Unknown
19. Escola Marechal Eurico Gaspar Dutra	Unknown	Jaboatão dos Guararapes	Unknown
20. Escola Maestro Nelson Ferreira	Unknown	Paulista	Unknown

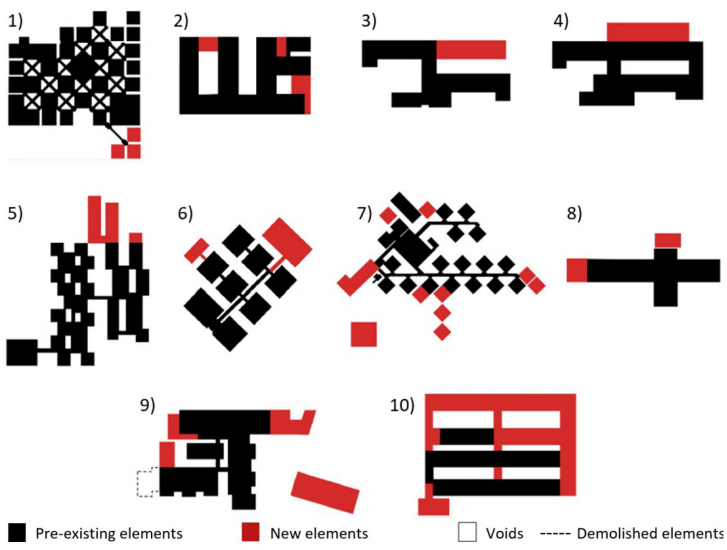


Figure 1. Schemes derived from MM Roberto guidelines for school in Northeastern Brazil. © Claudia Loureiro, 2000.

Figure 2. Schools belonging to the production of the 1970s in Pernambuco. © Larissa Sousa, 2023.

Figure 3. Aurea Cavalcanti School (Olinda, 1972), Diário de Pernambuco School (Recife, 1974), Dom Sebastião Leme School (Recife, 1976), Eurico Gaspar Dutra School (Recife, 1975), Maestro Nelson Ferreira (Paulista, 1979). © Google Earth, 2023.

Figure 4. 1) Áurea Cavalcanti School, 2) Eleanor Roosevelt School, 3) Luiz de Queiroga School, 4) Ernesto Silva School, 5) Cândida de Andrade Maciel School, 6) Helena Pugó School, 7) João Bezerra School, 8) João Alberto School, 9) Bernard van Leer School, 10) Conde Corrêa de Araújo School. © Larissa Sousa, 2023.

Its pedagogical sector comprises classrooms, laboratories, physical education facilities, locker rooms, a typing room, spaces for practices, a library, and a hall. This school presents the greatest potential for extensibility among all the schools studied here, as its layout, with circulation through enclosed environments, allowing it to expand in all directions through associations in the mesh.

In terms of disadvantages, the layout of the blocks follows an extremely functionalist mould. The school environments are limited to the built area, without a connecting element between its blocks, leaving the external area for residual use. With time, the school expanded its circulation to accommodate annexes.

In general, the Department of Education has rarely modified the schools to accommodate new uses, and potential for expansion was seldom made use of. Figure 4 demonstrates how some schools accommodated new spaces in their meshes. Comparisons were made between original designs and the current situation, verified through site visits, aerial views, and files provided by the Department of Education.

The continuity of the spatial logic established in the project by the insertion of new elements in the design is notable. This logic is presented with greater intensity in the schools more aligned with the concept of mat-building. The sample seems to indicate a greater propensity for interpreting school equipment as an element open to alterations in cases where the module and mesh are stronger in the architectural design.

However, the schools have seen few additions to their initial structures, possibly due to limitations imposed by the urban context of expanding neighbourhoods and as a result of political-administrative reasons. In this production, the incompatibility between the project and its use led to a progressive degradation of the school buildings. Vandalism and insecurity in these neighbourhoods, eliminating permeability to the outside, led to the implementation of walls and grilles, and further contributed to this degradation.[8]

6. CONCLUSION

Mat-buildings possess architectural attributes that can be well assimilated by the demands of contemporary education. They easily accommodate changes or expansions in requirements and maintain visual unity despite a de-hierarchized form. The adaptations made by MM Roberto for a school type for impoverished northeastern zones, combined these attributes by detaching it from the rigidity of a pre-established structural mesh. However, new urban challenges over recent decades have imposed limitations on the type, highlighting the need to search for responsive adaptations to the particularities of the 21st century.

Investigations specifically aimed at flexibility in school architecture are scarce. However, it is essential to delve into the topic to tackle the problem of obsolescence in public schools, particularly prevalent in communities with greater socioeconomic vulnerability. ■

8. Loureiro, *Classe, controle, encontro: o espaço escolar.*

BIOGRAPHY

Larissa Leão Silva de Sousa is an architect who graduated from the Federal University of Pernambuco (UFPE) in 2021. She is currently a doctoral candidate in urban development at the Federal University of Pernambuco (PPGDU-UFPE). She holds a master's degree in architecture from the Postgraduate Programme in Architecture and Urbanism at the Federal University of Minas Gerais (NPGAU-UFMG), under the research line Theory and History of Architecture and Urbanism and its relations with other arts and sciences.

Fernando Diniz Moreira is an Architect (UFPE, Brazil, 1990) and historian (Catholic University of Pernambuco, 1991) with a PhD in Architecture (University of Pennsylvania, 2004). He is a Full Professor at the Federal University of Pernambuco (UFPE) in Brazil, where he has been teaching since 1996. He was the coordinator of Brazilian Docomomo (2016-2017) and twice elected Federal Counsellor at the Brazilian Council of Architecture (2011-2017). His professional experience also included conservation plans for urban districts, convents, and other listed buildings.

THE GASOMETER IN VIENNA

MARKUS TOMASELLI
TU WIEN

ABSTRACT.

The four "gasometers" from 1899, which have been listed buildings since 1978 and were once among the largest gas production facilities in Europe, were extensively revitalised between 1999 and 2001. The architects Jean Nouvel, Coop Himmelb(l)au, Manfred Wehdorn and Wilhelm Holzbauer and their teams each redesigned one of the four cylinders and created a modern, mixed-use district in Vienna by converting these industrial monuments while retaining the old outer shell.

The lighting of Vienna's Ringstrasse increased the demand for gas, leading to the decision to build Europe's largest gasworks at the time. Construction work on all four tanks have been completed in mid-1898 and they were ready for operation on 17 July 1899. After the shutdown in 1986, the tank bells were dismantled and removed, leaving behind the domes, decorated with brick walls. At the beginning of the 1990s, the empty Gasometer D was used for clubbing. From 1999 to 2001, 615 flats, 230 student flats, 11,000 m^2 of office space, an event hall for 4,200 visitors, the state archives and a shopping centre with an original 22,000 m^2 of retail space were built in the shell structures. The article shows how this transformation process has been embedded in the city's urban transformation strategy as part of the European Union's Urbion funding program. It also shows the underlying discussion of the architectural possibilities for intervention in terms of the changes of use of this industrial monument.

1. INTRODUCTION

In the late 19th century, Simmering was a busy industrial center with factories, warehouses and production facilities. The gasometer complex, which consists of four massive cylindrical buildings, was originally built between 1896 and 1899 to store gas for Vienna's lighting and heating. Designed by the architects Friedrich von Schmidt, Wilhelm Aicher and Karl Heifer, the gasometers quickly became symbols of Vienna's industrial efficiency and technical progress. After 1986, the four large cylinders fell into disuse, caused by the switch to natural gas for Vienna's gas supply. In the 1990s a new use for the listed buildings was considered. In 1999 - one hundred years after their completion - the conversion into a modern residential and commercial center started, easily accessible from Vienna city center and St. Stephen's Cathedral in just 8 minutes by the U3 underground line. The gasometers are occupying 220,000 m2 and stand as an independent city within the city. The high level of identification of the approximately 1,500 residents with their living space has led to the formation of a large residential community, which exists both, virtually and in reality, as an association and active neighbourhood community. Numerous theses and dissertations in the fields of psychology, spatial planning, architecture as well as articles have been written about this project.

2. SOFT URBAN RENEWAL IN VIENNA

In Vienna, housing subsidies are used for the refurbishment of "Gründerzeit" buildings as part of the "Sanfte Wiener Stadterneuerung "(Gentle Viennese Urban Renewal), an UN-awarded subsidy program for the refurbishment of historic city districts. The rents in such subsidized renovated residential buildings serve exclusively to refinance the renovation costs for a number of years. This approach has made it possible to upgrade many "Gründerzeit" neighborhoods without displacing the resident population. "Soft" urban regeneration projects in Vienna represent a holistic approach to revitalizing neighborhoods through community-based initiatives, social interventions and cultural programs. In contrast to traditional urban regeneration measures, which focus primarily on physical infrastructure and redevelopment, soft urban regeneration emphasizes social cohesion, community involvement and improving the quality of life.

Vienna is renowned for its high quality of life and progressive urban policies. It has long been committed to promoting inclusive and sustainable communities. The realization that vibrant, livable neighborhoods are not just about buildings and infrastructure led to the emergence of soft urban regeneration projects. These projects demonstrate that the people who live in a neighborhood are the most important factor in determining its success. Vienna's soft urban renewal initiatives are not just about preserving and improving the historic building fabric. They also tackle social challenges that can arise from redevelopment measures (social segregation), promote cultural diversity and maintain social integration of residents in their neighborhood's high number of affordable housing units in Vienna is generally viewed positively, but the high-income limits for eligibility for these units are often

criticized. The trade-off between social targeting and social mix undoubtedly exists in Vienna as well, but the frequent demand to open up social housing exclusively to very low-income households make social mixing impossible and causes social segregation in the city Vienna, the policy of social inclusion has so far succeeded in largely avoiding subsidized housing with social problems. In the context of context of upgrading the historic city, the EU-funded URBION I project of the City of Vienna at the end of the 1990s provided a significant impetus for improvements to the urban structure of the "Gürtel". The success of these interventions led to the city's subsequent application for the Urbion II project for the" Erdberger Mais".

3. URBION II

On 28 April 2000, the European Commission decided to launch a community initiative for the economic and social regeneration of urban areas. This decision is based on Article 20 of Council Regulation (EC) No 1260/1999 of 21 June 1999. The Vienna URBAN II area, with a total of around 160 hectares and almost 22,800 inhabitants, is located in the south-east of Vienna. It consists of parts of the 3rd and 11th districts of Vienna; the centre is the so-called "Erdberger Mais". The area is located in the south of Vienna on one of the busiest roads in Europe. It comprises parts of the 3rd and parts of the 11th district of Vienna. The majority of residents lived in the western part of the area, which also had a partially outdated building fabric. The rest of the area was dominated by commercial use. In the years 2001 to 2006, this programme was intended to facilitate sustainable improvements for this area and its inhabitants. In order to ensure that the gasometer transformation project is integrated into a neighbourhood worth living in, an administrative and economic policy initiative was launched with the support of the European union for the transformation of the surrounding industrial area with the Urbion II project.

4. GASOMETER

The Gasometer housing project serves as a testament to the innovative spirit of adaptive reuse and sustainable design. Led by well-known architectural firms such as Jean Nouvel and Coop Himmelb(l)au, the redevelopment of the Gasometer complex involved a careful balance between preserving the historic integrity of the structures and introducing contemporary design elements. One of the most striking architectural features of the Gasometer housing project is its seamless integration of old and new. The framework of the cylindrical tanks, which are both rugged and beautiful, have been preserved. This serves as a reminder of the site's industrial past. At the same time, modern materials, finishes, and amenities have been introduced. These enhancements serve to enhance functionality, aesthetics, and comfort.

Despite the involvement of four Architects, only two development strategies were possible for the Gasometers, the ring and the centre-in variants. The challenge of designing a circular building lies in the difficulty of directing light. The architects Jean Nouvel, Coop Himmelb(l)au and Manfred Wehdorn opted for a circular structure. They constructed a residential and

office ring of up to eleven storeys within the cylinder, creating a large circular atrium. The interior of Nouvel's new structure for example has a diameter of 34 metres. In contrast, Wilhelm Holzbauer opted for a centralised approach, constructing a star-shaped structure in the centre of the cylinder. This divides the interior into three spacious gardens and does not touch the gasometer wall. Coop Himmelb(l)au also deviated from the ring development.

4.1 DEMOLITION AND SECURING THE STRUCTURES

The dome covering was dismantled according to a statically specified procedure in order to keep the supporting structure in balance. The pressure ring was supported by a specially constructed platform, which was initially mounted on a crane tower. In order to prevent the segments from buckling downwards during lifting, the individual dome segments were braced with steel cables. In order to be able to lift the entire segments, the wind bracing and the angle profiles were removed in every second segment. Hydraulic presses were used to press the compression ring up from the platform in order to relieve the tension. In order to maintain the balance, once the tension and compression rings had been relieved, the segments were lifted off one after the other in a statically specified sequence using tower cranes with a hook height of between 69 and 82 metres. The lifting was carried out in such a sequence that two opposite segments were always lifted first, followed by those that were 90° rotated to the segments that were dismantled first, and so on. As soon as the segments were dismantled, they were taken apart once in the centre and transported away for reinforcement and refurbishment. In order to realise the gasometer project, numerous openings had to be created in the gasometer walls. This proved soon to be a challenging endeavour. The masonry, in particular in the lower (basin) area, showed the strength of reinforced concrete, necessitating the use of mining equipment. Milling machines were employed to tackle the masonry.

On the one hand, the masonry, which was 5.40 metres thick, was worked on with mining cutters. In the upper area, where the wall thickness was "only" 90 centimetres, it was cut open with diamond-studded steel cables. In order to enable the installation of flats, offices and shops, which require a great deal of light, numerous new openings were cut into the skin of the gasometer. The decision to alter the gasometers, which are listed buildings, has been met with some controversy. However, it is clear that the new purpose necessitates such a change.

4.2 THE NEW GASOMETER, A MULTIFUNCTIONAL PROJECT

The four-cylinder tower blocks with their flats in Simmering were completed in summer 2001. At that time, the shopping centre in the basement, which had originally approximately 70 shops, opened simultaneously. The Gasometer City, originally known as the "G-Town", was completed, but its urban surroundings were far from it and would not be for a long time. This is where the next phase of transformation commenced with the realisation of the Urbion II project.

One particular challenge for the engineers was the event hall in Gasometer B. It is uncommon for a rock hall to be constructed in a

residential building. Here, however, the experiment was undertaken. The hall is a concrete construction that rests on rubber feet and has no structural connections to the gasometer. In October 1999, the go-ahead was given for the extension to Gasometer B, which was planned by Coop Himmelb(l)au. Underneath the building is the underground car park of Gasometer B (see above), while the building itself is colloquially referred to as "the shield" by local residents. It comprises 116 residential units and offices.

5. THE FOUR CYLINDERS

A – JEAN NOUVEL

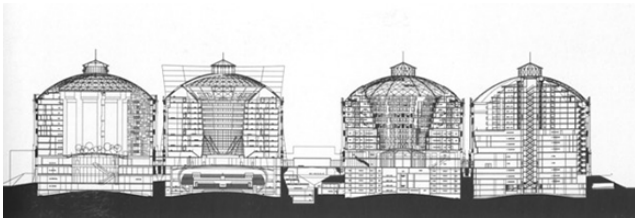
French architect Jean Nouvel implemented a shining body in the cylinder, detached from the historic façade and orientated inwards. It was of great importance to him to convey visual lightness through the use of glass and reflective steel, and to create a synergy between the existing outer wall of the gasometer and the new construction. Each of the eleven residential floors contains approximately 20 flats, which are divided into blocks of two. In between, there is open space of approximately one flat in width. The residential floors, which begin at a height of around 25 metres, contain around 120. These Gaps between the individual buildings make the listed gasometer façade with its high windows visible. This, as well as the glass fronts of the flats and the mirrored remaining walls, ensures a high utilisation of sunlight.

Below the flats are three office floors, three shopping centre floors and an underground car park. The underground station adjacent to Gasometer "A" is located directly in front of the main entrance to the shopping centre. There are also offices on the second to fourth floors.

B – COOP HIMMELB(L)AU

The architectural design of the Gasometer B was created by the Viennese architectural firm Coop Himmelb(l)au, Wolf Prix and Helmut Swiczinsky. Its distinctive exterior features an 18-storey residential building with a shield-like extension. The historical cylinder and the extension collectively comprise 254 residential units. The "shield" should symbolise the transformation of the Gasometers into a new form of urban living. If the sign were absent, it would be impossible to discern that a new structure had been erected on the site, was one of the arguments for this addition. The 1,400 m^2 event hall has a capacity of 4,200 people and is of particular importance for Vienna, as there was previously a significant gap between the Wiener Stadthalle, designed by Roland Rainer in the late 50ties with a capacity of up to 16,600 visitors, and the other event venues in Vienna, with a maximum of approximately 1,500 visitors. Furthermore, music groups that were unable to fill the Stadthalle were too expensive for most smaller venues. The flats are arranged in a continuous circle around the perimeter of the gasometer, with a 20-metre diameter light passage in the centre. The windows on each floor of the tower are aligned closely together. But definitely the striking recognisable feature of Gasometer B is the shield-shaped extension leaning against the north. With this project, architect Wolf D. Prix (pictured) from







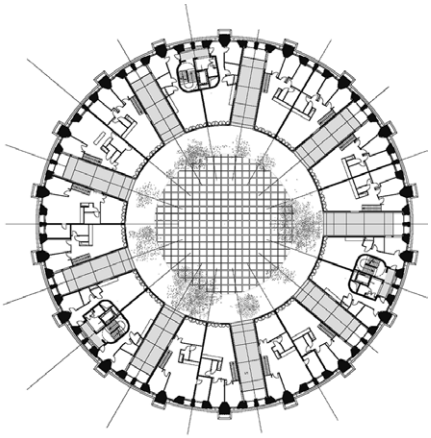


Figure 1. Jean Nouvel, Gasometer Tower A, Vienna, 2007, inner courtyard above the shopping mall, © Christian Matt, 2007

Figure 2. Coop Himmelb(l)au, Manfred Wehdorn, Wilhelm Holzbauer, Jean Nouvel – Vienna, 2001, Section, Vienna, urban preservation and renewal. Wien: Stadtplanung Wien, MA 18, Stadtentwicklung u. Stadtplanung, 2000

Figure 3. Coop Himmelb(l)au, Manfred Wehdorn, Wilhelm Holzbauer, Jean Nouvel – Vienna, 2001, https://upload.wikimedia.org/wikipedia/commons/thumb/1/17/Gasometer_wien.jpg/2560px-Gasometer Wien, May 5, 2024, 17:45 Photo/Map: Arne Müseler / arne-mueseler.com / CC-BY-SA-3.0 / https://creativecommons.org/licenses/by-sa/3.0/de/deed.de

Figure 4. Jean Nouvel, Gasometer Tower A, Vienna, 2001, Floor plan apartments. © Christian Matt, 2007

the Coop Himmelb(l)au team wanted not only to add a contemporary touch to the gasometers but also to increase the usable living space of the building. Gasometer B is the most densely built-up building - not in favour of the residents. However, the sound insulation of the concert hall seems to be excellent. This hall in the "basement" of Gasometer B, is mounted on rubber buffers it "floats" and by this prevents structure-borne sound transmission.

C – MANFRED WEHDORN

The Gasometer C, designed by Manfred Wehdorn, is notable for its adherence to traditional Viennese architectural principles, its abundance of greenery, and its suitability for social interaction. A large staircase-shaped courtyard, or atrium, serves as the centrepiece of this Gasometer. Manfred Wehdorn, who was a well-known architect and professor for monument preservation at my university, the TU WIEN composed the 92 flats spread over 6 storeys with a light-coloured façade are stepped back upwards in order to achieve more light on the lower floors. The flats start at a height of around 30 metres above street level, with three floors of office space located between the residential floors and the former shopping centre, today known as the "Music City". "Music City" is a functional concentration of shops, rehearsal rooms and classrooms on the subject of music and was designed by ".Megatabs" (architect Daniel Dora) as a specific re-use of the largely vacant commercial space of the shopping centre. The inner courtyard, under a large glass dome, which allows the former mall below to shine through and provides those areas with daylight. The dome is surrounded by a four-meter-wide strip of greenery on which trees have been planted. The

stepped inner courtyard has terraces and pergolas planted with flowerbeds and trees. Wehdorn wanted to realise the "green" arboretum here. A public car park is located under the central corridor of the former shopping centre.

D – WILHELM HOLZBAUER

Gasometer "D", designed by Wilhelm Holzbauer, is the only gasometer without a central inner courtyard and the only one in which each flat has a small green space or at least a loggia. The residential tower in the centre of the gasometer has the shape of a small central circle, with three rectangular "arms". Between these three equally large "arms" are three equally large green spaces, creating three inner courtyards with gardens 35 metres above the street and with a view over Vienna. This form ensures that people don't look into each other's flats or are all orientated in the same open space. There are also garden flats with fruit trees and a profusion of greenery. The garden offers the opportunity to experience the changing seasons, with the blossoming of the cherry tree in spring, the cherries in summer, the autumnal foliage in autumn, and finally the snow that covers the garden in winter. Below the flats, there are three floors above ground and three floors of storage space for Municipal Department 8, the Vienna City and Provincial Archives. Gasometer D also houses the Vienna City and Provincial Archives, with approximately 35 kilometres of shelves, that ensure the appropriate storage of the valuable documents. The actual residential building is situated on the roof of the Archives. ■

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BIOGRAPHY

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CONCRETE ABSTRACTION

JORGE GAMBINI
DEPAU/IP Y DMP/IT, FADU/UDELAR

ABSTRACT

Bayardo, the architect, and Tizze the structural engineer completed the drawings for the "Urnario Municipal no. 2" (Municipal Ossuary no. 2, as it is known in English) in 1959. The building, erected in 1962, is a massive structure designed to accommodate over 18,000 funerary urns. Its distinctive identity is founded on the gravitational character of the 2,800-tonne exposed concrete structure. and its bare boundaries. The building guides users on a perceptual journey characterised by increasing levels of spatial complexity and formal abstraction.

The ossuary embodies many of the themes influencing 1960s architecture, such as the eloquence of neutral form, bold control of technological means, optical conception of static structure and integration of the arts. Despite being recognised in various international publications and designated as a National Historic Monument in 2014, it lacks a comprehensive framework for maintenance and conservation.

The analyses discussed in the article are part of an extensive multidisciplinary research project conducted[1] in collaboration with the Faculty of Architecture, Design, and Urbanism of the University of the Republic and the Municipality of Montevideo. This project aims to guide future preventive and restorative interventions to ensure the preservation of the Ossuary.

The paper provides a detailed view of the formal analysis of "El Urnario," the design strategies developed by Bayardo, and the key points on its abstract visual construction and physical presence.

> We intended the meaning of the work to be easily perceptible: a severe and austere exterior contrasted with an interior space, like a patio, in which richer and more varied nuances are pursued. Elevated from the natural level of the land so that the surrounding landscape is not interrupted and is offered to the viewer as a series of panoramas limited by the architecture, the volume opens to a square interior patio, which is reached after crossing a porticoed space that seeks to "crush" the observer, due to the play of its dimensions.[2]

1. THRESHOLD

In Bayardo's Ossuary, the observer encounters a particular paradox between the massive and corporeal exterior, marked by constructive realism, and the abstract and extensive interior. Here, the visual arrangement of lines and surfaces, modulated by natural light, surpasses all individual signs of death on which their precise geometry was based.

The mould in which the concrete was cast left traces of its geometric and constructive order on the surface of the facades, leaving testament to the specific conditions of its production and the vicissitudes of the building and its surroundings over time. The unit of measurement is the height of an unplaned formwork board, which ranges from 13.5 cm to 14 cm. In this way, the pillar measures 18 boards in height, the beam-wall 48 boards and the self-supporting wall marking the access, 11 boards.

The gravitational compression exerted by the Urnario's structure on space and the profound shadow it casts configure a transitional space where the body and mind physically recognise the ceremonial nature of the work **(Fig.1)**. Stepping over this threshold implies being transformed by an intimate form of knowledge, which arises from the formal configuration of the architectural space and the intentional precision of the construction details. The threshold is a perceptual device that offers us the image of the park as a panorama transfigured by contrast.

The threshold is conceived as an annular deambulatory, topped by the tombs block that rises 2.40 m above the pavement. The longitudinal marking of 58 boards defines the texture of the slab bottom. At the ceiling, the diagonal meeting of the formwork at the corners of the quadrangular ring ensures that the modular order of the elevations rotates on the exterior edge, reinforcing the perception of continuity and material unity. The encounter between the slab and the façade is marked by a sharp edge, lacking a drip edge, intensifying the monolithic and reductive image of corporeality that we observe on the outside. The detachments that are currently observed in the cement coating of the exterior edge reveal how the Municipal Columbarium project's architectural intention takes precedence over the construction, to the point of affecting the material stability of the work and even denying it

The vertical outer limit of the threshold is defined by the eight trapezoidal screens, which assume the isometry of the square, adopting an identical arrangement in each of the elevations. The screens align with the facades, freeing the corners with a cantilever of 8 m and defining a central

1. This article presents part of a multidisciplinary research project conducted by: Juan José Fontana, Jorge Gambini, Mary Mendez, and Fernando Tomeo.

2. Nelson Bayardo, "Urnario del Cementerio del Norte," *Revista de la Facultad de Arquitectura*, no. 4 (febrero 1963): 8.

portico spanning 20.50 m. This structural configuration means that the perception of the supports is linked to the position of the observer's body and its movement.

Instead of repeating the exterior edge solution, the bottom of the slab meets the patio's interior façade with a wide recessed perimeter drip in the cement surface. This design choice induces a perceptual decomposition of the building's enclosures. It marks the beginning of an increase in visual complexity as we move inward, transitioning from object to system, making the construction detail a factor that intensifies the form.

2. COURTYARD

At La Tourette, the bare wall of the church lacks formal content other than the resplendent brutality of an indifferent and visually hostile construction surface. In contrast, the Urnario project takes an opposite approach: art substitutes faith drawing our full attention in a secular act of charity. in this case, the wall features a gigantic concrete mural designed for contemplation.

Due to its position, size and plasticity, Edwin Studer's mural is the predominant element of the composition of the space. The manner in which it draws your attention is such that it transforms the entire surface of the pavement into a plane of contemplation. The standing body must face the work directly, making the symmetrical nature of the architectural project evident. The mural directly engages the viewer, exhibiting its dual nature as an autonomous art object and as an aesthetic artefact **(Fig.2)**. It reflects its adaptation to the architectural framework in which it is inserted and which, in some way, proves to be revealing.

The east and west elevations are configured as a volumetric and abstract bas-relief, which breaks down the façade into a succession of geometric planes that respond specularly to the project's symmetry.

The abstract garden space embodies a strong communal spirit, but only two seating options offer a retreat from the mural's influence. The first turns its back on the work and is nestled under the stair-ramp, directing its gaze to the north and downwards to a pond of golden proportions inviting us to sink our thoughts into the reflective surface of the water. Positioned along the circulation path that links the patio entrances, this bench becomes a transit and meeting place, offering solace in shared moments. The second bench moves away from the paths and seeks privacy and seclusion. Sheltered by a willow and a raised planter containing collective offerings, this bench faces the screen pillar. Daylight illuminates the pillar, drawing the eye upward and into the deep shadows of the openwork wall.

The patio's boundaries, with their rich and varied nuances, aim to create a therapeutic space. The sensitive use of detail and architectural form seeks to contain the emotional and moving force of the moment.

3. COLUMBARIUM

The stair-ramp ascends towards the funerary ring tangent to the north façade of the patio. This ascent offers a close view of the mural, which reveals

the haptic nature of its components. Its dark, porous concrete is marked by 14 cm vertical formwork boards on the continuous light concrete wall background, which features horizontal formwork boards indicating its architectural significance. The sunlight accentuates the volume of the pieces that make up the work, distinguishing them from the background surface.

The climb towards the raised columbarium occurs perpendicular to the project's axis of symmetry. The concrete abstraction of the columbarium is achieved through a stark disconnection between function and experience. Experience paradoxically denies its symmetrical material corporeality. We are faced with a perceptual construction that transcends the formal law of the project, offering us an abstract and situational aesthetic experience **(Fig.3)**, whose unstable centrality is centred on the subject, their position and movement within a material geography where order is permanently concealed.

The enclosure is emphatically delimited by a wall of urns that defines the funerary space's outer perimeter. It forms an absolute limit, except for the four niche-shaped openings of the north side. While the outer limit is closed and uniform, the limits of the patio are complex and present varying degrees of openness. The free-standing shelves, mezzanine layout and material elements that define the enclosure adhere strictly to the the floor plan's bilateral symmetry, a symmetry that is systematically disrupted by experience. The observer encounters a fluid, continuous space that solely permits extremely close or distant, foreshortened views of the urns, in which the position of the body on the axis of symmetry is systematically prevented by the architecture.

The 20.50 m long wall that supports the stair-ramp defines the conditions of the interior limit of the southern sector, a tubular space with a square section measuring 6 m x 6 m, divided in 2 by a free-standing urn block of 3.30 m. This block extends approximately 3 m towards either side of the mural. Its position in the centre forces an asymmetrical and partial contemplation of space, which contradicts the symmetry and unity of the construction. Three skylights cut across the roof and cast geometric lines of light over the walls of the tombs. The natural lighting setup guides the viewer's progress while reinforcing the dual nature of the funerary space as both a part and a whole. In the east and west sectors, two large openings face the patio, showing an asymmetrical configuration of planes, made up of the perimeter wall of tombs and a free-standing shelf, 2.30 m high and 11.70 m long, extends to the southern block without touching it. The natural lighting coming from the patio highlights the separation of the free-standing blocks and the back wall.

The north wing is cut by a longitudinal mezzanine situated below the midline of the columbarium's height, dramatically compressing the space below. A concrete parapet visually divides the total height into two practically identical parts.

While the continuity of the envelope, the pavement and the slab bottom maintain the spatial and material unity of the funerary ring, the ostensible changes in scale and proportion of the lower level of the northern sector

separate it. In a frontal view of the mezzanine, this crossroads between continuity and fissure becomes evident. Towards the patio, the sturdy concrete parapet folds to form the railing of a cantilevered staircase that advances towards the viewer. The upward and vertical movement corresponds to a horizontal movement in depth, induced by the continuity of the surfaces of the floor and the outer wall of the urns, pushing the body towards the shaded area under the mezzanine.

When beneath the 2.30 m mezzanine, the dominant perception of the funerary space seems to shift from visual to tactile. Compression emphasises the sensation of proximity of the limits of space, giving the observers a sensory experience even without direct contact. The urns' height divides the space into two narrow passages that are as independent as they are different.

A 20 m long panoramic window opens towards the patio, which has been designed to allow for ideal contemplation of the mural. The viewer's distance ensures a complete view of the mural, with the middle height offering an unobstructed perspective. The panoramic opening allows the possibility of visualising the symmetry of the architectural artefact, but only to offer it from its condition as the frame of the work of art.

To the north, under the mezzanine, the space grows darker and in a certain sense, narrow and claustrophobic. This area, which holds the greatest compression and drama of the project, is violently penetrated by a volumetric light in the middle of the path. The opening, located in the centre of the outer limit, reveals the thickness of the funerary wall. Its jambs and sill reflect the light from the north, configuring a luminous parallelepiped that, with its elevated centre of gravity, draws the space upwards and outwards, directing the observer's gaze towards the sharp, dripless edge that marks the limit of the funeral space. Opposite the opening, the four niche-shaped openings frame an idyllic horizon, in which the gaze is lost in the park. The hand relaxes and seeks support from the windowsill, momentarily forgetting what defines the thickness of the wall.

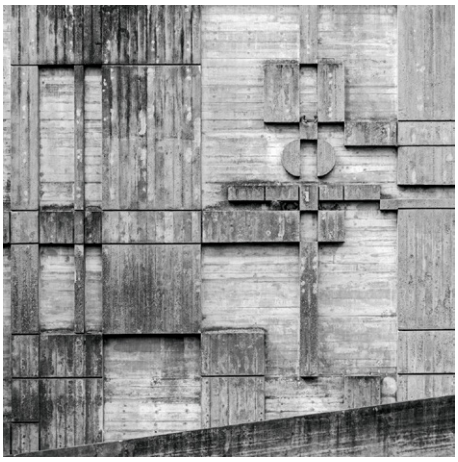
Both passages allow the gaze to recover a position on the axis of the bilateral symmetry of the project, a location that, instead of returning to us the formal and operational logic of the funerary artefact, projects us outside its limits, presenting us with a scene capable of sublimating, equally, both death and architecture.

In the funerary ring, the conditions of perception have been intentionally designed as a visual instrument, privileging the apparent form of the object over its operational form. Any observation that results in a comprehensive view capable of recognising the artefact's typological order and functional design, has been categorically prevented.

The possibility of an affirmative experience is thus left open, which ultimately exposes the autonomy of the subject. In this context, we can borrow the words with which Robin Evans analyses and describes a building as different and as close as the Barcelona Pavilion:

By virtue of its optical properties, and its disembodied physicality, the pavilion always draws us away from awareness of it as a thing and









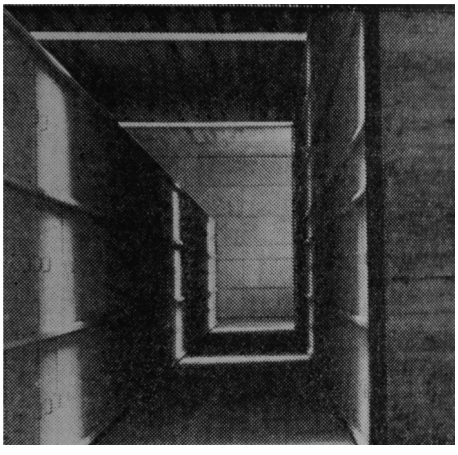


Figure 1. Nelson Bayardo, Urnario Municipal, Montevideo, Uruguay, 1959-1963, north facade (©Leonardo Finotti 2016).

Figure 2. Nelson Bayardo, Urnario Municipal, Montevideo, Uruguay, 1959-1963, fragment of Studer's mural at courtyard north facade (©Leonardo Finotti 2016).

Figure 3. Nelson Bayardo, Urnario Municipal, Montevideo, Uruguay, 1959-1963, mezzanine level. (©Leonardo Finotti 2016).

Figure 4. Nelson Bayardo, Urnario Municipal, Montevideo, Uruguay, 1959-1963, columbarium. (©Leonardo Finotti 2016).

Figure 5. Nelson Bayardo, Urnario Municipal, Montevideo, Uruguay, 1959-1963, Southern sector of the columbarium, with the hidden urns. (Julio Navarro-Carmen Moreno, In "Urnario del Cementerio del Norte," *Revista de la Facultad de Arquitectura*, no. 4 (1963): 16).

draws us toward awareness of the form as we see it. Sensation, forced to the foreground, pushes consciousness toward apperception. The pavilion is a perfect vehicle for what Kant calls aesthetic judgment, where awareness of our own perception dominates all other forms of interest and intelligence.

But, Kant insists, outside of their seemingly meaningless activity, we make our own destiny.[3]

4. THE NEGATIVE PATH

There are several plans of the building that highlight the determining role of the funerary shelf as the basis of the organisation, structure and form of the building. The ground and first floor plans reveal a symmetrical and regular arrangement of shelves in the funerary area. The "PN° 5" plan relates the position of the openings on the north façade exclusively to the distribution of the standard module that houses the ballot boxes. "PN° 5a" shows how the structural reinforcements of the disc beams in the funerary ring coordinate with the position of the slabs and screens of the shelves.

On the shelves, the naked urns confront viewers with a kind of operational transparency, in which the device ostensibly exhibits its character as a funerary machine. stacked and multiplied to an overwhelming number, immerses the observer in a sense of infinity, akin to Kant's "mathematical sublime." It presents an order of such magnitude that it seems to defy the imagination, pushing reason towards the absolute.[4]

In a diametrically opposite sense, contemplation of the meagre proportions of the individual urn prompts us to fill the narrow limits of its inner emptiness with something concrete, with an image or a concept. The urns' fronts feature small acrylic plates that identify the bodies in the abstract and orthogonal matrix of the tomb **(Fig.4)**. Each name creates a specific place for remembrance, making it possible for the memory to be embodied in the offering. Colourful plastic flowers and blurred photographs consecrate the places where, at some point, memory has been transfigured into present emotions.

A series of graphics illustrate the fibre cement plates that cover the ballot boxes, and the uprights responsible for securing them in position determine the apparent order of the form. The flat pieces of fibre cement not only block direct views of the urns but also impose an alternative rhythm and proportions that completely blur the mortuary order of the columbarium.

The project highlights a recurring contrast between function and experience. It prevents any insight into the operational condition of the modular matrix, which remains hidden in the background while maintaining the efficiency of the funerary device. Historical photos document the Municipal Ossuary with its closed shelves **(Fig.5)**. These images depict the funerary ring as an autonomous plastic reality, which, based on its visual configuration and its vague materiality, obscures its inherent function as an apparatus. This radical denial reshapes our perception of the building and the bodies within, reducing them to mere objects. ■

3. Robin Evans, "Las simetrías paradójicas de Mies van de Rohe," in *Traducciones*. transl. Moisés Puente, (Girona: Pre-Textos, 2005), 287.

4. Immanuel Kant, *La crítica del Juicio*, transl. Manuel García Morente (Madrid: Colección Austral, 2004), 190.

BIOGRAPHY

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RESEARCHING, DISMANTLING, REBUILDING: THE WORK OF EMILIO DUHART REVEALED BY INTERVENING ON THE HERMAN HOUSE

LORETO LYON
BEALS LYON ARQUITECTOS

ALEJANDRO BEALS
BEALS LYON ARQUITECTOS

ABSTRACT

This text presents some findings during the task of researching on, dismantling and restoring a single-family house designed by Emilio Duhart during the early sixties in Chile. By examining archive material, we traced back and tried to understand the project development and leading concepts by analyzing Duhart's other contemporary projects; not only to verify the recurrence of certain concepts and ideas within his body of work but also, to explore the different strategies used to materialize them.

However, it was the process of physically dismantling everything that was damaged in the house -almost everything besides the concrete structure- what really allowed us to reveal the main architectural principles behind the whole design process. A silent dialogue both with architects already gone and the house itself, which provides the guidelines to renovate the house, but also to reflect on some of our own design principles when making architecture.

1. THE DISCOVERY

For many years we walked past this enigmatic structure, trying to guess how the interior and the garden looked like, all hidden by a high wall that kept everything secret. Seen from the street, it only appeared as an exposed concrete skeleton overrun and consumed by a mantle of ravenous creepers, which already seemed to have devoured the softer parts. Not much else could be seen under the bush, but the detached volume of a triple height staircase poking on a corner, surrounded by beams and wrapped in a thin tissue of timber and frosted glass. Through this veil, it was possible to see the blurry shadows of ivy already spreading in, moss and droplets running down the glass, also colonizing the blackened concrete surfaces. At dust, a soft and green glow came from within, and just a few times, a fading human outline moving up or down inside this frosted box, looking like the distorted figure descending a staircase in Duchamp's painting.

It was when we first visited the Herman House (1966) that we realized it was designed by Emilio Duhart (1917-2006), an architect known mostly because of his remarkable public buildings created at the time of the pinnacle of the modern movement. This is one of the few houses he designed which still stand, and of which we were unaware of its existence, since not a drawing or a picture of this house has ever been published before. It is also, perhaps, the only house where the architect addressed similar concepts and strategies to those used in larger public projects, like the free plan and the free façade.

2. THE ARCHIVE

The Herman House is in a neighborhood developed in the 1950's at the foothills of Cerro San Cristobal, Santiago's metropolitan park. At the time of its construction, this area was on the outskirts of the city, now absorbed by its growth and therefore much more central. Despite of changes in the context, and because of its location close to the hills, somehow the feeling of being on a fringe of Santiago remains.

Once we realized this house was designed by Emilio Duhart, we began to research to know more about its history and define a point of departure for future transformations. Fortunately, all the drawings of the project were at Universidad Católica's documentation center, keeper of Duhart's archive. However, and together with this 'informed methodology', we also wanted to explore a more experiential approach; to think on future transformations by continuously visiting, dismantling and intervening the house.

The drawings of the Herman House cover a span of three years, from 1963 to 1966. Despite being a single-family house, the design process took a relatively long time, and as expected in a time lapse like this, different young architects and draftsmen intervened. Borja Huidobro (later to become Duhart's son in law) and Christian de Groote amongst them, two of the most prominent architects in the history of Chilean architecture.

Even though the house underwent several changes and transformations along the whole process, what we find to be the most prominent aspects, and which are also recognizable in other keystone projects of Duhart, remained: a

strong connection and appraisal of the surrounding geography and landscape; the pursue of flexibility to allow for change and transformation; the presence of vegetation and continuity with nature; and attention to detail in the relationship between architecture, the human body and the experience of space.

3. DESIGN STAGES AND CONCEPTS

We identified four main moments during the design process of the Herman House: a schematic design, design development, construction documents and lastly, a landscape design.

3.1 SCHEMATIC DESIGN: THE VALUE OF LANDSCAPE AND GEOGRAPHY

Duhart had a strong connection and appraisal of Chile's landscape and its geography, which he tried to value and incorporate into his projects. In the plan drawings, for example, there was often an icon indicating, besides the four cardinal points, the main mountains surrounding the valley of Santiago. Therefore, the plans are not only referred and organized according to the movement of the sun, but also to the main geographical events in the valley (Montealegre, 1994). The first plans and elevations of the house already define the position of the volume, closer to the street and leaving exactly half of the lot empty. The decision of freeing a big backyard to the west, probably linked to the presence and views of nearby San Cristobal hill and the possibility of creating a continuous and -in appearance at least- more extensive landscape. **(Fig. 1)**.

The house itself is organized within a compact two-story high rectangular volume, surrounded by a perimeter wall that runs around the whole limit of the plot. On top of this volume, a roof terrace, with some curved walls that keep the space closed towards the street and open to the main views of the nearby hill. A dispositive to connect with the geography of the Andes, which remind us of similar solutions used on the roof terrace of the Ville Savoye, the elevated terrace at the Villa Shodhan, or the older sail shaped wall at Casa Malaparte.

At the same time Duhart designed this house, he also worked on the Cepal building. Obviously, the two are completely different in terms of scale and program, however, it is possible to recognize in this smaller structure several concepts already present at Cepal, like the reference to geographical elements and the flexibility that a plan freed from structure allows.

If in the house he creates a connection with the surrounding geography by means of a roof terrace and the views toward both close and distant mountains, his sensibility towards landscape is best appreciated at the Cepal building[1]. Duhart describes Cepal as a building with a double condition: one which can stablish a dialogue with the big geography because of its monumentality, but which also incorporates a smaller and more domestic scale (Auca, 1966)

3.2 DESIGN DEVELOPMENT: FLEXIBILITY AND ADAPTATION

During the first stage of design of the Herman House the two floors are symmetrically divided on its longer axis by a main wall, with secondary load bearing walls both perpendicular to it and along the perimeter.

1. Fernando Pérez, "Emilio Duhart y el Edificio Naciones Unidas en Santiago," en Jeannette Plaut y Marcelo Sarovic, *Cepal 1962-1966: United Nations Building, Emilio Duhart Arquitecto* (Santiago, Chile: Constructo, 2012).

On a second stage, by the end of 1963 and already under the supervision of Christian de Groote, the structure mutates, and the materiality becomes more specific. All in search for an open plan that allows for higher flexibility and future transformations.

The supporting walls on the perimeter disappear and are replaced by a series of concrete columns: three on each of the longer sides and one coinciding with the central axis on the east and west elevations. The main wall that longitudinally divides the plan and a couple of perpendicular walls on the 'service side' of the house, remain.

The result is that now one half of the house becomes a free plan without any structural partition. On the most open side of the plan, the project specifies different solutions to break down the big, elongated space into smaller rooms or situations, always allowing for these partitions to be removed or transformed. At ground floor the aim seems to get the longer site views possible, connecting the front with the back garden, from wall to wall, through the interior of the house. The main space is divided in dining-room, living-room and studio using two accordion screens (modern fold), and therefore, without compromising the continuity of space.

On the second floor the division of rooms is done by sliding doors or very thin partitions. The plan even indicates multiple possible positions for them, reinforcing the idea that these could be changed later in the history of the house and thus, adapted to the will and needs of their inhabitants. We confirmed this when we took down these partitions when renovating the house and found out these were made of very thin timber frames, secured at their base using just some wood wedges against a continuous floor finished in terracotta tiles. **(Fig. 2)**.

The exo-structure set the facades free of their structural constraint, allowing for a greater variety of openings. At ground floor there are narrow and frame-less windows against the concrete slab, big windows in the center framed by thin concrete walls and columns, and long horizontal windows at the bottom. A series of bow windows allow to be closer to the garden, or rather, in the garden. When there is need for an opaque wall, these frames are filled with bricks, and therefore making evident that this border, which never touches the slab, does not perform a structural function. Differently, the outer walls on the upper floor are completely made from timber, but like the ones below, they also leave a full-length horizontal separation before reaching the slab.

If the Herman House is thought as structures to be filled, lived, enjoyed and eventually transformed, the same happens at the Foro Endesa Building (1962), but on a much bigger scale.

The building was commissioned by the National Enterprise for Electricity, to concentrate all their offices in one single building. Emilio Duhart worked in this project together with other two architects: Luis Larragubiel and Gastón Etcheverry. All of them were asked to prepare different schematic designs, and the design proposed by Duhart was the one chosen to be built, not without some resistance from the others[2].

The structure was conceived as what nowadays is a standard for office building typology: a core that contains the vertical circulations and services,

2. Alberto Montealegre, *Emilio Duhart Arquitecto* (Santiago, Chile: Ediciones ARQ, 1994).

and a free plan around it. However, at the time of the design, these concepts were a novelty. From the outside, what gives shape to the building is again an exo-structure: a grid of columns and beams of reinforced concrete which bear the loads on the perimeter, and thus liberates the space between the core and the façade from any additional structural elements. Therefore, the free plans can be divided and adapted at the occupants will. This approach is not only structural and functional, but also constructive. A diagram that explains the building sequence depicts the massive central core being built using a system of sliding formwork, on top of which the construction cranes are later installed. After that, begins the construction of the perimetral frame, and finally the assembly of prefabricated beams and slabs.

In both projects analyzed here, house and tower, flexibility, change and adaptation are sought, even encouraged, avoiding the definitive. Architecture is devised as a backdrop for daily life to happen.

3.3 CONSTRUCTION DOCUMENTS: ON MATERIALITY

During the last stage of the project of the Herman House the biggest exterior transformation happens on the roof. First, a low, pitched timber roof covers the higher slab, but the stairs still arrive to this now inaccessible space. Evidence perhaps that this structure was expected to be removed, if needed to. Lastly, there is an alternative of using the roof terrace simply as an elevated garden: a wooden deck with planters around, which could also be later transformed into an indoor playroom. It is also in this stage, where most drawings of details are dated. There is a particular aspect that draws attention, not only because of the precision of some drawings, but also because of the contrast between the bare concrete structure and other surfaces within reach of the occupants of the house. Handrails within the staircase, flat boards on top of the bow windows and on their backrests. Every element that may meet the body seems to have been designed and built in wood. **(Fig. 3)**.

Besides the timber studs that structure the perimeter wooden walls of the second floor, the handrails in the staircase are the only pieces of timber in the whole house that we could salvaged. Everything else was rotten, cracked, or eaten by insects. The profile of these elements is also the only sinuous shape in the house: an extruded profile that perfectly replicates the movement of a hand sliding over the timber.

The traditional wooden construction, the use of local stone on floors and some walls, together with all the other elements in the space, anchor the building and its spaces to the history and tradition of the place. All evidence of Duhart's permanent will to reference local historical tradition, and to represent it in contemporary terms[3]

3.4 LANDSCAPING: ON CONTINUITY

The last two drawings of the Herman House, dated in 1966, belong to the landscaping proposal. The earlier one is signed by Duhart, a conceptual general planning of the garden, and the latest, by a landscape designer, María Santa Cruz, which mostly indicates the vegetal species following Duhart's

3. Pérez, "Emilio Duhart y el Edificio Naciones Unidas en Santiago."





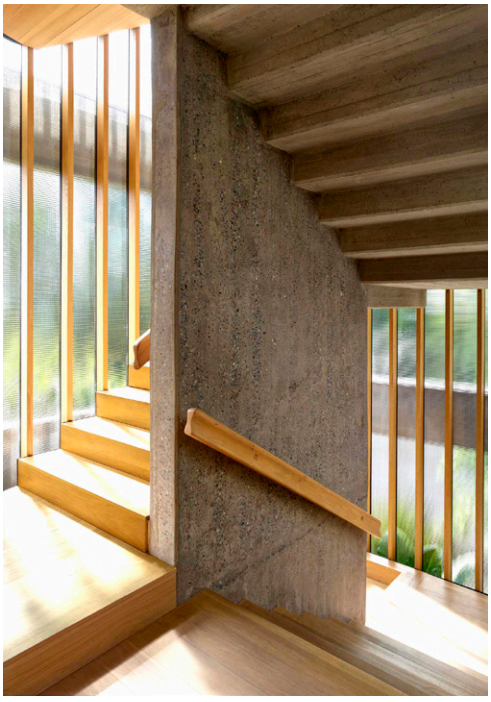


Figure 1. E. Duhart, Beals Lyon Arquitectos. Herman House, Santiago, Chile, 2023. Connection with the surrounding geography. Credits: Roland Halbe, 2023

Figure 2. E. Duhart, Beals Lyon Arquitectos. Herman House, Santiago, Chile, 2023. During the process of dismantling the second floor. Credits: Roland Halbe, 2023

Figure 3. E. Duhart, Beals Lyon Arquitectos. Herman House, Santiago, Chile, 2023. Original wood handrails within the staircase. Credits: Roland Halbe, 2023

design, which suffered little change. The most notorious elements are a continuous shaded border, completely covering the perimeter walls, and a swimming pool, strategically placed along the same view axis of the main living area at ground floor. These two elements contrast with the rest of a rather pale drawing. Additional vegetation and trees are planted in front of the main windows, and nothing obscures the staircase core. The contrast between the perimeter and the rest of the drawing transforms the whole plot into a new, exterior walled room. Thanks to the structural solution that frees the facades from a load bearing condition, it is possible to have big glass planes and apparently floating slabs. Thus, the interior views extend without obstruction to reach this new exterior green boundary, and in return, the natural light and the greenery floods in multiple ways towards the interior of the house.

4. DISMANTLING AND REBUILDING

The original owner of the house, Mr. Herman, lived there for about fifteen years, and then sold it to a younger family, which inhabited it intensely for almost four decades. There was no doubt about it. Door frames with children growing marks carved full height on them, red floor-wax stains climbing on the concrete walls everywhere, a derelict but reckless garden which was already devouring the house, and an old couple left alone living here, with joyful memories, but already too tired to keep going with the house. When we found the house, it was already unattended for too long.

Covered in ivy, the depth of the real damage of the concrete structure and wood elements was hidden, as the precariousness of some constructive solutions: every angle of the columns, beams and walls, was about to fall because of rebar corrosion; rotten timber window frames and secondary structure damaged by insects and fungi; parched wood facades with plenty of grooves; broken glasses; cracked waterproofing; torn vapour barriers and almost no insulation. The installations, never updated, were useless and beyond repair. Despite all this, and having resisted several major earthquakes, there wasn't serious structural damage, but it was urgent to take care of the house to prevent further damage.

Confronted with this unexpected scenario, and to adapt the spaces to our own requirements, we progressively began dismantling all that was damaged or faulty. In the end, we had no alternative but to leave anything but the concrete structure.

As we progressed with this initially unintended process of deconstruction (or 'undoing' the construction), more and more pathologies or constructive deficiencies were revealed. However, not everything was negative, as this turned out to be a fertile process for discovery and reflection. A creative method born out of the violent process of deconstruction. This way we choose not only to base our design choices in old drawings, but mostly, on what the house itself suggested. It was then when we could focus on the qualities and atmospheres we discovered and enjoy.

Probably, every architect has been in the position to imagine changes or corrections when visiting a work of architecture. At least, it is something we

cannot avoid. And we enjoy it a lot: 'that window could be a little to the left, that way you could see that hill from this chair'… 'this floor could have been the same than outside, so you could perceive it as a single space'… 'a pivotal door here would allow for a continuous wall between inside and outside'… and so on. Small adjustments both to enhance what we found has value and to improve what we consider to be shortcomings. A process we frequently use as architects, where whether by visiting or reflecting on a work done by others, then we start creating our own.

If the survey of archive material allowed us to understand the evolution of the project of the *Herman House* and the successive contributions of Duhart's younger collaborators, it was the process of dismantling everything that was damaged or needed to be renovated, what really revealed the main spatial concepts and pursues of the project. This method set the guidelines to adjust or reshape what we consider to be shortcomings, but most importantly, to retain and intensify the qualities that define the identity of this house. An ongoing process of observation and discovery in what will be just another chapter in the story of this house. And probably, not the last one either. ■

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BIOGRAPHY

Loreto Lyon (Chile, 1979) received the title of architect from UC (Chile) in 2005. In 2011 she received a Master of Science degree (MSc) in "Environmental Design and Engineering" from the Bartlett, University College of London (UCL).

Alejandro Beals (Chile, 1976) received the title of architect from UC (Chile) in 2001. In 2012 he received a Master of Philosophy degree at the Royal College of Art (RCA), London, where he researched on boundaries and borders in architecture, under the supervision of professor Nigel Coates.

They have taught studios at Cornell University AAP, the IUAV in Venice, Scola da Cidade in Sao Paulo, and Universidad Católica de Perú. Currently they teach at Universidad San Sebastián and Pontificia Universidad Católica of Chile. They have published and exhibited extensively. In 2016 Ediciones ARQ published the monograph Beals Lyon Arquitectos: Public Voids, featuring a selection of works about public architecture. The practice has been recognized with various design awards, like Archdaily's 2020 Building of the Year Award and Oscar Niemeyer Price for Latin American Architecture.

EDUCATING MODERN CHILDREN: LOCAL SOLUTIONS AND STANDARDIZED CONSTRUCTION IN MEXICO

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ABSTRACT

At the end of the 1950's, the Mexican federal government began implementing a vast program to build schoolhouses in rural towns and villages all over the country. The program relied on a design that used lightweight prefabricated and standardized elements that could be easily transported and assembled by local inhabitants. The school "kit" also included furniture and didactic materials. The school design was lauded and won the Triennale in Milan in 1960 and was emulated in other Latin American countries. This paper seeks to place the standardized design in the context of rural schools before it appeared through the examination of a federal program carried out in a remote area in Western Mexico: the Tepalcatepec basin. In the 1950s the region was developed through a broad program that built infrastructure, provided electricity and running water, and established hospital and over 200 rural schools. The comparison of the architectural solutions of the standardized schools and those from the preceding program allow for a balanced consideration of both program.

1. INTRODUCTION

Conditions in Europe at the end of the World War I favored the development of modern architecture as did similar situations in other parts of the world. At the same time, social circumstances implied a greater commitment of the State to the growing demand for equal access to housing, health, and education. In response to the demand for education, new paradigms appeared in school architecture all around the world. It is important to note that the architectural solutions for educational institutions varied enormously in response, not only to climate, culture, and region, but also to pedagogical models. The influence of local circumstances became enmeshed with new pedagogies (under the influence of Piaget, Froebel, Montessori, and others) while health issues —specifically the aftermath of the influenza epidemic of 1918 and the constant threat of the tuberculosis— also motivated innovation in school design, as did the increasing participation of women in the work force, particularly as teachers.

Experimentation led to the development of open-air schools in many parts of the world. Richard Neutra's proposals for California and for Puerto Rico, and Jan Duiker in the Netherlands; the rational designs of Juan O'Gorman for economizing school construction in Mexico; the rural schools designed by Luis Nunes in Brazil and Hannes Meyer in Switzerland, in contrast with proposals by Otto Haesler in Germany or W.M. Dudok in the Netherlands, are but a few examples of innovative approaches to school design.

Solutions given to the design of schools in different situations and parts of the world, vary from the interaction of local thinkers or circumstances to the plastic expression of modern architecture, taking into account the materiality and the technology. Sometimes, new pedagogies that stress programs and organization are present in consolidated urban centers. I rural context, pedagogical proposals may vary, and housing has to be taken into account. Furthermore, in rural context, the weight of tradition and vernacular architecture is evident, opposing the prefabrication that seeks to solve the demand, in an expeditious and efficient way. Therefore, it is necessary to analyze both proposals in the light of local conditions, both socioeconomic and environmental.

2. MEXICAN PROPOSALS BY MID 20TH CENTURY

For Mexico, the construction of school became a priority at the end of the Mexican Revolution (1910-1920). During the twenties and thirties, the Ministry of Education built numerous elementary schools primarily in urban areas, many of them with large campuses that included libraries, theaters, and extensive sports installations. Schools in rural areas materialized at the end of the forties, with much simpler programs.

In 1944 the Comité Administrador del Programa Federal de Construcción de Escuelas (CAPFCE) was formed under Jaime Torres Bodet, Secretary of Public Education. From 1944 to 1946 José Villagrán García was executive director of the Projects and Technical Planning Commission and he worked closely with José Luis Cuevas, Mario Pani y Enrique Yáñez. CAPFCE

functioned with a structure that assigned regional coordinators (Jefes de Zona). The early ones included Domingo García Ramos for Campeche, Carlos Leduc for Colima, Raúl Cacho for Mexico City, Juan Segura for Sinaloa, Pedro Ramírez Vázquez for Tabasco, and Luis Guillermo Rivadeneyra for Veracruz.

CAPFCE established federal guidelines for the building of school and, with the regional coordinators, studied the specific conditions and needs in different parts of the country. In the early years schools were built primarily in urban neighborhoods. Rural areas remained largely unattended by the organism until the end of the 1950s with the design of the standardized "aula rural" or rural schoolhouse under Pedro Ramírez Vazquez's leadership at the CAPFCE.

The construction of rural schools in Mexico emerges before the design of the schoolhouse, in a marginalized region in Mexico in the period prior to the "aula rural". The example illustrates the way in which local communities, in coordination with municipal, state and federal government solved their need for schools. It i a precedent for the analysis the "aula rural" and allows for a comparison of the solution with attention to four aspects: the role of local communities in the design and construction of rural schools, the placement and hierarchy of the schools in the settlements, the communal function of rural schools, and their adaptations to climate.

3. RURAL SCHOOL ARCHITECTURE IN THE HOTLANDS OF MICHOACÁN (1947-1958)

In 1947, at the suggestion of the former president Lázaro Cárdenas del Río, President Miguel Alemán established the Tepalcatepec Commission (modeled on the Tennessee Valley Authority) to promote the development of the hot lands in Michoacán in Western Mexico through the construction of infrastructure (roads, airstrips, dams, and irrigation works), the provision of running water and electricity and the construction of schools and hospitals. It functioned under the Ministry of Hydraulic Resources and had ample jurisdiction to coordinate activities between different levels of government (municipal, state and federal) and federal ministries (Health, Education, Agriculture, etc.).

Between 1947 and 1958 the Commission built 206 rural elementary schools, seven secondary schools and four technical schools (forestry, agriculture and a normal school for teachers).[1] During the period from 1947 to 1958, with Lázaro Cárdenas in charge, schools were erected in the municipalities of Apatzingán, Buenavista, Múgica, Felipe Carrillo Puerto and Parácuaro. Visits to the region and the revision of archival materials and historical photographs allow for an understanding of the design of schools and the situation of rural schools previous to the implementation the rural schoolhouse on the part of CAPFCE.

Many of the schools included in the Commission's report existed before the 1940s. They had been built by local communities but were first included in the federal registry in the 1940s when the Ministry of Public Education did a census. This explains the variety in solutions as well as the large number of one or two-room schools with no bathrooms, electricity or running water. Even after the schools were registered by the federal

1. *Secretaría de Recursos Hidráulicos, Comisión del Tepalcatepec, Memoria de los trabajos realizados. 1947-52. Inauguración de la primera etapa* (Uruapan: Comisión del Tepalcatepec, 1952), s.p. and Secretaría de Recursos Hidráulicos, *La Comisión del Tepalcatepec. Memorias de los trabajos realizados 1947-1961* (Uruapan: Comisión del Tepalcatepec, 1961).

government, local communities were expected to continue providing funds both for teachers' salaries and for maintenance and repairs.[2]

Other schools that were built with assistance from the Commission received funds from local organizations. For example, the citrus growers contributed funds for a school in Apatzingán and the local soccer league for a school in Caltzontzin. Schools established by the Commission usually had financing both from federal and state government.

The schools built by the Commission present a variety of architectural solutions, although for the most part they use local materials as well as concrete. Walls are mostly made from clay brick (there a few built with stone) and for roofing the most common solution is a light wooden structure with clay tile.[3] The same design was used for several of the smallest settlements that included a T-shaped structure with two classrooms and a house for the teacher.[4] In larger settlements, the school stands out due to its scale and design, such as in Antúnez.

The program of the rural schools built by the Commission between 1947 and 1958 consisted of two classrooms (in some cases four), a small office, a storage room, a library and restrooms, and, as a separate structure the house for the teacher or teachers. At El Ceñidor the school included an outdoor theater and at Cenobio Moreno there were showers and changing rooms for use by local residents who did not have running water in their homes. Most schools also had a basketball court.

These schools share a series of characteristic related to the tropical climate. Most of them have shaded covered corridors on four sides of the building to protect the walls from the sun as well as a covered outdoor room between the school rooms and the bathroom which could be used as a theater or shaded play area. Often, these shaded areas were about half of the total surface of the school. The classrooms have high ceilings and high windows that helped with airflow to keep the classrooms cooler.

In keeping with Cardenas's interest in replacing the religion with education (and the church with a school), the school were meant to be visible symbols and places strategically within the settlements. The most notable example is the school at Llanos de Antúnez (a new settlement) which was placed in the center of a large roundabout (170 meters in diameter). The scale of the building in the rural context made it a point of reference for the community, located on the main boulevard. The school facades in the projects built by the commission articulated their importance and their relationship to the region with nods to local architecture. Even in the smallest communities, the entrance to the school was framed by brick columns that held a sign with the name of the school that set it apart from the low houses surrounding it.

4. CAPFCE AND THE RURAL SCHOOLHOUSE AFTER 1958

Between 1958 and 1964 with Pedro Ramírez Vázquez as general director, CAPFCE presented a standardized design for the construction of rural schools. Authorship of the design is attributed to Ramiro González del Sordo, Pedro Ramírez Vázquez and Jorge Campuzano Fernández in the pamphlet edited by CAPFCE.[5] Additionally, it is important to mention the participation

2. This continued into the 1960s as evidenced by documents signed (or finger-printed) by members of rural communities in which they commit to providing resources for their schools. Archivo Histórico de la Secretaría de Educación en el Estado-Michoacán, Serie: Escuelas Primarias. Sección: Dirección Federal de Educación. Subserie: Fundación y/o federalización de escuelas. Caja 107, expediente 1384.

3. In adjoining regions, a school was built of Wood. In Gámbara, in the municipality of Múgica the school was built with stone.

4. This model appears in: El Ceñidor (built with funds from the ejido), Pinzándaro, El Letrero, El Rosario, and Nueva Italia (with a slight variant that reduced the number of covered corridors).

5. Pedro Ramírez Vázquez, Aula Casa del Maestro. (Mexico City: SEP, 1959). Acervo de Arquitectura Mexicana.

of Manuel Teja and Juan Becerra who together with Ramírez established ECA, S.A. in 1959 who designed the structural prototypes for construction.[6]

The schoolhouse design used prefabricated elements that could be easily transported to rural areas and erected by the local community; CAPFCE presented with four options for construction using wood, brick, adobe or wooden slats (for tropical climates).[7]

The design was a one-room school with the teacher's house under the same roof. With a surface of 108 square meters, it contained a classroom that measured 9 by 6 meters that could be divided into separate spaces for children at different levels in their education. The teacher's house of roughly the same area had a kitchen, living and dining space, a small study, two bedrooms and a bathroom and, to the back, a walled in patio. There were variants with two and four classrooms and the design became the basis for all school construction all over the country in the decades that followed.

The schoolhouse came in a package that included all the elements for the building. No element weighed over 50 kilograms, ensuring they could be lifted and put in place by the local community without the need for cranes. The entire package of structural elements and windows, and door frames weighed 4.3 tons. Instead of glass, windows were covered with translucid plastic that incorporated, maps and didactic images. Additionally, each school was provided with equipment (including a phonograph) and didactic materials.

The design was implemented in 35,000 schools all over Mexico and emulated in other Latin American countries. In Mexico, the schoolhouse became ubiquitous and, with its low tile roof and small scale fit into the communities without standing out. Its placement in communities varied greatly, sometimes occupy lots on the outskirts of towns and in other central locations.

5. CONCLUDING REMARKS

The case of the schoolhouses built by the Tepalcatepec Commission in the hot lands of Mexico illustrates the struggle of local communities and their agency in getting financing and their participation in building and maintenance of their schools. Undoubtedly this generated a sense of belonging, even in the cases when the design was provided by the authorities. The prefabricated casa-aula gave continuity to the participation of local builders, even though the schools did not contain formal elements related to the local region. The use of local materials and the options given by CAPFCE did not make the schools "regional"; despite the stated proposal to wed local craft with national industry, the proposal was national in nature.[8] The design of furniture refers to crafts, but not specifically to the locales where the schools were built.

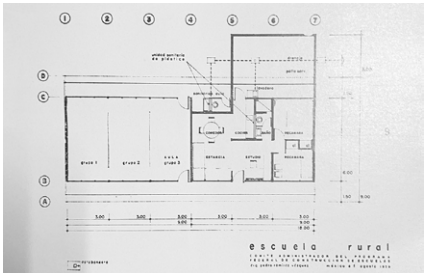
One of the most interesting differences that can easily be overlooked is the placement of schools. In the federal aula-rural program the schools were not usually centrally located, and their small scale made them fit into rural communities. This is in stark contrast to the program headed by Cárdenas in the Tepalcatepec where visibility was paramount. As part of a strategy to replace religion with education and the church with the school, the new schools –although not exactly monumental— became focal points for the

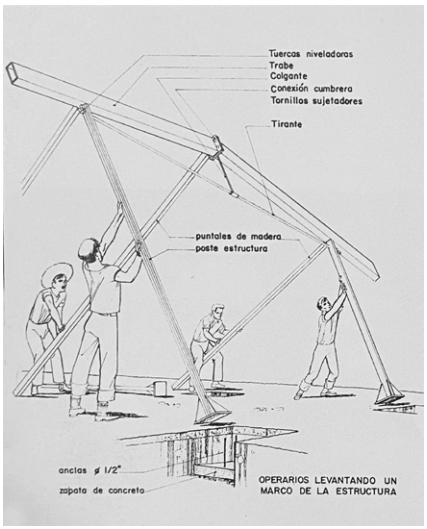
6. The recognition the project received in the Triennale in Milan in 1960 did not give credit to these participants. It is also important to mention the Silver Medal was given to Ernesto Gómez Gallardo for the design of furniture.

7. Ramírez Vázquez, Aula Casa del Maestro. It is important to mention the precedent of Rivadeneyra´s experimentation with prefabricated and standardized classrooms as head of CAPFCE from 1952 to 1958.

8. Pedro Ramírez Vázquez. *Aula-casa rural*. (Mexico City: Instituto Nacional de Bellas Artes (INBA), 1962), p. iv.







communities. There were given a hierarchical central place in the town layout and also included services that could be used by the communities: basketball courts, showers with dressing rooms for those who had no running water at home, theaters and even community kitchens in some cases. ■

Fig. 1 Rural school built by the Tepalcatepec Commission in El Ceñidor, Michoacán. Source: Secretaría de Recursos Hidráulicos. Comisión del Tepalcatepec, Memoria de los trabajos realizados. 1947-52. Inauguración de la primera etapa. Uruapan: Comisión del Tepalcatepec, 1952, s.p.

Fig. 2 Plan for the rural schoolhouse implemented in Mexico in the 1960s by the CAPFCE. Source: Pedro Ramírez Vázquez, "Aula Casa del Maestro" Mexico City: SEP, 1959. Acervo de Arquitectura Mexicana

Fig. 3 Image from the instruction booklet for the erection of the rural schoolhouse. Source: Pedro Ramírez Vázquez, "Aula Casa del Maestro" Mexico City: SEP, 1959. Acervo de Arquitectura Mexicana

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BIOGRAPHY

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LEARNING THROUGH EXPERIENCE: JOHANN HEINRICH PESTALOZZI'S PEDAGOGY IN HANNES MEYER'S EDUCATIONAL BUILDINGS

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ABSTRACT

Hannes Meyer first knew of Johann Heinrich Pestalozzi's pedagogical ideas while working on his Freidorf cooperative estate project. For Pestalozzi (1746-1827), education was vital to achieving humanity, the last phase of his conception of *Human Nature*. The social context was equally influential at that. The educator believed in a holistic approach where the Head, the intellectual, the Heart, the moral, and the Hand, the physical, must be stimulated.

His intuitive method privileged experience and perception through the senses. It benefited from close environmental contact and developed a healthy body. Moral values were expected to be instilled in the family circle, where the mother bore the primary responsibility of upbringing.

In 1926, Meyer and Wittwer stated their goals for the Petersschule: "No commanded study but rather experienced knowledge. No deformation of the spine but rather body care. No school cripples, but rather vital youth."[1] These were the architects' first references to Pestalozzi's agenda. To achieve that, well-lit classrooms, workshops, and bathrooms were included. A gym and two large, suspended terraces promoted physical activities in an avant-garde shape.

Pestalozzi's pedagogy was also implemented at the ADGB School. Conceived as a trade union training facility, it took those principles further. The connection with nature became stronger. Physical activity was central to well-being. Collective work was enhanced through brigades following the small circle theory, as reflected in the dorms.

Pestalozzi's ideas are notable in the children's home in Mümliswil. Through Pestalozzian methods, children were introduced to cooperatives, including a "Mother Gertrud" guiding the activities. Community participation was fostered mainly in the round room, where performances and discussions occurred. Thanks to the adequate installations in the building, hygiene was stimulated, and the natural environment of the Jura mountains was a central actor in learning by playing.

1. INTRODUCTION

Hannes Meyer first learned of the transformative ideas of the Swiss social thinker and educational reformer Johann Heinrich Pestalozzi (1746-1827) while designing Freidorf, the first cooperative estate in Switzerland. The community had envisioned establishing a Pestalozzi school[2] where children would learn in small circles, discovering through experience and developing physical strength as an essential condition for the healthy development of the mind. The ultimate goal was, however, to bring people to a moral state in which egotism would be superseded. In Freidorf, people would be reeducated as "new men" capable of coexisting in harmony with their neighbors.[3] Alfred Lei, one of the cooperative's founders, saw it that way: "When we move to Freidorf, we'll have to forget how we were raised until now and educate ourselves to become new people. It is pessimistic to think that people wouldn't get along in Freidorf."[4] The estate, they believed, "should be the beginning of a modern cooperative enterprise and serve as a role model and example of how our world should be built in small groups."[5] These learnings will eventually influence how Meyer conceived his role as an educator and designer. His work at the Bauhaus and his projects for education, the Petersschule, the ADGB School, and the Children's Home in Mümliswil will gradually incorporate principles that can be traced back to Pestalozzi.

2. JOHANN HEINRICH PESTALOZZI'S EDUCATIONAL APPROACH

Central to the vision of Freidorf was the education of individuals who could transcend their egotism and engage with the rules and benefits of the collective, much in the sense of Pestalozzi's philosophy. For him, education was the key to humanity, the way society shaped the person. Without it, people would get wild.[6] The "art of education," or "the art" as he called it,[7] was fundamental in raising individuals to the moral stage, the very last in his three-fold conception of *human nature* that could be reached "only after we have found and realized our life's task, which is beyond egoism, [and] lead a truly fulfilled life."[8]

Pestalozzi believed that ignoring social change was neither possible nor desirable.[9] Education should respond not only to man's natural physical and psychological faculties and needs but also to his social circumstances and himself.[10] It is in the inner circle of the house where these values should be instilled in the child in the first place. The school should advance those morals further through the example and love of the teacher to his pupils; it does not impose anything on the child but expands what is already in his nature.[11]

The Swiss educator conceived a pedagogical method that considered the child's cognitive psychology and social milieu.[12] The teacher's role is to foster those capabilities and to teach them the elementary knowledge to become "a fully developed intelligent moral person."[13]

He spoke in that sense of the head–heart–hand abilities to be cultivated. "Head," the cognitive, and "Hand," the physical strength and manual dexterity, supplemented that of the "Heart," meaning the "basic moral feelings of love, faith, trust, and gratitude, plus also the activity of our

1. Hannes Meyer and Hans Wittwer, "Erläuterung zum Schulhaus von Heute," GTA-ETH Archiv, 28-1926-1-1. Quoted in K. Michael Hays, *Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilbersheimer*, (Cambridge, MA., London, England, The MIT Press, 1992) quoted in Raquel Franklin, "*Radical Architecture for a Vital Youth: Hannes Meyer and Hans Wittwer's Entry for the Petersschule Competition*," *Bauhaus a conceptual model*, (Ostfieldern, Hatje Cantz, 2009): 208

2. Franklin, *Radical Architecture for a Vital Youth: Hannes Meyer and Hans Wittwer's Entry for the Petersschule Competition*, p.5

3. Siedlungsgenossenschaft Freidorf, *Protokoll*. (Muttenz: SGF, 1919) 9. All translations are mine unless stated.

4. Freidorf, *Protokoll*, 9

5. Freidorf, *Protokoll*, 8

6. Arthur Brühlmeier, *Head, Heart, and Hand: Education in the Spirit of Pestalozzi*. (United Kingdom: Open Book Publishers, 2010)

7. Brühlmeier, *Head, Heart, and Hand: Education in the Spirit of Pestalozzi*, 18

8. Brühlmeier, *Head, Heart, and Hand: Education in the Spirit of Pestalozzi*, 18

9. Keiichi Takaya, "The Method of Anschauung: From Johann H. Pestalozzi to Herbert Spencer." *The Journal of Educational Thought (JET) / Revue de La Pensée Éducative* 37, no. 1 (2003): 80. http://www.jstor.org/stable/23767177.

10. José María Cabañas Quintana, "El Concepto de Naturaleza y de Estado de Naturaleza En Pestalozzi." *Revista Española de Pedagogía* 65, no. 236 (2007): 94. http://www.jstor.org/stable/23766004

conscience, our sense of beauty and goodness, [and] the ordering of our lives according to moral values."[14]

How to stimulate such abilities was the next step in the process. For that, Pestalozzi developed his method of *Anschauung*, or "method of intuition," i.e., the "direct knowledge of the object through the five senses; … the primacy of the direct experience of the individual"[15] instead of memorization.[16] Exercises in three main categories, number, form, and language, went from the concrete to the abstract; that was the Principle of Coherence,[17] where drawing played an essential role.[18]

Concepts of space and time were intrinsic to the child's mind in an underdeveloped way. It was the teacher's task to arouse intuitions of form so that, in the process, the child could recognize not only its outline but also its characteristics of color, texture, etc. At a later stage, he would also be able to inquire about its function, construction, history, etc., to interpret and consolidate knowledge.[19]

3. HANNES MEYER'S FIRST EXPERIENCES

In 1924, Hannes Meyer had the chance to experiment with such concepts when commissioned with the Swiss pavilion at the World's Cooperatives Exhibition in Ghent, Belgium. He explained his plan to the actor Jean Bard, hoping he would join him. He said: "Each country will expose its products. Personally, I have a more original idea. I would like to explain the cooperative principle to the public through a puppet theater of a particular conception. It would involve playing dolls on a human scale with real actors."[20]

Confronting the puppet with the human highlighted other oppositions, reminding us of some of Pestalozzi's terms: "social: Co-op versus anti-co-op, artistic: Naturalness versus truth. Here the natural movement of man, dictated by heart, brain, custom, affect, and intellect; there the emotion-free, shameless, and spiritlessly unrestrained, truthful attitude, and devotion of the puppet, absolute 'play.'"[21]

In 1926, Meyer published his text "The New World," reconsidering his position regarding architecture, history, and tradition, favoring universalism and functionality; he left Freidorf and partnered with Hans Wittwer. They participated in two architectural competitions that placed them among the avant-garde of the ABC group he had joined a couple of years before: the Petersschule and the Palace of the League of Nations.

4. THE PETERSSCHULE COMPETITION

K. Michael Hays recognizes the Pestalozzian basis for Meyer and Wittwer's entry into the Petersschule competition when he says: "The desired conditions are, first, Pestalozzian sociocorporeal ones: 'no commanded study but rather experienced knowledge. No deformation of the spine, but rather hygiene. No school cripples but rather vital youth!'"[22]

These were the aims of their project, but how exactly did they match Pestalozzi's theories? They responded to the Head-Heart-Hand trilogy. In Pestalozzi's method, learning through experience, especially observation,

11. Cabañas, "El Concepto de Naturaleza y de Estado de Naturaleza En Pestalozzi." 94

12. Rebekka Horlacher, "Schooling as a means of Popular Education: Pestalozzi's method as a popular education Experiment," *Paedagogica Historica,* Vol. 47, No. 1-2, (February-April 2011): 68

13. Rebekka Horlacher, "Best Practice Around 1800. Johann Heinrich Pestalozzi's Educational Enterprise in Switzerland and the Establishment of Private Pestalozzi Schools Abroad," Encounters on Education 12 (Fall 2011): 3-17. doi:10.24908/eoe-ese-rse.v12i0.2366.

14. Brühlmeier, *Head, Heart, and Hand*, 48

15. Takaya, "The Method of Anschauung" 78

16. Takaya, "The Method of Anschauung" 84

17. Brühlmeier, *Head, Heart, and Hand*, 71-72

18. Clive Ashwin, "Pestalozzi and the Origins of Pedagogical Drawing." British Journal of Educational Studies 29, no. 2 (1981): 139. https://doi.org/10.2307/3120021.

19. Ashwin, "Pestalozzi and the Origins of Pedagogical Drawing.", 139

20. Jean Bard, *Qui es-tu Arlequin? récit da ma vie*, Editions Victor Attinger, Neuchâtel, 1972, p.125

21. Hannes Meyer, "Das Theater Coop," *Das Werk*, No.12 Year 11 (December 1924): 329

22. K. Michael Hays, *Modernism and the Posthumanist Subject:* 8

was privileged over memorization or the traditional way of learning. The action of the hand was matched with the intellectual development of the head. The second deals with the physical response and instilling values in the pupil, such as orderliness, cleanliness, perseverance, etc.[23] Meyer takes it almost literally from Pestalozzi's writings:

> *The quiet I demanded when I was there and teaching was a great help towards my goal, as was the insistence on the physical posture in which they sit. …It is incredible how the insistence on such little details can give the teacher the basis for great ends. Unless they had seen it, no one would believe that a girl who has been allowed to run wild takes a first step on the road of moral development simply by becoming accustomed to holding her body and head straight for hours on end without letting her gaze wander.*"[24]

The third statement, "No school cripples but rather vital youth," probably goes in the sense of disqualification that both Pestalozzi and Meyer rejected. Everyone has a talent that should be fostered. Meyer would return to that idea during his Bauhaus period, saying, "Everyone has an aptitude for something. Life refuses no one. Hence, education for creative design engages the whole man, removes inhibitions, anxiety, and repression, and eliminates pretense, bias, and prejudice.[25]

How were they addressing such goals in the architecture of the Petersschule? First, a strong emphasis on physical development demanded ample spaces for exercise that, under the conditions established in the call, especially when selecting the site, could not be met. They believed the designated site was unfit for a modern school. The patio was too small, not even a square meter per pupil. Therefore, two suspended terraces would artificially expand the playground. The classrooms, playgrounds (covered and uncovered), and toilettes constituted a constructive unit (**Fig. 1**). The rest of the architectural program that got particular attention was composed of a teachers' room, a gym, a school pool, a kitchen, and an assembly hall. The optimal light for the classrooms had to come from a skylight; however, since there was no place for a single level, they had to reach a compromise, leaving only the drawing room on the upper level, with an eastern orientation for the rest of the classrooms. Spaces for body care, including the gym and pool, were located on the ground floor. There was also a room for manual work, and the collection was to be exhibited in vitrines on the first floor's hall. Finally, a modern constructive system of standardized concrete pieces and steel bridges for the terraces was to be supplemented with insulated lightweight walls, rubber flooring, etc.[26]

Meyer and Wittwer's project "Kompromiss" was disqualified in the first round;[27] nevertheless, it served, together with their project for the Palace of the League of Nations, as an example of Meyer's work that brought him to the Bauhaus.

Pestalozzi's learnings were also introduced in the school's curriculum once Meyer took over the Direction from Gropius. The workshops stood

23. Brühlmeier, Head, *Heart, and Hand,* 39

24. Brühlmeier, Head, *Heart, and Hand,* 42

25. Hannes Meyer, "Bauhaus, and Society, 1929," in *Hannes Meyer: Buildings, Projects, and Writings,* ed. Claude Schnaidt, (New York, London, Niggli, Architectural Books, Tiranti, Taufen, 1956).

26. Meyer and Wittwer, "Erläuterung zum Schulhaus"

27. *Konkurrenz zur Erlangung von Entwürfen für den Neubau der Petersschule in Basel*. GTA/ETH 28-35-05

at the core, while sports, the stage, and the band were incorporated as part of a holistic training of students. The vertical brigades, in which the more advanced students helped the younger ones, also derived from Pestalozzi's method of the small circle, which preferred to mix children of different ages and abilities in the same class to profit from comradeship.

5. THE ADGB SCHOOL

Those ideas were implemented in adult education at the Bauhaus and the ADGB School designed for the General German Trade Union Federation. After winning a competition, Meyer and Wittwer were commissioned with its construction in the forest of Bernau, near Berlin. Otto Hessler, the architect in charge of the program's development, established the expectations from the onset: "The building should be an example of modern building culture. It shouldn't be created as a school in the traditional sense, in an arbitrary form with the required number of classrooms, seminar rooms, living rooms, etc., but it should be exemplarily created in every sense."[28]

The training center was conceived as a place where workers could, for a short period of one to two months, learn not only about their trade or syndicalism but also socialize, improve their health through exercise, relaxation, and contact with nature, and, in Pestalozzi's sense, get over their egotism and engage in the community. Architecturally speaking, "in the organization of the school life, Meyer followed Pestalozzi's so-called 'Theory of the small circle,'"[29] alternating activities among the brigades to optimize the use of rooms, each with proper natural lighting. He included a gym, pool, and stadium for physical activities, a large aula, and a dining room with resting areas open to magnificent landscape views. The dormitories were distributed in four blocks of three floors, each for 30 brigade members and an extra one for communal activities (**Fig.2**). Five double rooms on each floor shared a bathroom at the end of the corridor. A color coding identified each building with a brigade, red, yellow, blue, and green, degrading the tonality in each floor to orient the users through the building or to indicate the hierarchy in the organization, thus enhancing the sensory perception of the participants. The blocks staggered according to the terrain's natural slope, and a glass corridor unified the complex, running from the dining room toward the classrooms and the gym. Four teachers' houses completed the design at the entrance. Bauhaus students participated in the construction and interior design, fostering the idea of learning through experience.

The building was inaugurated in 1930 and functioned as planned for only three years before falling under Nazi rule and, later, under the GDR, fell into decay. The restoration works ended in 2007, and it was inscribed in the UNESCO World Heritage list in 2012.

6. THE CHILDREN'S HOME IN MÜMLISWIL

Upon returning to the homeland in 1936 from the Soviet Union, Meyer was again commissioned with a project for the Swiss Cooperative Union. Bernhard Jäggi, the cooperative's president, donated the building for a children's home

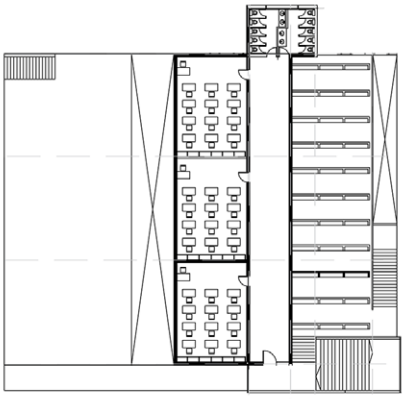
28. Adolf Behne, "Bundesschule in Bernau bei Berlin. Von Architekt Hannes Meyer," *Zentralblatt der Bauverwaltung*, Special Edition, No. 14, 1931, p. 213. GTA/ETH 28-1928-1-PER-26

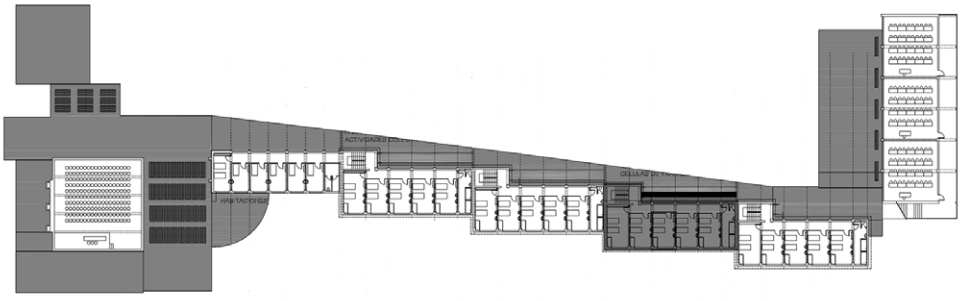
29. Klaus-Jürgen Winkler, "Über den Wert eines Baudenkmals: Die ehemalige Bundesschule des ADGB in Bernau," *Die Bundesschule des ADGB in Bernau bei Berlin*, (Potsdam, Potsdamer Verlagsbuchhandlung, 1993): 9

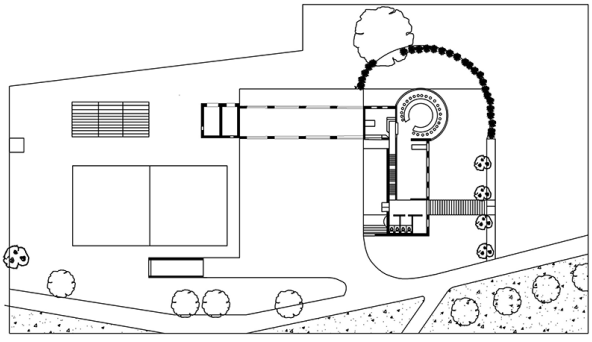
Figure 1. Hannes Meyer, Hans Wittwer, Petersschule Competition, 1926, Plan drawing: Luis Andrés Zaldivar Yescas

Figure 2. Hannes Meyer and Hans Wittwer, ADGB School, Bernau, Germany, 1929. Plan drawing: Luis Andrés Zaldivar Yescas

Figure 3. Hannes Meyer, Children's Home, Mümliswil, Switzerland, 1939. Plan drawing: Luis Andrés Zaldivar Yescas







in his hometown, Mümliswil, to introduce kids from all social strata to cooperative life and principles through Pestalozzian methods. For the first time, Meyer acknowledged a direct response to the educator in his design:

> *In the social sense, implanting fundamental cooperative ideas in the children through new means guided the donors. The home can host between 24 and 30 kids, making up the 'family cooperative circle.' in Pestalozzi's sense, having at the center a 'Mother Gertrud' as a director who, together with a teacher knowledgeable in sports, leads the educational work.*[30]

The children were to stay between two and three months, with a preference for those with weak constitutions who would benefit most from nutritious

30. Hannes Meyer, "El Hogar Infantil Cooperativo en Mümliswil (Jura Suizo)," *Arquitectura*, no.8, (México, 1941): 29

food, hygiene, culture, and sport.[31] The building was designed accordingly. The rounded room that articulates the two aisles was the meeting room where children performed theater pieces or conducted their assemblies **(Fig. 3)**. Simultaneously, the terrace on top of it, with extraordinary views of the village underneath, was used for the morning exercises. There were double rooms for the children in one of the aisles, while adults occupied the perpendicular one. Well-equipped bathrooms enhanced hygiene, which was promoted as part of their educational process. Following Pestalozzi again, Meyer explained that "in its psychological functional scheme, an effort in compensating the collective demands with the individual needs has been made. Since any social link is endangered when the individual's life is disdained."[32]

The building, made out of local materials with local handwork, provided the children with spaces for manual activities, recreation, body care, double bedrooms on the children's aisle, and an aisle for adults' facilities. Pestalozzi's spirit was present during each activity. The building suffered some alterations throughout the years, most significantly adding a room on the rounded terrace (**Fig.3**). It served several functions throughout its history, including an orphanage and a women's club. Today, it is part of the Fluri Foundation and is a museum documenting the history of the Swiss orphanage system.

7. CONCLUSIONS

Meyer inherited many of Pestalozzi's ideas regarding education and society. The intuitive method, the small circle, and the attention to the Head-Heart-Hand were but a few. He had the opportunity to respond with architectural means to the demands of a reformed education system that privileged experience over memorization and fostered physical, intellectual, and moral strength with different emphasis in each project: body strength and experience learning in the Petersschule, the small circle in the ADGB School and the "Mother Gertrud" in the Children's Home. ■

31. Meyer, "El Hogar Infantil Cooperativo en Mümliswil (Jura Suizo)", 29

32. Meyer, "El Hogar Infantil Cooperativo en Mümliswil (Jura Suizo)", 30

BIOGRAPHY

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#04

INFRASTRUCTURES OF CHILD-CARE: ESTABLISHING THE MODERN LANGUAGE OF ZAGREB'S SCHOOLS IN THE AGENCY OF IVAN ZEMLJAK

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ABSTRACT

The evolution of the urban landscape in the modern era, particularly regarding the role of buildings framing social infrastructure, embodies a deeper societal transformation in the conception of education that took a most significant shift during the first half of the twentieth century. This transition is underscored by a parallel advancement in pedagogical paradigms and architectural design, where progressive educational models find resonance in the spatial configurations characterised by openness, transparency, health and humanism. In the Croatian context, the interwar period witnessed a novel architectural language with a social ambition, particularly manifested in elementary and preschool educational settings.

While several renowned architects contributed with noted examples, the spatial articulation of education in Zagreb will be significantly inaugurated through the work of Ivan Zemljak. His engagement with international architectural tendencies, coupled with his keen interest in public health concerns, facilitated the convergence of diverse demands inherent in the design of modern educational spaces. His tenure as the head of the City Building Department afforded him the opportunity to apply and refine his expertise, resulting in the construction of numerous elementary schools and associated child care facilities across Zagreb.

The architectural legacy of Zemljak, exemplified by his adept fusion of modernist principles with vernacular sensibilities, underscores a dynamic evolution in architectural expression within the Croatian context. Over a span of a decade, his designs transitioned from cubist austerity to an embrace of local architectural idioms, articulating a unique amalgamation of the open-air education movement's pavilions and regionalism.

The symbiotic relationship between pedagogy and architecture, as exemplified by the work of figures like Zemljak, elucidates a broader narrative of societal evolution wherein educational environments reflect shifting cultural, pedagogical, and architectural paradigms.

1. INTRODUCTION

The transformation of the urban environment in the first half of the 20th century, particularly concerning buildings of social and educational infrastructures, went beyond embracing modern principles. A profound change in how the child was viewed within the modern city, following a simultaneous progress in pedagogy and developmental psychology, aligned with a new spatial language prompted by needs for exposure to air and light particularly evident in the open-air movement. An educational space catering to freedom of movement and a flexible curricular schedule found its answer in an overarching hygienisation of the built environment.[1] New forms of teaching, enabling active child participation and direct contact with nature, indirectly introduce a range of spatial consequences, which alter the school space in various pedagogical models through different ways. Recognizing the child's individual abilities and their natural need for work and activity was the common denominator of reform pedagogy movements emerging at the end of the 19th and beginning of the 20th century. Providing an alternative to traditional schooling were various pedagogical approaches promoting artistic education, manual work, education in and by nature, articulated in an array of models and methods. Some had a profound influence on the inner formulation of educational space. However, the one with the furthest reach in terms of reframing the space of the school became the one whose pedagogical and philosophical origin was surpassed by the alarming state of health in urban children – the open-air education movement. The school building, until the beginning of the 20th century, was a formative element of urban identity, defining its dominant role in outward spatial articulation and confirming social hierarchies in its interior, with high window-sills and fixed row-seating. The pavilion school catering to the fundamental reform of curricula[2] enabling an intense communication with the outdoors prompted a substantial reform in the role of the school-building in an urban environment, only to be affirmed by the simultaneous development of modernism's postulates.

2. A MUTUAL DEVELOPMENT: ARTICULATING GOALS OF MODERN EDUCATION AND THE LANGUAGE OF MODERN ARCHITECTURE

The shift in education's spatial expression is marked by a concurrent progress in pedagogical approaches and architectural design, where innovative educational models resonate in spaces characterised by openness, transparency, health, and human-centred principles. This can be observed in the alignment of parallel congress series defining the principles of modern architecture and healthy, child-oriented education. Postulates of both CIAM and the Congresses on open-air schools converge by the end of the 1930s. The Third CIAM Congress was held in Brussels in November 1930, and the Second International Congress on Open-Air Schools happened there in 1931.[3] The goals of achieving educational spaces featuring ample light, fresh air, providing freedom of movement were expressed in both.

The application of the conclusions of the Fourth CIAM Congress, held in 1933, implicitly fulfils the requirements of the open-air education movement.

1. Colomina, *X-Ray Architecture*.

2. Hansen-Schaberg, "Räume der Krankheit und Orte der Heilung. Soziale, medizinische und pädagogische Aspekte der Tuberkulosebekämpfung" 303-316

3. Châtelet, "Le mouvement international des écoles de plein air", in *L'école de plein air - Une expérience pédagogique et architecturale dans l'Europe du XXe siècle"* 21-38

The Third Congress on Open-Air Schools formulated concrete requirements to the location and design of open-air schools, many of which were already present and extensively affirmed in examples of open-air schools built by that time. These two conferences held before WWII mark the conclusion of a long and fruitful experimental period in education and architecture intended for it – at the dawn of WWII, initiatives for the establishment of open-air schools in Europe diminish, as its postulates became absorbed into the ubiquitous demands for the modern post-war school.

3. RECEPTION OF REFORM PEDAGOGY AND ESTABLISHMENT OF ORGANISED CHILD-CARE IN THE CROATIAN INTERWAR CONTEXT

The influences of progressive education in Croatia were present but introduced at various places in pre-school institutions and schools. The implementation of new educational practices faced challenges, especially in traditional schooling, while pre-school institutions proved more agile. Experimental schools, established from the mid-30's onward, served as laboratories for implementing new pedagogical methods.[4]

The most widespread type of institutions catering to children outside of obligatory education in Croatia before WWII were children's shelters, intended for proletariat's children aged three to twelve, which had nowhere to go while both parents were working, both pre-schoolers or young schoolchildren. In Zagreb, after World War I, the number of children unattended during the day increased rapidly. Shelters were primarily caritative, founded next to schools. Their architecture regularly showcased principles of modern educational goals expressed in spatial configurations, particularly the influence of the open-air movement, aligning with their caritative and health-oriented function. In terms of built infrastructure, they are the originators of a newly constructed network of child-care facilities, many maintaining their role of kindergarten to this day.

4. THE ENGAGED ARCHITECT: SCHOOLS AND SHELTERS OF IVAN ZEMLJAK

The neo-classicist school-building was foundational in the identity of many Croatian towns and cities built during the Austro-Hungarian empire. The period between two wars witnessed a new kingdom, a rapid rise in urban populations caused by worker influx, and a modern articulation of new neighbourhoods. Zagreb was experiencing growth and social infrastructure became the focal point of interest in both its municipal infrastructure as in its progressive architectural scene. The reconsideration of spatial frameworks that would meet the pedagogical demands found in modern schools and children's shelters coincides with the involvement of Croatian architects in CIAM and the acceptance of "modern architecture as a means of fighting for new social and economic relations."[5]

Zagreb witnessed intense development between 1918 to 1941, amid significant social segregation and housing quality decline. Confronted with unprecedented challenges like overpopulation and disease, city authorities worked to alleviate hardships during economic crises. In line with policies

4. Defrančeski,"Oko reforme naše osnovne nastave", 205-216

5. Premerl, "CIAM i naša međuratna arhitektura", 50-52

promoting preventive medicine and public education, the state regulated the construction of buildings for social standards through laws and guidelines. According to the Pupil Health Protection Law of 1930, schools were obliged to ensure hygiene for pupils and provide conditions for the physical development of healthy, as well as weak and sick children.[6] Similar requirements were outlined in the National School Law of 1929, which mandated that schools must have "classrooms and workshops according to hygienic and pedagogical rules" and that "the buildings of public schools must be in healthy locations; dry and bright (...)."[7] Both laws imply green areas, playgrounds, gymnasiums with changing rooms and showers, as well as southern or eastern orientation and cross-ventilation of classrooms.

The year 1930 thus represented a significant turning point for the inauguration of the modern language of architecture in realising the goals of contemporary education, and the conveyor of this shift was the architect Ivan Zemljak. His position as head of the city's Building Department in the Zagreb City Council allowed him to validate the possibilities of spatializing modern educational plans and programmes[8] to be "a mirror of the pedagogical approach to the child."[9] The municipal Building Department controlled and shaped the role of schools in burgeoning new parts of Zagreb. The city's construction policy prioritised educational institutions in new neighbourhoods, and in the work of Ivan Zemljak, they take on a didactic role both within their function and in relation to the neighbourhoods where they emerge as modern, enlightening focal points.

The schools and shelters Zemljak built within a decade – 1930-1940 – defined a rapidly growing Zagreb's periphery, soon absorbed into the city. His work bridged the defining quality of educational buildings at the turn of the century in terms of identity establishment, but more importantly, showcased the fundamental principles of the modern school – ample light, open spaces, movable furniture, and polyvalent communal spaces.

The shelter Zemljak designed in the worker's suburb of Trešnjevka was the first modern children's shelter, built next to a school[10] in 1930. The shelter was the first testament of his influence by neoplasticism, also reflected in the project of the school in Jordanovac, which Zemljak was simultaneously designing.

The school on Selska road is one of the landmarks of Croatian modern architecture. A complex of three volumes enclosed a large green space with a swimming pool used by suburban children outside of school weeks. A municipal shelter for children within the Selska school was opened in 1931. The composition of three interconnected volumes dominated the working-class landscape; two tall wings with a central volume of the hall and shelter, connected by an open portico. The shelter was intended for preschool and elementary school children aged 3 to 12, and during school holidays "for the accommodation of holiday camps." The open space and the hall were designed for the community and intensive use during holidays and weekends: an open-air pool, a football field, porticoes; the hall was equipped with a cinema projector, radio, and stage.

6. Bjažić Klarin, Roth-Čerina, "Škole i bolnice za Zagreb 20. Stoljeća", 124-133

7. Zakon o narodnim školama u Kraljevini Jugoslaviji, čl. 23. i 27.

8. Zemljak's reports from study trips abroad, particularly the Netherlands and Germany, testify to his interest in the spatial framework of reformist pedagogical models. (State Archives in Zagreb, Personal files of city officials)

9. Maroević, "Arhitektura Ive Zemljaka", 72-80

10. Also designed by Zemljak, however, a couple of years earlier, still bearing a neoclassicist idiom.

The same year, Zemljak completed an elementary school in the hilly eastern rural part of Zagreb's periphery. His shelter next to this school, built a few years later, responded to the current pedagogical and hygienic requirements regarding children's and outdoor spaces, with a scheme he will vary in several later projects: a longitudinal comb-like layout in which classrooms with three facades and corresponding terraces alternate in a regular rhythm. The design of the areas around the school, with playgrounds, meadows and orchards, were adapted to all-day stay encouraging work and play outdoors.

The shelter next to the neo-classicist school in Lašćina, completed in 1938, was the most radical application of the pavilion type in Zagreb's educational architecture, evoking the roots of the open-air movement. Zemljak was tasked with building three units for 40 children each, a dining room, and the janitor's apartment. He freely arranged a complex of four freestanding pavilions – three classrooms and a dining room – following the sloped terrain and connecting them with a covered walkway. His aimed for autonomy of each group containing all functional elements: entrance, cloakroom, toilets, showers, and a 70 m^2 classroom space.[11] In the Lašćina shelter, Zemljak interpreted the modern theme of the classroom pavilion through an idiom of local traditional architecture, making it a "turning point in the development of Zemljak's design expression: a gradual departure from the strict language of the international style and a shift towards organic architecture with the use of traditional and vernacular elements."[12] The pavilions' roofs are sloped, with eaves and wooden beams, and facades, covered in brickwork coated with a thin layer of plaster. The spaces between the pavilions and open terraces organically blend with the terrain. Height differences are addressed with dry stone walls, and the articulated garden is further animated with bird feeders, beehives, benches, wells, and play equipment.

At the same time, Zemljak had completed a school with an integrated shelter in Rapska Street. An original concave south-facing wing, aimed to create a sense of community through a geometrical gesture. Several other schools, without integrated shelters, were built by Zemljak during the 1930's, all applying the principles of open, light, hygienically and technically sound edifices. One of them – the school in Koturaška – was selected in 1936 as an experimental school for curricular development and teaching of new pedagogical principles.

Finally, Zemljak's school with a shelter in Knežija from 1940 combines an elementary school with a comb-like pavilion-shelter. Here, he combines the expression of Lašćina with the spatial scheme of Jordanovac – although the school is two-story, and the shelter pavilions are on the ground floor, arranged in syncopation with terraces, the roofs are pitched, and the eaves are pronounced. Like all previous examples, the shelter in Knežija is still used as a space for preschool children's activities.

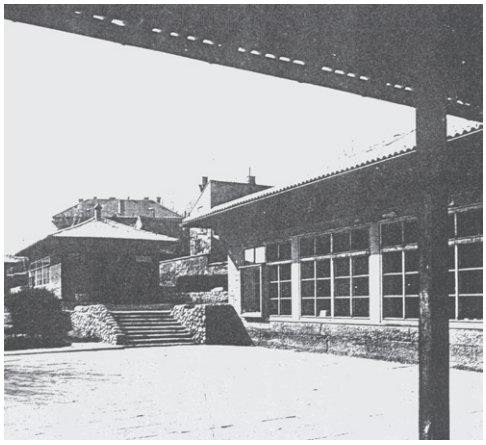
5. CONCLUDING REMARKS

Educational buildings were the laboratory of a new approach to the built environment as much as the spatial expression of a new humanism directed

11. Zemljak, "Nova dječja skloništa u Zagrebu", 59-65

12. Laslo, "Ivan Zemljak i Zagreb", 13–17





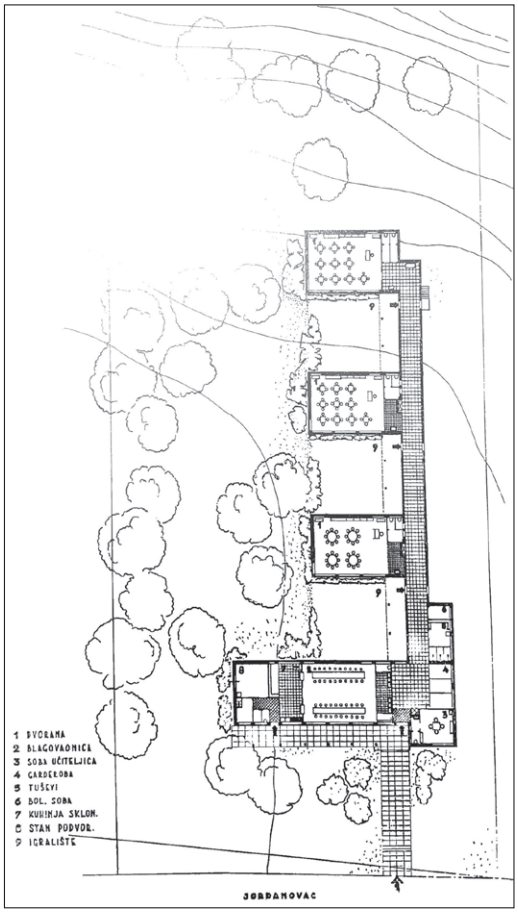


Fig. 1. Ivan Zemljak, Selska school and shelter, Zagreb, Croatia, 1931, swimming pool. © Radović-Mahečić, 2007

Fig. 2. Ivan Zemljak, the Jordanovac shelter, Zagreb, Croatia, 1938 © Ivan Zemljak, 1939

Fig. 3 Ivan Zemljak, the Laščina shelter, Zagreb, Croatia © Ivan Zemljak, 1939

towards its youngest. The development of educational institutions in Croatia before WWII reflects this dynamic interplay between pedagogical theories, architectural innovations, and societal needs. Reform pedagogy influenced the evolution of both pre-school institutions and traditional schools, albeit at different paces and for different reasons. The swifter shift in pedagogical and spatial investigation was introduced in the network of facilities catering to younger children outside of obligatory education: shelters as precursors of the built infrastructure of child-care.

The implicit social, emotional, pedagogic and hygienic needs of Zagreb's growing worker neighbourhoods found their matching architectural response in a decade of realisations by Ivan Zemljak. They reflect the influences of current movements in pedagogy and modern architecture, coinciding with them and gradually adopting a local idiom over time in his interpretation. In an original authorial language, the newly built infrastructure of education in Zagreb embodied all modern requirements aimed at the well-being of children in cities – fresh air, sun, hygiene – as well as pedagogical requirements. His personal interest in issues of pedagogy and public health accompanied a clear architectural expression which, in less than ten years, evolved from

a cubist austerity towards modernist regionalism, employing vernacular idioms and materials in an educational environment rich with tactile spatial experiences. The empathic approach, creating numerous opportunities for spontaneous appropriation by generations of schoolchildren, has survived as a contemporary example of educational space used in the same way as intended, almost a century later. It is worth mentioning that all of Zemljak's spaces from that period are in the same function for which they were designed, and are still highly rated by users in terms of suitability for the content they house. Many of Zemljak's schools and shelters from the 1930s – all exceptional achievements in educational architecture – are all listed in the Register of Cultural Heritage of the Republic of Croatia. ■

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Mia Roth-Čerina, PhD, is a Croatian architect and professor at the Faculty of Architecture, University of Zagreb. Her practice is led in partnership with Tonči Čerina, with whom she has received numerous national and international awards. In 2023 they curated the Croatian pavilion at the 18th Venice Architecture Biennale. As an author and co-author, she publishes articles, studies, textbooks and books. From 2010 to 2017, she was the Croatian delegate of the international work program Architecture & Children at the UIA (International Association of Architects). In 2018, and again in 2022, she was elected to the council of the European Association for Architectural Education.

CHESTE WORKER UNIVERSITY: DESIGNING A MODERN EDUCATIONAL CENTRE TAILORED FOR CHILDREN

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ABSTRACT

This paper examines the intersection of architecture, pedagogy, and social and political context in shaping Modern Movement educational environments, through a case study of the Cheste Worker University in Spain, designed in 1967 by architect Fernando Moreno Barberá.

Under the premise of transforming society through educational policy, the Franco regime implemented a socio-educational programme for working-class youth starting in 1955, aiming to boost the national economy by enhancing the qualifications of the workforce. The implementation of this training programme led to the construction of twenty-one Worker Universities with Cheste planned as the largest one: a reference Guidance Centre for all the country catering to over 5,000 inhabitants aged between 11 and 14. Residence in the huge educational complex was on a boarding basis, forcing simultaneous and synchronised daily activities.

The result is a large-scale project that unfolds a personal interpretation of the compositional principles of the modern movement, with a predominance of the aesthetic possibilities of reinforced concrete structures. Moreno Barberá approached its design based on sociological studies and under the premise of "demassification", aiming to foster empathy with students to ensure their well-being and the smooth operation of the centre. This special sensitivity is perceptible across all its scales, encompassing site layout and landscape, architecture or interior, furniture and graphic design, with a focus on placing the young student at the forefront of design considerations and the integration of innovative pedagogical approaches.

Using archival research and architectural analysis, this paper reconstructs the design process and intentions behind the different buildings, common spaces and landscaping.

The findings highlight the importance of considering user experience and pedagogical innovation in the design of educational environments, revealing how architecture can facilitate effective learning environments and support the holistic development of students, offering insights that resonate with contemporary discussions on school design and educational practices.

1. THE SOCIO-POLITICAL CONTEXT: THE FALANGIST SOCIO-EDUCATIONAL PROJECT

In the final years of the Spanish autarchic period, when the interventionist economic policy and international isolation were pushing the Francoist regime into a critical situation, the national syndicalist-Catholic movement decided to promote the construction of a series of worker training centres for the industry, aimed at boosting the weak Spanish economy. Training professionals in various branches of industry also aimed to placate a growing social discontent – as a concession to the working class – and to project a certain aura of modernity onto the anachronistic and underdeveloped dictatorship.

Pressed by the need for qualified labour for new, more specialised jobs in an industrial fabric in activation, these new educational institutions sought to reverse a trend that showed data of a very high dropout rate after elementary education. Consequently, one of the main objectives of the Falangist educational policy was the training of the working class, while ensuring tight control of society through the ideological indoctrination of the child population, silencing any potential political or social demands.

The creation of the Spanish Worker Universities was first mentioned in a speech by José Antonio Girón de Velasco - Minister of Labour between 1941 and 1957 - where these centres were described as an ambitious project aimed at the professional, technical, and human training of workers and their children, although the project of new macro-institutions was consolidated and institutionalised alongside the Economic Stabilization Plan of 1959.

2. PEDAGOGY: THE SINGULARITY OF WORKER UNIVERSITIES

From the 1950s onwards, a process of greater flexibility and pedagogical modernisation began in Spain, albeit always under the same initial ideological principles. The main innovation of the Worker University project was the incorporation, within the new teaching programme, of a cultural and humanistic component that the existing centres dedicated to vocational training did not offer. Their designation as "universities" – not without controversy – reflected the humanistic and globalising nature of the new professional education, being outlined as superior institutions.

For the Francoist regime, vocational training, therefore, became the means to offer the greatest prospects for the working-class improvement and social progress, dignifying the labour condition and allowing workers to access professional positions. Education at the Worker Universities was completely free. The Mutualities covered the cost of student scholarships including their corresponding maintenance or accommodation in case they were boarders: food, clothing, travel from the family residence to the Worker University and vice versa, school supplies, enrollment fees, toiletries, textbooks, heating and lighting, use of laboratories and workshops, practice materials, sports facilities and equipment, laundry and clothing maintenance, correspondence of students with their families, medical and pharmaceutical services, certifications, and academic degrees.

In short, the student's family was relieved of any direct or indirect burden that could arise from their schooling.

3. WORKER UNIVERSITIES EXPANSION

A total of twenty-one Worker Universities were constructed across the nation, and were distinguished during their operational years due to their undeniable social and economic role.

The first Worker University to become operational was the one in Gijón (1946-1957), intended for the training of about a thousand students. The architect, Luis Moya, was commissioned to create a "monument to labour" and embraced monumental and classical architecture as the only dignified style capable of expressing the "new order." However, by 1955, Moya's solitude in these approaches became apparent, consolidating the shift towards a more architecturally rationalist language. The changes made to this initial experience will impact the relationship of future centres with the environment, adopting much more permeable dispositions with the natural surroundings. It is interesting to compare the architecture from the Universidad Laboral de Gijón (or Worker University of Gijón, as it would be known in English) with the projects that were undertaken immediately afterward, such as those in Seville (OTAISA, 1949-1954), Córdoba (Miguel de los Santos, Francisco Robles, Daniel Sánchez Puch, and Fernando Cavestany, 1952-1956), and Tarragona (Luis Pera Buesa and Manuel Sierra Nava, 1953-1956). These projects use references, materials, and compositions closer to modern architecture than to the official models of Francoism, and they inspired architecture that was built following international trends. Thus, educational architecture aroused enormous interest among Spanish architects, making it a field of architectural inquiry.

4. CHESTE WORKER UNIVERSITY ARCHITECTURE

The Cheste Worker University, designed by Moreno Barberá in 1967, was the first institution in Spain for the training and guidance of students funded by Labour Mutualism, representing a significant difference compared to the centres founded up to that point. What was originally conceived as a Worker University for the vocational training of young people in the region would become a "Centre for Guidance of Worker Universities," constituting a genuine student city with a capacity for 4,800 students, more than double that of larger centres like Seville or Gijón.

Following a boarding school regime, these children between the ages of eleven and fourteen were to complete the first two courses of the training plan at the Orientation Centre. Based on the aptitudes they demonstrated, they would then be directed to the various disciplines taught at different Worker Universities. This extensive educational complex served as the mandatory gateway to the educational system of the Worker Universities. It directed all newly enrolled students to transition to one of the other centres after levelling up in terms of knowledge and providing personal, academic, or professional guidance to ensure their success in the scholarship system.

This system aimed to mitigate the significant differences in educational levels among students, a task entrusted to Cheste for standardisation.

According to Luis Illueca Valero, the first Rector-Administrator of the Centre for Guidance of Worker Universities in Cheste, the institution's objective was "to be a community, but an educational community: not a military camp, not even a boarding school, nor a replacement for the family. It is an attempt to create a new society through personal achievements in coexistence, through the experience of decision-making, and by creating a youthful way of dealing with each individual's personal problems. [...] It is a way of trying to empower the individual by exposing them to an enrichment of material means and above all, communal experiences."[1]

In the project report, Moreno Barberá provided a scale for the programme by comparing it with demographic data from 1967. He stated, "Of the 9,202 municipalities in Spain, 88.6% have fewer inhabitants than the projected University." Consequently, the project was conceived on an urban scale, addressing all the needs of a population of this size with the particularity that "all inhabitants did the same thing at the same time and together."[2] The institution stressed the importance of "de-massification," meaning that students should not feel like they belong to a mass of 5,000 people all doing the same thing. Instead, they should live in autonomous groups, each with their own activity independent of the others, for which the activities that all students must participate in simultaneously were carefully studied.

In May 1967, a group of teachers and psychologists developed a preliminary needs assessment regarding facilities, dependencies, and services required for a centre of this type. Such an assessment served as the basis for the architectural draft, which was already entrusted to Fernando Moreno Barberá. Experts from the Worker Universities in operation at that time participated in the group. The ambitious initial programme, with successive modifications and observations made to the preliminary project, included extensive provisions that Moreno Barberá eventually grouped following a strictly functionalist scheme: Public Area, Teaching Area, Dining and Services Area, Residential and Expansion Area.

Additionally, all these different uses had to be structured in a way that established ideal functional relationships between the buildings: "Efforts should be made to minimise the distances travelled by teachers and students. Avoid mixing visitors with students. Group buildings in such a way that the teaching function does not interfere with the students' lives, so that they can forget about the existence of classes when they finish class hours and live peacefully in their residential areas."

Moreno Barberá insisted on the necessity to find a suitable location to accommodate such an extensive child population, and engaged in the search for the final spacious plot of land on Alto de la Loma in Cheste. To ensure construction efficiency, both in terms of material economy and time, the project was governed by a module of 1.60 metres, derived from the reference unit of the student's desk, measuring 0.80 metres. Therefore, the adaptation of architecture to the scale of children was the fundamental basis for the project.

1. Transcription of the documentary "La Universidad Laboral de Cheste" (RTVE, 1972). Doctor in Pedagogy, this Valencian carried out a divulgative work around his pedagogical approach through several publications such as "Padres e Hijos" (Aula, 1967), "Cómo enseñar a nuestros hijos" (Banco de Vizcaya, 1967) or "Una experiencia de organización educativa" ("Notas y Documentos" Collection, Dirección General de Enseñanza Primaria, 1970).

2. The following quotations that appear in the text are the direct testimony of Fernando Moreno Barberá, either extracted from the original project documents (1967-70) or as transcriptions of the lecture given at the ETSA-UPV in 1991.

4. 1. A MECHANISM FOR AN EXTENSIVE PREADOLESCENT POPULATION

Moreno Barberá's project incorporates psychological strategies to address the well-being of the unique resident population. In a brief text, Moreno Barberá outlined the main ideas underlying the proposal presented: "Architecture must adapt to man, in our case to the young person. Buildings are for people, to be used and inhabited by people. It is necessary to think of them when designing, to feel as one would feel when walking through them, when living in them. Anticipate and even provoke the reactions that, according to their psychology, the inhabitants of each building or complex will have when approaching it or moving within it. Many times, as in the present case, human beings are grouped into higher-order social units, to which all their activities must be organised: [...] A disciplined life, on one hand, such as that of education. Another ordered by the needs of the community, such as meal and sleep times."

The educational institution was designed to function as a large social machine in which each architectural piece was arranged as efficiently as possible from a distributive standpoint, guiding the constant movement of users between different functions. The goal was to create a large-scale urban mechanism to organise the lives of this high number of people while including de-massification mechanisms. During their activities, the large human group had to be divided into units of a maximum size of 200 people, which would make it more easily manageable and recognisable: the College. The sense of belonging to a group becomes a driving force in architectural design, both for its functional and emotional implications. Thus, the 4,800 students were distributed among 24 Colleges, each assigned their own independent spaces in residences, classrooms, workshops, and dining areas.

By way of its dynamic organisation, the ensemble made up of the four dining halls and the services building stands out as the most significant example of the de-massification attempt that pervades the entire project. In this case, it was the only area where approximately 5,000 people had to coincide at the same time three times a day, as the establishment of meal shifts had been dismissed due to numerous inconveniences. The architect decided to move away from the model of large communal dining halls "due to their depressing aspect" and, consequently, chose to divide the programme into four independent dining halls, each with 1,200 seats. Furthermore, each of them would be built in a circular shape encompassing garden courtyards – two of which were circular and two quadrangular – so that diners would never see everyone at once. Additionally, each college – a group of 200 students – would be separated by partitions. In these layouts, the design of furniture played a prominent role in aiming to influence the creation of closer human relationships. This also extends beyond the strictly architectural realm to permeate all scales of design, including even signage. In fact, the artist J.M. Cruz Novillo designed the emblems of the 24 colleges identifying each one with a colour and element from the natural world. Moreno Barberá's interest in bringing architecture together with art is noteworthy, with collaborations from visual artists such as Javier Clavo

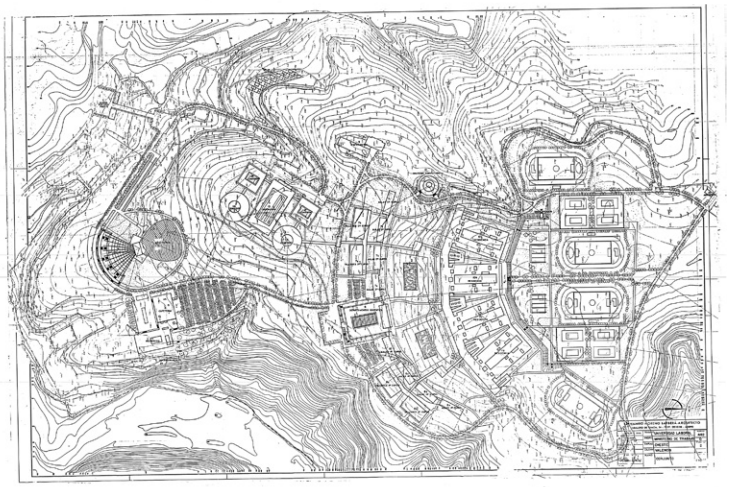


Fig. 1 Fernando Moreno Barberá, CWU Project Site Plan, Spain, 1968 © FMB Legacy. Carmen Jordá Such Archive. Scanned by CIA (2023) ETSA-UPV.

Fig 2 SEQ Fig. * ARABIC 2 Fernando Moreno Barberá, CWU, Spain, 1967-1969. Group of students in the Cheste Educational complex. Capture from the documentary "*La Universidad Laboral de Cheste*" © RTVE Archive (23rd June 1972)

Fig. 3 Fernando Moreno Barberá, CWU, Spain, 1970, view of the pedestrian walkways. © Archivo Histórico CTAV





being commonplace—a recurring theme in modernity since the avant-garde movements established strong interdisciplinary connections.

4.2. FREE INDIVIDUAL LIFE

At the same time, the architect considers it essential to have "expansion" spaces for leisure time, where boarding students can have an environment conducive to individualism: "Life during free or leisure time must unfold in spacious, informal spaces, where one can lose oneself, have freedom of movement and initiative, where one can find small adventures, spaces that are part of the landscape."

The explicit mention of the landscape scale is by no means accidental. In fact, it was precisely the need for open spaces –beyond the minimum requirements demanded by educational regulations for playground space– that was the most cited argument by the architect in the search for the project location. The architect's personal commitment to obtaining an optimal location with favourable conditions, surrounded by extensive wooded areas, is very

significant. This would enable students to "lead their own lives independently of others, even to isolate themselves without encountering the rest."

Seen through the lens of a sensitive approach to subjective experience, the manipulation of the rugged profile of the natural topography takes on new meaning, utilised to conveniently position the different pieces of the complex on the natural promontories, staggered and grouped by function. The architectural forms, appearing as three-dimensional voids, are scattered among the vegetation, adapting to the contour lines, and conveying a sense of flexible order. In this way, an environment is created to allow the student's personality to develop. A defined but seemingly free natural space, anchored to the random rules of nature, can positively influence students transitioning from childhood to adulthood. And within this vast open natural space, the buildings, with small, enclosed environments, seek to provide places conducive to introversion "to listen to music in small groups, to meet with friends, to plan outings or sports, or to come up with ideas like releasing a mouse in the next class. [...] The aim is for students to be able to forget all their teaching problems outside of class hours."

Moreno Barberá paid special attention to pedestrian circulation, which became a prominent architectural element: "One of the established problems was the need to decongest, as the 5,000 guys came down [at once] from the residential area through large, covered walkways so they wouldn't get wet when it rained." Adapting to weather conditions materialised in the form of reinforced concrete roofs that, like ribbons at just the right height and of a generous size, which colonised the territory to create spaces for socialising and coexistence. It brings to mind Latin American experiences such as Oscar Niemeyer's long and undulating canopy at the Ibirapuera Complex (1951) in São Paulo, or even his earlier canopy at the Pampulha Casino (1942), and above all, the sculptural covered walkways (1952-1953) by Villanueva at the Ciudad Universitaria de Caracas (or University City of Caracas, as it is known in English). But Moreno Barberá, more a builder than an artist, felt comfortable working with simple straight lines in a solution akin to the covered walkways by Mario Pani and Enrique del Moral for the Ciudad Universitaria (or University City, as it is known in English) of Mexico City (1948-1953). ■

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PEDAGOGICAL EXPERIMENTATION AND MODERN ARCHITECTURE: EXPERIMENTAL HIGH SCHOOLS IN SANTIAGO, CHILE[1]

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ABSTRACT

This research identifies architectural innovations from a selection of experimental educational establishments in Chile, with school buildings designed between 1950 and 1962. The article analyses the architectural value of these works in relation to the challenges faced by school architecture in the 20th century.

Experimental high schools have been vastly documented as valuable examples of educational experimentation that followed reforms from the 1920s and 1930s in Chile. Nevertheless, the relationship between pedagogical aspects and architectural space has received little attention. This paper analyses the experimental educational programme through its architectural projects: Manuel de Salas High School (1950), Darío Salas High School (1950), and Gabriela Mistral High School (1946). It utilises analytical drawings and dense descriptions of unpublished archival sources (architectural plans, photographs), as well as direct observation *in situ* of school facilities at the present time.

The results demonstrate that the architecture of Chilean experimental high schools gradually progressed towards a formal differentiation of their buildings in response to the increasing complexity of the school programme, which sought to be expressed in a visibly modern architectural form, and move beyond strictly functional requirements.

1. INTRODUCTION

The history of modern school architecture in Chile has focused on public buildings with significant urban presence, as well as on private educational establishments that introduced modern architectural principles. Among Chilean public architecture, notable works include those centred on the projects of the Ministry of Public Works, with remarkable school palaces from the early 20th century, and more abundantly, the works of the Educational Establishments Construction Society (*Sociedad Constructora de Establecimientos Educacionales*) from the late 1930s onwards[2].

The cases analysed were exceptional public establishments, as they responded to an experimental pedagogical guideline.

A lengthy debate on an educational reform initiated in 1928, followed by a counter-reform in 1932, resulted in the separation between regular establishments and others that would be expressly created as experimental.[3] The latter would be responsible for testing various innovative pedagogical practices of their time.[4] Once these practices were supported by scientific evidence, they could be applied to other common establishments.

The experiments conducted at primary education level have provided interesting insights into the learning methods tested at that time, and the resulting changes in spatial dynamics, both inside and outside the classroom. These methods were implemented in pre-existing buildings, conceived under the conventional teaching model – spatially non-experimental.[5]

The experimental pedagogical discussion at secondary level, on the other hand, combined the renovation of existing establishments with the creation of new ones explicitly designed to accomplish the experimental mission. New buildings would be aligned with the requirements of the experimental educational programme. This research investigates the relationship between experimental pedagogy and architectural features, aiming to understand the interaction between their modern conceptions. The hypothesis guiding this research is that educational experimentation gave way to a field of architectural exploration related to pedagogical aspects.

The methodology consisted of a documentary review of the main pedagogical guidelines of the selected establishments, primarily based on secondary sources, and a dense description of the architecture and analytical drawing, considering the architectural programme and the formal features of the school complex, as well as a selection of specific facilities.[6] This was based on primary documentary sources: blueprints, project reports, periodical publications, and historical photographs.

The following results are presented, focusing on the analysis of three cases:

- Manuel de Salas Experimental High School (1950)
- Darío Salas Experimental High School (1949)
- Gabriela Mistral Experimental High School (1946).

1. This work presents results from the Fondecyt Initiation Project 11200884 "Project, Exploration, and Resistance in Modern School Buildings (Chile 1940-1980)", Principal Investigator Ursula Exss.

2. Humberto Eliash and Manuel Moreno. *Arquitectura y modernidad en Chile / 1925-1965. Una realidad múltiple* (Santiago: Ediciones Universidad Católica de Chile, 1989); Alfredo Jünemann, *Mönckeberg y Aracena: maestros de la arquitectura en los inicios del modernismo 1920-1950* (Santiago: Ediciones UC, 2023); Sociedad Constructora de Establecimientos Educacionales, *50 años de labor 1937-1987* (Santiago: Sociedad Constructora de Establecimientos Educacionales S. A., 1987); Claudia Torres, Soledad Valdivia, and Maximiano Atria, *Arquitectura escolar pública como patrimonio moderno en Chile: registro y análisis de las obras construidas por la Sociedad Constructora de Establecimientos Educacionales en la zona centro del país: 1937-1990* (Santiago, 2015), https://doi.org/10.34720/vtnt-s328 ; Maximiano Atria, "One hand to school them all: the Society for Construction of Educational Facilities in Chile (SCEE)", *The Journal of Architecture* 23, nº2 (2018): 207-224.

3. Jaime Caiceo, "Hernán Vera Lamperein y su participación en el movimiento de renovación gradual de la educación primaria en Chile", *Revista História da Educação* 18, nº42 (January-April 2014): 171-185; Caiceo, "El desarrollo de la educación secundaria durante la primera mitad del siglo XX en Chile: liceos renovados". *Revista da FAEEBA* 29, nº59 (July-September 2020): 129-143, https://dx.doi.org/10.21879/faeeba2358-0194.2020.v29.n59.p129-143.

2. THREE ARCHITECTURAL PROJECTS FOR EXPERIMENTAL HIGH SCHOOLS

2.1. MANUEL DE SALAS EXPERIMENTAL HIGH SCHOOL

The Manuel de Salas Experimental High School was established in 1932 by Amanda Labarca, who was the General Director of Education at the time. It introduced pedagogical experimentation to the secondary level after four years of experience with the primary education cycle[7]. This was the first public establishment to provide coeducational education, integrating both females and males

The value of the pedagogical innovations of this establishment is widely recognised in educational literature, which generally appreciates educational integration as a fundamental value: female and male education, primary and secondary education, interdisciplinary approaches through project-based method, integration of school culture with daily life, active learning, and group work, among others.[8]

All these aspects, which we will see replicated in subsequent experimental projects, made this case a model to follow.

The architectural project for the Manuel de Salas Experimental High School was designed by La Sociedad Constructora de Establecimientos Educacionales (SCEE) (or Society for the Construction of Educational Establishments, as it would be known in English), under the direction of the architect, José Aracena. The construction plans for the complex were first approved in 1950, with completion occurring in phases over the years. It progressively incorporated the complex elements required for comprehensive education: sciences, arts and crafts, and physical activity.

Modernisation, in this case, considers functionality and hygiene but does not compromise on a modernising aesthetic. Instead, it followed the guidelines of the original residential building that initially housed the school, from the architects Smith and Solar.[9] Thus, the architecture maintained a palatial character for the entire complex, rich in ornamentation, with great attention to details such as moldings and finishes (**Fig. 1**).

Technical and construction innovations were also introduced. In 1952, the gymnasium building was designed, characterised by its large spans and reinforced concrete structures. Its basement also included sanitary facilities, changing rooms, and a significant area designated for a manual work workshop, to encourage vocational exploration.

The auditorium was also to have had a grand project dated that same year, but this was never built. Subsequently, the expansion of the laboratory building in 1961 provided specialised spaces for home economics and sewing education, as well as for the physics, chemistry, and biology laboratories, designed along similar lines to the previous project.

2.2. DARÍO SALAS EXPERIMENTAL HIGH SCHOOL

The Darío Salas Experimental High School was established in 1947 (Decree N. 1442) as a co-educational high school located in the southwestern sector of Santiago. The determination of its location was of vital importance for

4. Irma Salas, "La investigación pedagógica en Chile", *Anales de la Universidad de Chile* nº45-46 (January 1942): 115.

5. Camila Pérez Navarro and Claudia Drago. *Es nuestra escuela de brazos abiertos: historia de la Escuela Experimental de Niñas de Santiago* (Santiago: Camila Pérez Navarro, 2017); Pérez Navarro, "Iniciativas, prácticas y límites de la experimentación pedagógica en la historia de la educación chilena (1927-1953)". *Bajo la lupa* (2020): 1-27.

6. Methods explained further in: Ursula Exss, *Escuelas para todos* (Valparaíso: Ediciones Universitarias de Valparaíso, 2022): 34.

7. Viola Soto, "Florencia Barrios Tirado y el Liceo Experimental Manuel de Salas", *Revista Enfoques Educacionales* 3, no. 1 (2000-2001): 211-222.

8. Soto, "Florencia Barrios", 215.

9. Mario Pérez de Arce. *Smith Solar & Smith Miller arquitectos*. (Santiago: Ediciones Universidad Finis Terrae, 2011).

experimental high schools, as the Gradual Renewal Plan for Secondary Education[10] that initiated it, sought to conduct pedagogical trials in social realities equivalent to those of other common high schools in the country, where the methods would be applied once properly tested and proven.[11] The first establishment was housed in a mansion in the *Estación Central* neighbourhood; however, it soon became necessary to design new facilities for its operation. This was not only due to the significant increase in student demand in the southwestern sector of Santiago but also because it became essential to have adequate spaces for the requirements of the experimental programme: guidance services, social assistance, medical and dental services, library, physics and chemistry laboratories, manual arts workshops, and home economics education, which the original mansion did not provide.[12]

The project for the new buildings was commissioned by the SCEE to architect Jorge Aguirre Silva, renowned for his extensive architectural work. The project, dated 1950 in its original proposal, featured isolated pavilions arranged in a comb-like layout without abandoning the more traditional organisation of the time, where the buildings form the walls of a compact block. On observing this, architect Alfredo Jünemann identifies it as a "transitional" school building,[13] as it anticipates the arrival of the comb-like buildings that would first characterise new private school complexes and at a later date also public schools and high schools, by a decade. The classroom pavilions have an open ground floor, increasing the courtyard area, given that the site is small in relation to the capacity of 1,000 students.[14]

The experimental architectural programme is evident in the allocation of certain buildings, which differ in their architectural form from the pavilions primarily intended for classrooms. An auditorium and gymnasium, featuring a double height building with an angular facade, were situated next to the school's entrance, facing the main avenue, providing it with an urban presence within the neighbourhood. Science laboratories and a manual practical workshop, with low buildings and skylights for illumination, were planned for the back of the site, although they were not constructed. Opposite the central courtyard, there was a four-story octagonal tower above a sunken courtyard. The ground floor housed the dining hall, and the upper floors contained classrooms for music and arts, with a terrace-patio for students on the top floor. This tower is unusual among school building typologies, awarding particular prominence to the artistic school programme (**fig. 2**).

2.3. GABRIELA MISTRAL EXPERIMENTAL HIGH SCHOOL

The Gabriela Mistral Experimental High School was established in 1946[15], as part of the same initiative for renewed high schools previously described. The main pedagogical coordinates proposed the active participation of the educational community, the implementation of educational methodologies oriented towards facilitating learning through active methods such as workshops, laboratories, projects, and group work, flexible classrooms, and correlated activities developed simultaneously throughout the high school.[16]

10. Ministerio de Educación, *Plan de renovación gradual de la educación secundaria* (Santiago: Comisión de Renovación Gradual de la Educación Secundaria, 1946).

11. Gonzalo Latorre, "La experimentación educacional en Chile", *Revista de educación* no.27 (April 1945): 43-44.

12. Liceo Darío Salas, *Proyecto educativo institucional Liceo A-16 Darío E. Salas (2019-2022)*, 15-16.

13. Alfredo Jünemann, *Jorge Aguirre Silva - Un arquitecto del Movimiento Moderno en Chile* (Santiago: Ediciones ARQ, 1996), 130-131.

14. Jünemann, *Jorge Aguirre Silva*, 130-131.

15. Ministerio de Educación, *Decreto nº1687* (March 13 1946).

16. Liceo Gabriela Mistral, *Proyecto educativo institucional PEI 2020 - Liceo Gabriela Mistral (Educación de Párvulos, E. Básica y E. Media)* (2020), 5.

Bringing experimentation into the classrooms was active, participatory, and experiential. This is expressed, for example, at the class level through the establishment of previously non-existent Class Councils, including the election of Boards and Work Committees.[17]

The construction of new facilities, designed to respond to innovative educational proposals, was one of the dimensions that highlighted the experimental approach at that time. This was expressed in "an architecture that reflected the new social and technological processes of its era."[18] The architectural project for the Gabriela Mistral Experimental High School, undertaken by the SCEE under the direction of architect Juan Hidalgo, was approved in 1958[19] with the buildings completed in 1962 according to SCEE records.[20] Interestingly, its architecture did not gain visibility in architectural periodicals, making it virtually unknown in our context despite its significant attributes, which remain observable to this day. For its documentary reconstruction, our research relied on rarely circulated historical documents, such as SCEE reports, decrees, documents, and blueprints from public archives.

The school complex is composed of several isolated and interconnected pavilions within a large square site at the corner of two wide avenues. Two aspects stand out in the architecture of the high school: the experimental educational architectural programme and the formal autonomy of the architectural pieces that make up the complex. Regarding the architectural programme, similarly to the previously analysed high school, a significant area near the main entrance was allocated for medical, dental, and social assistance, a library, and vocational guidance services, all of which were central to the educational proposal.

The main pavilion housed theoretical classrooms on the second and third floors, including a geography classroom with an adjoining map room. In total, there were 30 classrooms, including a second two-floor pavilion. A distinctive feature was that on the first floor, the classrooms connected to an adjacent courtyard designated for outdoor classes.

Aside from the theoretical classroom pavilions, there was a third pavilion dedicated to practical learning, with workshops for manual labour, ceramics, and cardboard work, as well as a sewing room on the first floor. The second floor was dedicated to physics, biology, and chemistry. Each of these three areas consisted of exhibition rooms and laboratories equipped for direct student experimentation, serving as models for the appreciation of practical learning. The third level of the practical programme included a large drawing room.

The original project included the construction of an auditorium with seating for 500 people and a balcony for 450, adjacent to the main entrance building, forming a single continuous curve of the facade. This auditorium would have an independent entrance from the avenue, covered by a second marquee. Although this building was ultimately not constructed, leaving this flank of the main building unresolved, the imposing gymnasium was completed. Located in the centre and at the back of the complex, it was

17. Liceo Gabriela Mistral, *PEI 2020*, 5-6.

18. Liceo Gabriela Mistral, *PEI 2020*, 6.

19. Ministerio de Educación Pública, *Decreto n°.7452 - aprueba planos, especificaciones y presupuestos para la construcción del Liceo de Niñas Experimental "Gabriela Mistral" de la ciudad y dpto. de Santiago*. (July 25, 1959).

20. Sociedad Constructora de Establecimientos Educacionales, *Veinticinco años* (1962).

surrounded by the open school courtyard. The gymnasium is notable for its slender wall structure and curved roof, as well as the transparency of its glass facades.

Another memorable space is the covered courtyard, which, among other uses served as a gymnasium and assembly hall and was equipped with a small stage at one end and connected to the dining halls at the other end under a vaulted roof supported by slender pillars. Although this space is barely recognisable today due to transformations of the building, it is clearly observed in the original blueprints. This area was particularly relevant and provided unity to the complex, not only because of its transparency and its role in connecting the various buildings but also due to its undulating roofs, which contrasted with the straight-line characteristic of the rest of the architecture (**Fig. 3**).

Historical photographs and technical specifications reveal that the use of colour was also a particularly prominent element here, as a significant portion of the glazed facades featured an intercalated pattern of blue and yellow, made of *'plastiglas'* (or plexiglass), mounted on the metal framework.

Another interesting aspect of the design was the integration of built-in carpentry and furniture, such as partitions that included doors, movable lattices to promote cross ventilation, and glazed surfaces for bilateral lighting, along with storage spaces for educational materials within the classrooms or offices. These elements, made with native wood carpentry, have been preserved to this day and exhibit high construction quality, making their conservation desirable, especially given the risk posed by careless renovation processes in contemporary school buildings.

3. ARCHITECTURE FOR EXPERIMENTAL SCHOOLING

In summary, the review of the presented cases highlights the following aspects:

First, the provision of a complex and extensive architectural programme aimed to balance, if not quantitatively then at least qualitatively, the place of practical education compared to the predominant theoretical teaching. The dedication to the design and equipment of laboratories and workshops for trades and/or the teaching of visual arts, music, and/or performing arts was prominent due to the architectural resources within the complex.

Second, the presence of an auditorium and gymnasium within the school programme gave the building a cultural presence within its neighbourhood. The use of auditoriums was not exclusive to experimental high schools but was also present in simpler school groups and other relevant urban complexes.

There is also a greater extension of the support programme associated with the administrative area: medical, dental, social, and vocational guidance facilities, that transformed the school from a selective establishment to a formative and orientational one.[21] These facilities, in addition to assisting students, were likely part of the scheme to gather scientific evidence regarding the functioning and pedagogical methods employed.

The original authors, as well as recent research, highlight the transnational nature of these modernisation processes in educational reforms that followed the second post-World War.[22]

21. Andrés Guzmán, "Características de las políticas de reformas o innovación de la educación en Chile: perspectiva histórica", *Pensamiento educativo* 17, nº2 (October 1995): 217.

22. Pablo Toro, "Una nueva oficina en el liceo: la instalación de los orientadores como política educacional en Chile (c.1946-c.1953)", *Historia Caribe* 13, nº33 (July-December 2018): 288-289.

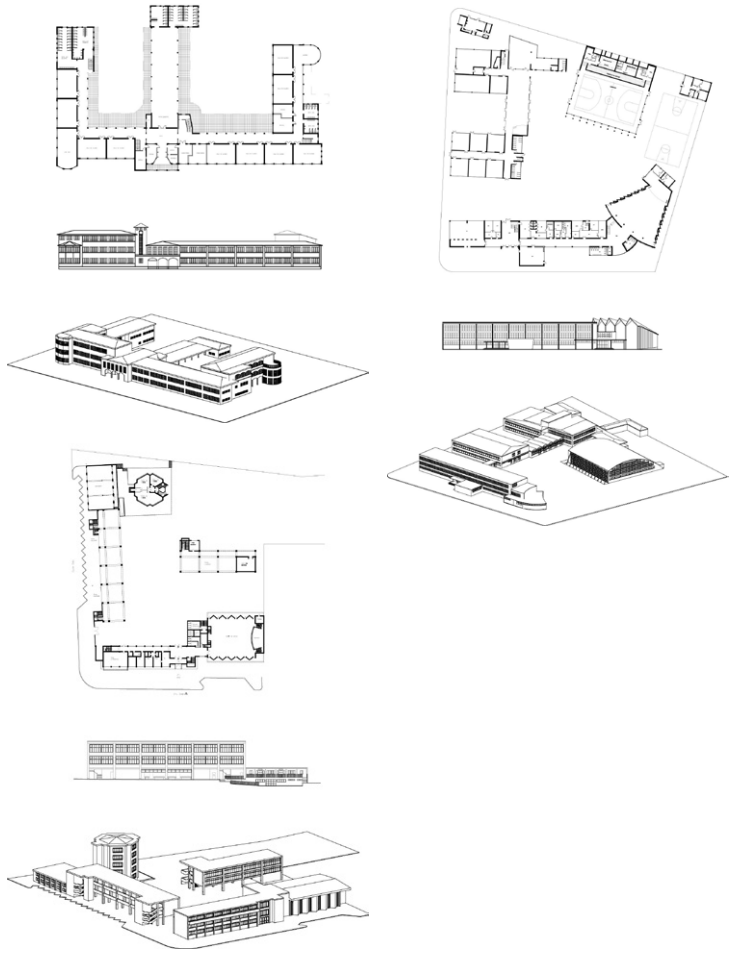


Fig 1: Arch. José Aracena & Sociedad Constructora de Establecimientos Educacionales, Manuel de Salas Experimental High School, Santiago, Chile (1950), plans and isometric view. © Drawing Fondecyt Iniciacion 11200884, from archive plans.

Figure 2. Arch. Jorge Aguirre Silva & Sociedad Constructora de Establecimientos Educacionales, Darío Salas Experimental High School, Santiago, Chile (1950), isometric view. © Drawing Fondecyt Iniciacion 11200884 from archive plans.

Figure 3. Arch. Juan Hidalgo & Sociedad Constructora de Establecimientos Educacionales, Gabriela Mistral Experimental High School, Santiago, Chile, (1958-1962). Plans and isometric view. © Drawing Fondecyt Iniciacion 11200884, from archive plans.

Regarding the architectural form, the school displayed formal resources that evidenced markedly modernising forms: the transparency of interconnected spaces, the lightness and large spans of the structures in auditoriums, and even the use of colour on the facades.

It has also been possible to observe that, as is common in architecture, the arrival of new school buildings was delayed in relation to the period of educational experimentation between 1946-1965. In the cases of the Darío Salas High School and the Gabriela Mistral High School, our research detected long processing and execution times that raise doubts about the effectiveness and consistency between educational and architectural experimentation. Nevertheless, the analysis of the projects shows an architecture that firmly supported the conception of a modern school space, applied in sectors of Santiago's capital that for the first-time opened school complexes of such quality, complexity, and scale. ■

BIOGRAPHY

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#04

A CLASSROOM TO CHANGE THE WORLD: THE SCHOOL ARCHITECTURE OF THE MINISTRY OF PUBLIC WORKS OF URUGUAY (1954-1965)[1]

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ABSTRACT

Architects Hugo Rodríguez Juanotena and Gonzalo Rodríguez Orozco designed the *Comprehensive Classroom* for the Ministry of Public Works in the 1950s and the 1960s. It consolidated all the learning spaces that were dispersed, such as the workshop, laboratory, toilets, indoor and open-air classrooms and experimental garden, into a generously sized unit, shaping by repetition the whole school building, eliminating the need for corridors. Simultaneously, a curricular change in the Uruguayan Elementary Public School tried to incorporate the pedagogical ideas of the New School movement. In this context, the Comprehensive Classroom updated the concept of school architecture in the country. This paper focuses on analysing the interior space to demonstrate the ideas and strategies involved in this design in close relation with pedagogical thought. We argue that the Comprehensive Classroom represents a shift in spatial paradigm in the Public Elementary School in Uruguay, supported by modern architecture ethic and aesthetical values. It would attest to the political role of the architects and public work offices to promote innovative solutions and the design potential to influence in societal transformation. This paper also made use of critical and historical methods, consulting on original and unpublished documents with particular focus on graphic materials. The available information was complemented with drawings and images created by the author.

1. INTRODUCTION

Architects Hugo Rodríguez Juanotena (1923-2012) and Gonzalo Rodríguez Orozco (1930-2016) designed the *Comprehensive Classroom* for the Ministry of Public Works in the 1950s and the 1960s. The Comprehensive Classroom had different versions over time, but the main idea was to consolidate all the dispersed learning spaces, such as the workshop, laboratory, toilets, indoor and open-air classrooms and experimental garden, in a generously sized unit, shaping by repetition the whole school building, eliminating the need for corridors.

At the same time as a curricular change in the Uruguayan Public Elementary School that aimed to incorporate the pedagogical ideas of the New School movement, the Comprehensive Classroom updated the concept of school architecture in the country.[2] We can see how it attempts to move away from the traditional idea of the school space to another of a domestic nature, focused on children as the primary beneficiaries of education. The users have the possibility of transforming the setting and the interior space can be open towards the outdoors nearby and the city. Furthermore, we can appreciate the design of the school scenario to the extent that the techniques with which it was built were showcased as a model of beauty and behaviour.

Despite being valued at the time, the Comprehensive Classroom has not been sufficiently highlighted and studied by the academy. It was notably absent, for example, from the Uruguayan section of the exhibition on Latin American architecture at MoMA in 2015.[3] This invisibility is also appreciated in the fact that the constructed buildings with these units have not been properly preserved, having suffered from multiple alterations, which makes it difficult to recognise them directly.

This work aims to contribute to the field of architecture and the history of education by studying this high-quality experience of public works in Uruguay. This paper focuses on the interior space to illustrate the ideas and strategies involved in this design in close relation to pedagogical thought. We will argue that the Comprehensive Classroom offered a change of space paradigm in the Public Elementary School in Uruguay, supported by modern architecture ethics and aesthetical values. It would demonstrate the political role of the architects and the public work offices in promoting innovative solutions and the design potential to influence in societal transformation.

Understanding school settings as interfaces between people, objects, activities and the environment, influencing their bonds, movements or perceptions, we can observe how the design of the Comprehensive Classroom attempted to dialogue with the new curriculum and collaborate with the change of social and cultural traditional relations.[4] This transformation was based on the separation of the intellectual and the manual, the individual and the collective, the domestic and the institutional, the interior and the exterior. This dialogue between architects and teachers is not simple or linear, but rather it is a complex relationship involving a network of actors with mutual and sometimes contradictory influences. This makes the architectural project a critical instrument, in debate with institutions, society and culture.

1. This paper is based on the author's PhD thesis "El pizarrón móvil y la mesa colectiva. El Aula Integral del Ministerio de Obras Públicas de la República Oriental del Uruguay (1954-1973)", supported by CAP Udelar.

2. Consejo Nacional de Enseñanza Primaria y Normal. *Programa para escuelas urbanas aprobado por resolución del Consejo Nacional de Enseñanza Primaria y Normal de fecha 1° de marzo de 1957*. (Montevideo: Imprenta Nacional, 1969).

3. Bergdoll, Barry et al. *Latin America in construction. Architecture 1955-1980*. (New York: MoMA, 2015).

4. Bonsiepe, Gui. *Del objeto a la interface. Mutaciones del Diseño*. (Buenos Aires: Infinito, 2005). 17.

This experience presented a new perspective on the school building relationship system, and bringing it to the present could allow us to reflect critically on the current design practice of school architecture.

In order to achieve that, critical and historical methods were used. Original and unpublished documents were consulted with particular focus on graphic materials. The available information was complemented with drawings and images created by the author.

2. RENEWING SCHOOL ARCHITECTURE IN URUGUAY

School architecture in Uruguay by the middle of the twentieth century had primarily been constructed in response to the institution's pedagogical practices, which were based on individualised and intellectualised teaching rooted in Hebart's theories.[5] The public elementary school in Uruguay was well consolidated, providing free and compulsory education for children from 5 to 12 years old. The classrooms were directional and equipped with fixed benches, resembling an auditorium. There were two instances of experimental school buildings in the late 1920s, with a vocation for social transformation, but those were isolated cases.[6]

In the 1950s, the institution's renovation of teacher and school curriculums was the subject of debate. The debate focused on two different approaches to equipping and organising the classroom: using fixed benches or collective tables. These approaches were considered in terms of the interpersonal relationships they would allow.[7] The 1957 Programme incorporated innovations of pedagogues such as Jesualdo Sosa (1905-1982) or Clemente Estable (1894-1976), based on creative expression and scientific experimentation.[8] These innovations coexisted with the restrictions and institution's habits.

At the same time, the shortage of well-maintained buildings highlighted the urgency of carrying out a major school construction plan. However, there was no clear indication of the requirement for a new school space model that aligns with the new curriculum. In fact, this happened at the initiative of the Ministry architects, who integrated a differentiated system of relationships within the classroom into an economical, rational and easily implemented solution. Although several versions were designed (1956, 1958 and 1960), the Comprehensive Classroom can be considered a single project with variants.

This proactive attitude is framed in the context of the expansion of public works in the country during those years. This expansion was associated with modern architecture and a new generation of architects. It was accompanied by the radical reform of the Faculty of Architecture of Montevideo, where Rodríguez Juanotena and Rodríguez Orozco were both professors, with a policy that privileges the social contents of the curriculum and modern architecture as an instrument to bring about change.[9]

On the other hand, on an international level, there was a push to develop educational buildings based on the new teaching methods. This is reflected in Roth's work, where he emphasises the Anglo-American experience of the interwar and post-war periods. This period was

5. Castro, Julio. *Del banco fijo a la mesa colectiva. Vieja y nueva educación*. (Montevideo: Ministerio de Educación y Cultura, 2007).

6. Rey, William. "Enseñanza y utopía. Iniciativas asociadas en la arquitectura moderna uruguaya." *Quintana* 15 (2016): 73-86.

7. Castro. *Del banco fijo a la mesa colectiva*.

8. Consejo Nacional de Enseñanza Primaria y Normal. *Programa para escuelas urbanas*.

9. Nudelman, Jorge. *Tres visitantes en Paris. Los colaboradores uruguayos en Paris*. (Montevideo: Ediciones universitarias. CSIC Udelar, 2015). 117, 208.

characterised by single-story linear pavilions and open-air classrooms, and Roth insisted on the value of designing school spaces to forge new forms of social coexistence.[10]

3. DIALOGUES BETWEEN ARCHITECTURE AND PEDAGOGY

In order to understand the teaching contribution of the Comprehensive Classroom and to establish links with the new school curriculum, we will analyse four key points: domesticity, activity, openness and intelligibility.

3.1. DOMESTICITY

The concept of the self-contained classroom involved using the area previously dedicated to the corridor as a pedagogical area, trying to minimise movement throughout the building by also allowing direct entry to the classrooms from the street. Eliminating the corridor, on the one hand, aimed to reduce the disciplinary issues associated with traditional corridor behaviours (where the students were made to form lines), in contrast to other contemporary cases where the corridor was conceived as a didactic device.[11] On the other hand, it sought to protect students from situations that could lead to "*promiscuity*" by moving to the toilets away from adult supervision while granting them autonomy for their use inside the classroom.[12]

Here we can see how the idea was to promote children's sense of self-determination, to develop their creative and intellectual potential, releasing them from an institutionalised space to a more familiar one, with more subtle supervision.[13] The classroom was conceived as a home, focusing education on children, providing them with the elements to be able to "*live a full physical, mental and emotional life"*.[14]

3.2. ACTIVITY

This strategy allowed for an increase in surface area, forming a single bilaterally illuminated and ventilated volume (8x10-9m). It collaborated in the interior spatial isotropy, allowing greater versatility in its occupation with light furniture units. There were fixed countertops for workshop or laboratory work to the south, while to the north, separated by a cabinet, there was a classroom with movable blackboard partitions on its sides.

This organisation appears to have responded to the new curriculum's experimentation and expression by providing specific furniture and spaces for these purposes. These activities were usually segregated in the building, reflecting a fragmentary structure of knowledge, which separates the manual from the intellectual.

On the other hand, the curriculum gave the teacher the ability to administer didactic techniques with flexibility, depending on the observation of children and their environment.[15] Here the generous dimensions of the classroom and the possibility of moving its blackboard side partitions to bring units together allowed for a wide variety of configurations, bringing it closer to open-space school configurations. However, we know that traditional benches were used to occupy these classrooms, limiting their

10. Kozlovsky, Roy. *The Architectures of Childhood: Children, Modern Architecture and Reconstruction in Postwar England*. (New York: Routledge, 2016). 95.

11. Kozlovsky, Roy. *The Architectures of Childhood. 133*; Foucault, Michel. *Vigilar y castigar*. (Buenos Aires: Siglo XXI Editores, 2002).

12. Rodríguez Juanotena, Hugo. "Solución aconsejada. Aula integral." (Montevideo: Biblioteca personal de Hugo Rodríguez Juanotena, c.1955c.)

13. Consejo Nacional de Enseñanza Primaria y Normal. Programa para escuelas urbanas. 3

14. Consejo Nacional de Enseñanza Primaria y Normal. Programa para escuelas urbanas. 3.

15. Consejo Nacional de Enseñanza Primaria y Normal. Programa para escuelas urbanas.

capacity for transformation.[16] The exception was the first year's classrooms, where collective tables were used. This juxtaposition of a traditional school organisation on a setting that aims to renew it is understood as a way of cushioning a change perhaps seen as too radical by the teachers.

3.3. OPENNESS

The school programme proposed a correlation between expression and experimentation, linking them with outdoor life. If the exploration of the world were approached according to the experimental method, the knowledge of the human body would also be emotionally approached. This involved children expressing themselves through "*teaching by rhythm*", dances, games and music, which had their privileged place outdoors.[17]

The classroom extroversion was underlined by the possibility of open-air teaching, moving the blackboards, or working in the experimental garden adjacent to the outdoor classroom in the first version. This allowed for a seamless visual and physical connection from the interior to the exterior, aligning with the curriculum's objectives.

In this sense, the school design consists of several volumes positioned in a linear and horizontal formation, with a maximum of 6 units, in addition to an administrative pavilion. These buildings were dispersed and parallel to each other, connected by open galleries. This arrangement made the school similar to a park, where the outdoor spaces, rather than being hidden, were exposed and interacted with the urban environment.

3.4. INTELLIGIBILITY

The good, the beautiful and the true were identified in the school, bringing together moral formation with the love for beauty and culture. This went beyond teaching aesthetic education to the cultivation of ethical values.[18] Thus, a genuine and stimulating environment was required, with art and architecture as a model of behaviour.[19]

The realisation of the art murals at the entrance to the school was carried out independently from the classroom unit, with limited collaboration with artists. In contrast, the intelligibility and technical integrity of the school scenario are explicitly sought after. The construction was prefabricated based on panels and metal frames; later, due to the economic crisis, the project moved to reinforced concrete and apparent masonry, moving away from the expectations of building industrialisation. The roofs consisted of lightweight reinforced beams showing the structural stresses in their form. In this way, the intelligibility of the construction exceeded the strict technical necessities, giving it a flexible, didactic value.

4. AFTERWORD

The Comprehensive Classroom was ambiguously accepted and implemented by the school institution, despite its convergence with the new curriculum. Criticism received for its renovating ambition and supposed lack of articulation with teachers led to the discontinuation of the project by mid-1960s.[20]

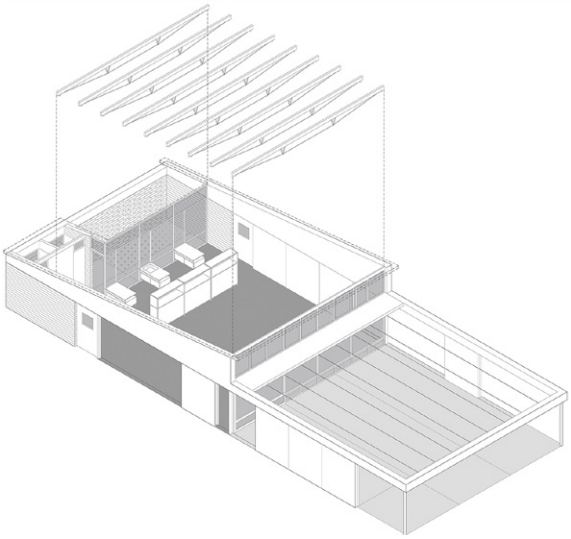
16. Ministerio de Obras Públicas. Su Obra. 1959, 1960, 1961, 1962. (Montevideo, 1963). 75.

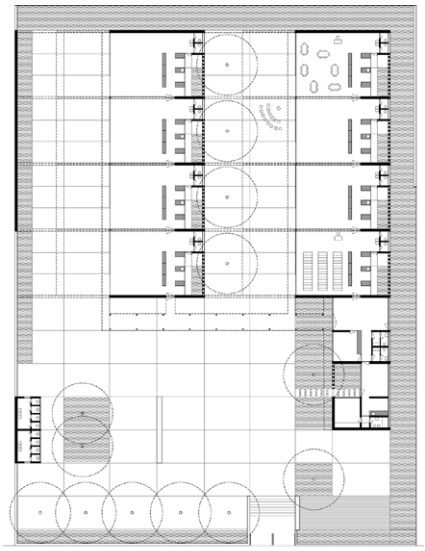
17. Consejo Nacional de Enseñanza Primaria y Normal. Programa para escuelas urbanas. 76.

18. Consejo Nacional de Enseñanza Primaria y Normal. Programa para escuelas urbanas. 3.

19. Estable, Clemente. «Enseñanza de maneras de aprender y enseñanza de nociones. Diversas maneras de ordenar las materias en la enseñanza.» En *Clemente Estable pensador*, editado por Juan F. Estable et al., 225-282. (Santa Lucía, Canelones: Fundación Clemente Estable, 2008). 276.

20. Ministerio de Instrucción Pública y Previsión Social, et al. *Informe sobre el estado de la educación en el Uruguay: Plan de desarrollo educativo. Tomo segundo*. (Montevideo, 1966).131.





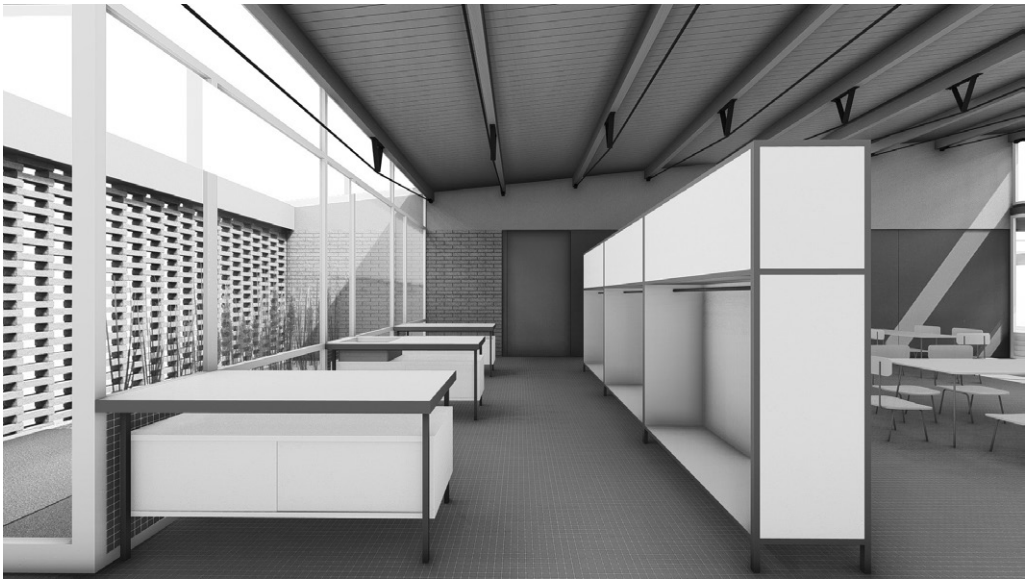


Fig. 1. Hugo Rodríguez Juanotena & Gonzalo Rodríguez Orozco, Ministry of Public Works. Comprehensive Classroom Type B, 1958. Axonometric view. @ Drawing by the author.

Fig. 2. Hugo Rodríguez Juanotena & Gonzalo Rodríguez Orozco, Ministry of Public Works. 81st school in Montevideo, designed with the Comprehensive Classroom Type B, 1958. Plan. @ Drawing by the author.

Fig. 3. Hugo Rodríguez Juanotena & Gonzalo Rodríguez Orozco, Ministry of Public Works. Comprehensive Classroom Type B, 1958. Interior view of the workshop area from a child's visual horizon. @ Drawing by the author.

The Comprehensive Classroom stressed the relationship between architects and teachers. It involved a political proposal, a re-description of reality in order to transform it, based on a particular idea of childhood and teaching, where the aesthetic, often undervalued, acquires a privileged role. It not only meant a radical overhaul of traditional routines, but also a distinct repositioning of knowledge and interpersonal relationships in society. ■

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BIOGRAPHY

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ADAPTIVE REUSE AND SUSTAINABLE CONSERVATION FOR MODERN EDUCATIONAL ARCHITECTURE

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ABSTRACT

Adaptive reuse is a complex process that aims to preserve the values of heritage buildings while adapting them for present use and transferring them to the future. With the rise of carbon reduction campaigns driven by the climate emergency, adaptive reuse has gained more traction as an alternative to demolishing and replacing older buildings. It is now generally seen as a crucial component of sustainable practice strategies. Thus, most old buildings necessitate modifications and ingenuity to regain functionality and generate a renewed appreciation for their historical, architectural, and socio-economic significance.

This discussion may be reframed in modern educational architecture to include contributions from aspects beyond its functional adaptation. It is posing additional issues considering the changes brought about by the 21st-century's technological advancements, educational methods, and pedagogical objectives. Modern educational architecture has been specifically developed to prioritise modern architecture's functionalist and rationalist principles. School buildings and university campuses have been deliberately designed to conform to a particular set of structures, standards, components, and classifications that embody the educational principles and methods developed in the nineteenth and twentieth centuries.

Given the constant shifts in teaching methods, climate conditions, spatial demands, and technological advancements that occurred in the 21st century, there is a need to examine the challenges and limitations modern educational architecture faces. These concerns must be addressed to improve the functionality of modern educational architecture, draw attention to it and emphasise its significance, cultural value, and preservation tactics. This paper sheds light on these challenges that require further spatial modification to the physical layout, climatic change and sustainability standards that demand a higher quality indoor environment, the assimilation of educational buildings into their urban and community contexts, and the recognition of historical value and heritage preservation.

1. INTRODUCTION

Educational architecture, created a new school layout typology that has been extensively used worldwide.[1] New teaching approaches and improved pedagogy were reflected in school building layouts, which changed learning settings from one room to linear classrooms.[2] With the development of nations' social services, these classrooms provided teaching and activities that followed the United Nations Educational, Scientific and Cultural Organisation's (UNESCO) pedagogical requirements.[3] Modern Architecture introduced the functionalist approach, which was crucial to rationality, at the same time as this sort of school building Hille.[4] More than 120 modern schools were used in Hille's book to illustrate society's social and economic requirements, ecological restrictions, and material growth. This purpose-built educational architecture is still in use. Its status is valuable for educational purposes, as well as for presenting a significant contribution to architectural history.

The decaying architecture of schools lacks the physical requirements for contemporary learning. Its spaces are inadequate for 21st-century schooling.[5] Modern educational architecture met teaching methods and created functional spaces with environmental considerations like natural light, cross ventilation, and friendliness, but climate change and innovative pedagogical approaches require further changes.[6]

From a historical standpoint, several of these modern educational buildings have had a notable influence on cultural and social norms.[7] These landmarks not only served as physical symbols but also played a role in providing for the nation's welfare, transmitting social and political demands, and contributing to its modern historical development. This emphasises the significance of modern educational architecture as a physical space for learning, as well as a place where both tangible and intangible values are manifested. Thus, the crucial issue to address in this paper is which conservation strategies should be undertaken for historic or heritage school buildings to align them with the demands of the present-day education system while ensuring their authenticity and incorporating modern values to create adequate new learning environments.

2. ADAPTIVE REUSE CONCEPT

One of the most popular preservation strategies, adaptive reuse, finds a new use for an existing historic building, ensuring it will be around for the foreseeable future. According to Plevoets and Cleempoel, the concepts of adaptation and reuse form the basis of adaptive reuse.[8] They explained that modifications involving both functional and physical components are specifically mentioned by the word. This permits functional alterations to the building while preserving its historically significant elements. As a result of repurposing an old building rather than constructing a new one, less strain is placed on the planet's resources, which is why preservation and sustainability are synonymous.[9]

Adaptive reuse for heritage buildings is a method of managing cultural heritage sites and introducing new significance to an existing culture.[10] This

1. Lindsay Baker, ed. *A History of School Design and Its Indoor Environmental Standards, 1900 to Today.* (Washington, DC.: National Clearinghouse for Educational Facilities, 2012), 3.

2. Baker, *A History of School Design and Its Indoor Environmental Standards, 1900 to Today*, 11.

3. Kate Darian-Smith and Julie Willis eds., *Designing Schools: Space, Place and Pedagogy* (New York, USA: Routledge, 2017), 175.

4. R. Thomas Hille, *Modern Schools: A Century of Design for Education* (Hoboken, NJ: John Wiley and Sons, 2011), 344.

5. Paola Virgioli, "Educational Needs of the Third Millinium: The Italian Answer," in *Educational Architecture - Education, Heritage, Challenges*, ed. Alexandra Alegre, et al. (Portugal: Atlas of School Architecture, 2019), 213; Baker, *A History of School Design and Its Indoor Environmental Standards, 1900 to Today* , 21.

6. Baker, *A History of School Design and Its Indoor Environmental Standards, 1900 to Today*, 17.

7. Sofia Aleixo, "Change and Adaptation," in *Educational Architecture - Education, Heritage, Challenges*, ed. Alexandra Alegre, et al. (Portugal: Atlas of School Architecture, 2019), 62.

8. Bie Plevoets and Koenraad van Cleempoel, *Adaptive Reuse of the Built Heritage Concepts and Cases of an Emerging Discipline* (London and New York: Routledge, 2019), 23.

9. Itohan Esther Aigwi, Ahmed Duberia, and Amarachukwu Nnadozie Nwadike, "Adaptive Reuse of Existing Buildings as a Sustainable Tool for Climate Change Mitigation within the Built Environment," *Sustainable Energy Technologies and Assessments* 56 (2023): 13;

implies that the existing structure possesses both historical significance and architectural relevance. Hence, the extent of adaptation remains unspecified, encompassing a spectrum that spans from substantial modifications to the building's exterior to minor alterations confined to the interior.[11] While the first impact may not be immediately apparent, the change in purpose will ultimately result in substantial alteration. Certain buildings constructed throughout the modern age, such as educational institutions, continue to serve their original purposes, while others undergo significant transformations. Due to their outdated design, limited functionality, and inability to handle the rapid information exchange needed in the digital age, they often fail to meet contemporary needs.

The fundamental principles of adaptive reuse practice for historic buildings, according to Plevoets and Cleempoel, include authenticity, aesthetic appeal, and the age of the building.[12] According to Burke and Grosvenor, school's intrinsic feeling of shared memory, the palpable impact they have on the constructed surroundings, and essential historical relevance make them highly respected.[13] Therefore, it is important to conserve these buildings for their practical role as educational spaces, and their historical and cultural relevance, which have outlived their original purpose.

On the other hand, sustainability has been a highly discussed subject in the realm of architecture and urban planning during the past decade. Li et al. stated that scientific frameworks, procedures, and approaches should be used to guide adaptive reuse because the concept is oriented towards sustainability.[14] One part of sustainable ecosystems is making creative use of existing building stock. Contributing to sustainable architecture and cities are sustainable adaptations of cultural heritage. Because of the various moving parts involved in an integrated strategy, adaptive reuse of historic structures is not an easy task. According to Vardopoulos et al., adaptive reuse is a method for improving urban sustainability that helps with resource management, boosting the economy, making a place more appealing to tourists, and getting people involved again.[15] That is why adaptive reuse tools for sustainable conservation must get creative and develop new ways of thinking about and repurposing old buildings.

3. CONTEMPORARY CHALLENGES

Considering the preceding discourse, modern school architecture was established to unite pedagogical theories with modern architectural concepts. The concept of contemporary adoption and reuse of these buildings emphasises the potential of the educational environment to support learning processes and activities in schools. It is considered that these educational spaces are not only a representation of modern tangible heritage but also the intangible relationship between the education process and the social-cultural context. However, it could be argued that within this context, various actors and stakeholders, whether in educational policy or urban planning, should work to manage and share the responsibility of maintaining the conditions of education spaces while questioning the potential functions that could be re-adopted within these places. Considering this, it is essential to highlight

Ioannis Vardopoulos et al., "Considering Urban Development Paths and Processes on Account of Adaptive Reuse Projects," *Buildings* 10, no. 4 (2020): 2.

10. Francesca Lanz and John Pendlebury, "Adaptive Reuse: A Critical Review," *The Journal of Architecture* 27, no. 2-3 (2022): 442; Yuan Li et al., "Research Frameworks, Methodologies, and Assessment Methods Concerning the Adaptive Reuse of Architectural Heritage: A Review," *Built Heritage* 5, no. 1 (2021): 3; Vardopoulos et al., "Considering Urban Development Paths and Processes on Account of Adaptive Reuse Projects," 1; Hung-Ming Tu, "The Attractiveness of Adaptive Heritage Reuse: A Theoretical Framework," *Sustainability* 12, no. 6 (2020).

11. Aleixo, "Change and Adaptation," 65.

12. Plevoets and Cleempoel, *Adaptive Reuse of the Built Heritage Concepts and Cases of an Emerging Discipline*, 2.

13. Catherine Burke and Ian Grosvenor, *School* (London, UK: Reaktion Books, 2008), 173.

14. Li et al., "Research Frameworks, Methodologies, and Assessment Methods Concerning the Adaptive Reuse of Architectural Heritage: A Review," 4.

15. Vardopoulos et al., "Considering Urban Development Paths and Processes on Account of Adaptive Reuse Projects," 2.

the main contemporary dimensions that were identified as the challenging factors of the adaptive reuse of educational spaces.

3.1. SPATIAL ORGANISATION AND PEDAGOGY

The spatial layout of the education environment and how this environment interacts with teaching and pedagogy play a significant role in activating knowledge gaining. Because the traditional pedagogical process, depends on positioning the teacher within the educational space, the spatial organization (space and place) of this institution was used to apply a systematic layout and urban structure that responded to the education process.[16] Yet, during the last decade, significant educational and technological development has impacted and challenged the traditional educational approach, where these spaces became inadequate and isolated from the development of pedagogical practices. Thus, in some cases, such as Al-Qayrawan School in Kuwait (as shown in Fig. 1), these spaces work to align and re-position their spaces and places to meet the new learning environment needs. This pushes toward seeking various layers of interactions and adapting the current spatial configurations to respond to the pedagogical challenges.

The case of the library building of Alvar Alto University (shown in Figures 2 and 3), was restored and reshaped in 2017 to house a media space that matches the individual and the group study's working needs. This offers a new perspective to understand the spatial organization of the modernist building and take its architecture to the twentieth century while introducing a contemporary notion of the social and cultural context. Yet, spatial adaptation may encounter different challenges associated with the fragile architectural details and the limited adaptive techniques that could be applied due to the building's status whether as a listed building or due to the cultural identity of buildings within its context.

3.2. CLIMATE CHANGE AND SUSTAINABILITY VISION

The adaptive reuse of existing educational spaces and buildings is a sustainable mechanism to give new opportunities to existing modernist buildings. As a strategy, it aims to prolong the life span of the existing educational spaces that are neglected, to achieve environmental, economic, or social heritage benefits, and to prevent these buildings at the level of demolished.[17] This strategy has been adopted widely across different functions, yet it requires that the building hold unique architectural details, cultural and heritage values within its context. Bearing this in mind, it should also satisfy the social expectations of the new targeted users and promote economic values.

According to Othman and Elsaay, sustainable principles are achieved by achieving the required functions that understand and match the users' and stakeholders' perspectives, desires, needs, and expectations while considering protecting the environment, enhancing society, and prospering the economy.[18] Therefore, the adaptive reuse of modern educational spaces will contribute and promote the different pillars of sustainability; through re-enhancing the social interaction with the community heritage, providing

16. Ula Merie, "Architecture, Power and Identity the University Campus as a Product of Time and Place" (The University of Sheffield, 2019).

17. Aigwi, Duberia, and Nwadike, "Adaptive Reuse of Existing Buildings as a Sustainable Tool for Climate Change Mitigation within the Built Environment."

18. Ayman Ahmed Ezzat Othman and Heba Elsaay, "Adaptive Reuse: An Innovative Approach for Generating Sustainable Values for Historic Buildings in Developing Countries," *Organization, Technology and Management in Construction: an International Journal* 10, no. 1 (2018).

an opportunity to celebrate the local materials and architectural values, in addition to reducing the unnecessary cost of structuring new buildings.[19]

3.3. URBAN AND SOCIETAL ASSIMILATION

The post-war period was generally considered the perfect chapter to embrace modern architecture in the education environment, where the spatial and urban design principles were experiencing different levels of transformations and challenges associated with the significant and rapid changes that the education policy faced. This period provides extraordinary proposals and opportunities in the way that the academic environment and its education policies reflect and express modern architecture. Mobilising technical capability, new structures, and materials intended to reflect these new innovative approaches. Within this, additional debate was raised towards understanding how this innovative environment could promote the meaning of its context, place, and nation. Bearing in mind achieving smooth transactions that would adopt the rapid changes in contemporary architecture and still reflect the individuality of its society.

To understand that Maurrasse suggests specific aspects that can help and support the local community engagement in the possess of connecting the education environment and the city.[20] First the scale of the education environment as an institution, the level and the degree of the relationship between the institution and its context, the capacity and the potential of the community–based institutions, the history the culture dimensions and structure, the financial support, or funds of the institution, and finally, the education environment, its mission and commitment towards both its context and institutional innovation. These aspects are suggested to enhance the educational space and improve the urban quality of its community. Thus, we should acknowledge that there is a clear interaction between the adopted education policy and the perception of its spatial design unity and integration within its context.[21]

During the last decades, educational spaces, such as classrooms, libraries, laboratories, and halls were the perfect platform to validate the quality of architecture and share the responsibility towards achieving social spatial justice. Pedagogy place's main aim is to generate an intellectual place that has its character and identity within a collaborative safe environment. Yet, determining the borders of this relationship could vary according to the social-cultural norms, the historical context, and the education policy which might be gradually shifted or altered across time. Thus, adapting this space should emphasize the potential of the place as a vital aspect of adaptive reuse policy, and its identity within its context and surrounding environment.

3.4. HISTORICAL VALUES AND HERITAGE PRESERVATION

Adaptive reuse as a strategy is focused on reviving the educational spaces of modern architecture which are considered as a modern heritage. This helps to revive the cultural identity, preserve the architectural value of educational places, enhance cultural authenticity, and promote spatial justice.[22]

19. Ezzat Othman and Elsaay, "Adaptive Reuse: An Innovative Approach for Generating Sustainable Values for Historic Buildings in Developing Countries".

20. David J. Maurrasse, *Beyond the Campus How Colleges and Universities Form Partnerships with Their Communities* (New York and London: Routledge, 2001).

21. Maurrasse, *Beyond the Campus How Colleges and Universities Form Partnerships with Their Communities*.

22. Plevoets and Cleempoel, *Adaptive Reuse of the Built Heritage Concepts and Cases of an Emerging Discipline*.

The historical values of the heritage building are an integral part of the national pride. Adaptive reuse can offer new ways to access heritage buildings in addition to transforming their surrounding context. It opens the way towards achieving self-sufficient funding, new functions, and utilising heritage preservation according to the new image of the building. Yet, this strategy requires special attention to the structural integrity and building codes, and whether these codes meet the safety measures or not.

4. EXCHANGING CONSTRUCTIVE STRATEGIES

For sustainable conservation and adaptive reuse implementation principles, it is necessary to examine each case from various regions. Even though modern educational architecture shares similarities in its principles of design and standards, it differs from one region to another. Kindergartens, primary, intermediate, secondary, and universities all serve the purpose of education; however, they differ in terms of the designer, materials and technology used, the region, climate, pedagogical requirements, and the age and gender of the students. Additionally, buildings have undergone modifications over time because of the various policies and guidelines that have revealed distinct alterations in each instance. Consequently, adopting adaptive re-use practices in each instance broadens our comprehension, enabling the exchange of knowledge and expertise across national and cultural boundaries.

5. CONCLUSION

Adaptive reuse is a thrilling and dynamic method of progress that can creatively reach multiple significant historical, cultural, economic, and environmental objectives. This study provides further reasons to support the expansion of the adaptive use of historical buildings from the standpoint of modern educational architecture. In this article, schools and universities exemplify modern architecture that addresses the challenge of modernisation while preserving its original purpose. It examines the present challenges related to physical use, environmental aspects, integration into urban areas, and the significance of educational spaces in terms of their legacy. Its objective is to bring up new subjects that can impact the implementation of sustainable conservation and the adaptive repurposing of such spaces.

This inquiry has examined adaptive reuse in a manner that should prompt future investigation into this rising phenomenon. We need new foundations for innovative and sustainable design. This understanding would also help preservation professionals negotiate with project stakeholders and government authorities to balance preservation, adaptation, functioning, and budget. We wanted to show that adaptive reuse can be seen as a process rather than just an architectural design intervention, which might help establish a complete and dynamic approach to adaptive reuse. It is widely supported as a sustainable technique. It is essential to weigh each facility's pros and cons of adaptive reuse.

The paper has brought several general concerns about assessment approaches, pedagogical and climate change requirements, and adaptive



Figure 1. Alfred Roth, Al-Qayrawan Girl's Intermediate School, Rumaithiya, Kuwait, 1971. The image shows the HVAC ventilation and classroom that have been incorporated into the original design to address the pedagogical and climate change requirements. © Personal Archive, Zainab Murtadhawi, 2020.

Figure 2. The library building at Aalto University, one of the listed modernist buildings, was recently restored to house media and open space that matches the individual and the group study working needs 1969, Espoo, Finland, 1969, Alvar Aalto. © Personal Archive, Ula Merie, 2018.

Figure 3. Aalto University, Espoo, Finland, 1964, Alvar Aalto. © Personal Archive, Ula Merie, 2018.





reuse practice methods. At the 18th International DoCoMo Mo Conference, discussions around the role of adaptive reuse in creating a more sustainable educational built environment will reveal treatment techniques that involve preserving, rehabilitating, restoring, and reconstructing educational architecture worldwide. This presents an excellent chance for conservators to collaborate and share their knowledge, theories, methods, and requirements to achieve a unified and significant outcome that caters to a diverse range of expertise. ■

BIOGRAPHY

Zainab Murtadhawi obtained a PhD in Modernist and Welfare Architecture from Sheffield School of Architecture and an MSc in Sustainable Building Conservation from Cardiff University in the United Kingdom. Her thesis focuses on the modern educational architecture in Kuwait, specifically in relation to the period of modernisation that occurred after the discovery of oil. She is an Associate Researcher in the Construction and Building Materials Programme at the Kuwait Institute for Scientific Research (KISR). Her research focuses on Modern Architecture in the Middle East, with a particular emphasis on the repurposing of Welfare Architecture in the built environment.

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REPURPOSING MODERN HERITAGE SCHOOLS IN KUWAIT: A FRAMEWORK FOR ADAPTIVE REUSE

#05

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ABSTRACT

This study explores adaptive reuse techniques for preserving cultural buildings, with a particular focus on modern heritage schools transformed into structures with new functions. Balancing a case-by-case methodology with a semi-universal approach for Kuwait, the research advocates for a nuanced exploration through a comprehensive case study, considering the evolution of educational pedagogy. A central inquiry revolves around determining what elements should be preserved, altered, expanded, and modified architecturally. The primary emphasis is on the spatial layout, architectural elements, and programme distribution within the chosen context. The distinctive tectonic form and programme relationship emerge as pivotal aspects that distinguish the building as inherently modern in comparison to Kuwaiti vernacular architecture. The empirical facet of this research unfolds through an experiment conducted at the Adailiya Campus for the College of Architecture. Initially a kindergarten school, the campus underwent a transformative renovation in 2019 to house Kuwait University's College of Architecture. This renovation not only reshaped the physical structure but also redefined its functionality by introducing additional structures to support studio spaces for architecture students, later expanding to accommodate the Interior Architecture department. The Adailiya Campus exemplifies how modern heritage structures can be repurposed to meet contemporary educational needs, providing insights into challenges and opportunities inherent in adapting schools into renewed structures. In summary, this study contributes to the discourse on preserving cultural buildings by providing a nuanced understanding of adaptive reuse techniques within the context of educational spaces evolving into modern heritage structures. The findings aim to inform architectural practices, heritage conservation strategies, and educational policies, striking a delicate balance between preserving historical essence and addressing contemporary and future needs.

1. INTRODUCTION

Traditional education in Kuwait was primarily conducted within the confines of mosques and private residences, where scholars imparted religious teachings and basic literacy skills[1]. However, the modernisation and formalisation of education began in the early 20th century, spurred by Kuwait's burgeoning oil wealth and a growing desire for social progress. The government established the first formal school, Al Mubarakiya School, in 1911, marking a significant milestone in the country's educational journey[2]. Subsequent decades saw the establishment of more schools, both public and private, catering to the diverse needs of Kuwaiti society. Today, Kuwait boasts a robust education system that emphasises both traditional Islamic values and modern academic disciplines, with a strong emphasis on literacy, numeracy, and technological proficiency. Kuwait has a history of demolishing modern heritage schools that have become obsolete and forgotten, viewed as eyesores needing removal. To reduce this trend of demolition, we propose the adaptive reuse method. These schools are emblematic of Kuwait's post-oil era, a time when education flourished and architecture symbolised the nation's prosperity. They represent modern heritage in terms of architecture, economy, and society.

2. HISTORICAL CONTEXT AND ARCHITECTURAL ANALYSIS

In the early 20th century, Kuwait lacked a formal educational system, with only a few Quranic schools, called Al-Katatib, funded privately, providing basic education. The establishment of Al Mubarakiya School in 1911 marked the advent of modern education in Kuwait, catering to commercial and clerical training. Subsequent developments included the founding of Al-Ahmedia School in 1921, offering English courses, and an all-girls school providing education in Arabic, home economics, and Islamic Studies. Government involvement in formal education began in 1936, leading to the proliferation of schools, with 17 established by 1945[3].

3. OVERVIEW OF KUWAITI VERNACULAR ARCHITECTURE

Kuwaiti vernacular architecture, rooted in history, culture, and climate, reflects a nomadic lifestyle adapted to the desert. Key features include the iconic "bâdgir / ريق داب" for natural ventilation, mud-brick walls, and enclosed courtyards for cooling and privacy. Ornate details like mashrabiya screens and geometric patterns highlight Kuwaiti craftsmanship and cultural motifs. Despite modernisation, efforts to preserve and integrate traditional elements persist, honouring the country's cultural heritage amid contemporary developments.

3.1. AL-QIBLIYA SCHOOL

The Al-Qibliya School, originally belonging to Mr. Khalaf Al Naqeeb, underwent a transformation into a school in 1938. It is unclear whether the building was given or bought for this purpose. Initially, it was a girls' school constructed with one storey only, using the only available construction method at the time: mud construction. In the 1950s, a second storey was added to accommodate more classes, further expanding the school.

1. "100 Years History of Education in Kuwait". Kuwait: NCCAL, 2013.

2. "100 Years History of Education in Kuwait". Kuwait: NCCAL, 2013.

3. History of Education in Kuwait, (تاريخ التعليم في الكويت الابتدائية والكويت), (Ministry of Education Kuwait), accessed April 2024, https://moe.edu.kw/pages/history

The circulation consists of a "liwan" with columns supporting the roof, serving as a transition for the classes and facing towards the interior.

Following the acquisition of the building by the National Council of Culture, Arts, and Literature, adaptive reuse was implemented. The new function of the building is as a cultural centre, housing offices for the engineering department and other amenities.

Traditional rows facing the teacher have given way to adaptable spaces supporting collaboration, creativity, and experiential learning. Today's designs prioritise natural light, ventilation, and outdoor access for student well-being and engagement. Open floor plans, flexible furniture, and integrated technology facilitate dynamic interactions, promoting holistic learning experiences.

3.2. TRIPE AND WAKEHAM

As Kuwait's education system evolved, so did its architectural landscape. The concept of the Kuwaiti courtyard house, with its emphasis on privacy, natural ventilation, and communal living, influenced the design of modern schools. Courtyards, reminiscent of traditional Kuwaiti architecture, became central features in school designs, providing open spaces for students to gather, socialise, and engage in outdoor activities. Additionally, modern schools incorporate elements such as shaded walkways, natural lighting, and passive cooling techniques to mitigate the effects of the region's harsh climate. By integrating traditional architectural elements with contemporary educational needs, Kuwaiti schools exemplify a harmonious fusion of cultural heritage and modern functionality.

The main spaces were oriented to the northeast, with balconies and cantilevers facing southeast, often shielded by louvers and screens. Faced with a shortage of local labour and suitable materials on site, the architects standardised concrete elements such as beams, floor panels, and column sizes, implementing them in a regular three-metre grid. They used Amara blocks for wall panelling to address these challenges[4]. This design concept features a two-storey, open-air layout, with classroom wings separated by hallways, allowing for greater cross ventilation and making good use of natural light. (**Fig. 1**)

3.3. ALFRED ROTH

Alfred Roth, a Swiss architect renowned for his expertise in school buildings, was recommended by English architect Leslie Martin, who at the time served as a consultant for the Ministry of Public Works. He was invited to Kuwait in September 1965. During Roth's visit to the Kuwaiti schools designed by German and English architects, he identified deficiencies, particularly a disregard for climate conditions[5]. He observed that the classrooms and buildings were excessively open to the environment, which consisted of vegetation-devoid sand. The long and narrow classrooms were also noted as unsuitable for the climate. Roth also argued that the buildings used more area than necessary in circulation and open spaces, possessed inefficient sun and acoustic control, were absent of anthropometric standards, and had no

4. Roberto Fabbri, "Prototyping Spaces for Education Pedagogy, School Planning, Standardization, and Prefabrication in Kuwait's Drive to Modernity.", in *Essays, Arguments & Interviews on Modern Architecture Kuwait, 1949-1989*, ed. R. Camacho, S. Saragoça and R. Fabbri (Zurich: Niggli, 2017), 45-60.

architectural quality. Consequently, Roth submitted a detailed report of his criticisms and suggestions, along with a sketch, by the end of his visit. One of Roth's main beliefs was that the school acts as an extension of a traditional Kuwaiti courtyard house[6].

3.4. AL RUMAITHIYA SECONDARY SCHOOL

Alfred Roth's ground-breaking endeavour, the Rumaithiya Secondary School now known as Al Qayrawan Middle School for Girls, broke ground in 1967 and reached completion in 1971 (**Fig. 2**). Conceived as a response to existing school designs by German and English architects, Roth's prototype echoed the traditional courtyard layout, featuring a central courtyard with rooms opening inward and closed off from the exterior perimeter. The comprehensive space programme included classrooms, special rooms, faculty accommodations, a multi-purpose hall, and a gymnasium. Roth collaborated with the Kuwaiti Engineers Office (KEO) on construction, pioneering a design where all classrooms faced the central courtyard—a novel approach at the time.

The main building, spanning two storeys, housed special classrooms on the ground level, typically larger than average. The first floor accommodated twenty-one classrooms of smaller dimensions, accessible via a transition space positioned 85 cm below, ensuring smooth circulation. Vertical and horizontal window slits on the exterior walls provided protection against the intense Kuwaiti sun, complemented by glass bricks on the ground floor. Departing from predecessors, the building boasted a load-bearing structure of unplastered reinforced concrete. Outer walls made of white sand-lime bricks were insulated with plastered hollow blocks. Aluminium-framed windows and cast stone slabs covered the floors. Due to financial constraints, air-conditioning was omitted, replaced by Roth's innovative cross ventilation system, ensuring comfortable indoor conditions[7].

While the school is still in use, functioning as a school, the abandoned part of the site will be addressed for the framework. The site hosts buildings that used to be the faculty dormitory, then was repurposed as faculty offices. Now abandoned, the building consisting of two identical structures, sit on neglected land adjacent to the school property exposed to the elements, withering away.

4. ADAPTIVE REUSE AND ITS SIGNIFICANCE IN PRESERVING CULTURAL BUILDINGS

Adaptive reuse is a rigorous process, partly due to the cultural significance of these buildings and the number of stakeholders involved. Numerous studies aim to preserve the essential qualities and values of heritage sites, particularly schools, to enhance their current usability and ensure their future preservation. Preserving cultural buildings through adaptive reuse not only maintains a tangible connection to the past but also enriches community life by providing spaces for social interaction, education, and cultural activities[8].

Before these schools were abandoned, they underwent various transformations to accommodate changes and the increasing student population. Unfortunately, some of these changes, along with building

5. Fabbri, "Prototyping Spaces for Education Pedagogy, School Planning, Standardization, and Prefabrication in Kuwait's Drive to Modernity."

6. Alfred Roth, *Das Neue Schulhaus/The New Schoolhouse/ La Nouvelle Ecole* (Zurich: Girsberger, 1950).

7. Ricardo Camacho, Sara Saragoça, and Roberto Fabbri, *Essays, Arguments & Interviews on Modern Architecture Kuwait, 1949-1989* (Zurich: Niggli, 2017).

maintenance, were poorly executed, ultimately leading to their abandonment. The process begins with an analysis of the existing building, encompassing its historical, spatial, and technical aspects. This involves mapping out the building's evolution, gathering information about the site, materials, construction type, architectural elements, and surroundings. The findings from this analysis, investigation, and research are crucial for informing the architects' initial designs.

4.1. OPERATIONAL SYSTEM

In directing this process, it is essential to distinguish between recognised and categorised values in the value assessment. This enables the determination of the most significant elements deserving conservation. This inevitably involves decisions between conservation and change, blending and contrast, and continuity and partial renewal. However, it falls upon the architect to unify, balance, and fortify both the historic values and future functionality, alongside other pertinent values.

Once the appropriate function is determined and agreed upon for the building, various strategies can be implemented. Seven different approaches, depending on analysis, can be used when adding new elements to the building. These include:

1. Building within
2. Building over
3. Building alongside
4. Building around
5. Adapting to a new function
6. Building in the style of
7. Salvaging materials for recycling

4.2. CRITERIA FOR ADAPTIVE REUSE APPLICATION

In the process of repurposing old or historic buildings for new uses while retaining their heritage value; The criteria for an adaptive reuse application typically include the following considerations:

1. Historical Significance: Evaluate the building's historical value, considering architectural style, past events, and its contribution to heritage.
2. Structural Integrity: Assess the building's condition for safety and stability, determining if renovations are necessary.
3. Architectural Features: Identify and preserve key architectural elements that define the building's character.
4. Adaptive Potential: Evaluate the feasibility of adapting the building for a new use while maintaining historical integrity and modern functionality.
5. Market Demand: Analyse demand for the proposed space based on location, demographics, and economic trends.
6. Regulatory Considerations: Ensure compliance with zoning laws, building codes, and preservation regulations.
7. Financial Feasibility: Conduct a cost-benefit analysis comparing

8. Jorge Otero-Pailos, Thordis Arrhenius, and Erik Fenstad Langdalen, *Experimental Preservation* (New York: Routledge, 2022).

adaptive reuse to other options, considering renovation costs and potential income.

8. Community Engagement: Involve stakeholders to align the project with community values and priorities.

4.3. HISTORIC ASSESSMENT AND EVALUATION

As a start, the initial step in determining a conservation plan involves a comprehensive process of examining and analysing a historic building to understand its value, condition, and potential for adaptive reuse or preservation. This includes evaluating several key factors:

1. Age of fabric/style: Refers to the historical period during which the building was constructed and its architectural style. Understanding the age and style helps in determining its historical and architectural significance.

2. Condition: Pertains to the current state of the building's physical condition, including any structural issues, decay, or damage. Evaluators assess the level of deterioration and required maintenance or restoration efforts.

3. Utility: present/future: Evaluates the building's current and potential future usefulness or functionality. It considers whether the building is currently serving a purpose and its adaptability for future uses or renovations.

4. Importance in urban setting: Assesses the significance of the building within its urban context. Factors may include its role in defining the neighbourhood's character, its contribution to local history, or its influence on surrounding architecture.

5. Contribution to urban character: Examines how the building adds to the overall aesthetic and cultural ambiance of its urban environment. It considers architectural features, scale, materials, and historical context.

6. Details/artefacts: Refers to specific architectural details, decorative elements, or historical artefacts within or associated with the building. Evaluators assess their significance in preserving the building's historical or cultural value.

7. Archaeological/historical significance: Evaluates the building's importance from an archaeological or historical perspective. It considers any archaeological findings associated with the building or its site, as well as its historical relevance to the local community or broader historical narrative.

8. Loss of features: Refers to any original or significant features of the building that have been lost or compromised over time. This could include alterations, demolitions, or deterioration that have affected the building's historical integrity.

9. Unsuitable additions: Involves assessing any modern additions or alterations that are incompatible with the building's original design, architectural style, or historical significance. These additions may detract from the building's overall value or character.

5. FRAMEWORK

An Adaptive Reuse Framework was developed and designed to be adaptable, focusing on repurposing school buildings. Three different school prototypes

were selected, and the framework was applied to each, resulting in distinct outcomes for each case.

5.1. THE ADAILIYA CAMPUS

The Adailiya Campus presents a unique case, characterised by its evolutionary history and the blend of educational buildings added over time. Initially, it follows the "E" layout prototype, designed by A. R. Fuchs, a German architect at the Ministry of Public Works in the 1950s. Dubbed "Fox's Model," it features three levels. The main horizontal bar serves as the core, with three smaller bars extending from it. A narrow yet spacious transition space leads to larger classrooms or seminar halls. The initial prototypes of post-oil era schools were generously spacious, with significant amounts of unused space serving as corridors or transition areas. These spaces now offer the opportunity and flexibility to introduce appropriate interventions that enhance both the space and the functionality of the building. The smaller bars branching from the main one contain smaller classrooms, each flanked by exterior hallways. (**Fig. 3**)

5.2. IDENTIFY RENOVATIONS ON SITE

Fuchs's model was renovated only on the ground and first floors, leaving the second floor with little to no intervention. The old window frames were replaced with newer aluminium frames for better insulation. Doors were painted, and some were replaced. Large classrooms were redivided with gypsum board to accommodate the sizes according to the needs of the previous use. Access to the back corridors was closed off, leaving them unused.

The renovation of the Kindergarten consists of white Alucobond aluminium cladding on the exterior. A steel structure was added on the interior for support. Some repairs and additions to the site are not appropriate and need to be reconsidered to achieve better functional performance.

5.3. ASSESS AND ANALYSE

The first step in introducing a new use for a building is understanding it, exploring its features, and identifying new opportunities that would encourage people to use it. The more people use the building, the longer it remains vibrant, avoiding abandonment and deterioration.

5.4. INTERVENING WITH THE SITE

Introducing a new function to the site/building to host craft workspaces, small office spaces for local architecture firms offering internship programmes for training, and a section for an architect residency programme. The new function would also include a commercial section offering materials and art supplies, as well as a café and restaurant to generate funds for repairs and maintenance of the building. A facility management plan will be implemented before, during, and after the renovation to ensure the longevity of the building's function, allowing for flexibility to adjust to the needs of students and other users of the building.

The top floor of the building, currently abandoned, will host the three to four new functions after the necessary renovations and repairs. Each function/programme will be situated in one of the four wings.

Introducing the new functions programme:

1. Vocational crafts school
    a) Materials lab
    b) Lecture rooms and classrooms
2. Architect residency
    a) Communal studio
    b) Private office
    c) Meeting room
    d) Video streaming room
3. Commercial and offices
    a) Offices for rent
    b) Café
    c) Restaurant
    d) Communal working spaces

If there were to be an intervention within the existing building, the new construction would be assembled rather than built anew. It involves dry construction with only a few materials, echoing the original structure. Various forms of wood could be utilised: solid, agglomerated, cross-laminated, etc. These materials are joined together similarly to textiles, allowing for assembly and disassembly, making the construction "reversible" in nature.

The intervention in the building activates all original elements, incorporating them into the new programme while utilising the physical, spatial, and historical qualities of the structure. This approach enhances efficiency and strengthens the character of the original building in the new construction.

New structures intervening within the existing building will feature contrasting materials to distinguish them from the original structure. This approach ensures that the original building stands out, narrating its own story, while the intervening elements add a contemporary layer to the building's narrative. Similar materials to those existing in the building are reserved solely for repair purposes.

6. CONCLUSIONS

Kuwait's educational journey intertwines cultural preservation and architectural evolution. Traditional Kuwaiti elements, like courtyards and ventilation systems, harmonize heritage with functionality. Adaptive reuse breathes new life into historic school buildings, honouring their significance while meeting modern needs. Interventions introduce contrasting materials to distinguish them from the original structure, adding a contemporary layer while preserving the building's narrative. Results from the proposed framework show enhanced structural integrity, heightened community







Figure 1. Aerial view of Balqees School, providing a broader perspective of its layout and design. © Naser Ashour.

Figure 2. Aerial photograph of Rumaythiya School (now Al Qayrawan Middle School for Girls) in 2024, showcasing its courtyard layout and innovative classroom orientation. © Naser Ashour.

Figure 3. Aerial photograph of the Adailiya Campus in 2024, showing the layout and architectural evolution over time. © Naser Ashour.

engagement, and renewed cultural vitality across the four schools studied. This balanced approach ensures the past informs the present, shaping Kuwait's bright future. ■

BIOGRAPHIES

Rabab Raes Kazem, an architectural designer based in Kuwait, is passionate about using architecture to foster social awareness while remaining mindful of context and time. With a Bachelor of Sciences in Architecture from Roger Williams University and a Master of Arts in Art and Architecture History, Rabab furthered her studies with a Master's in Architecture from California College of Arts. Her focus on architectural heritage and multi-sensory design practices emphasizes architecture as an immersive experience. Currently at the National Council for Culture, Arts, and Literature, Rabab works in the Department of Documentation and Survey of Historical Buildings

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IDEAS BEHIND THE FORM: OVERLOOKED QUALITIES OF THE EXPERIMENTAL SCHOOL IN BRATISLAVA

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ABSTRACT

The aim of the paper is to show the importance of awareness of the period context related to the design of school buildings in the era of socialism in the then Czechoslovakia, using the example of an experimental school in Bratislava, designed and realized by the prominent Czech architect Vladimír Karfík in the second half of the 1950s (in collaboration with the civil engineer Jozef Harvančík). Especially for the experimental schools, it is not only its fabric, but also its inclusion in the period discourse that justifies their significance and should inform the character of future adaptations. In the case of the school under study, this was not quite the case. Although the current adaptation has not led to any major construction interventions and the building still serves its original function, the (reversible) changes show a substantial disregard for the original innovations. Values of schools built during socialism are often overlooked, along with the fact that architects in the Eastern block – similarly to their counterparts in Western countries – tried to design buildings that adequately responded to the various issues of the time, not necessarily aiming to comply with the communist regime in the first place. In the case of the researched experimental school, the paper builds its argument not as much on the knowledge of Karfík's background – his work experience for Le Corbusier and Frank Lloyd Wright, or for the Bat'a company, which marks his most important realisations – but on archival and field research, and mostly on a content analysis of a book that Karfík co-authored.

1. INTRODUCTION

Czechoslovakia was reunited after World War II, but the interwar democratic regime was replaced by a totalitarian one, subordinate to the Soviet Union. The changed political and economic situation was naturally reflected in the building industry – in the goals it pursued, but also in the technical and material possibilities of construction, while typification and prefabrication became important tools of its economisation. Following the example of the USSR, five-year plans for the development of the national economy were intended to help the effective development of the war-torn country. All this was also reflected in the construction of school buildings, of which there was a shortage after the war, while one of the important priorities of the new socialist state was to enable equal conditions of education and teaching for all as advocated by the School Law from 1948. Therefore, since 1950, typification became the main tool for the mass production of building prefabricated building elements, to increase the volume of construction, reduce labour and speed up construction time. This also meant that the school building layouts and structural types were stabilised for 3 to 5 years which limited the architects' possibility of responding flexibly to new progress[1].

However, some solution was offered by a prototype construction, which allowed, along with the otherwise consistent application of a particular school type, to design a certain percentage of schools according to experimental projects proposed by research and study institutes, universities or state design departments. Although the experimental projects permitted the architects to test different aspects from a pedagogical, architectural or structural point of view, as they were prototypes, the buildings might have been in some respects of a lower quality of execution. This paper seeks to show through the specific example of an experimental school in Bratislava (now Slovakia), that it is precisely why the knowledge of the context and conditions under which experimental schools were built in the former Czechoslovakia, is crucial in order to propose appropriate contemporary adaptations. Ignorance of the former context can lead to an incorrect assessment of the architectural significance and thus to inappropriate building interventions.

Although this paper seeks to highlight the largely forgotten contribution of the school designed by the architect Vladimír Karfík (1901–1996) and civil engineer Jozef Harvančík (1921–1987), it will not attempt to contradict the shortcomings of the building's execution or attribute unlikely qualities to the school's architecture. However, by pointing to the specifics of the time and place, as well as the international context, it will argue that the value of the building lies in the fact that it is one of the few important manifestations of the efforts of Czech and Slovak architects to reflect global post-war trends. The research aims to demonstrate that the design of the school can be read as an attempt to contribute to the formation of a conscious society rather than to "building of socialism" – as it had to be officially claimed – which increases the likelihood that the building will be adapted in the future in alignment with its original innovative features that can still be restored although they have been suppressed over time.

1. Vladimír Karfík, Světla Karfíková and Marián Marcinka. *Nové smery vo výstavbe škôl* (Bratislava: SFVU, 1963), 187.

The arguments presented in the paper are based on the results of architectural-historical research, which drew mostly from archival sources (personal fund of the architect Vladimír Karfík, Brno City Museum), site research, and period journal and book publications. Key outcomes have been obtained by a content analysis of the book *Nové smery vo výstavbe škôl* (New Directions in Construction of Schools??)[2], co-authored by Karfík. In addition, contemporary literature on the topic of school buildings has been studied. The paper is divided into the following sections: description of the school building in Bratislava itself, clarification of the context of the post-war period and the construction of schools on European scale as well as in Czechoslovakia, and lastly Karfík's contribution to the topic of school buildings, awareness of which should be taken into account for future adaptations, as the paper proposes.

2. THE EXPERIMENTAL SCHOOL IN BRATISLAVA

The school in question was built in Mierová kolónia – one of the housing settlements of a large chemical plant in Bratislava[3]. It was a prototype of a secondary (8-year, 9-class) school that emerged from the research task of an experimental project focused on the construction technology of prefabricated schools, which was solved by the research team of the Slovak Technical University in Bratislava in 1956 under the leadership of the architect Vladimír Karfík. Built in 1957, the aim was to test the assembly system, reduce the consumption of building materials, and also to evaluate the classrooms with a square floor plan and bilateral natural lighting in terms of the layout and operation of the building[4]. (**Fig. 1**)

Although the new construction technology ultimately made the building more expensive than the use of a conventional one, it took only 3 weeks to manufacture the building elements and 6 weeks to assemble the building carcass. Despite the fact that the photograph of the school appeared on the cover of the publication *Výstavba škol v Československu* (Construction of Schools in Czechoslovakia) and subsequently in the book *Nová technika a architektura* (New Technology and Architecture)[5], architecturally the project did not impress the professional public very much, as can be understood from the brief commentary by an unnamed editor of the prominent Czechoslovak architectural magazine *Architektura ČSR*, where only one page was devoted to it. Although the editor praised the progressiveness of the layout and the structural system, as well as the fact that the authors preferred square classrooms to the hitherto predominant type of classrooms with a rectangular plan, the architectural expression subordinated to the structural system did not, in his opinion, "sufficiently convey the building's purposeful mission and meaning"[6]. (**Fig. 2**)

However, a more complimentary review by the architect Dušan Kuzma published in the *Projekt* magazine explains that the modular grid of the structural system was determined by the basic layout of the classroom with dimensions of 7.8 m x 7.8 m, which in turn determined the width of the wall panel (195 cm) made of expanded clay concrete, in which the authors also took into account its weight to allow easier transport and installation.

2. Karfík, Karfíková and Marcinka, *Nové smery vo výstavbe škôl*.

3. The factory was founded at the end of the 19th century by the Swedish inventor Alfred Nobel. Several housing settlements for its workers are still in use today.

4. Karel Storch (ed.), *Nová technika a architektura v Československu* (Praha: Svaz architektů v ČSSR, 1961), 72.

5. Karel Josef Laboutka, *Výstavba škol v Československu* (Praha: Státní pedagogické nakladatelství, 1957). Karel Storch (ed.), "Nová technika a architektura v Československu", 72-74.

6. *Architektura ČSR* 18, no. 5-6 (1959), 324.

Kuzma describes the interior features in more detail, suggesting that despite the less convincing architectural expression of the building's exterior, the authors took care to create a quality learning environment. The box-like form of the reinforced concrete parts allowed for built-in cabinets and glass display cases to be built into the wall, allowing for a visual connection to the corridor space (**Fig. 3**). Physical well-being of students was to be aided by forced ventilation provided by equipment connected to the heating by means of units located under the windows[7].

The quality of the original spatial layout of the school and classrooms is evidenced by the fact that the building has not ceased to serve the school function – the building was acquired on a 30-year lease in 2004 by the Waldorf School. Although it can be seen as positive that the building remains to serve the school function, and the original spatial concept has proved to be suitable for the current use without necessity of major construction interventions, the adaptation shows a complete ignorance of the quality of the original concept.

3. POLITICAL AND HISTORICAL CONTEXT

Only by understanding the historical and political context – in Europe as well as in Czechoslovakia – is it possible to become more aware of the importance of the school for the local architectural discourse. The period after the end of World War II was characterised by efforts to rebuild war-torn Europe. Among the public facilities that the European governments were interested to invest in, education played an important role. For Western European countries (primarily Denmark, Norway and Sweden, but also the UK and France) education was a means to build a social democratic infrastructure, while for post-fascist states – such as Italy – focus on young children offered an opportunity to "build democracy and long-term resistance to fascism," as Ian Grosvenor and Catherine Burke stress in their book *School*[8]. In Germany, architect Hans Scharoun experimented with ideas for appropriate school design in line with contemporary international concerns for child-centred education and the strengthening of democratic society[9].

At the same time, several countries faced a shortage of school buildings in the early part of the 20th century, and the construction of new schools became an opportunity to support new concepts of education by creating appropriate spaces. Experts and educators alike began to think of the school building as a "third teacher," as schools were expected to fulfil through their design and organisation the notions of a "democratic and egalitarian society," where young people as individuals would be respected, supported in their abilities, and "[n]ursery schools, elementary schools, community schools, and colleges" would become places where societal inequalities could be eliminated[10]. The form of new school buildings was also discussed within the framework of the Commission on School Buildings of the International Union of Architects (UIA) at a meeting organised by the UIA in 1958 in Rabat, Morocco, attended by representatives of several European countries (the Netherlands, Czechoslovakia, Great Britain, Sweden, France, Germany, France, member countries of the Commission)[11].

7. Dušan Kuzma, "Montovaná škola," *Projekt 1*, no. 1-2 (1959), 14.

8. Ian Grosvenor and Catherine Burke, *School* (London: Reaktion Books, 2008), 119.

9. Grosvenor and Burke, *School*, 120.

10. Grosvenor and Burke, *School*, 120.

11. "Compte rendu de la reunion de la Commission des Constructions scolaires a Rabat (4–7 Fevrier 1958)", in *Constructions scolaires, Bulletin information* (March 1958). According to Christine Savonneau (UIA General Secretariat), email message to author, April 4, 2024.

The meeting prompted the drafting of the *Charte des Constructions Scolaires* (School building charter), which, after rectification, was published in 1959[12]. The aim of the Charter was to set out basic principles for school buildings that can be adapted to the specific conditions of individual countries, as the "diversity of problems, the variety of human, economic and geographical conditions, and the rapid development of teaching and construction techniques" did not allow "to develop standards for the dimensions or types of buildings". Although Europe was divided by the Cold War, the UIA meeting in Rabat, Morocco, was attended by architect Bedřich Schránil on behalf of Czechoslovakia, in addition to representatives of Western countries, and the Charter was published in full in the journal *Architektura ČSR* in 1959[13]. It may seem paradoxical that Czechoslovakia, as an Eastern Bloc country, was keen to follow the Charter, since Western countries saw in the schools the potential to strengthen democracy according to the Western model, which was undoubtedly not the goal in the countries under the Soviet Union. But the situation was a little more complex as following section shows.

4. KARFÍK'S CONTRIBUTION TO SCHOOL BUILDINGS

The interest in Western trends most likely reflected attitudes of those architects, who were still influenced by the ideas of interwar democratic Czechoslovakia. From today's point of view, it is not always possible to clearly distinguish between what the architects themselves tended to achieve, and what the regime forced them to do. As architecture historian Veronika Hittmanová Rollová points out, "Left-wing oriented architects had […] considered their profession in a wider social perspective even in interwar Czechoslovakia."[14] But even neutrally oriented architects – among whom Karfík can be counted – were interested in contributing to progress with their work.

Whereas the article by education expert Karel J. Laboutka from 1961 evaluating the post-war school buildings in Czechoslovakia states that according to the 1948 law "conditions were created for the application of the principles of socialist pedagogy"[15], the published texts of the architects show that they were keenly interested in the debate in the West and were inspired by many examples from there. So, while the law promoted a teacher- rather than a student-centred approach in the educational process – which also meant preference of the rectangular shape of the classrooms among other things – architects were not reluctant to test more "democratic" square floor plan classrooms.

Regarding Karfík, and the co-authors of the book *Nové smery vo výstavbe škôl* (**Fig. 4**), architects Světla Karfíkova and Marián Marcinka, it is obvious that in order for the book to pass the censorship, it was not possible to completely omit the obligatory passages characterised by their socialist rhetoric and references to Soviet models. But a closer analysis of the text of the book shows that the authors not only refer to the objectives of the UIA Charter[16], but also to principles that are more in line with trends

12. "Charte des Constructions Scolaires", in *Bulletin d'information* n°20-21, (March – June 1959). As in Christine Savonneau (UIA General Secretariat), email message to author, April 4, 2024.

13. "Charta školských staveb UIA", *Architektura ČSR* 19. no. 7 (1960), 486-489.

14. Veronika Rollová, "A Revolution That Did Not Produce a New Space?", in *The Future Is Hidden in the Present*, ed. Veronika Rollová and Karolina Jirkalová (Praha: UMPRUM, 2021), 10-11.

15. Karel Josef Laboutka, "Výstavba školních budov v ČSSR," *Pedagogika*, no. 6 (1961), 671.

16. Josef, "Výstavba školních budov v ČSSR", 671.

in the West. One of them is the square floor plan used in the experimental school in Mierová kolónia. Also, the book's bibliography mentions a number of Western, even U.S. publications.

An interesting finding comes from the analysis of the image material: 65% of the total number of images officially refer to Western school projects in Europe (mostly from Switzerland, Denmark, Sweden, France and also Great Britain), but also the U.S.A. The percentage would likely be higher because the captions for several of the images, which are reminiscent of schools in the West, lack an indication of location. In his review of the publication, architect Vladimír Dedeček highlights the attention paid by the authors to the "basic unit of the school, the classroom, its shape, size and furnishings", where the "variability of the furnishing of the space is emphasised as an important psychological component of the pedagogical process"[17].

The fact that the architects' focus is on the quality of the classroom space and not on the exterior expression of the building is very much representative of Karfík's overall post-war work, where he concentrates on the functional and technical issues of architecture. This is probably why the building, which inspired several school projects in Brno[18], largely fell into oblivion in the past decades. The totalitarian regime that forced Karfík, like other architects, to give up designing in his own office, was not tolerant of either his American experience or his history of working for the capitalist Bat'a. While his postwar professional focus made him acceptable to the communist regime, in 1956 he was even awarded a state prize for his work in the field of progressive building construction; at the same time, as an educator he remained a valued liaison between students and the ideas from the Western world.

5. CONCLUSION

Although the interventions in the experimental school in Mierová kolónia may not be perceived as particularly problematic – they are reversible and the original construction had its shortcomings; this situation highlights a problem that not only the wider public, but also the architects themselves lack sufficient insight and awareness of the work of their predecessors from the relatively recent past. This was confirmed a few years ago when a member of the international jury of an important Slovak architecture prize CE·ZA·AR 2019, attempted to highlight the qualities of an awarded project – adaptation of a school from 1970s – by criticising the original work as "soulless" and "gloomy", typical for architecture built in the period of socialism[19]. One of the older generation of architects, Imrich Ehrenberger (1939), reacted to the situation with justified indignation by publishing a personal reflection[20], which drew attention to the problem of simplistic interpretation of history and evaluation of works.

Similar situations show that school buildings from the socialist period are often quickly and unjustifiably undervalued. Experimental projects are even more vulnerable in this respect, as they are prototypes that may not have been repeated. Their appearance alone, without closer examination and

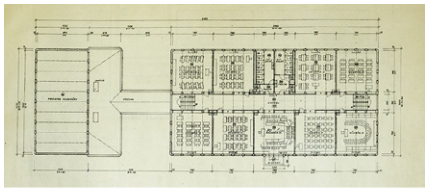
17. Vladimír Dedeček, "Recenzia na Nové smery vo výstavbe škôl," *Projekt 5*, no. 1 (1964), 25.

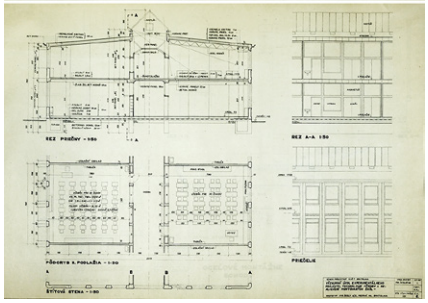
18. Štefan Šlachta and Vladimír Šlapeta, "Stretnutia dnes už historické. II. časť," *Projekt* 25, no. 4, 49.

19. "CE·ZA·AR 2019 – výsledky", Archinfo, accessed February 12, 2024, https://www.archinfo.sk/sutaze/slovenske/ce-za-ar-2019-vysledky.html

20. Imrich Ehrenberger, "Nedalo mi," accessed February 12, 2024. https://www.archinfo.sk/diskusia/blog/vykon-povolania/nedalo-mi.html?fbclid=IwAR0A_tzS4-C8ZyOBoQZsFfmwyU0rJwx4Sthu64Mc-BX83GcpYmlpiZM0sHI

knowledge of the context, may not speak clearly enough about their overall architectural values. At the same time, a lower quality of construction does not mean that a building does not deserve a responsible approach when adapted. It is the knowledge of the context of the experimental school in Bratislava, whose current state has completely obscured the unique creative efforts of its authors, that points to the importance of paying attention in research to the context that led to its emergence. ■









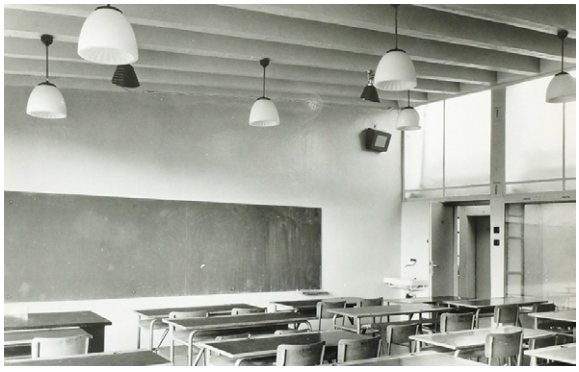


Figure 1. Vladimír Karfík and Jozef Harvančík, proposal of an experimental school (1956) as one of the results of a research project pursued at the Slovak Technical University in Bratislava. © Brno City Museum.

Figure 2. Vladimír Karfík and Jozef Harvančík, Experimental school, Bratislava, Slovakia, 1956–57. Exterior view. © Brno City Museum.

Figure 3. Vladimír Karfík and Jozef Harvančík, Experimental school, Bratislava, Slovakia, 1956-57. Interior of the bilaterally lit classroom with a glazed wall panel allowing a visual connection from to the hallway. © Brno City Museum.

Figure 4. Cover of the book Nové smery vo výstavbe škôl by Vladimír Karfík, Světla Karfíkova and Marián Marcinka. © SFVU, 1963.

BIOGRAPHY

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SOCIAL SUSTAINABILITY THROUGH ADAPTIVE REUSE CASE STUDY: MT. PLEASANT HIGH SCHOOL – USA

#05

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RHODE ISLAND SCHOOL OF DESIGN

MAYA WEBER
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ABSTRACT

Preserving or reconstructing a building that has outgrown its function has always been a subject for rigorous debate. Adaptive reuse can contribute to a sustainable and culturally rich built environment by preserving and repurposing existing buildings.

The Providence Preservation Society initiated a reuse project using the social sustainability adaptive reuse approach in collaboration with the Rhode Island School of Design to explore the possibilities of reusing all or parts of the historic building of Mt. Pleasant High School in North Providence instead of demolishing and reconstructing it.

During this project, we explored historical documents and interviewed people with different relationships with the school, such as current and previous students, teachers, and neighbors.

Enhancing the neighbors' and students' awareness of the environmental and social aspects of demolishing this building is the primary goal of this investigation. The assessment of cultural heritage is often clouded by public perception, particularly concerning preserving architectural heritage from the Modern Movement era that emerged in the 20th century. While experts recognize Modern Movement artifacts as cultural heritage, the views of non-experts often diverge. By introducing the potential of the building to the community, we hoped to show how a slight intervention can lead to sustainable results and provide a productive learning atmosphere.

The outcome of this investigation is to supply the basis to start an informed conversation alongside presenting a potential solution. The adaptive reuse of the historic Providence High School reflects a community-driven vision for a sustainable future. From its architectural history to generating a new proposal, each step embodies a commitment to conserving and revitalizing the building. This initiative showcases the potential of adaptive reuse to foster social sustainability while simultaneously considering environmental and economic aspects for constructing a future that respects the past while meeting present and prospective needs.

1. INTRODUCTION

A monumental yet crumbling brick building, surrounded by two-story residential housing is the first impression you get when approaching Mt. Pleasant High School.

Early modern buildings now demand some physical and functional alteration. However, functional unresponsiveness is mainly the result of social trends and changes in urban contexts. The causes must be analyzed in order to present a responsive reuse plan.

Searching for the roots of the dysfunction of Mt. Pleasant High School, we found widespread issues affecting the area: namely, neighborhood families are not sending their children to this school. The Mt. Pleasant High School students are shuttled to school from lower socio-economic neighborhoods in the city. These socio-economic differences between the neighborhood and the students are challenging and must be addressed. The overall academic feedback of the students and the school's performance could be more satisfying.

Merely physical improvement could not restore the school's lost reputation. To convince the Providence Public School Society, it needs to remain an academic building with the possible additions.

Mt. Pleasant High School is a public school in Providence, Rhode Island, USA. It was built in 1938 by architects at the Office of the Commissioner of Public Buildings. It is a four-story red-brick-and-limestone building with approximately 300,000 square feet. Two large asymmetrical towers flank the main entrance in the center.

The building's style is on the edge of modernism trends with a steel frame structure, and the main facade follows collegiate gothic. At the rear, the floor-plan follows the function precisely, and the height of each mass section is leveled based on its needs.

The interior is in various states of disrepair. There are holes in the floors and water damage in some rooms. The exterior facade is partly covered in netting to prevent injury from falling bricks. Providence Preservation Society placed it on its Ten Most Endangered list.[1]

According to Providence Public Schools' policy, public schools need less square footage, and the strategy is either demolition and rebuilding or to rehabilitate selectively. The school is a local landmark. It is the tallest building in the area, and the towers can be seen from different parts of the neighborhood.

To prevent the building from being torn down and present an adaptive reuse solution that respects and protects the existing structure, we needed to collect social data and ideas, preferably to come up with a solution that addresses the concerns of the target users: students, neighbors, and parents, with a comprehensive rehabilitation or reuse project, and spread awareness of the carbon consequences if the building is demolished.

1. Providence Preservation Society. "Mount Pleasant High School," accessed May 2, 2024. https://ppsri.org/advocacy/current-advocacy/mount-pleasant-high-school/

2. LITERATURE REVIEW

The main goal of this project was to gather the community's concerns and points of view while involving them in the decision-making related to the

iconic high school in order to achieve a long-lasting and sustainable strategy for intervening or potentially reusing this local heritage.

2.1. ADAPTIVE REUSE

Based on the definition of the ICOMOS New Zealand Charter (2010), adaptation is the process(es) of modifying a place for compatible use while retaining its cultural heritage value.[2] Adaptation processes include alteration and addition.

Adaptive reuse is based on the words 'adaptation' and 'reuse.' The term refers explicitly to changes that involve a functional and physical component that is not necessarily radical.[3] Social trends are noticeable in the majority of reuse cases.

In the past, the practice of altering existing buildings for new uses occurred spontaneously. However, currently, the approaches can be people-led, building-led, or policy-led.[4] the Mt. Pleasant High School project is a combination of the three.

We often appreciate adaptive reuse not only for its environmental benefits but also for the layers of history and meaning embedded in older structures. It contributes to a sustainable and culturally rich built environment by preserving and repurposing existing buildings.

2.2. SUSTAINABILITY

It is accepted that this triad model, in which ecological, economic and social factors are necessary to formulate sustainable development methods. This three-pillar sustainability model has dramatically evolved in developing each aspect independently.[5]

The active NGOs claim that people want the same things: access to clean air and water, economic opportunities, a safe and healthy place to raise their children, shelter, lifelong learning, a sense of community, and the ability to be involved in the decisions that affect their lives.[6] Addressing the particularly relevant local needs while conserving and enhancing the values of our built heritage can be a more intelligent move towards sustainable development, encompassing social and cultural sustainability.

Accordingly, the main goal of this investigation is to consider all three essential pillars appropriately by eliciting the community's concerns and needs.

2.3. COMMUNITY DRIVEN

Engaging the community in design is a process, methodology, or practice of designing with people who will benefit from the design. The ethos of this design model values people by recognizing end users or beneficiaries as the project's primary goal. Whereas architects and professionals can bring technical expertise and particular skills to a given design project, community members bring local expertise and knowledge that designers might lack.[7]

Expanding the concept, community-driven development gives control of decisions and resources to community groups themselves rather than

2. ICOMOS, New Zealand. "ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value." *ICOMOS: Auckland, New Zealand* (2010).

3. Bie Plevoets and Koenraad Van Cleempoel. *Adaptive reuse of the built heritage: Concepts and cases of an emerging discipline*. Routledge, 2019.

4. Derek Latham, *Creative reuse of buildings: Volume one*. Routledge, 2016.

5. Efrat Eizenberg and Yosef Jabareen. "Social sustainability: A new conceptual framework." *Sustainability* 9, no. 1 (2017): 68.

6. Institute for Sustainable Communities. "What is a Sustainable Community?", accessed May 2, 2024. https://sustain.org/about/what-is-a-sustainable-community/.

7. Travis Hicks, *Community-engaged Interior Design: An Illustrated Guide*. Taylor & Francis, 2023.

the planners. These groups often partner with demand-responsive support organizations and service providers, including elected local governments, the private sector, NGOs, and central government agencies. Community-driven development is a way to provide social and infrastructure services, organize economic activity and resource management, empower poor people, improve governance, and enhance the security of the poorest.[8]

According to these definitions, the connected people are involved in the decision-making phase and outcomes of this intervention and reuse design.

3. METHODOLOGY

The building's documentation and data were collected alongside interviews in order to create the building information model for this project.

We started our project at the Providence Archives by looking over historic blueprints and building documents in order to construct a building information model. The BIM model also helped us to calculate the embodied carbon of the building as well as operating energy demands. Our second methodological approach was to conduct interviews. During this project, we tried to speak to as many people as possible, including current students, teachers, students from the neighborhood who went to different schools for the above-mentioned reasons, and the neighbors in the area. We first spoke to an artist living in the neighborhood who built a miniature replica of the school out of Legos. He did this in order to make the building more relatable to others, because it allows a bird's eye view of the structure and engages people of all ages. He proudly described his strong bond to the school - his grandmother was one of the first students to be educated in the building, and his great-grandfather was a bricklayer who built the auditorium. We spoke to other people whose ancestors were also the bricklayers who built this building and learned about their personal connection to it.

By speaking to us, if only for 3-10 minutes each, students had the opportunity to voice their opinions. While a lot of the students were not interested, some took the time to give us their honest answers and started questioning what their learning environment should and could look like. During our interviews, we became aware of the disconnect between the neighborhood and the students. The neighbors were primarily interested in protecting the shell of the building because of its connection to their history rather than its present or future role. The privileged students who went to better-performing schools, were more concerned and focused on the carbon footprint of possible demolition. The students attending the school were primarily concerned with the present condition of the building.

The main consensus we got from interviewing Mt. Pleasant students was that they have no pride in their school, and, therefore, do not care what happens to the building. We quickly realized that finding intersection points between the school and the neighborhood had to be part of a solution.

8. Philippe Dongier et al., "Community driven development." *World Bank Poverty Reduction Strategy Paper* 1 (2003): 303-327.

4. RESULTS

Our conversations and observations helped us create the outline of a social event, including a community charette and ten-day exhibition, to engage the building's current and potential users. Our potential audiences included the Providence Preservation Society, students, neighbors, architects, the Providence School Board, and interested people.

Six posters were provided (**Fig 1**) for this social event to describe and visualize the heritage values of the site and its engagement with urban contexts and residents' memory. Furthermore, the posters clearly explained the environmental implications of demolishing the building in the form of easily understandable infographics. The interactive sections of the presentation illicited their opinions on reconstructing or reusing the building considering the information we made available. The participants were offered a playful surface to stick notes, draw dreams, and compare opportunities.

Additionally, the team has provided their own planning and design as a sample reuse idea (**Fig 2**). This idea was driven by one interview with a girl who felt like nothing she was learning was preparing her for life after graduation. She mentioned that some vocational skills, like cosmetology, could enhance career opportunities.

Accordingly, we propose to replace less than 10% of the square footage of the building, which has not been renovated, with an extension providing a light filled space for students and additional office space. The office space could house: Cosmetology, Architecture/Landscape Architecture, IT, Catering, Dentistry, and Carpentry. These spaces are offered for rent at affordable rates. In exchange, this would offer students a glimpse into these professions one day a week, providing students with real-life experience and exposing them new skills. Businesses could hold weekly mentoring sessions and workshops for students interested in that field, for fee. This will not only inspire students toward future career opportunities but can also bring clients from the neighborhood into the building from a separate entrance. Connecting the neighbors to the school and its novel approach to training would make great strides toward restoring its reputation. This approach would also generate income for the building through rents, which could then be used for educational purposes and improving the well-being of the students.

In terms of physical intervention, we wanted to avoid gutting the entire structure and leaving only the building's prominent facade. In the case of this project, the changes needs to be visible from the street. This is why our suggested addition to the building was the bold gesture of cutting out a small section of the front-facing facade. We want to emphasize that modernization and changes to the existing building have been made, creating a new and inviting space to learn.

We needed to address both student and neighborhood groups - promising the students to update the outdated interior while also catering to the desire of the neighbors to restore the exterior of the building. The new

glass addition allows a look into the building connecting the neighborhood to the life of the building inside.

By opening a section of the right wing of the building and creating an open space, we are resolving the problem of too much unused square footage and aligning it with requirements set by the school board.

By adding a multi-floor light-filled atrium with seating, plants, and bridges, we hope to offer students an intersection between the office space and communal space — a space that invites them to do homework or spend time with classmates outside of class hours.

Environmentally, the building information model provided us with the opportunity to estimate the building's embodied carbon and energy usage and cost. Designers can defend their reuse plans by providing calculations and presenting how environmentally friendly they can be. Also, the effects of retrofit detailing on energy consumption can be measured and analyzed.

Economically, the proposed planning could increase the school's income by renting out the workshops, which can be used for academic purposes and school amenities. This source of income contributes to sustaining the school and enhancing its performance. Unfortunately, the charette did not take place despite the team's preparation and effort. There were several reasons that this community engagement event did not take place, reasons that were not related to preservation.

Initially, the Providence Preservation Society reached out to the Interior Architecture Department of the Rhode Island School of Design about whether students could volunteer their time to research, engage the community, and plan a preservation project. The authors, two graduate students in the post-professional program on adaptive reuse, volunteered. Our research allowed us to create a process for a community charette that presented the positive aspects of reusing structures, especially in an age of climate crisis.

Mt. Pleasant High School, Providence Public Schools, and the RI Department of Education had been proceeding with a plan to demolish Mount Pleasant. After receiving concerns from the community, Providence Public Schools Dept. reached out to the Providence Preservation Society about halting demolition plans and issued a request to study alternatives including demolition, new construction or adaptive reuse.

Despite preparation, this event did not take place. While it was puzzling and frustrating, we came to understand it as a lesson on practice in the professional world where so many factors come into play other than architectural issues themselves. A critical factor was attendance. Despite our planned efforts to promote the event to students by offering them incentive vouchers to local businesses.

The Providence Preservation Society worried they would not be able to attract enough of a broad demographic of community and student attendees for the planned charette event. If that were to happen, a larger ratio of the professional community in attendance would give the appearance of unequal representation, albeit unintended.

In addition, the Providence Preservation Society sensed that there was a high likelihood that the building would be saved, the community would feel less urgency to attend an event to save it, and thus, put the charette event on indefinite hold. PPS is now refocusing its energies towards saving other educational heritage in the city, heritage sites which are smaller in size, and whose preservation and restoration are less complicated and aligned with preservation society's policies.

5. CONCLUSION

As architects, we had a basic preconceived idea of the type of intervention we envisioned before we spoke to the students. We were surprised by their disinterest in the building or their education, so we adapted our approach and took the time to listen. The school officials were envisioning a robotics lab and research center as advancements to rebrand the school; however, these were far from the students' academic interest. We knew we could only understand what the community wanted after we engaged in a dialog. This reinforced the importance of adaptive reuse as a tool to not just restore or rebuild, but also repair relationships between the people using the building and its neighbors. As a result of this communication we not only collected information about the community's needs and concerns but also made them aware of the positive environmental, social, and economic potentials of adaptive reuse for this project.

6. DISCUSSION

While decision makers far from the day-to-day of school life are debating the building's future, the structure is crumbling. This impacts the quality of education, and at the same time creates a greater disconnect between the building and the neighborhood. To avoid this, we need to recognize the importance of community outreach into design.

If the historic building registration list was more inclusive, the arbitrary demolition of iconic buildings like Mt. Pleasant High School could be prevented. In cases where preservation purposes do not align with organizational policies, the registration list would safeguard the building and Providence Public Schools Organization's policy of less square footage for each student would not be a factor threatening Mt. Pleasant's future.

Finally, there are many forms of community engagement. It requires that people be informed in advance about what is happening to get them to attend these meetings and events. If there is no open communication, people forget they have a say. Most people we spoke to felt powerless, forgotten, and demoralized. The students had not heard about any plans for the building. Therefore, we state that before there is community engagement, there needs to be open communication. We had hoped to bring the different voices together in a charette, but instead, we listened to them individually and hopefully motivated them to participate before any further decisions affecting their future are made. ■

Figure 1. Mt. Pleasant High School, Providence, USA, 2024, Community Charette Posters. © Eghbali and Weber.

Figure 2. Mt. Pleasant High School, Providence, USA, 2024, Adaptive Reuse Planning. © Eghbali and Weber.



BIOGRAPHY

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Maya Weber is a German American with a bachelor's in scenography and interior architecture from Switzerland, a master's in spatial design from Germany, and a postgraduate degree in Adaptive Reuse at RISD in the USA. Her focus lies in the narrative aspect of spaces, resource-conscious buildings, and structures as cultural heritage.

SCHOOL ARCHITECTURE AND ADAPTIVE REUSE: THE CASE OF THE INMACULADA CONCEPCIÓN SCHOOL

#05

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ABSTRACT

This paper explores the adaptive reuse project of the Former Inmaculada Concepción School in Concepción, Chile. This was originally designed by Emilio Duhart H. and Roberto Goycoolea I. in 1964 and maintained its original use and qualities until 2019, without modifications. However, from 2018 to 2022, a rehabilitation project was undertaken to adapt the building to mixed uses. The project aimed to preserve its original qualities and strategic position in the city while complying with current regulations regarding anti-seismic measures and universal accessibility. In summary, the project successfully balanced the demands of the new owner, regulatory and technical requirements, and the needs of the new commercial uses with the architectural qualities and values, resulting in an adaptive reuse project reasonably favourable to its original condition.

The current operators find it appealing to establish their business in a heritage building like this one, as it sets them apart from their competitors, but unfortunately, they have not been consistent with maintaining and enhancing it.

School architecture is versatile when it comes to prolonging its useful life beyond the pedagogical needs that gave rise to it. Through the proposed case, we aim to show the methodology used to establish the building's qualities and how it contributes to the results of the reuse project and the building's operational phase.

1. THE REALITY OF OUR MODERN HERITAGE

Much of our modern heritage is unprotected by the institutions and instruments that ensure its safeguarding. In many cases, it is privately owned and neither its owners nor its users, that is, nor the society that hosts it, recognise the value of its qualities. In this way, the heritage is at risk as it is exposed to obsolescence, change of use, transformation, degradation, or even disappearance due to the high commercial value that its privileged locations hold. This is all a result of the rapid transformations in today's society.

In our country, there are few successful examples of rehabilitation or adaptive reuse of Modern Architecture for new uses, although there is an increasing interest in investigating, registering and documenting its examples. In most cases, this Architecture is disguised, expanded, intervened, demolished, or ignored without much happening other than complaints and lamentations that quickly fall silent. There are numerous reasons for this complex scenario, some of which are economic reasons or existing legal loopholes. However, fundamentally, it is due to a lack of awareness about the value and meaning of this architecture, which leads to a lack of attachment and sense of belonging.

The city of Concepción was rebuilt after the earthquakes of 1939 and 1960 under the premise of modernity, from city planning to the design of countless single-family homes, public, educational, commercial buildings, or large housing complexes. This heritage goes unnoticed in terms of its quality, despite being used on a daily basis by its citizens. The architectural style, although relatively young, is already more than 50 years old. It reflects economic, technical, material, and social advancements, as it saw itself forced to adapt to changing circumstances and contexts. In this scenario, Modern architecture must adapt to the demands imposed by today's fast-paced world, tackle fresh challenges and adjust to new functional requirements or changes of use. It must therefore undergo a process of renewal, and an adaptation that allows it to remain useful without sacrificing those original qualities and characteristics that constitute its greatest assets.

2. INMACULADA CONCEPCIÓN SCHOOL REUSE PROJECT

2.1. GENESIS OF THE INITIATIVE

In 2014, the Congregation of the sisters of Christian Charity exchanged the 5,500 m^2 grounds of the Inmaculada Concepción school with Inmobiliaria Madesal for new infrastructure located in an emerging residential area outside the city's consolidated centre.

When the news became public, the first voices of concern came from the academic community. Docomomo Chile echoed such concern and wrote a letter to draw the attention of citizens to the architectural value of a building without legal protection, the importance of its authors and the serious impact its alteration or loss would have. It also asked the authorities and the new owners to consider the future of the building and guarantee the preservation of the qualities of its architectural and urban configuration. Days later, an alert about the Duhart and Goycoolea building was published on the

Docomomo International website (April 30, 2015). At the same time, from the academic community, a meeting was requested with the new owners to understand in depth the scope of the real estate project and, on the other hand, highlight the qualities of the building, as well as the importance of its protection as an important piece of our local heritage. Madesal accepted the request, and a first meeting was held with academics and researchers from the four Architecture schools of the city.

Four years later Madesal resumed its commitment made in that first instance and set up a series of meetings to share the progress of the proposed real estate project with relevant actors at different levels to gather opinions and suggestions. Madesal, represented by its General Manager Fernando Saenz Poch, expressed its interest in preserving the Duhart and Goycoolea building through a reuse project that respects its architectural qualities while also adapting to new uses and current regulatory requirements. Consequently, the architects in charge of the project worked alongside a technical advisor who defined and guided the preservation of the original Duhart Goycoolea building.

Fernando Sáenz P. declared that he took on the reuse project as a strategy to capitalise on social profitability, or in other words to fulfil his corporate social responsibility. This receptive and open approach of a real estate agency is unprecedented in the local context, as it welcomes the initial concern and reorients its investment considering this new variable and condition. Furthermore, rehabilitating an existing building is understood as advantageous since there is significantly less damage to the environment by avoiding the carbon footprint associated with the entire demolition and construction process.

2.2. CRITICAL ANALYSIS OF THE ORIGINAL PROJECT BY DUHART – GOYCOOLEA

For a reuse project, in-depth knowledge of the building to be intervened is considered a crucial starting point for an architectural design process that adapts it to current demands. It was imperative to identify and highlight the valuable qualities of the Inmaculada Concepción School, designed by Duhart[1] and Goycoolea[2] in 1964, in order to preserve them. (**Fig. 1**)

The critical analysis of the original project established architectural values on three levels: spatial, compositional and constructive-structural qualities. In this way it was defined:

2.2.1. SPATIAL QUALITIES

1.- Spatiality of the main school entrance: degree of transparency, proportions, degree of lighting, interior-exterior relationship, façade setback and elevation from street level.

2.- Elevated horizontal plane: interior definition of the hall and ceiling of the first-floor circulation, scaling and tensioning said space. Furthermore, as it extends towards the street, it transforms into the distinctive wide canopy that greets and accompanies the pedestrian's passage.

3.- Scale box volume and bathrooms: This volume takes into account two relevant spatial qualities. On the one hand, at all levels it has a spacious

1. Emilio Duhart Harosteguy (1917-2006), who graduated as an architect in 1941 from the Pontifical Catholic University of Chile. In 1958, after 12 years of partnership with Sergio Larraín G.M. He founded his own office in Santiago: Emilio Duhart Arquitectura y Planning, an office that would last until 1969, when Duhart emigrated to France. During this period, his most notable works are found, such as the United Nations building for Santiago de Chile, 1960 – 1966, today ECLAC. In 1960, the office opened a subsidiary in Concepción thanks to the professional partnership with Roberto Goycoolea I. Duhart received the National Architecture Prize in 1995.

2. Roberto Goycoolea Infante (1918 -2018) was a Civil Builder and Architect, he graduated as such in 1958 from the Pontifical Catholic University of Chile. He was a former student and collaborator of Duhart in his office in Santiago and from 1960 his partner in Concepción, the city where he moved to live. He received the National Architecture Prize in 1995.

circulation space around it, which isolates and highlights it. On the other hand, inside, it consists of two subspaces, of which the most prominent is the scale box that is bathed by overhead light.

4.- Spatiality of the 2nd and 3rd floor circulations: height and width of its development, its clear linearity and mainly the interpretation of the structural solution of the project that shapes and tensions its route.

5.- The inner courtyard is a significant open space for the project, due to its configuration and height, it ensures the quality of the interior natural lighting.

2.2.2. COMPOSITIONAL QUALITIES

1.- Main facade. Markedly horizontal composition with a clear differentiated reading of the 1st -, 2nd - 3rd level and 4th terrace level:

1st level: This is primarily focused on reading and pedestrian recognition. This composition is defined by three degrees of permeability that contrast opacity, transparency and a very characteristic sieve or framework. In the centre of the composition, the protruding canopy prioritises the main access.

2nd-3rd level: The composition of the façade is rhythmised by the heads of the structure's beams. The presence of the beam is exalted by a continuous horizontal window that is slightly set back from the plane of the façade. At these levels there is balance in the composition of full and empty spaces.

4th Terrace Level: The original project featured a light isolated volume with a "butterfly" roof that constituted the upper part of the building and was visible from the street level.

2.- Solid volume of scale and bathrooms. This volume has a clear reading in the composition of the façade and balances its horizontality. In plastic terms, the use of colour in the coating used adds value to the element.

3.- Encounter with an adjacent building. The composition of the volume is recognised as a unique quality of the original project, as it is set back to align with the adjacent building, creating a solid "floating" volume. At the terrace level he proposed a very innovative elevated garden for its time that was even planned vertically to climb and cover the upper section of the South façade of the neighbouring building. However, this aspect of the original design was never carried out.

2.2.3. CONSTRUCTIVE - STRUCTURAL QUALITIES

1.- Structural system. The beams and pillars that make up a modular arrangement in a transverse direction, alongside the slab, create a system that has no more bracing in a longitudinal direction than the solid volume that contains a scale box and bathrooms. This structural solution is always visible in the interior or exterior space.

2.- Steel construction solution to "hang" the canopy. There is special care in the design of the construction detail of this element and it can already be seen from the main entrance hall to the building.

3.- Free Plant. The building's structural system defines free floors with reinforced concrete pillars with a circular section on the 1st level and a rectangular section on the upper levels.

2.3. ADAPTIVE REUSE

"*The best way to preserve a building is to find a use for it*"
Viollet-le-Duc, 1854

#05

It is crucial to reuse heritage as a sustainable response to preserving fragile heritage in local contexts. An intentional reuse project where the pre-existing and the new coexist in harmony means prolonging the useful life of the building. In this sense, Soria and Guerrero[3] state that the challenge for the architectural project that wants to effectively adapt a building of heritage value is to be a tool that manages, on the one hand, to maintain the values that allow for preserving the memory of what is intervened and on the other hand, create contemporary spaces that respond to current needs by providing added value, in other words, highlighting the past, interpreting the changes and needs of the present and safeguarding the future.

The bibliographic review suggests that consciously projecting on pre-existing buildings can be a means of heritage preservation. Contemporary architectural design, therefore, has room to contribute since "the wide range of use possibilities for a wide range of places of different qualities becomes evident, which become necessary within the dynamics of today's society, recognising the value of pre-existence and non-substitution", this necessarily implies a degree of modification for effective adaptation. In the case of the school, it means rehabilitation to house mixed uses that include retail, cafes, and offices. Operators find it appealing to establish their businesses in a historically significant building like this one because it sets them apart from their competitors, as long as it considers the characteristics and qualities of the space it is using and is consistent with it.

On an urban level, the successful completion of the reuse project is expected to stimulate the commercial regeneration of its immediate surroundings. The Rehabilitation of the Duhart and Goycoolea building will become the access threshold to a larger real estate development within the block that includes commerce, offices, and apartments and that also aims to connect to the existing network of galleries in the city, another characteristic space rooted in its collective memory. (**Fig. 2**)

3. FINAL CONSIDERATIONS

The case examined here is undoubtedly unique, not only because of the authors of the work, their qualities or the challenge it implied for the professional team, but also because of the attitude assumed by its owner, since he calculates the enhancement of the building beyond the immediate economic benefits. The outcome of the rehabilitation project is considered quite positive, as it represents a turning point in the approach towards real estate projects that integrate Modern Heritage in the city. In this sense, it can contribute to better practices from contemporary architecture, and real estate management in favour of the preservation of our built heritage.

Contemporary interventions are necessary to sustain modern heritage, both materially, physically and culturally. When it comes to school architecture, it

3. Francisco Soria and Luis Guerrero, "El proyecto de reutilización arquitectónica: hacia una valoración ampliada del patrimonio edificado", *Academia XXII UNAM*, no 13, (2016): 127- 143.

can involve maintaining its modern characteristics while also incorporating new interventions that distinguish it with respect to pre-existing architecture. Contemporary interventions on modern school heritage, as represented in this case, determined a complex network of relationships and actions that did not always work in unison. The demands and priorities of the owners, regulatory requirements and needs of its users (which may not always be consistent), input from professionals responsible for the projects, the assessment of citizens and specialists, economic constraints, and numerous other factors represent the current reality of Modern Heritage in our country.

When the rehabilitation project began, the school suffered from a general lack of recognition and awareness of its original values, qualities or characteristics among the congregation and the general public. Only academics and specialised researchers recognised its qualities as such, that is, a very small circle of actors. Only when the threat of demolition, in other words, the loss of the building was assumed, were voices raised, and the school's alumni and civil society turned their attention to the project.

In this sense, the role of specialised criticism is, therefore, to EDUCATE, socialise, and broaden knowledge about buildings, architects and their contexts. The purpose is to record, classify, and safeguard, not prevent, from the perspective of this research, the necessary adaptations and processes of change, but rather to support the respectful consideration of the fundamental values of modern architecture.

The architecture office responsible for executing the rehabilitation project served as a mediator, and facilitator between the various parties and factors involved in this adaptive reuse process. However, no one anticipated that the project's implementation phase would not align with the significant effort put into it. What was originally understood as a good practice (despite the complex and cumbersome challenges of the pandemic) to adapt work in a sustainable way to current needs, has been hindered by the tenants, those who occupy the building and do not recognise its qualities or its internal logic. They only prioritise their individual interests, focusing solely on functionality and economic profitability, while overlooking the effort, relevance and impact that a work of these characteristics has. Unfortunately, the poor condition of the rehabilitated spaces has been detrimental to the original qualities of the work and how they are perceived by users.

The rehabilitation of this building, from the perspective of this research, has guaranteed the historical relevance of the building, not only by preserving its useful life but by keeping its memory alive for hundreds of young women who were educated in its classrooms. The building holds a place in the collective memory of the city, representing the education and values of Catholic upbringing for a segment of the population, although it is unaware of its architectural values. Its former students today revisit the building to go to the offices, medical appointments, pharmacy or cafeteria, and they recognise the old spaces in the facilities to varying degrees of certainty.

The building's external appearance remains unchanged, preserving the original facade's composition, proportions, rhythm, and distinctive elements.







Figure 1. (a and b) Emilio Duhart and Roberto Goycoolea, Colegio Inmaculada Concepción, Concepción, 1964. © Fondo Documental Emilio Duhart, Archivo de originales Sergio Larraín García Moreno, Pontificia Universidad Católica de Chile.

Figure 2. Pedro Caparrós M. Paseo Inmaculada, Concepción. Chile. 2023 Immaculate school night view rehabilitation project. © Courtesy of Pedro Caparrós M. Photographer Roberto Wallace.

However, the materiality was updated. Changes were made mainly in the spatiality of the old classrooms to adapt proportions, circulations, etc. to new uses thanks to the open floor plans and the structural system that the original building provided.

Modern school architecture and in this particular case, its qualities, including its strategic urban location, spatial distribution, construction techniques, structural system, aesthetic quality and use, as well as its intangible values such as historical significance, and social impact is, without a doubt, a reference to establish the relevance of this typology as architectural heritage and a way of ensuring its transition to the 21st century through adaptive reuse projects that allow us to value and preserve our heritage sustainably. ■

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BIOGRAPHY

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COLLABORATIVE REDESIGN OF MODERN SCHOOLS: RETHINKING SPACES OF COIMBRA LYCEUM

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ABSTRACT

Modern school buildings face a demanding challenge when renovation implies adaptation to contemporary teaching and learning experiences in schools. At the Department of Architecture of the University of Coimbra (DARQ-UC), two Erasmus-funded projects – Reuse of Modernist Buildings (RMB) and Collaborative Redesign of Schools (CoReD) – were developed to create methods and tools to answer these challenges by engaging the school community in the design process.

Meanwhile, the Municipality of Coimbra called for tenders to carry out a research and action project for the former Coimbra lyceum – José Falcão Secondary School – designed in 1930 and built in 1936. DARQ-UC was selected to test the participatory methodologies developed within a research environment into a real case study. Although pedagogical activities are still functioning, the building faces several challenges due to construction pathologies and the new functions that were added during the last 90 years of continuous activity.

The paper focuses on the participatory process carried out with the school community to create the functional programme together and rethink the use of the existing school spaces according to the experience of those who use the school every day to learn, teach and work. The research activities were based on the S3S methodology (CoReD) and involved surveys, walkthroughs, workshops, interviews, and a school assembly, involving 500 participants. The dialogue with the community highlighted the qualities of the building and also the needs related to functionality, accessibility, sustainability, and intersectionality. The final programme proposed by the research and design team is the product of the dialogue with the community

voices and modern building principles (RMB). Nevertheless, the participatory process is a territory of negotiation with consensus and conflicts, where "the existing building will dictate the rule for what is possible (...) it will establish the limits of transformative intervention"[1]

1. INTRODUCTION

Projects for schools were the first to explore modern principles by building on the 19th-century rationalistic experience, namely by including rows of classrooms, laboratories, gymnasiums, and swimming pools, among others.

Today, many of these schools are still functioning but they need to be renovated in architectural and educational terms due to the degradation of the environmental conditions and the inadequate educational facilities. The reuse of these modern school buildings suffers from their functional character, which hinders their contemporary educational needs and from their constructive fragility due to the innovative and experimental solutions employed.

These buildings were built in modern urban areas, related with housing neighbourhoods, and played an important social role as community centres. Today, they are more than educational facilities and have become part of the everyday life of the cities, used by generations that developed a sense of belonging with the space, architecture, furniture, and objects.

Collaborative redesign with a participatory approach becomes more and more relevant when the buildings have a social dimension and several actors can contribute with their everyday knowledge and experience.

2. JOSÉ FALCÃO SCHOOL (1930–2023) – HISTORY AND TRANSFORMATION

In Portugal, the design of school buildings follows the international state of the art with several projects for high schools developed in the first quarter of the 20th century according to this rationalistic approach. Nevertheless, the new political regime and the opening of the architectural culture to modernism during the 1920s created the conditions for a new perspective on school buildings. The state organism responsible for schools' maintenance and construction opened a set of competitions for new high school buildings[2].

The José Falcão Lyceum in the city of Coimbra is the result of one of these competitions where young architects presented modern proposals inspired by European references but also learned from the rationalist experience. The team of Carlos Ramos, Adelino Nunes and Jorge Segurado won this competition in 1930 with the project Santa Cruz, a tribute to the first convent that functioned as a school **(Fig. 1)**. The project is an interesting combination of modern structures: it has the rotunda that organises the entrance block with the atrium, staircase, library and amphitheatre, or the sports pavilion with several circular elements and galleries connecting the main building; it also has more classical elements, namely the internal patio and the rows of classrooms.

The school has been functioning as such for 88 years and has become part of the city landscape and everyday life. The school community that worked and studied here over the years developed a strong sense of

1. Alexandre Alves Costa, *O Liceu Alexandre Herculano, no Porto. História, Projecto e Transformação* (Porto: FIMS, 2011), 49.

2. Gonçalo Canto Moniz, *Arquitetura e Instrução: O Projecto Moderno do Liceu, 1836-1936*, (Coimbra: eldlarq, 2007).

belonging. This is probably the reason for the very good condition of the buildings although in some cases, some transformation has changed the modern character to solve specific needs.

Five main transformations that had an impact on the modern design can be identified. The first took place immediately after the opening of the school, in 1936, to increase the number of students with a new floor in the west and south blocks of the main building. This transformation was designed by one of the three authors, Carlos Ramos, but the two other authors considered it unacceptable and withdrew their authorship. The second was the replacement of the swimming pool with an auditorium and a small gymnasium in1960s. The third was the construction of the changing rooms and three classrooms for the sports pavilion in place of the covered open-air playground. The fourth was the replacement of the wooden windows with aluminium in the 1970s. The fifth and latest transformation was the expansion of the canteen and gymnasium.

3. PARTICIPATORY DESIGN

3.1. STATE OF THE ART

Since the late 1960s, collaborative design has been challenging architects to rethink architectural design practices in a participatory approach that engages the local community in the design process. In 1971, Giancarlo de Carlo called for an architecture of participation where "architecture will abandon the authoritarian position and will become part of the people, and people will defend architecture"[3]. In fact, De Carlo was criticising the modern architects that produced beautiful buildings without taking in consideration people's needs but applied rational programmes based on technical logics. There is thus an opportunity today to revise history and redesign the building according to the users' experience and real needs. The collaborative redesign of modern school buildings highlights this challenge by bringing modern and contemporary architecture and education into the dialogue.

3.2. METHODOLOGY

3.2.1 CORED AND JOSÉ FALCÃO SCHOOL

At the Department of Architecture of the University of Coimbra (DARQ-UC), two European Erasmus-funded projects were developed to create methods and tools to answer these challenges by engaging the school community in the design process, namely the RMB project – Reuse of Modernist Buildings and CoRed – Collaborative Redesign with Schools.

This latter, involving the same team of researchers, provided the knowledge base for the participatory process implemented at José Falcão School, by using the CoReD's participatory tool named Survey on Student School Spaces (S3S), which aims to collect student feedback on their schools, uses and feelings. Ultimately, S3S acts as a post-occupancy evaluation tool, to consider possible co-creation and co-rehabilitation actions with the school community to better align learning parties and spaces and their effective uses and appropriation.[4]

S3S is a twofold process that comprises an online survey about users' feelings and activities in five types of spaces: outdoor spaces, formal learning

3. Giancarlo de Carlo, *L'architettura della partecipazione* (Milan, Quodlibet, 2015), 78.

4. Carolina Coelho, António Cordeiro, Luís Alcoforado and Gonçalo Canto Moniz, "Survey on Student School Spaces: An Inclusive Design Tool for a Better School," *Buildings 12*, no. 4 (2022): 392 https://doi.org/10.3390/buildings12040392.

spaces, study spaces, eating spaces, and communal and circulation spaces. Then, it involves focus groups such as walkthroughs, to detail the data previously collected. Finally, the school community is gathered in a school assembly to collectively engage all the community and to negotiate future actions on space.

The participatory process at José Falcão School Is being implemented in two main stages:In the first trimester, participation was undertaken to understand how the building is organised, how the spaces are used, which spaces are the most relevant and which spaces are lacking or need to be rethought. In the final trimester, the community will be involved again in order to assess the impact of the refurbishment on the school's day-to-day life, acting as post-occupancy evaluation.

Additionally, during the intermediate phases, the school community will be invited to take part in specific activities, helping to make decisions about the particular architectural options.

4. REHABILITATION OF JOSÉ FALCÃO SCHOOL

4.1. PARTICIPATORY PROCESS

This paper will focus on the participatory process carried out with the school community in the initial stage of this project, implemented between December 1, 2023 and January 31, 2024.The intention was to create the functional programme together and rethink the use of the existing school spaces according to the experience of those who use the school every day to learn, teach and work.

In the refurbishment project for José Falcão School, the CoReD methodology was reformulated due to the need to involve the different stakeholders: a large number of students, teachers, staff, parents, alumni, and institutional partners. Thus, the research activities were based on the CoRed's S3S methodology, including surveys and walkthroughs and a school assembly, but also comprising workshops and interviews. This process engaged 500 participants overall, who were very enthusiastic about contributing to the process from the start and willing to take part in the activities.

4.1.1. SURVEY

The conducted survey encompassed input from all members of the educational community to grasp their needs and perspectives. Queries delved into frequency of usage, activities conducted, and participant perceptions regarding each space, aiming to elucidate the activities and sentiments associated with each. The 524 responses provided a holistic understanding of the different community viewpoints and educational needs.

The analysis of responses underscores a substantial student representation (80%), compared to teachers (16.9%) and staff (3.1%). The inner courtyard emerged as a valued space, although its restricted access limits its utility. The outdoor recreational area faces challenges in use due to maintenance issues and a lack of equipment. The entrance stands out as a widely utilized space, establishing itself as the "face" of the school for the city and as one of the

school's elements of identity, while the library, positioned above, experiences relatively low usage and, though it is appreciated by visitors, suffers from outdated furnishings and books. Classrooms and corridors encounter similar challenges, including thermal, acoustic and ventilation issues, though their ample dimensions and natural light are commendable features.

4.1.2. WALKTHROUGH

Walkthroughs are group activities involving visits to comment on school spaces conducted in two modalities. Firstly, walkthroughs aimed to clarify survey results by visiting spaces outlined in the questionnaire, organized according to survey categories. Secondly, tours with representatives from associations or specific groups gathered the perspectives regarding the school spaces that were considered of particular interest to them. Fourteen walks were conducted in total, of which ten were aimed at specific groups. University of Coimbra researchers recorded participants' comments using template sheets **(Fig. 3)**.

The comments corroborated and expanded upon the survey feedback, but also touched on various areas of concern. For instance, the laboratories exhibited notable discrepancies in capacity and student numbers, with issues of comfort, acoustics, and adaptability. Lighting and ventilation problems were highlighted. The sports complex showed the necessity of improving accessibility and refurbishing classrooms. Finally, the comments of the Inclusive Education group were crucial, since the spaces dedicated to them face challenges of location, organisation, and accessibility, with insufficient water points.

4.1.3. WORKSHOP

Workshops were conducted in an enclosed setting, targeting groups that do not utilise every school space in their daily routines. Firstly, participants sit around a table with photographs representing school spaces, select one, and use it to comment on the place. Subsequently, they organised themselves into groups around a poster displaying the school's floor plans to discuss areas of interest and common issues, recording them on post-it notes later affixed to the panel. A spokesperson from each group presented the discussions. In addition to three planned workshops, there were spontaneous meetings with four groups, prompted by time constraints or late hours, showcasing the simplicity and ease provided by this tool.

The general comments were aligned with those from other activities but provided additional insights into less-discussed spaces, such as the central stairs, which, although imposing, face challenges related to accessibility, climate control, and safety; the amphitheatre, notable for its location and antique furniture but lacking in thermal comfort, modern equipment, and proper furniture maintenance; the gymnasium, where issues of insufficient changing rooms and the need for a covered outdoor space for students must be addressed; and the cafeteria, a social hub that requires enhanced attractiveness, particularly during winter months.

4.1.4. INTERVIEW WITH THE SCHOOL DIRECTOR

The interview served as a pivotal moment in the community participatory process, consolidating themes from previous procedures. The interview was conducted by two research team members who followed a script that was shared previously. It provided insights into the educational strategy, school's daily operations, enhancing our understanding of the current situation and offering recommendations for the project team. Key points included ensuring accessibility for all and addressing specific management space requirements.

4.1.5. ASSEMBLY

To close the first stage of the participatory process, an assembly was organised -in four moments- to present the co-diagnostic and design strategy and to discuss these results. Firstly, two projects were presented related to interventions in two high schools carried out in the frame of Parque Escolar[5]. Secondly, the team presented the co-diagnostic and design strategy. Thirdly, the school community and guests were invited to split into four rooms to discuss one of four key spaces – entrance, students' room, classroom and sports spaces. Fourthly, the groups return to the amphitheatre to share the results of the discussion from their room.

The results were balanced between supporting the strategy, co-creating new proposals and some resistance to specific changes.

The "entrance" group highlighted the need for an entrance which is accessible for all and the need to control the speed of traffic in the main avenue in front of the school.

The "students' space" location opened to the patios was approved but they made some recommendations for more convivial spaces outside: sports equipment outside, toilets, non-chromatic materials and parking for bikes and motorbikes.

The "exterior spaces" group proposed the renovation of the alley with a new entrance with more dignity, namely with benches and tables, water spots, information panels and parking for bikes. This group discussed the sports pavilion, particularly the transformation of the auditorium into a flexible space that could have mixed use – canteen and auditorium. This solution was proved polemic and the project was revised to keep the autonomy of the auditorium.

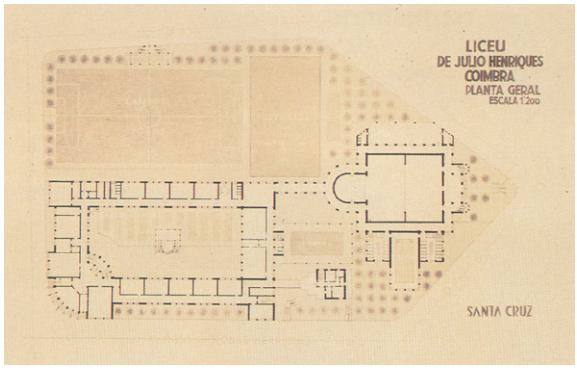
The assembly was not only a space of presentation and discussion but also a space for decision-making.

4.2. DESIGN STRATEGY

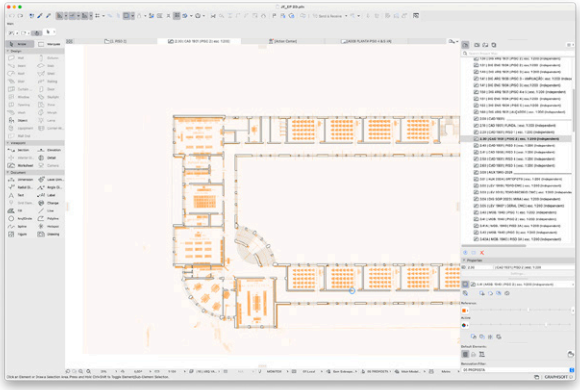
The spatial reinterpretation of the school layout departed from an in-depth analysis of the whole life span of the 88-year-old building. Since the initial project from 1931, all the changes introduced during the construction phase until 1936, the expansion of 1938 and all adaptations throughout 1940s, 1960s and early 2000s, were all considered and evaluated with their own strengths and weaknesses.

Given the large number of transformations implemented throughout the last nine decades, sorting out the archive documents was almost a project in

5. Parque Escolar was the public private company that was responsible for the planning, construction and maintenance of school buildings in Portugal since 2007.







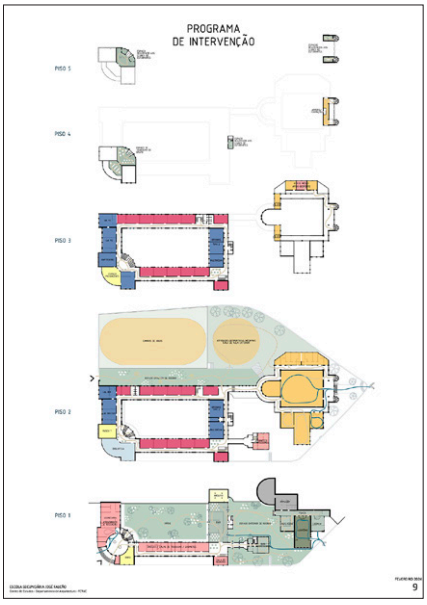


Figure 1. Santa Cruz Project, Liceu Júlio Henriques, Coimbra, Carlos Ramos, Jorge Segurado, Adelino Nunes, 1930. © Carlos Ramos Archive.

Figure 2. Walkthrough activity with teachers, courtyard, Renovation of José Falcão Secondary School Project, January 3, 2024. © Photo by Gonçalo Canto Moniz.

Figure 3. Snapshot of BIM organization of historical sheet layers, georeferenced and overlaid. May 6, 2024. © CEARQ-TD Archive.

Figure 4. First diagram presented in the first school seminar, as a result of the first participation sessions and architectural analysis. January 24, 2024. © CEARQ-TD Archive.

itself. In this sense, the use of BIM software was valuable from the very first moment. By georeferencing all projects in digital sheets layers, the team was able to trace and compare every single variation of the physical layout of the building. This kind of digital palimpsest contributed to a quick and thorough understanding of the evolution of the case study **(Fig. 3).**

All this historical data was then compared with the knowledge fostered by the participatory process. The inputs received from the school community were crucial in the process of outlining the main action lines of the project, such as: opening up and connecting the courtyards, creating a main gathering

room for the community and bringing the layout back to its original and clearer organisation.

These ambitions were analysed through the lens of the new pedagogical project for a progressive and inclusive school that aimed at reshuffling and adapting the lyceum's layout to future needs. The layout of the classrooms was reconfigured for a more inclusive and horizontal way of sharing knowledge. The corridors and atrium were reconsidered as spaces for encounters and for spending time, with the idea in mind of embracing the learning process outside of the traditional classroom environment.

The programmatic organisation of the school, which underwent many changes in the past, is now proposed to be clarified following the initial composition principles laid out by Ramos, Nunes and Segurado. Major classes will be located in the longer corridors, exceptional classes, such as science labs and design labs, will be on the two edges of the building with its specifically sized rooms. The bar and break room is proposed to be relocated to the south wing, on the ground floor, becoming not only the central gathering space but also connecting the two patios that had barely any connection and outside usage **(Fig. 4).**

The design strategy is not going back to the initial design, but establishing a balance between the initial modern composition principles and the new spaces for a contemporary education. In some situations, transformations are needed, but in other demolitions are necessary. This strategy follows Alexandre Alves Costa when he refers to Alexandre Herculano School rehabilitation, "the existing building will dictate the rule for what is possible (...) it will establish the limits of transformative intervention"[6].

5. CONCLUSIONS AND LESSONS LEARNT

As part of the process of participation by the educational community at José Falcão Secondary School, some methodological constraints and lessons learnt stand out. The whole community was very enthusiastic about the process and willing to take part in the activities, due to a strong sense of belonging. Since various activities were planned ahead, including walkthroughs, workshops and meetings, these required some flexibility in their implementation to accommodate the school schedule and actors availability.

We can conclude that participatory proximity is crucial to foster close dialogue with the entire school community during the participatory process, opening up various channels of communication, such as email, telephone or messaging. The school director also acted as a facilitator of the communication between all stakeholders, helping to coordinate the timetable for the various activities and those involved in each one.

Lastly, given the variety of participants involved, in terms of the type of experience they have in school spaces, their ages and personal, social and professional contexts, there were sometimes contrasting points of view about the same space. These situations had to be managed by the project's team of researchers, the points of view mediated, and the underlying arguments understood. Thus, we know that the proposed

6. Costa, *"O liceu"*, 49.

spatial definition is not the consensus of all those involved, but is the result of a mediation and negotiation of contributions from many stakeholders involved in this process. ■

BIOGRAPHY

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HEALTHCARE COMPLEXES: THE FUTURES OF MODERN URBAN ENCLAVES[1]

#06

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ABSTRACT

Hospitals and health complexes, viewed from an urban dimension, have played a pivotal role in shaping the networks and structures of cities and urban areas. Over time, as part of the modernisation process, health architectures have become increasingly complex. Beginning with the pavilion-style hospitals of the 18th century, which established the hygienist model as centres of healing and scientific practice, we have progressed to the 20th century, witnessing the emergence of various typologies that prompted discussions about their place in urban spaces.

The urban configurations and appearances of modern hospitals reflect the evolving complexity of their programmes, successive redefinitions, and the gradual incorporation of services, equipment, and technologies. The design of hospital complexes is a result of intellectual reflections and decisions, with their urban locations playing a crucial role in determining their organisation, scale, and volumetric composition.

Modern hospitals have adapted to new construction techniques and scientific advances. Initially characterised by concentrated, vertical blocks organised as complex sanitary systems, these complexes have evolved to accommodate various typological variations.

Throughout the 20th century, we have witnessed the design of hospital complexes aimed at consolidating different healthcare functions, often incorporating new services into existing modern hospital buildings. These health complexes serve as urban enclaves, attracting large numbers of people and playing a prominent role in their surroundings.

The focus is to analyse the relationship between modern health complexes and contemporary cities. This includes examining their historical origins, current uses, and future prospects in light of the evolving challenges faced by cities globally. From the ongoing adaptation and expansion of buildings in cities to considerations of obsolescence and inadequate locations, questions arise as to how to manage these modern legacies. Should they be adapted to meet contemporary needs, repurposed, or replaced with new complexes?

1. INTRODUCTION

Health and hospital architecture in modernity have been part of the research interests of the organisers of this session since the early 21st century, with particular attention paid to these processes in the context of Latin America. They have been actively involved in the Ibero-American Network of Historians of Hospital Architecture, as well as its five International Seminars, starting with the first one organised by Amora and Gama-Rosa Costa in Rio de Janeiro in 2014. Furthermore, at the same time, and with a more urban focus, sessions have been organised at the three Congresses of the Ibero-American Association of Urban History.

The hospital building in modernity, conceived as a healing machine[3], emerged in the 18th century as an urban function alongside other modern programmes such as prisons, schools, and collective housing, all of which directly contributed to the modernisation of urban society.[4] Modern architecture in the 20th century symbolised efficiency and hygiene, and such principles were considered fundamental to the development of the most rational of modern buildings: the hospital.

Moreover, health has been a constant concern in state and professional interventions in urban space. Throughout the 19th century, "hygienist" and "sanitarist" principles guided modernisation projects, introducing new modes of planning public spaces and new models for hospital architecture. The formal typology of hospitals organised into pavilions, initially based on the 19th-century French model of Durand's articulated pavilions, was reconsidered to accommodate different hospital programmes. The shift in the logic of hospital placement within cities, prompted by the late 19th-century transition from the miasmatic to the Pasteurian paradigm, did not occur instantly. The idea of the hospital as an exceptional enclave remains a guiding factor in design decisions to this day.

2. FROM SITE STRATEGIES TO URBAN PROJECT

The hospital or healthcare complex, understood in its urban dimension, was one of the first facilities to contribute to the consolidation of urban service structures. Health architectures have gained significant complexity throughout the processes of modernisation. Starting with the pavilion-type hospitals of the 18th century, which shaped the hygienist model as places of healing and scientific practice, up to the 20th century, with the definition of different typologies and technological developments that required debating the place of these functional typologies in the city space and urban context.

The early pavilion complexes of the 19th and early 20th centuries, despite the fact they were not modern in expression, employed modern strategies. Among these, urban considerations for selecting their locations were derived from the knowledge and problems of the time. For example, to address the issues arising from increasing migration, industrial pollution, and the scarcity of water and sewage networks, procedures were recommended for choosing healthy land.[5] Mumford perceived the counterattack to the pestilential industrial city through the "art of sanitation or public hygiene,"

1. This research is part of the Fondecyt Project 1221316: "Arquitectura moderna y ciudad: el proyecto urbano ante el desafío del desarrollo. Chile 1930-1980."

2. Productivity Research Fellow at the Conselho Nacional de Desenvolvimento Científico e Tecnológico- CNPq.

3. Michel Foucault, *Les Machines à guérir: aux origines de l'hôpital modern* (Bruxelles: P. Mardaga, 1979).

4. Anthony Vidler, *The writing of the walls: architectural theory in the late enlightenment*. (New York: Princeton Architectural Press, 1987).

5. Claudio Galeno-Ibaceta, Horacio Torrent, Ursula Exss, and Stephane Franck, "El hospital moderno como proyecto urbano en Chile 1930'-1970'", in *Livro de atas do V Seminário Internacional de História de Arquitetura Hospitalar* (Coimbra: Centro de Estudos Sociais, Universidade de Coimbra, 2023), 221.

and the improvement of prisons and hospitals transformed them into "pilot plants" for urban space reform.[6]

Hygienists recommended that hospitals should be located away from urban conglomerations, placed outside cities, close to accessible roads, on healthy land, downstream from the population, and downwind from prevailing winds. Additionally, the terrain should have a slight slope, avoiding valley bottoms and marshes, and should be situated on the middle part of a hillside. These recommendations were associated with certain favourable ventilation conditions. They also suggested creating a protection zone around hospitals consisting of parks and gardens.[7]

In the early decades of the 20th century, some aspects to consider in the design of a modern hospital included the orientation of the terrain, its relationship with the alignment of the rooms, and variations in designs according to the geographic area due to climate. In the context of the southern hemisphere, the hospital should ideally be positioned facing north, and similarly, the rooms should be oriented to the north to maximise natural lighting.[8]

Urban configurations and appearances of modern hospitals reflect inherent considerations of increasingly complex programmes, successive redefinitions, and the gradual incorporation of services, equipment, and technologies. The design of hospital complexes is influenced by intellectual processes, strategies, and compositional decisions. Among other factors, their urban locations play a key role in the final definition of their organisation, scale, and volumetric composition.

For Fortier, the hospital would be one of the first urban facilities.[9] In this sense, Fourquet and Murard argued that collective facilities reflected urban planning disputes and constituted the "skeleton of urban space." Furthermore, they proposed a spectrum of functions, derived from the Athens Charter, which materialised in collective facilities, among which "caring," translated into hospital and healthcare facilities.[10]

To study hospital complexes as urban projects, we must analyse the dialectical relationships between programmatic and formal resolutions and the urban positioning of healthcare establishments. This requires a systematic reading based on several factors: urban siting strategies, the relationships between programmes and architectural-urban composition, architectural accessibility operations, and contextual pre-existences and consolidations.[11]

3. THE MODERN HOSPITAL

The modern hospital configuration no longer requires large plots of land due to new construction techniques and scientific advances. Initially, it adopted the form of concentrated and vertical blocks, organised as complex healthcare systems that impacted upon urban organisations. However, within these complexes, typological variations can be identified, resulting from medical advances or technical and morphological innovations, which even led to lucid systemic compositions.

Throughout the 20th century, we have seen the configuration of hospital complexes designed to fulfil different healthcare functions or created

6. Lewis Mumford, *La ciudad en la historia: sus orígenes, transformaciones y perspectivas (Tomo 2)* (Buenos Aires: Ediciones Infinito, 1966), 631.

7. Ricardo Larraín-Bravo, *La higiene aplicada en las construcciones. Tomo Segundo* (Santiago de Chile: Imprenta Cervantes, 1910), 1059-1066.

8. Mauricio Aubert, "Nuestros hospitales modernos," *Revista de Beneficencia Pública*, tomo 4, no. 1 (March 1920), 8-16.

9. Bruno Fortier, "Le camp et la forteresse inversée," in *Les machines à guérir: aux origins de l'hôpital moderne*, ed. Michel Foucault (Bruxelles: Pierre Mardaga, 1979), 45.

10. François Fourquet and Lion Murard, *Los equipamientos del poder: ciudades, territorios y equipamientos colectivos* (Barcelona: Gustavo Gili, 1978), 24-25.

11. Galeno-Ibaceta, "El hospital moderno como proyecto urbano," 223.

by incorporating new services into existing modern hospital buildings. These health complexes are urban enclaves with significant presence and prominence, around which large flows of people occur.

We observe the constant development of technologies for the treatment and cure of patients, which impact the hospital environment and can lead to the obsolescence of these buildings. As a result of this, many modern hospital buildings have been demolished or adapted for new functions. However, general hospitals, as they are large-scale complexes, show resilience in developing countries and continue to fulfil their social function through continuous adaptations. These hospitals occupy a significant place in cities as enclaves, and many of them are located near major transportation modes.

4. OBSOLESCENCE

Obsolescence is one of the factors affecting healthcare complexes and their considerations regarding modern healthcare heritage, as addressed in the session "The Modern Healthcare Architecture: Obsolescence and Transformation" at the 14th International Docomomo Conference in 2016.[12] Regarding this phenomenon, historian Daniel Abramson has questioned what happens when the function changes, aiming to detect what strategies have been employed to prevent obsolescence. An exemplary case was the design by John Week with Richard Llewelyn Davies for the enormous Northwick Park Hospital, formulated so that it could grow to avoid becoming obsolete.[13] The hospital was designed to have "growing limits" that could be continually transformed, ensuring there was never a "final plan" and that it remained "eternally unfinished."[14]

Week, in a study titled "Flexibility and Growth," concluded that hospital rooms should be "like branches on a tree, each with the freedom to grow without disturbing the general pattern."[15]

Abramson identified that the design logics of industrial warehouses had been adapted to laboratories and hospitals, consisting of stacked floors, some of which were completely cleared to accommodate programme spaces, alternating with thick intermediate levels housing facilities. This approach was applied in Louis Kahn's pioneering Salk Institute from 1959-1965 and in Charles Luckman's San Diego Veterans Administration Hospital in 1968. In this way, habitable floors were flexible and clear, in a system they termed "interstitial," to "create space that does not become obsolete."[16]

In the Chilean context, we have verified that hospital complexes designed since the late 1960s by the SCEH (or The Society for the Construction of Hospital Facilities, as it would be known in English) utilised certain strategies to accommodate evolving requirements over time, such as phased growth, as seen in the case of the Juan Noé Hospital in Arica, designed by architect Eduardo Vásquez in 1967 and completed in 1977.[17] Additionally, they employed three-dimensional frameworks, as seen in the case of the San Pablo Hospital in Coquimbo (demolished), built between 1970 and 1975, designed by architect Hernán Aubert (**Fig. 1**).

These strategies can be effective in addressing obsolescence; however, when dealing with urban complexes, we encounter a situation similar to that which

12. Renato Gama-Rosa Costa, Ana Amora, Claudio Galeno-Ibaceta, and Daniela Arnaut, "The Modern healthcare architecture: obsolescence and transformation," in *Adaptative Reuse, the modern movement towards the future. 14th International Conference Proceedings*, ed. Ana Tostões and Zara Ferreira (Lisboa: Docomomo International / Casa da Arquitetura, 2016), 492-494.

13. Daniel M. Abramson, *Obsolescence: an architectural history* (Chicago: The University of Chicago Press, 2016), 9-10.

14. Abramson, Obsolescence, 89-90.

15. Abramson, Obsolescence, 69.

16. Abramson, Obsolescence, 82-83.

17. Claudio Galeno-ibaceta, "Arid zones, health and typologies: a Chilean lab of hospitals," in *Proceedings of the 16th International Docomomo Conference*, ed. Ana Tostões and Yoshiyuki Yamana (Tokyo: Docomomo International / Docomomo Japan, 2021), 1576-1577.

affected pavilion hospitals: the need for extensive land expansion. In the case of structures inserted in urban areas, growth operations can be complex and could alter the conditions of fullness and emptiness, and even require the adaptation or replacement of other constructions within the context of these urban complexes.

5. URBAN FACTORS

In our research, we observed several cases of the clustering of health services and institutions, prompting the question: why does this happen? Large hospital facilities, such as general and specialty hospitals, especially public institutions near transportation hubs, tend to generate what we call the clustering phenomenon. This phenomenon attracts a range of services and other institutions that complement hospital functions, such as primary healthcare services, imaging services, clinics, and other activities, forming geographically identifiable spatial connections in cities.

Interestingly, in the cases studied, this initially happened without apparent planning but was later appropriated by large hospital facilities –both general and specialty hospitals– for the implementation of new services and institutions.

Unlike hospitals for diseases treated in isolation –such as leprosy, tuberculosis, and mental illnesses, which were planned to be located outside of central city areas– general hospitals and specialty hospitals for non-communicable diseases depend on transportation services for the movement of patients, healthcare workers, and supplies.

Over time, we have observed intentions for changes in environments, such as the preservation of the historic centre of Rio de Janeiro, which houses modern hospitals like the Municipal Souza Aguiar Hospital, designed by architect Ary Garcia Roza, and the Cancer Hospital, whose projects dialogue with the historical surroundings.[18] The Souza Aguiar Hospital Complex serves as a prime example of an enclave, situated on preserved land in the historic centre of Rio de Janeiro (**Fig. 2**). While the hospital and blood bank from the original project by Garcia Roza are reasonably preserved, other buildings have been added to the lot, such as the Maria Amélia Buarque de Hollanda Maternity Hospital.

Other changes, like the creation of urban highways or BRT (Bus Rapid Transit) systems, had a direct impact on sites. For instance, the Institute of Puericulture and Pediatrics (IPPMG) of UFRJ, designed by Jorge Moreira, lost many of its gardens, designed by Roberto Burle Marx, while the Curicica Sanatorium Complex, designed by Sergio Bernardes, faced drainage problems and there was a visual impact on the building's scale due to the construction of the BRT elevated highway. It also experienced the demolition of pavilions.

It is important to note the Lagoa Hospital in Rio de Janeiro, designed by Oscar Niemeyer and Hélio Uchôa, which, despite being well preserved and featuring gardens by landscapist Burle Marx, had an emergency pavilion added that was not designed by the original architects.

6. STRATEGIES

Regarding strategies for healthcare complexes, it is evident that in recent years, adaptive reuse has gained significant relevance. This approach often

18. Ana Amora and Rafael Barcellos Santos, "Two modern monumentalities in Rio de Janeiro central area: distinct ways of designing within the historical city," in *Modern design: social commitment & quality of life*, ed. Carmen Jordá Such, Maite Palomares Figueres, Ana Tostões and Uta Potgiesser (Valencia: Universitat Politècnica de València, 2022), 1085-1093.

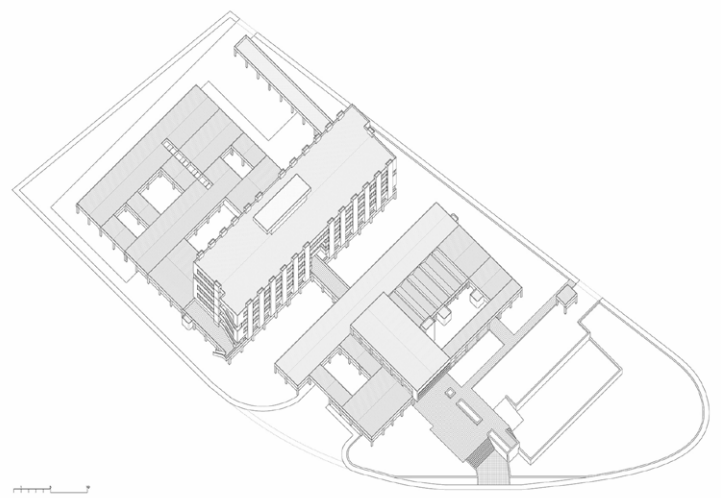


Figure 1. Hernán Aubert, Constructor Society of Hospital Facilities, Hospital San Pablo and Attached Health Centre, Coquimbo, Chile, 1970-1975. © Isometric drawing by Logan Leyton for the forthcoming book *Anonymous Modernity in Chile* (currently in the editing process). Part of project folio N°. 593909, partially funded by the Culture Funds, Government of Chile.

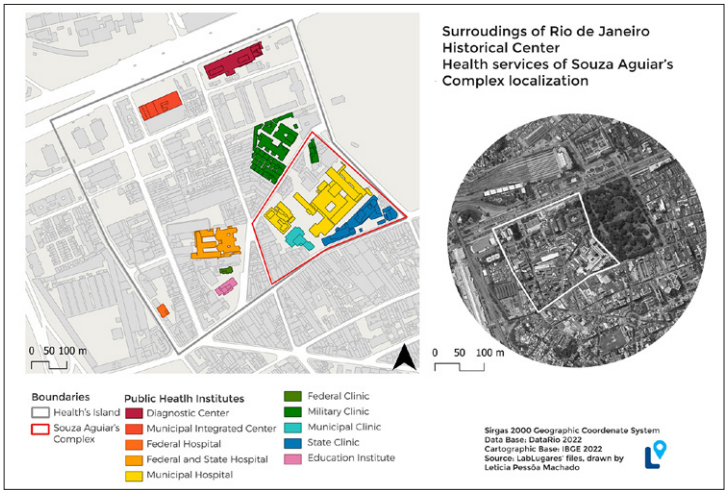


Figure 2. Surroundings of Rio de Janeiro Historical Centre Health services of Souza Aguiar's Complex localisation, Brazil. © Source: LabLugares files, drawn by Leticia Pessoa Machado Credits.

involves repurposing or adaptation; however, it does not preclude the application of well-formulated and respectful extension ideas as well.

Pier Francesco Cherchi, in 2016, published the book "Typological Shift: Adaptive Reuse of Abandoned Historic Hospitals in Europe," which, while it does not focus on modern architecture, addresses a series of strategies that have been applied to heritage structures. He divides these strategies into three groups. The first of which is the "general approach to adaptive reuse," which includes conservation and minimal modification, conservation of the historic envelope, conservation of typological order, and technological modernisation. The second group addresses "typo-morphological variations," including juxtaposition, addition, insertion, and subtraction. Finally, the third group deals with the "design of open spaces," covering new connections with adjacent public spaces, the expansion of public space, spaces of collective use for culture and art, and the recovery and reuse of outdoor space.[19]

Although these operations focus more on the "artifact" than on the urban aspect, Cherchi observed that, in the face of the abandonment of historic centres and the consequent stripping of the functions of buildings in these

19. Pier Francesco Cherchi, *Typological Shift: adaptive reuse of abandoned historic hospitals in Europe* (Siracusa: LetteraVentidue Edizioni, 2016), 90-91.

20. Cherchi, Typological Shift, 70-71.

areas, communities rediscover these forgotten enclaves and recognise the historical significance of these structures, perceiving them as opportunities for renewal. This renewed interest allows for the reintegration of these "frozen" parts into the city's network of urban relationships.[20]

7. QUESTIONING HOSPITAL HERITAGE

It is relevant to discuss the relationship of these modern healthcare complexes in contemporary cities, their historical origin, their current uses, and their futures in light of the changes facing cities across different global regions. As buildings are constantly readapted and expanded with new spaces, questions arise regarding their obsolescence and inadequate locations: How should we treat these modern legacies? Should we adapt them to the new times? Change their uses and functions and create new complexes elsewhere? Renew inherited models from the recent past? Or reconsider their relationship with the city and the urban environment?

These buildings are constantly undergoing readaptation and expansion, especially in developing countries. Despite this, many view them as obsolete, leading to questions about their urban placement. These structures not only tell various stories about how we approach health and urban planning but also serve a crucial social function by providing public services. They represent examples of resilience, whether by adopting new uses, inspiring new building designs, meeting contemporary requirements, or serving as historical testimonies.

However, this topic and the questions raised here remain open for further exploration, and research suggests several avenues for investigation. Firstly, there should be greater recognition of this modern legacy. Additionally, it would be beneficial to compile an inventory and analyse solutions aimed at adapting these buildings to new functions and utilizing modern technologies. Furthermore, understanding how these healthcare facilities are integrated into cities and interact with other urban services is essential. Lastly, exploring emerging trends in hospital projects, particularly those that revisit modern principles, could provide valuable insights. ■

BIOGRAPHY

Claudio Galeno-Ibaceta is an architect with a Master's and PhD in Theory and History of Architecture. His research focuses on the relationship between human body knowledge and architecture, particularly in northern Chile's healthcare facilities. He serves as Associate Professor at UCN's School of Architecture and directs the master's programme in Architecture in Arid Zones. As General Secretary of Docomomo Chile, he's been involved with Docomomo International since 2004. He's also a member of the Latin American Network of Hospital Architecture Historians and the Ibero-American Association of Urban History. Currently, he's engaged in research projects on historical and modern architecture in Chile.

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THE POWER OF ADAPTATION: THE CONVERTION OF A TEACHING HOSPITAL INTO A JUSTICE COMPLEX

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ABSTRACT

This article analyses the conversion of a big hospital and teaching complex, developed between 1971 and 1978 and commissioned by Santa Casa de Misericórdia de São Paulo to a team of architects led by Fábio Moura Penteado, into the biggest criminal justice complex in Latin America, opened in 2000. The architectural characteristics and the superlative scale of the complex constitute a privileged object to analyze the potentialities and limits of architectural flexibility, as well as how this concept is related to the modern project culture, specifically with the general strategies developed by the so-called Escola Paulista.

1. INTRODUCTION

Terms like flexibility and related concepts such as multi-purpose adaptability, and multifunctionality were introduced and popularized by architectural modernity and, as such, have already been broadly discussed and criticized. However, it is worth revisiting them since the conservation of buildings from the past depends primarily on their ability to adapt to social transformations, changes in use, and new technological requirements.

In this context, the degree of complexity reached by certain programs, such as a hospital, induced certain morphological solutions and functional strategies in response to highly specialized medical, sanitary, and technological requirements, which at the same time need to accommodate adaptability and standardization to meet the constant demands for reorganization and expansion.

The project of the teaching hospital of the Santa Casa de Misericórdia de São Paulo, later converted into a criminal justice complex constitutes a privileged object to analyse the potentialities and limits of flexibility in architecture and how this concept relates to the modern design culture, more specifically to the strategies developed by the so-called Escola Paulista. It is also possible to question the place and type of expected flexibility in structures of gigantic scale, in which the technical demands aggregate onto others, related to the efficiency and capacity to support a high flow of users and the need to adapt to the Brazilian socio-cultural conditions.

The hospital complex project, developed by a team of architects led by Fábio Moura Penteado (1929-2011), started in 1968 and had its final version presented in 1978. After the construction of the concrete superstructure, a rectangle measuring approximately 240 m by 180 m, the project was paralyzed due to a lack of resources. More than a decade later, it was acquired by the State of São Paulo government to instate the Fórum Criminal Ministro Mário Guimarães, inaugurated in 2000, with the adaptation project by Borelli & Merigo Architects **(Fig. 1)**.

The initial project intended to build a complex of approximately 100,000 m² on a large plot of 240,000 m² on the banks of the Tietê River, a region close to the north side of the city centre of São Paulo and a strategic point of access to the city. In addition to having almost 800 beds and clinics capable of serving 4,500 daily consultations, it would have a medical school with 600 places and a training course for 3,000 health technicians, which would total an approximate flow of 15,000 people per day–between doctors, patients, students, staff, and visitors.[1]

It is important to emphasize that the concept of a modern hospital in Brazil was forged in strong dialogue with engineering and architecture, as evidenced by the work of architects like Jorge Machado Moreira, Álvaro Vital Brasil, and Rino Levi. Discussions held in institutions from São Paulo and Rio de Janeiro contributed to deepening the debate, such as the Hospital Organization Division DOH (1941), led by medical doctor and engineer Ernesto de Souza Campos, and the Hospital Research Institute IPH (1954), whose founder and first president was the architect-engineer Jarbas Karman.[2] Among others, both

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1. Fábio Penteado, *Irmandade da Santa Casa de Misericórdia de São Paulo. Hospital Escola Júlio de Mesquita Filho* (São Paulo: Not published, 1978), 3-4.

2. Ernesto de Souza Campos (1882-1970) was an interlocutor of the Rockefeller Foundation in Brazil and one of the founders of the University of São Paulo Medicine School and Minister of Education and Health in 1946. Jarbas Karman (1917-2008) worked at the Special Public Health Service – SESP, established in 1942 which marked the beginning of cooperation between Brazil and the United States in the field of health.

helped to stimulate the debate about the design and construction of hospitals, in close relationship with experiences developed in the United States.[3]

In the context of the work's conception, the rapid population growth of the São Paulo metropolis cannot be disregarded, whose cities went from 8,139,730 inhabitants in 1970 to 12,588,725 inhabitants in 1980,[4] driven by strong internal migration, mainly of people from the northeast region of Brazil, in search of better living and working conditions in the most industrialized city in the country.

No less superlative than the teaching hospital, the criminal justice complex that took its place decades later houses almost all the criminal justice facilities of the São Paulo metropolis and constitutes the largest of its kind in Latin America. Its facilities house 31 criminal courts, a prison for 400 inmates, and several other courts, departments, and sectors of the city's judiciary system. With an average daily flow of 5,000 people, around 1,400 employees and more than 100 magistrates work at the justice complex.[5]

2. FROM HOSPITAL TO JUSTICE COMPLEX

In the late 1970s, the charitable institution Santa Casa de Misericórdia de São Paulo began to implement a project that had been put on hold since 1963 to create a modern teaching hospital, destined to serve a contingent of about 1 million people in a situation of "absolute poverty", in the words of Penteado.[6]

The proposal presupposed a profound institutional renovation, joining the concept of a teaching hospital with that of a general hospital, according to Teófilo de Almeida[7], "one that receives all or several types of patients with different diseases" and, therefore, required high levels of training of the technical staff, treatment techniques, equipment, and care with safety and contagion that also resulted in specific requirements for spatial organization.

The existing documentation in Penteado's collection records four different preliminary designs of the project, developed since 1968. In these previous designs, it becomes clear a general solution by wings interspersed with landscaped courtyards and connected by a central strip, surrounded by a continuous lateral surface of exposed concrete that demarcates a single volume.[8]

In the definitive proposal, an offshoot of the latter from 1978[9], Penteado and his team presented a solution that offered the identity that previous generic solutions lacked. The building's program would be distributed on three main floors—a basement, the ground floor, and the upper floor, in addition to a technical floor—and in three functional strips in the plane—two sides, cut by open patios on the roof, and a central section with the main function of distributing the flows. It is a tripartite organization that reflects on the facades, characterized by three large lowered arches that, on two sides, coincide with the functional strips and, on the other two, with the centres of the garden patios.

The crucial difference of this last proposal lies in the idealization of a square-gardened central square, arranged in the central strip close to the main access to the building. On the ground floor, from the corners of the

3. To learn more about the the concept of a modern hospital in Brazil, read: Ana M. G. Albano Amora, "A formação do campo da arquitetura hospitalar no Brasil", in *A Modernidade na arquitetura hospitalar: contribuições para a historiografia - Volume 1,* ed. Ana M. G. Albano Amora and Renato Gama-Rosa Costa (Rio de Janeiro: Programa de Pós-Graduação em Arquitetura - Faculdade de Arquitetura e Urbanismo - PROARQ-FAU-UFRJ, 2019), 14-45.

4. Information available on SECRETARIA Municipal de Desenvolvimento Urbano/ SMDU - Departamento de Estatística e Produção de informação/Dipro. São Paulo: SMDU. [Accessed March 02, 2022]. Available at https://www.prefeitura.sp.gov.br/cidade/secretarias/upload/urbanismo/infocidade/htmls/7_populacao_recenseada_1950_10552.html.

5. AM, "Complexo Judiciário da Barra Funda, projetado para ser hospital, é o maior fórum criminal da América Latina," Diário da Justiça (June 13, 2012).

6. Fábio Penteado, *Fábio Penteado: ensaios de arquitetura* (São Paulo: Empresa das Artes, 1998), 70.

7. Teófilo de Almeida, "Evolução hospitalar no Brasil: ontem e hoje" (1944), in *Evolução e planejamento hospitalar. Volume 2* (Rio de Janeiro, Ministério da Saúde, 1965).

8. The first versions of the project were developed by Fábio Penteado and Eduardo de Almeida, with collaboration from Alfredo Paesani and Teru Tamaki.

9. In the definitive version of the project, Fábio Penteado and Teru Tamaki are listed as authors, with collaboration from Tito Lívio Frascino, Eduardo de Almeida, and Giselda Visconti.

square, four ramps start at an intermediate level, from where four others go up to the upper floor **(Fig. 2).**

The option for a large horizontal building was opposed by the "podium on a platform" typology, vertical and hermetic; a centralized model was generally considered more efficient. According to Renato Gama-Rosa Costa[10], the monoblock system, created in the USA in the first decades of the 20th century, attracted the attention of more and more Brazilian hospital planners and would achieve hegemony in the country after the 1950s, in part due to the great dedication from architects to projects that would increasingly employ high technology. Also, the demand for large plots of land for implantation, increasingly scarce and peripheral, seemed to indicate the vertical solution as the most appropriate.

However, Penteado's project combined the typology in a single but horizontal block with the logic of pavilion spatial structuring, with the wings interspersed with open patios. But if medical and surgical processes came to be considered virtually deterministic as regards building form, putting typology in strict relation to the functionality and flexibility of the building, why, then, would Penteado opt for an immense horizontal hospital with paths that could reach 200 meters of extension?

An answer may lie at the crossroads of several questions and conditions. First, and the most obvious, is that there were no space restrictions for its implementation; on the contrary, the land was so wide that the architect foresaw a series of buildings and additional programs, including the opening of a "Health Park" around the building, open to the public.

Second is in the design tradition of the so-called "Escola Paulista", of which Penteado was an important part, alongside such greats as João Batista Vilanova Artigas (1915-1985) and Paulo Mendes da Rocha (1928-2021). In the architectural repertoire of many members of this generation, buildings of marked horizontality prevailed, functionally and plastically resolved by the definition of generic grid roofs, under which the program of needs was freely articulated, surrounded by relatively continuous and blind facades in exposed concrete.

A third possible reason is directly related to the second. The idealization of the internal space as an infrastructural prototype and urbanity metaphor, a thought common to the "brutalist" architects of São Paulo, which, in Penteado's work, took on meanings that went beyond public suggestion to reach the individual dimension of the most disadvantaged inhabitants of the metropolis. In this way, the idealization of interiors that emulate a system of streets and a central square sought to configure the familiar spatiality of a small town with an open and spontaneous character to facilitate internal orientation **(Fig. 3)**.

A decade before the beginning of Penteado's project, Jarbas Karman[11] highlighted that regardless of the typology adopted, what is important is to design an efficient scheme concerning the optimization of the routes by nursing professionals, whose lengthening would result in greater physical wear and tear and financial burden, as "each step weighs and costs".

10. Renato Gama-Rosa Costa, "Apontamentos para a arquitetura hospitalar no Brasil: entre o tradicional e o moderno," *História Ciências Saúde-Manguinhos*, n. 18 (December 2011).

11. Jarbas Karman, "o hospital bem planejado" (1958), in *Monica Mussati Cytrynowicz, Instituto de pesquisas hospitalares arquiteto Jarbas Karman* (São Paulo, Narrativa Um, 2014), 90-91.

In addition to efficiency issues, Penteado considered the vertical solution wrong for the Brazilian conditions. As a "crowd hospital", he defends the dilution of traffic flows through the ramps and internal streets, loaded by the presence of many visitors, a problem that he did not consider relevant in European and American hospitals.[12]

As for the questions about the efficiency of the circulation and distribution of hospital services, Penteado[13] mentions the carrying out of "research to rationalize the movements, carried out in conjunction with the Santa Casa de Misericórdia hospital consultancy", whose tests were carried out "by pushing carts with a stopwatch on the hand", demonstrating that only 4 minutes separated the most distant points of the building. The diagonal arrangement of the four ramps that are in the center of the square would avoid peripheral routes through the wings, shortening them.

Research shows estimates that, at the peak of the "podium on a platform" typology, nurses spent 40% of their time in patient transport logistics mostly because circulation patterns were confusing, without any external cues of directionality, setting, or hierarchy, which indicates that not only the distances should be considered for the optimization of the routes.[14]

As Jonathan Hughes[15] notes, obsessive attention to the physical separation of functions and traffic flows in hospital environments, in addition to satisfying specific needs, reveals a recurring association between clinical and civic design during the last century, when hygiene started to support discourses defined by health, efficiency and speed criteria, with an emphasis on the circulatory system. Thus, the hospital was not only the place of medical interventions but also linked to the city as a way of testing planning techniques like those of modern urbanism.

In the mid-1990s, with the large concrete structure in a state of disrepair, the government of the State of São Paulo acquired the area and resumed the construction. The project to convert the hospital into a criminal justice complex was carried out by architects José Borelli Neto and Hércules Merigo on the recommendation of Fábio Penteado himself, with whom recent graduates had worked on the detailing of the teaching hospital project.

In summary, the hospital project intended for the ground floor to be the main entrance for users and various administrative sectors, in addition to reserving one of the three functional lanes for outpatient clinics. The first floor houses similar functions, with the difference that this floor contains several public service rooms and institutional headquarters. On the upper floor would be the hospital's "critical area", intended for hospitalizations and surgeries, pediatrics, and nursery, in addition to the Intensive Care Unit. In the justice building, the courtrooms (up to 52) were concentrated on this floor, designed in modules that adapt to the original structure and circulation.

The hospital's complementary services—changing rooms, storage, warehouses, and other technical support spaces—would be located at the basement level, which would also house the emergency unit, food sectors, and an auditorium for 250 people. In the justice complex, the support and

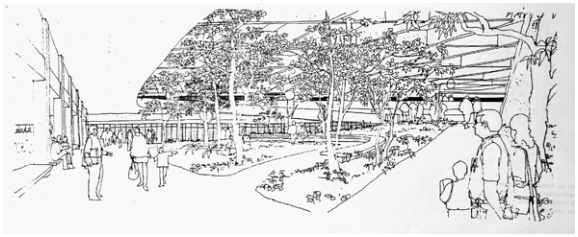
12. Fábio Penteado, *Irmandade da Santa Casa de Misericórdia de São Paulo. Hospital Escola Júlio de Mesquita Filho* (São Paulo: Not published, 1978) 3-4.

13. Fábio Penteado, *Fábio Penteado: ensaios de arquitetura* (São Paulo: Empresa das Artes, 1998), 70.

14. Paul W James and William Tatton-Brown, *Hospitals: Design and Development* (Princeton: Architectural Press, 1986).

15. Jonathan Hughes, "Hospital-City," *Architectural History*, no. 40 (1997): 266–88.







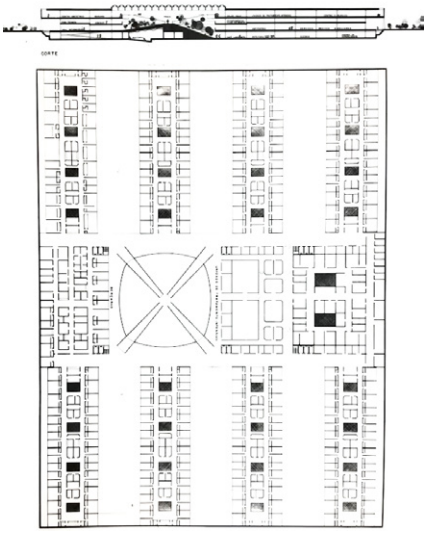


Figure 1. Penteado, former Santa Casa Teaching Hospital, São Paulo. Aerial image of the Fórum Criminal Ministro Mário Guimarães, São Paulo, Brasil, undated. © Author's archive.

Figure 2. Penteado, Santa Casa Teaching Hospital, São Paulo. Section and upper floor with the central square, 1978. © Fábio Penteado's Archive, 2022.

Figure 3. Penteado, Santa Casa Teaching Hospital, São Paulo. Drawing of the central square, by Vallandro Keating, undated. © Fábio Penteado's Archive, 2022.

Figure 4. Penteado/ Borelli & Merigo, Criminal Forum, São Paulo. Image of the central square at the criminal forum in June 2024. © Author's archive.

food structures were kept, the auditorium is used for the plenary sessions of the jury, and the emergency sector was converted into a prison.

3. SUMMARY

Although, obviously, the new use required design adjustments, there were no major changes in the spatial or formal structure of the building. The conservation of its original architecture seems to be mainly due to the multipurpose structuring scheme of functions and circulations. Borelli and Merigo reiterate the validity of the internal organization from an urbanistic view, where the different scales of "avenues and streets" create a spatial hierarchy that facilitates orientation.[16]

Furthermore, the development of an open-ended project would provide sufficient flexibility for installations or relocation of sectors in the building. Even with a different use, it can be stated that the structure meets the new functional demands well. The established São Paulo strategy

16. The information available on Borelli & Merigo's website: "Fórum criminal de São Paulo", [accessed January 28, 2022], available at http://www.borellimerigo.com.br/intitucional/forum-criminal-de-sao-paulo.

of idealizing large covered spaces certainly helps. Effectively, it is not difficult to imagine the conversion of space, without great difficulties, to several large projects, such as a shopping center or a university.

The drawings of the definitive version reveal that the project did not start from forms strictly defined by functions; on the contrary, it previously defined a flexible and virtually expandable formal-functional scheme. However, it is not a merely generic building, especially due to the conception of a network of circulations that transcends its functional destination by defining the central square as a symbolic and hierarchical anchor of its interior (Fig. 4).

Similarly, it manages to avoid the side effects that Hertzberger[17] identified in the obsessive search for eminently functionalist flexibility, which, when trying to adapt to all kinds of changes, ends up not meeting any in an ideal manner. In his well-known analyses, the Dutch structuralist defended the adoption of multipurpose forms, which lend themselves to different uses without the need to undergo major changes or lose their identity.

In their definition of adaptable design, Rabeneck, Sheppard, and Town[18] defended the idealization of environments with generous dimensions and similar proportions, adaptable to a change of furniture and light partitions, avoiding the need for large infrastructural works. Based on research on historic residential buildings, they found that, as in the Penteado project, the possibilities of adaptation are facilitated by the presence of a central coordinating courtyard or hall, without fixed functions, surrounded by environments without major hierarchical differences or fixed furniture.

It is worth noting that the conception of flexible architecture, when guided by a narrow functionalist view, often mistakenly equates uses to users, and functions to people, which ends up frustrating—in Lefebvre's words, "the very possibility of multi-functionality."[19]

The complex's quality and value for the architectural culture of São Paulo was recognized by the CONPRESP (Municipal Council for the Preservation of Historical, Cultural, and Environmental Heritage of the City of São Paulo) on February 12th, 2018, regardless of the change in its original function. ■

17. Herman Hertzberger, *Lições de arquitetura* (São Paulo: Martins Fontes, 1999), 146-149.

18. Andrew Rabeneck, David Sheppard and Peter Town, "Housing flexibility/adaptability," *Architectural Design*, no. 2 (1974): 86-87.

19. Henri Lefebvre, The production of space (Cambridge: Blackwell, 1991).

BIOGRAPHY

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PAIMIO SANATORIUM—THE MASTERPIECE IN CHANGE

#06

JONAS MALMBERG
ALVAR AALTO FOUNDATION / AALTO UNIVERSITY

ABSTRACT

The paper concentrates on the reuse of an iconic modernist building and adaptation of a Conservation Management Plan in use. In the case study of Paimio Sanatorium, the strong protection stipulations as a national monument from 1993 may simultaneously restrict potential uses and be insufficient to protect the values.

The building had since the construction became an architectural sight. Even Aalto himself took his friends to the site. When completed the building was widely published internationally. Possible uses are to be such that the values of the entity are preserved and also visitors' needs can be sufficiently met. Yet, the rather remote location in Paimio city, Southwestern Finland, and considerable size of the complex results in the reality that at least current flow of visitors can't provide income sufficient for the maintenance and heating.

At the same time, it seems unlikely that the hospital uses would return. Contrary the contemporary hospitals include extremely specific requirements and facilities which are very difficult to adapt in a protected building without heavily compromise the preservation.

The premises were nominated as a national landmark in 1993. At that time no other possible futures than the ever-continuing hospital use was taken into an account. Indeed, the use was written in the stipulations. However, the last ward moved out in 2015. Consideration what kind of layers should be preserved from the first 90 years ought to be taken into an account as new uses are designed.

1. INTRODUCTION

The building completed in 1933 as Paimio Sanatorium was of key importance to the international career of architects Alvar and Aino Aalto, whose groundbreaking entry won the competition in 1929. The entire building complex, grouped together in several buildings according to use and orientation, was constructed in accordance with Aalto's philosophy, right down to the smallest details of the furniture and the lighting fixtures. According to the contemporary idea of standardization, these items were also planned for use elsewhere—for example, many pieces of the wooden furniture became key products for Artek founded two years later. Especially the chair 41, so-called Paimio chair, has become a design icon.

With the advent of antibiotics, tuberculosis could be cured. So, the sanatorium was gradually converted into a general hospital from the mid-1960s onwards. Gradually by 2015 all the hospital wards had moved to new premises erected in more accessible locations. Since 2021, only tourism and events, and exhibitions have remained in addition to some housing. Also, the owner of the site changed in 2020 as Paimio Sanatorium Foundation was established.

Current uses in the half empty premises are insufficient to provide stable economy for the site, whose annual maintenance and heating costs reach up to € 1.000.000—not including major interventions or restorations. New possibilities have been actively studied, but due to the size of the entity, rather remote location, and characteristics of the buildings it had turned out difficult. The location in the outskirts of a 10.000 inhabitants city Paimio in Southwestern Finland is distant and without large variety enterprises.

The fundamental question for the uses is that they would accept the location. Simultaneously they should ensure finance, and above all they must be able to fit into the site without major compromises on preservation.

2. PROTECTION

The value of the site had been understood and public discussion due the alterations was opened in the 1970s.[1] The protection as a national monument was approved in 1993. Through the Building Protection Act (60/1985) (Council of State decision no. 43/561/92, 18.3.1993), the protection of the Paimio Hospital encompasses the main hospital building, the former heating plant, the garage, the former staff housing, the former junior physicians' row house, the former chief physician's house and the funeral chapel, as well as the surrounding area.

The protection covers the exterior of the buildings, the original interiors, the building structures, the building parts and the remaining fixed furniture and fittings, including the original lamps and details. The protection stipulations also state that the protected buildings and their surroundings must be maintained and conserved in accordance with their architectural and cultural-historical value.

The justification for the decision to protect the building was that "Paimio Sanatorium and the residential and utility buildings is a national building monument of cultural-historical importance with regards to building history, architecture, building technology as well as its uniqueness."[2] The protection stipulations are:

1. Maima Norri, "Kuinka käy Paimion parantolan?," *Arkkitehti* 7 (1977): 15 (Helsinki, Finland: Association of Finnish Architects).

2. Nina Heikkonen (ed.), *Paimio Sanatorium Conservation Management Plan*, (Alvar Aalto Foundation, 2016), 213-4.

1. The exterior of the protected buildings must be preserved and in repairs original colours and surface treatments must be used.
2. The original interiors, structures, building parts, remaining fixed furnishings including original lamps and details of the hospital building, the former chief physician's residence, the junior physicians' row house and the funeral chapel must be preserved and the colours and the materials of the original designs must be used in repair work.
3. The protected buildings and their surroundings must be maintained and conserved in accordance with their architectural and cultural-historical value. The buildings must be used so that their cultural-historical value is not endangered, and their use must serve the hospital function or a function that is in concordance with the original activity. Any repair or alteration work must be in concordance with the architectural value of the site and approved by the Finnish Heritage Agency.[3]

2.1. ALVAR AALTO FOUNDATION AS A STAKEHOLDER

According to the protection stipulations, the Finnish Heritage Agency has to approve all repairs and alterations. The Agency is an expert body responsible for protection and restoration issues of the most valuable protected architectural heritage.

The specialized knowledge of the Aalto Foundation as the preserver of the architectural heritage by Aaltos' is also to be taken into an account. Since 1990s the Foundation has actively promoted preservation and protection, provided knowledge, archival services and specialized information.

In 2020 Alvar Aalto Foundation was nominated as one of Finland's 18 museums with national responsibility as T*he Museum with the national responsibility of Alvar Aalto's architecture and design heritage*. Thus, the foundation's status in restoration projects became refined more accurately than before. The role adds to the Foundation's cultural-environment duties tasks such as supervising restorations, coordinating planning and advising on repairs of Aalto sites as stipulated by law. Before the participation of the Foundation had no definition based on law but was merely voluntary.[4]

Currently in addition to Paimio Sanatorium 12 other Aalto sites are protected according to the strongest protection law and there are three ongoing protection processes: the Aalto Studio, the Experimental House and the National Pension's Institute building. Also, two churches by Aalto are protected on the Church Act (1054/1993) assigning an active role for the Finnish Heritage Agency in their preservation. Thus, contacts and co-operation between the Heritage Agency and Aalto Foundation is active and fluent providing possibilities for constructive discussion and mutual understanding.

2.2. CONSERVATION MANAGEMENT PLAN

Both Aalto Foundation and the various authorities have been well prepared for emerged questions due to the Conservation management plan (CMP) completed by Aalto Foundation in 2016 as part of the Getty Foundation's *Keeping it Modern initiative*.[5]

3. Heikkonen, *Paimio Sanatorium Conservation Management Plan*, 213-4.

4. "Alvar Aalto Foundation now National Special Museum for Alvar Aalto's Architecture and Design Heritage," Alvar Aalto Foundation, accessed May 1, 2024, Alvar Aalto Foundation now national special museum for Alvar Aalto's architecture and design heritage - Alvar Aalto Foundation | Alvar Aalto -säätiö EN.

5. "Keeping it Modern," Getty Foundation, accessed April 9, 2024, https://www.getty.edu/projects/keeping-it-modern/.

The current protection stipulations still leave possibilities for discussion and refining the details. In the CMP preservation goals became discussed in depth. The CMP has no legal status, but it provides thoroughly considered possibilities for interpretation. The advisory board nominated for the process included representatives from all legal stakeholders. At that time completely revising the stipulations was not found necessary.

The question of originality in the main entrance lobby, for example, was proposed be refined meaning the status which was realized in 1958 following the design by Alvar Aalto's office. Originality was considered to refer to the original sanatorium use, whose end can be dated to the mid-1960s. In 1965 new law was assigned allowing also other than tuberculosis patients to be treated in the state subsidized public sanatoria and two years later another new law allowed the tuberculosis districts to be combined into health care districts. The tuberculosis was defeated due to improved medicines and broad coverage of vaccinations. Then the first reuse as hospitals took place in most of the sanatoria in Finland, including Paimio as discussed in the DOCOMOMO Lisbon conference in 2016.[6]

3. OBSOLETE PROTECTION STIPULATIONS

According to the current legislation the protection stipulations of a national monument can't be revised unless the whole protection is reconsidered.

Current stipulations are written in a way which allows flexibility to facilitate the continually improving hospital uses. Simultaneously they set the Finnish Heritage Agency a very strong position compared to more contemporary orders on other sites. The process of renegotiation new stipulations may result that the new ones may not become as strong or comprehensive as the current ones, which are not limited to certain parts of the interiors. Such flexibility is no longer allowed in the contemporary stipulations approved by the Governmental Centre for Economic Development, Transport and the Environment.[7]

In the early 1990s when the protection of Paimio Hospital was prepared the building history was not studied and evaluated in a contemporary way. The aspiration of returning to the idealized 1930s status was evident. As a detail for both the exterior and interior is assigned that "the colours and the materials of the original designs must be used". The building technique has significantly changed and returning to the original paints mixed on the site, for example, is not reasonable.

In the current situation consideration whether some layers of the hospital use ought to remain if a comprehensive reuse takes place. Some of the alterations of the main building as well as the staff housing, all designed in Aalto's office in the 1950s and 1960s may also include architectural and historical values. Yet, the current stipulations do not recognize their qualities.

If new stipulations were to be written the procedure of hearing of the current owner and other stakeholders would take place, and the in all it would take some years—longer than the span of solving the current issues of the half-empty site should take.

6. Jonas Malmberg, "Obsolescence and Future of Paimio Sanatorium (1929-1933) by Alvar Aalto," in *Adaptive Reuse. The Modern Towards the Future*, ed. Tostões Ana and Ferreira Zara (Lisbon, Portugal: Docomomo International, 2016), 509-515.

7. "Protection under the Act on the Protection of the Built Heritage," Finnish Heritage Agency, accessed April 9, 2024, https://www.museovirasto.fi/en/cultural-environment/built-cultural-environment/protection-under-the-act-on-the-protection-of-the-built-heritage.

4. NEW OWNER AND USES

Since the CMP even the owner has changed. The memorandum of the Paimio Sanatorium Foundation was signed on 27 October 2020 by previous owner the Hospital District of Southwest Finland and, the State of Finland, the Alvar Aalto Foundation, the Municipality of Paimio, and the City of Turku.[8]

On contrary, the idea of ever-continuing use as a hospital is strongly stated in the protection goals from the early 1990s. Furthermore, the use is assigned in the stipulations to "the hospital function or a function that is in concordance with the original activity". The latter may be flexibly interpretated but still, could for example a hotel, spa or tourism and leisure activities fit in the description?

The owner has indeed launched the design process to convert the uses of the site. Ideas involve several purposes including hotel functions in the main building.

4.1. HEALTHCARE?

Currently it seems unlikely that hospital functions could return. During the last decades the demands in hospital uses have become more and more detailed and complicated, and more challenging to be accommodated in old buildings. Simultaneously new hospital premises have been built in the region in logistically more convenient locations. Contemporary highly specialized large hospital in Paimio would be impractical even without having to balance with the architectural preservation.

The latest use as a children rehabilitation was well in balance with the original activities. Also, users were satisfied and inspired on the modernist architecture. Approximately half of the building stock was accommodated by the rehabilitation services but supplementing operators weren't found. Furthermore, economical competition in the rehabilitation sector turned out to be intensive and the operation became too expensive there. Unfortunately, it was discontinued in 2021.

4.2. HOTEL OR ACCOMMODATION?

The owner has launched a preliminary design process to convert the uses of the site to include several purposes including hotel functions in the main building.

Paimio Sanatorium has more than a hundred relatively equal sized rooms whose dimensions meet those of a modest hotel room. The layout may indeed remind that of a hotel. Sanatoria a century ago in Switzerland, for example, reminded hotels, as can be familiarised in Thomas Mann's iconic novel *Magic Mountain*. Paimio Sanatorium has become a tourist attraction since the beginning. Could these be conveniently combined as a hotel. At the current light, it seems to most probable solution to be studied further.

Questions may rise in a more detailed observation. Currently, the patient rooms have neither individual bathrooms nor toilets. Most of them are in the late 1970s appearance designed by Aalto's office. What kind of conversion would be reasonable?

8. "Paimio Sanatorium Foundation," Paimio Sanatorium Foundation, accessed April 9, 2024, https://paimiosanatorium.com/sanatorium/foundation/.

According to contemporary building legislation, in a re-use the current standards for a new construction should usually be met. That applies to fire protection and sound proofing for example. It opens up a variety of questions to be studied in depth.

Also, some current 50-year-old hospital style durable materials like the vinyl floors witness the second period as a hospital. Originally most of the floors were carpeted with linoleum. Neither of those remind a contemporary quality hotel interior. Replacing any material, even with those reminding the original solutions results in losing authentic hospital layers.

Which kind of uses could be in other parts of the building, where for example spa or saunas would be located? To some extent the large complex provides a variety of possibilities. Parts of the basements have been refurbished over the years several times. Also, the interiors of the 1958 completed surgery wing have been completely rebuilt a few times, the last refurbishment took place as late as in 2005. With careful design these spaces among others provide flexibility as discussed in the CMP.

Yet the major question in the long run is the balance between protection and refurbishment. Are visitors also in the distant future willing to come to the rather remote site for the hotel, which itself would be the main sight, but may have an appearance resulting from a relatively recent refurbishment?

Could possibility to experience a tuberculosis sanatorium with only little comforts be adequate? Some other uses instead of a hotel might result in harmonious continuity with the original healthcare as did the children rehabilitation. Unfortunately, if these were easily found they would have been introduced within the last ten years.

The process has started, and several decisions are to be answered soon. Many questions can be solved with careful design. Yet, every alteration means losing some layers from the history and authentic material. Any current material, even reminding the original is still not authentic.

4.3. THE PROCESS AND UNESCO WORLD HERITAGE

The State of Finland submitted a renewed tentative for the UNESCO World Heritage in 2021 including a group of Aalto buildings.[9] Naturally Paimio Sanatorium is included.

Issue of authenticity and the continuous use as a hospital were fundamental ideas in the earlier nomination process in which Paimio Hospital was alone in the tentative list since 2004.[10]

How much can now be sacrificed in order to provide uses for the site without compromising the outstanding universal value of the World Heritage?

5. CONCLUSION

Protection stipulations are made difficult to change on purpose. Their fundamental goal is to be effective in the long run. There are values that should not alter. At the same time the regulations are bearing ideas from the time they were assigned.

9. "The Architectural Works of Alvar Aalto - a Human Dimension to the Modern Movement," UNESCO World Heritage Convention, accessed April 17, 2024, https://whc.unesco.org/en/tentativelists/6509/.

10. Margaretha Ehrström, Jetsonen Sirkkaliisa and Lindh Tommi, *Nomination of Paimio Hospital for Inclusion in the World Heritage List* (Helsinki, Finland: National Board of Antiquities, 2005), 68.





Figure 1. Aalto Alvar, Paimio Sanatorium, Paimio, Finland, 1933. © Credits (Alvar Aalto Foundation, Jonas Malmberg, 2015).

Figure 2. Aalto Alvar, Paimio Sanatorium, Paimio, Finland, 1933. Patient room kept in the 1970s appearance. © Credits (Alvar Aalto Foundation, Jonas Malmberg, 2015).

Figure 3. Aalto Alvar, Paimio Sanatorium operation wing, Paimio, Finland, 1958. Operation theatre refurbished in 2005 in its current status. © Credits (Alvar Aalto Foundation, Sakari Mentu, 2015).



In the case of Paimio some principles drastically changed as it became evident that hospital uses will not continue. Simultaneously, current thinking in preservation is recognizing also layers of various periods in a stronger way than was found necessary more than 30 years ago.

Balancing in the aims of preservation and flexibility in uses is difficult. In an ideal case any alteration should to improve the quality of the protected built environment also in the long run. On the other hand, even as well-known architectural monument like the Paimio Sanatorium can't be kept without sufficient funds. Currently continuous subsidy from the state or other stable sources can't be seen as a solution without a proper use all year around. More questions are topical than exact answers.

Both the owner and other stakeholders, including the designing architects are facing the problems to solve. The answers may vary depending on the point of view. How the complex can simultaneously be a milestone monument in the history of modern architecture and an active place of various uses–globally thinking in the middle of nowhere. ■

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BIOGRAPHY

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OBSOLESCENCE AND VULNERABILITY OF MODERN HOSPITAL HERITAGE. THE CHALLENGE OF RURAL PSYCHIATRIC HOSPITALS IN MEXICO

#06

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ABSTRACT

Modern hospitals around the world impacted urban environments, whether they were small works or large health complexes. However, there have also been illnesses that necessitated geographical isolation due to the specific nature of the diseases, requiring distance and seclusion to promote health benefits.

Iconic examples of this type of facility were the tuberculosis sanatoriums, leprosarias (or leper colonies as they are known in English) or hospitals for mental illnesses, which had to be built outside traditional urban settings, the first two for fear of contagion and the third, under the model of "rural hospitals", in response to the psychiatric theories that recommended urban isolation at the time.

In Mexico, several psychiatric facilities were built under this model in the mid-twentieth century. Their authors designed large hospital complexes outside the cities, which made it necessary for them to include living quarters for the health personnel, as well as spaces for physical or mental recreation for the patients. However, at the end of the 20th century, new psychiatric theories took a clinical turn, recommending the patient's closeness to their social and family environment, which has transformed their original sense of isolation and places them at risk of patrimonial vulnerability. From some case studies in Mexico City, this model will be identified using a methodology based on consulting institutional archives and visiting psychiatric facilities to identify the characteristics of this vulnerable hospital heritage. It is expected that the result obtained will be a reflection on how to rethink its relationship with the contemporary city.

1. INTRODUCTION

In Western modernity, hospitals - and also prisons - ceased to be conceived as places of perpetual confinement to give way to scientific establishments where it was possible to heal their patients - "machines for healing," as Michael Foucault would say - and subsequently reincorporate them into society.

In the first decades of the 20th century, the compositional schemes were symmetrical, and their morphologies still reflected the inertia of historicism; however, with the advent of the Modern Movement, hospital complexes adopted steel and concrete structures that allowed for greater flexibility and ventilation of the spaces.

2. DISTANCE FROM CONTAGION

Due to the clinical characteristics of some diseases, it was recommended to locate them far from urban areas, either to minimise the possible spread of the causative agents, or to alleviate the impact on the immediate family and social environment. In the first instance, we can make reference to the tuberculosis hospitals, such as the world-renowned tuberculosis sanatorium in Finland, whose geographical remoteness was considered indispensable in correspondence for the bacterial treatments available at that time since penicillin would not be discovered by the Scotsman Alexander Fleming until the mid-twentieth century.

These medical scenarios in Mexico were no exception. In the hospital complexes far from urban centres, leper colonies and homes for the insane, as those facilities were called at the time, had existed for centuries. With the consolidation of hygienist thought in the 19th and early 20th centuries, these places ceased to be places of perpetual confinement and began to be attended to in a more scientific manner. Thus, the first modern hospitals were built away from the urban sprawl to try to heal and reincorporate patients into social life, some served to reduce contagion, while others would isolate the patient from his or her environment.

Among the first, the Sanatorium for Tuberculosis Patients in Huipulco, a small town far from the Mexican capital, was built on a spacious site that allowed for isolation and ideal ventilation for the patients in the 180 beds it initially housed.[1] This public building was constructed between 1929-35 under the design of architect José Villagrán García. This design adopts the guidelines of the Modern Movement, both through the use of the reinforced concrete and in the morphological sobriety, although it still presented a symmetrical composition in the set and the presence of geometric ornaments.

In order to reduce the spread of leprosy, the Mexican government set up a series of public clinics close to the most affected geographic regions in the first decades, in order to provide a first level of care, while for the most advanced cases of Hansen's disease, the Zoquiapan hospital was built in 1939, on the side of the highway that linked the Aztec capital with the nearby city of Puebla. It was a complex where patients could reside

1. Xóchitl Martínez-Barbosa and José Villalvazo-Reyes, "Huipulco Tuberculosis Sanatorium in its first ten years of operation," *Revista CONAMED*, *Vol*. 22 (2017): 31.

permanently, and were assigned a plot of land for growing vegetables and keeping domestic animals.

3. THE DISTANCE FROM THE MENTAL DISORDER

Psychiatric hospitals required varying degrees of isolation, whether for outpatient care as needed for patients experiencing occasional crises and receiving regular therapy or for those whose mental disorder required radical separation from their home environment. In the first scenario, patients could be treated in urban hospitals, while if the diagnosis was serious, they were required to be housed in health complexes with different characteristics from urban hospitals.

In Mexico, since the beginning of the 20th century, the country's main cities had asylums, as they were called at the time, located outside the urban centres or in the vicinity of small towns where the families of medical personnel and health employees used to live. In the case of Mexico City, in 1910 the "La Castañeda" General Asylum was built, an hour's drive from the capital, where mental patients were classified and separated. It was not until 1965 when President Gustavo Díaz Ordaz made the decision to close and demolish it, since the old building no longer served to apply psychiatric treatments, which made it advisable to divide the levels of care: a first level of psychological services in neighbourhood clinics, a second level inside general hospitals, and a third level in high-specialty hospitals. Therefore, an ambitious government program was proposed to build two types of tertiary mental hospitals: those in an urban area, for children and adult patients, and those in rural areas, built solely for men and women in adulthood.[2]

3.1. URBAN PSYCHIATRIC HOSPITALS IN MEXICO CITY

To provide psychiatric care in urban areas, two new modern facilities were built in the south of the city: the "Dr. Juan N. Navarro" children's hospital (1966) with 200 beds for infants and adolescents with mental disorders and the "Fray Bernardino Álvarez" hospital (1967) with 616 beds for acute adult patients. In both cases, these were tertiary-level hospitals that treated patients on an outpatient basis and only, if necessary, admitted patients for short stays of a maximum of ten weeks.[3] The buildings were constructed by the Secretaría de Salubridad y Asistencia (Ministry of Health and Assistance), a ministry under the presidential power. The designs were commissioned to Joaquín Álvarez Ordóñez, a Mexican architect born in 1932, who was then director of the office in charge of sanitary equipment.[4]

The "Dr. Juan N. Navarro" Children's Psychiatric Hospital was directed towards child and adolescent patients, a sector that had already been attended to in previous decades, but from a ward within a larger hospital, either as part of a hospital for the insane in general, or in a sector within a children's hospital.[5] On a vast plot of land, several bays were built and interconnected by covered walkways. The remainder of the property was

2. *Hospital Campestre Adolfo M. Nieto*. México: SSA, 1968, 5.

3. *Hospital Psiquiátrico Fray Bernardino Álvarez*. México: SSA, 1968, s/p.

4. Interviews with the architect Joaquín Álvarez Ordóñez conducted in 2023 and 2024.

5. Manuel Isaías López, "History and impact of institutional child psychiatry," *Salud Mental* no. 3 (September 1992): 36.

made up of arranged courtyards with porches for visitors and gardens with playgrounds for the physical and mental well-being of the patients.

The other urban hospital was the "Fray Bernardino Álvarez" Psychiatric Hospital, located just across the street from the aforementioned children's hospital. It was designed as the primary centre for all public mental health care in the capital, serving both adult patients and those referred to one of the other hospitals in the network based on the recommended treatment.[6] A ten-story tower was chosen to house the hospitalization, outpatient clinic, pharmacy, laboratories, operating theatre and intensive care, as well as an area for research and prevention of mental disorders, while the hospitalization area had medical and nursing staff, psychologists, and social workers, as well as service areas. The first floor had areas for occupational therapy with activities such as sewing, pyrography and wool rug manufacturing.[7]

3.2. RURAL PSYCHIATRIC FACILITIES IN MEXICO CITY

The "rural hospital" model - also called "farm hospital" - responded to the psychiatric trends of the first half of the 20th century. It was thought that acute mental disorders would improve if patients lived in isolation and with plenty of green spaces - replacing the quasi-prison system of the previous psychiatric hospitals - for recreation and for agricultural work carried out by the patients themselves, whether it was the cultivation of fruit trees, vegetable gardens and keeping of animals - for those who were able to do so - to promote the patients' gradual return to mental health. In Mexico, this model had already been applied since the 1940s, but in adapted buildings, which provided an opportunity to design modern complexes that were more efficient and sufficiently removed from the urban environment.[8]

During that time, four hospitals were built in accordance with the rural model, two completely new and two within existing buildings. For the two new modern sets, the clinical molding of pavilions was recovered:[9] 1) the "Samuel Ramírez Moreno" rural facility (1967) with 529 beds for male patients with the possibility of rehabilitation, in Tláhuac, in the east of the Mexico City; 2) the campestre "Dr. Adolfo M. Nieto" (1968) with 529 beds for patients with the possibility of rehabilitation, in Tepexpan, north of the city; the other two were: 3) the "Dr. Rafael Serrano" (1967) with 505 beds for chronically ill patients with the possibility of rehabilitation, near the city of Puebla; and, 4) the rural "Dr. Fernando Ocaranza" (1966) with 636 beds for chronically ill patients with a difficult rehabilitation scenario, in the neighbouring state of Hidalgo.[10]

The "Dr. Samuel Ramirez Moreno" Hospital was built on a plot of land in excess of 20 hectares. The layout consisted of isolated pavilions, each corresponding to the severity of the disease. In the centre, there were the auditorium, the dining room and the kitchens surrounded by a square and covered walkways -straight and curved- leading to the dormitory pavillions. The most striking feature was the auditorium roof: a hyperboloid with a lower section larger than the upper one and topped with a skylight. The

6. Marian Misdrahy Flores and Selvia Larralde Corona, "History and transformation of the Fray Bernardino Álvarez Psychiatric Hospital. The case of the day hospital 1997-98," bachelor's thesis, UNAM, 1998, 76.

7. Marian Misdrahy Flores and Selvia Larralde Corona, "History and transformation of the Fray Bernardino Álvarez Psychiatric Hospital. The case of the day hospital 1997-98," bachelor's thesis, UNAM, 1998, 76.

8. Carlos Tejeda Ruiz, "Farm hospitals," *Salud Pública de México*, no. 4 (July-August, 1967): 587.

9. As studied by the Red Iberoamericana de Historia de la Arquitectura Hospitalaria.

10. Ana Cecilia Rodríguez de Romo and Gabriela Castañeda López, "The Granja Hospital and the Bernardino Álvarez Granja School: background of the National Institute of Neurology and Neurosurgery," *Revista de Investigación Clínica* 65, no. 6 (November-December, 2013): 528.

roof itself was made of reinforced concrete that extended to ground level to serve as its own support.

In contrast, the Hospital Campestre (Rural Hospital, as it it known in English) "Dr. Adolfo M. Nieto" was built to accommodate adult patients with acute disorders. The overall layout adopted a concentric scheme, with a central circular plaza and pavilions with circular volumes. The architectural programme considered plans for five different areas: 1) the entrance building including outpatient offices, consulting rooms, intensive care beds, laboratories and social work facilities; 2) the hospitalization area divided into four wards, each with 112 beds, sanitary services, a nurses' station, and a restricted section for inmates with mental disorders; 3) general areas made up of a dining room, occupational therapy rooms for embroidery, sewing, drawing, beauty, modelling and relaxation rooms with televisions, board games, and spaces for reading, and finally, there was an auditorium for watching movies and performances; 4) the characteristic feature of this model included farms for therapeutic work with animals such as chickens, rabbits, sheep and pigs. Additionally, it featured sports courts for basketball and volleyball, as well as extensive gardens; 5) general services included the kitchen and laundry areas, power house, boiler house, substation, warehouse, workshops and elevated water tank, as well as areas for employees such as bathrooms and dressing rooms, and finally, living quarters for the doctors, considering the director and administrator, as well as dormitories for the residents. The remainder of the employees were external.

Seen from a distance, they looked like small impregnable villas where patients lived for years and decades, and sometimes until the end of their days, as it was common for family members to abandon them.

4. FINAL CONSIDERATION

Those urban or rural psychiatric hospitals continue to operate six decades after their construction, although they have had to adapt to the transformations driven by the new medical theories of mental disorders that favour the short-stay clinical model, in other words, providing asylum to patients for days or a couple of weeks, instead of uprooting them for years or decades from their psychosocial environment. In addition, advances in neurological and neuropsychiatric research have changed the clinical landscape, and as a result, punishment procedures that did not result in improvement but did violate the human rights of inmates have been eliminated.

In recent years, the trend in Mexico has been to build general hospitals that include a section for mental disorders, instead of exclusively psychiatric hospitals, which has had an impact on the future of these hospital complexes, as it puts them at risk of asset vulnerability. In the case of rural hospitals, the majority of them have been overtaken by urban sprawl, which has caused them to be demolished in order to provide new educational or sports facilities for the neighbourhood population.

It is clear that these transformations challenge not only the Ministry of Health authorities but also architectural conservation professionals and











Figure 1. Joaquín Álvarez Ordóñez, Children's Psychiatric Hospital "Dr. Juan N. Navarro", Mexico City, Mexico, 1966, inner courtyard of the outpatient clinic. © Credits: Ivan San Martín Córdova, 2023.

Figure 2. Joaquín Álvarez Ordóñez, Psychiatric Hospital "Fray Bernardino Álvarez", Mexico City, Mexico, 1967, aerial view at its inauguration. © Credits: Joaquín Álvarez Ordóñez Archive, year not specified.

Figure 3. Location of the aforementioned hospitals within the current urban sprawl of Mexico City. 1. Former General Asylum "La Castañeda", Mixcoac. 2. Area of hospitals in Huipulco: former Sanatorium for Tuberculosis Patients, Children's Psychiatric Hospital "Juan N. Navarro" and Psychiatric Hospital "Fray Bernardino Álvarez. 3. "Samuel Ramírez Moreno" Rural Hospital. Tláhuac. 4. Rural Hospital "Dr. Adolfo M. Nieto", Tepexpan. Credits: Own elaboration on Google Maps, 2024.

Figure 4. Joaquín Álvarez Ordóñez, Rural Psychiatric Hospital "Samuel Ramírez Moreno", Chalco, Mexico, recent view of the hospital auditorium © Credits: Jorge Manuel Medina Hernández, 2023.

Figure 5. Joaquín Álvarez Ordóñez, Rural Psychiatric Hospital "Dr. Adolfo M. Nieto" rural facility, Tepexpan, State of Mexico, recent view of the gardens and pavilions. © Credits: Jorge Manuel Medina Hernández, 2023.

heritage advocates to find plausible solutions so that this modern heritage can be adapted to new medical theories, thus rethinking heritage from the contemporary city and avoiding irreversible demolition. ■

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BIOGRAPHY

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LELÉ'S ARCHITECTURE OF CARE: THE SARAH KUBITSCHEK HOSPITALS AS A STRATEGY FOR BIRTH CENTRES AND HEALTHCARE SPACES

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ABSTRACT

The work of the architect João Filgueiras Lima, Lelé, holds an emblematic position in Brazilian architecture. It revisits ethical, formal and constructive themes of the modern architectural movement from previous decades with a high degree of awareness. His work has contributed to the construction of a transforming landscape in cities, designed for the community as an ecosystem connected by uses and bioclimatic adaptation to the surrounding environment. Architect João Filgueiras Lima, better known as Lelé, has explored paths of flexibility and development towards industrialization. Within Lelé's vast oeuvre, his healthcare architecture remains key today to a way of thinking and constructing spaces, inseparable from urban concepts of connection, adaptation, scalability and replicability.

In this sense, this paper proposes a critical discussion of Lelé's works in healthcare, particularly the hospitals of the Sarah Kubitschek Network specialising in musculoskeletal rehabilitation, conceived with the crucial collaboration of the landscape architect Alda Rabello Cunha, the physician Aloísio Campos da Paz and the economist Eduardo Kertész. The aim is to discuss this architecture as a *modus operandis* in the process of city building, based on the premises present in its design, as well as considering its material pre-existence, in constant risk of deconfiguration and disappearance.

The methodological approach is the case study of the Sarah Kubitschek Hospitals, in relation to their conservation, combined with a comparative-propositive analysis of the issue of the architecture of care facilities from a gender perspective in other contexts. We not only examine the architecture of spaces for maternity and birth centres but also those dedicated to providing healthcare for the elderly among others, in order to meet current needs for inclusion and care. The study connects with the research NAIX-EM in which the authors are involved at the Universitat Politècnica de València.

1. INTRODUCTION

This paper[1] proposes a critical discussion on Brazilian architect João Filgueiras Lima, Lelé's works in healthcare, particularly the Sarah Kubitschek hospitals specialising in musculoskeletal health, conceived with the crucial collaboration of the landscape architect Alda Rabello Cunha. The aim is to discuss this architecture as a *modus operandis* in the process of city building, in particular of healthcare facilities.

The methodological approach is the case study of Lelé's hospital designs, with a comparative-propositive analysis of the issue of the architecture of care facilities in other contexts.

The analysis exposes the importance of discussing and comparing these experiences as a methodological discussion. There are several cases of healthcare spaces that can potentially benefit from the strategies developed by Lelé in the Sarah Kubitschek hospitals. Such strategies focus on the component of care and humanization, as well as flexibility and scalability as required by some spaces, which is especially important in the case of spaces dedicated to providing healthcare to the elderly, for example.

This is also the case of maternity spaces, which have inadequately considered from the point of view of women's needs, the flexibility required to attend to the different childbirth processes, and in relation to the diversity of contemporary needs. Its program is particularly suitable for incorporating different uses and relationships in terms of tasks related to caregiving, as well as establishing community relations within the urban fabric, and related to reproductive activities.

In short, the paper investigates the design strategies to guide the conception of spaces in healthcare and birth centres, in particular. At the same time, the reflection serves as an initial step towards further analysis of the state of conservation of Lelé's hospitals: their transformation over time, their restauration, as well as, in some cases, and in an integrated approach, their possibilities for reuse.

Thus, while analysing and incorporating the lessons learned from the works being studied, we also examine the architecture of spaces for maternity and birth centres in order to meet current needs for inclusion and care.[2]

2. CONTEXT

The paper analyses, as a case study for contemporary strategies in healthcare architecture, the hospitals designed by Lelé based on the building-landscape approach and the premise of incorporating the garden into the project. It also incorporates concepts of scalability and replicability through the use of prefabrication. The study focuses on examining the first healthcare buildings conceived by the architect in Brasilia, the capital of Brazil, in the 1960's, as well as the example of the Sarah Kubitschek Hospital in Salvador in the 1990's, which served as the basis for building several other Sarah Kubitschek musculoskeletal health hospitals across Brazil.

To understand these strategies, it is first necessary to provide further context on the first hospital buildings conceived by Lelé, the Taguatinga hospital and the Sarah Kubitschek Hospital in Brasilia's South Wing.

1. Contributors of the paper: Eva Álvarez and Carlos Gómez (Universitat Politècnica de València).

2. The study connects with the research NAIX-EM in which the authors are involved at the Universitat Politècnica de València: "Strategies and models for the improvement of security, functionality and user experience in birth centres" (GVA. INNEST/2023/93) within the European Union's FEDER Programme of Strategic Projects in Cooperation and the Valencian Community 2021-2027.

In 1967, Lelé was invited by Oscar Niemeyer to design one of Brasília's first district hospitals, the Taguatinga hospital, based on the principle of modularity and extensibility, as well as on the flexibility of the spaces so that they could be expanded in the future. Alongside the collaboration of architect and landscape designer Alda Rabello Cunha, Lelé sought to create "terrace-garden areas that function as hospital solariums."[3] The staggered spaces were designed to be occupied initially as roof-top gardens, as an extension of the hospitalisation spaces.[4] The roof-top gardens would serve as a place for patients to sunbathe and get to know the vegetation and natural elements, enhancing care and socialising among the in-patients, linking the indoors and outdoors, and they were considered natural and built for well-being, meetings and care of users.[5] This design strategy is directly connected to seminal references in the period, such as Alvar and Aino Aalto's Hospital for Tuberculosis Patients in Paimio, Finland, or Johannes Duike's Zonnestraal Sanatorium in Holland.

On several occasions, Lelé referred to the influence of Alvar Aalto's work on his projects, especially in regard to the Hospital in Paimio, designed together with Aino Aalto. Visited by Lelé shortly after he designed the Taguatinga project, it was an important source of reference for the conception of the latter. Although very different in terms of programme, it is possible to observe strategies used by the Finnish architects in the basis of the project in Taguatinga, such as that of turning to the landscape through the layout of the buildings and opening them up to the outside. Or the solution of the roof-top terrace for sunbathing and socialising for the patients, conceived by Lelé as a garden terrace, favouring contact with the natural environment as an essential part of the cure.

However, the first hospital conceived by Lelé is also related to other examples in the local context, since, in the 1950s, Brazilian architecture had several examples of hospital architecture based on the exploration of the relationship between the building and the landscape. This premise of incorporating the garden into the building was particularly pursued by the so-called Carioca School, the architects who graduated from the National School of Fine Arts (ENBA), under the direction of Lucio Costa. Among the various projects in this context are those highlighted by Ana Amora, such as the Sanatorium Complex of Curicica, by Sérgio Bernardes, the Lagoa Hospital, by Oscar Niemeyer, the IPPMG, by Jorge Machado Moreira, and the Souza Aguiar Hospital, by Ary Garcia Roza. As the author explains, despite their "different programmes, formal typologies and links with their surrounding area, they are good examples for debating the presence of gardens in the Modern architecture of hospitals in the city of Rio de Janeiro."[6]

These four hospitals, the last three of which had landscape designs by Roberto Burle Marx, laid the foundations for Lelé's experimentation in healthcare architecture with Alda Rabello Cunha, helping to apply the experiences of the so-called Carioca School to the great construction site of Brasília.

Yet the Taguatinga experience paved the way for others. For this same city, Lelé conceived the first hospital for musculoskeletal health in 1980. In the

3. Lelé João Filgueiras Lima, *João Filgueiras Lima Lelé* (Lisboa: Blau, 2020), 46.

4. Lelé João Filgueiras Lima, *Arquitetura: Uma experiência na área de saúde* (São Paulo: Romano Guerra Editora, 2012), 71.

5. Carla Zollinger, "Curative Landscapes: Healthcare and Social Architecture in Brazil by João Filgueiras Lima Lelé," in *Modern Design: Social Commitment & Quality of Life* (València: Docomomo / Tirant lo Blanch, 2022), 394-402.

6. Ana Amora, "The garden in the modern hospital architecture of the 'Carioca School' in Rio de Janeiro, Brazil," *Gardens and Landscapes, De Gruyter Open*, no. 5 (2018): 22-38.

Sarah Kubitschek Hospital project in Brasilia's South Wing (**Fig. 1**), located on a more compact plot of land, the solution chosen was a vertical display of the programme, in a block of exposed reinforced concrete, considered to be brutalist. Behind the large Vierendeel-type concrete beams on the façades, the hospital housed large gardens for the use of the patients and their carers and relatives. As was the case with the Taguatinga Hospital, in this project the architect Alda Rabello Cunha was involved in designing the architectural solution integrated with the gardens. The gardens designed by the architect were fundamental to the project: "conceived as a mass of vegetation, the gardens integrate logically and functionally with the various types of existing spaces. In the case of the ward terraces, in-patients use these outdoor garden areas as places to socialise and as solariums for daily sunbathing"[7] (**Fig. 2**), so that the gardens and intermediate indoor-outdoor spaces play a central role in the project and in the patients' own healing therapy.[8]

3. ARAH KUBITSCHEK HOSPITAL, SALVADOR

The musculoskeletal health hospital built in Salvador de Bahia, designed by Lelé, inaugurated the expansion of the Sarah network after the construction of the first unit and head office in Brasília, resulting from a partnership contract between the Pioneiras Sociais Foundation and the Brazilian government.

Conceived in 1988, after a period in Rio de Janeiro, this project dates back to the period of Lelé's intense production in Salvador, in the 1980s. At that time, he had carried out an enormous volume of works, produced in the Fábrica da Cidade, FAEC, a factory conceived and built by him for the production of prefabricated parts for the large volume of public works in Salvador, mainly made of reinforced mortar (ferroconcrete). Among others, he designed and directed urban public works and facilities such as schools, kindergartens, university campuses, City Hall, as well as singular works, including collaborating with the architect Lina Bo Bardi.

However, the architect's experience with prefabrication had its origins in his first works in Brasilia, incorporated in the Taguatinga hospital, before the subsequent development in industrial experiences leading to the FAEC. His experience is also related to the context of the architecture of the Carioca School, especially in the field of healthcare architecture, if we look back at previous examples, such as Sergio Bernardes' Curicica hospital in the 1950s, which was also based on the prefabrication of concrete elements.[9]

The Sarah Salvador, from the 1990s, was built on an extensive plot of land, allowing for its horizontal layout, integrating all hospital areas, including those for treatment, hospitalisation, waiting and management areas. It also permitted the inclusion of large gardens connecting, framing or serving as intermediate and natural spaces for collective use on a daily basis (**Fig. 3**). The spaces and areas were designed with facilities and furniture to support daily and community life during treatment. The project was pioneering in the development of bioclimatic air conditioning systems, incorporating natural floor-to-ceiling ventilation made possible as a result of galleries located in the basements to blow air in, and complemented by the sheds located on the roof.

7. Lelé, *Uma experiencia*, 92-4.

8. Zollinger, "Curative Landscapes."

9. Thaysa Malaquias de Mello, "A contribuição do Arquiteto Sérgio Bernardes para a Moderna Arquitetura de Saúde," Master diss. (Universidade Federal do Río de Janeiro, 2018).

One of the premises of the musculoskeletal health hospitals in the Sarah network was to ensure the recovery of the patients and their companions. The hospital has several flats for in-patient care, in addition to the collective facilities, all of which were conceived along with the gardens.

4. SARAH KUBITSCHEK HOSPITALS IN BRAZILIAN CAPITALS

Decades after the first hospital in Brasília, Lelé designed several Sarah Kubitschek musculoskeletal hospital units around the country, including for example a second hospital in Brasília, as an expansion of the Sarah network.

In contrast to the first Sarah, made of concrete, the construction of the new units was based on a construction made entirely of prefabricated elements. Similarly to the Sarah Salvador, which was the first to be built entirely in a prefabricated modular system, the hospital layouts were organised horizontally in single-storey buildings constructed on large plots of land, with the prefabricated parts produced on a centralised scale. The architect built a factory in Salvador to produce the industrialised modular parts, the CTRS, which is a model of industrialisation methodology in hospital construction.

The system was designed to prefabricate all the construction elements of the healthcare buildings, which were configured based on industrially inspired forms, to encourage the use of natural resources in lighting and ventilation, and to create a variety of spaces, including large spans, at a low cost. Serial prefabrication allowed the architect to develop complex designs based on elementary and industrial figures.

The horizontal layout of the programme allowed the different areas of the hospitals to be integrated, from hospitalisation and management to sports and aquatic facilities. The in-patient spaces were connected to gardens and intermediate spaces open to the surrounding landscape. Such spaces were planned for collective use on a day-to-day basis, and designed in accordance with bioclimatic parameters.

The musculoskeletal health hospitals had apartments for patients requiring hospitalisation with a companion, connected to courtyards with gardens.

5. BIRTH SPACES AMONG SPACES OF CARE

Architecture for the process of childbirth has historically been treated within rigid parameters and has been subject to little problematisation as a typology of architecture, given that "the design of hospital spaces for labour and birth has traditionally been developed under surgical parameters and functionality for the professional"[10] and not for the users, in this case, the women who use them. These spaces, constructed within rigid technical-scientific structures, have perpetuated notions and norms without taking into account the diverse experiences and needs of the women for whom they are intended.

The critique of similarly rigid structures is central to the work of Lelé, especially in the design strategies of the natural and built spaces that he developed alongside Alda Rabello Cunha, for the well-being, meeting and care of the people who use them. Lelé's architecture is quite clear in his criticism of the generalized use of air conditioning and artificial lighting

10. Marta Parra and Ángela Müller, "Espacios de maternidad: Dignidad y salud," in *Habitar los hospitales: el bienestar más allá del confort. Nuevas tendencias en arquitectura sanitaria* (Alcalá de Henares: Universidad de Alcalá, 2021).







Figure 1. João Filgueiras Lima, Lelé, Sarah Kubitschek Hospital, Brasilia, Brazil. © Carla Zollinger.

Figure 2. João Filgueiras Lima, Lelé, Sarah Kubitschek Hospital, Brasilia, Brazil. © Carla Zollinger.

Figure 3. João Filgueiras Lima, Lelé, Sarah Kubitschek Hospital, Salvador, Brazil. © Carla Zollinger.

as a rule for all hospital buildings. For him, this unwritten rule created hospital environments that were "much more hermetic and, above all, more unpleasant and inhumane". Contrary to the typical logic of enclosing hospital equipment within a technological bunker, Lelé's projects sought to enhance and favour areas for socialising and public use by connecting interior and exterior, establishing a relationship with the surrounding landscape through the inclusion of gardens in the project.[11]

The spaces related to maternity are often characterised as hermetic and dehumanising, reflecting a strongly hierarchical patriarchal vision. Such a framework sets these spaces in standardized and established areas, preventing proposals outside the medicalized and, in short, controlled areas. Thus, spaces for childbirth have been identified with a surgical unit, leading to a lack of encouragement for other spaces related to maternity. In this context, the World Health Organisation, as early as 2015, warned about the existing problems in health centres, whose physical-spatial configuration, procedures and treatment are linked to situations of violence in the birthing process, recognising the need for research and institutional action, with the crucial challenge of respecting women's health choices.[12] Among these choices are deciding how to give birth, where to give birth, the birthing procedure itself, and the company during childbirth, in a long list. These principles were taken up by the WHO in 2018 and defined in more detail in the form of recommendations to promote "respected labour" or "mobility in labour and position of choice" or "emotional support from a companion of choice", considered as fundamental rights by the World Health Organisation itself.[13] These recommendations, alongside others, were reflected in the WHO Recommendations for care during childbirth, for

11. Zollinger, "Curative Landscapes."

12. World Health Organization, "Preventing and ending disrespect and abuse during delivery care in health facilities," in *Statement*, 2015, https://www.who.int/es/publications/i/item/WHO-RHR-14.23.

13. World Health Organization, "WHO recommendations for care during childbirth, for a positive birth experience," in *Recommendations*, 2019, https://www.who.int/es/publications/i/item/WHO-RHR-18.12.

a positive birth experience, based on the "importance of woman-centred care to optimize the experience of labour and birth for women and their babies through a holistic approach", considering "the complexity and heterogeneity of prevailing models of care and current practice."[14]

6. LELÉ'S PROJECTS AS STRATEGIES FOR BIRTH CENTRES

Few experiences are supported by deep and wide reflection on different ways of conceiving birth spaces, in Spain, as well as in the Western context. In the current context, health and care have been increasingly treated according to a scientific-productive model, based on hospital care and medicalised treatments.

In such a context, on the one hand it is fundamental to consider how architecture interacts with various disciplines in order to provide insights into the design of birthing spaces, specifically Birth Centres, in relation to different environments and their socio-environmental landscape. On the other hand, it is crucial to explore research on architectural typologies to address strategies and different models for enhancing the safety, functionality and experience of women, their partners and companions in birthing centres.

Thus, the present reflection took the cases of Lelé's hospitals as a basis for research on architectural systems and typologies to address the current and future question of designing and constructing care spaces, in particular Birth Centres, from a conception centred on the users, on the relationship with the natural and built environment, promoting the democratisation of their use, the possibility of flexibility and adaptation to different contexts, as well as production on scale.

In particular, the reflection has aimed to consider spaces that have been analysed very little in terms of their spatiality, such as spaces for maternity. Such spaces have been historically conceptualised, and especially in recent years, based on a highly technical-scientific and medicalised model. Therefore, it has become central to consider the spaces from a woman's perspective, taking into account their specific needs, and the complexity, flexibility and openness that these spaces would require to bring together the different models and processes in a vital and central need, such as childbirth.

The projects of João Filgueiras Lima, Lelé, and, particularly his healthcare architecture in collaboration of Alda Rabello Cunha, constitute an invaluable contribution to modern architecture of the second half of the 20th century in its technical, aesthetic and social possibilities associated with industrialisation and prefabrication, to promote the needs for change in healthcare spaces, especially in maternity care. The study of these works in their architectural typology is therefore an important source for promoting strategies and different models for improving the experience of women and other users in Birth Centres. ■

14. World Health Organization, "WHO recommendations for care during childbirth, for a positive birth experience," in *Recommendations*, 2019.

BIOGRAPHY

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THE INSTITUTO DE PUERICULTURA E PEDIATRIA MARTAGÃO GESTEIRA (IPPMG), BETWEEN GLORY AND RISK

#06

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ABSTRACT

In 1949, the formerly named Institute of Childcare and Pediatrics (Instituto de Puericultura e Pediatria - IPP) began to be built in a territory resulting from landfill of nine islands located at Guanabara Bay. The architectural project, designed by a team led by Jorge Machado Moreira, who was also responsible for the urban plan of the University City, was awarded in the category of hospital buildings at the II Biennial de São Paulo, in 1953.

The IPP's physical-functional program, as originally conceived, was distributed into four blocks. The gardens and tile panels designed by Roberto Burle Marx create an active relationship with the surrounding landscape. In 2009, Burle Marx's landscaping and panels were listed by the Rio de Janeiro City Council.

Despite its past glories, including its consecration and the recent recognition of the artistic value of the panels and the landscape design, the complex has suffered damage which has put its physical integrity and visibility at risk.

It is worth highlighting the chronic lack of funding that hinders the carrying out of preventive conservation work and makes the recovery of the gardens and the restoration of the architectural elements of the, at present, Institute of Childcare and Pediatrics Martagão Gesteira (IPPMG, as it is known in Portuguese) unfeasible.

This article intends to examine the current state of the IPPMG, understood in the intricate contrast between the celebration of historiographical narratives and negligent everyday attention. We are also interested in exploring how to create a future that is not necessarily identified with the lethargy that seems to numb different segments of civil society and public power today, endangering the transformations envisioned by its authors.

1. INTRODUCTION

This article discusses the architectural and landscaping concept of the formerly named IPP, an integral part of the University of Brazil, conceived between 1949 and 1953 by Jorge Moreira and Roberto Burle Marx in Rio de Janeiro. The first section, entitled "glory", analyses the design solutions and their integration into the University City, whose urban plan, also signed by Moreira, established guidelines for the development of an area resulting from the association, through landfills, of nine islands in Guanabara Bay. The second section, named "risk", discusses the chronic lack of funds that hinders the preventive conservation and restoration of the currently named IPPMG, despite its importance in terms of heritage. At the same time, it is mandatory to point out the problematic occupation process of the island, observing the diagnoses and guidelines suggested by the last two master plans produced by the Federal University of Rio de Janeiro (UFRJ), created to replace the University of Brazil. Through analysis of these documents, the relationship between the IPPMG, its insertion in the university campus and in the city of Rio de Janeiro is reconsidered.

2. GLORY

The IPP was created in 1937 with the support of President Getúlio Vargas to accompany and provide clinical guidance for children in their physical and mental aspects. In 1945, the IPP separated itself from the Ministry of Education and Public Health, as it became part of the Faculty of Medicine. In the same year, it was decided to establish the University of Brazil on an area of land formed by the landfill of nine islands in Guanabara Bay.

The IPP headquarters began to be developed in 1949, after initial being located in temporary facilities. It was eventually settled with several health facilities in the northern section of the island, adjacent to the road that connects the mainland to Ilha do Governador, where Galeão International Airport is located.

According to Amora e Souza[1], the IPP was perhaps the first building constructed on the campus, made possible through the intermediation of the Presidency. Getúlio Vargas considered it the starting point of a new phase in the history of child support in Brazil.

In the 1952 urban planning version, Moreira envisaged the use of *pilotis* in buildings to guarantee the free movement of pedestrians over large gardens, and the organisation of activities in ten spatially demarcated sectors connected through a monumental road axis that crosses the territory longitudinally.

In relation to IPP's architectural project, Paulo Jardim[2] acknowledges, in addition to the recommendations put forward by Le Corbusier, affinities with the constructive rationality defended by the Bauhaus masters. In this line of thinking, the physical-functional program is distributed in four blocks, with three of them – Ambulatory, Hospital, and Pupillary, which monitors healthy children – implemented parallel to each other and connected transversally by a fourth block, occupied by the Milk Bank.

The implementation of the complex, partially built on *pilotis*, integrates the covered areas with the building's external spaces, especially in areas

1. Ana Amora and Eliara Souza, "IPPMG: Obra exemplar, síntese das artes, de Jorge Machado Moreira," in *Anais do XI Seminário Docomomo Brasil* (Recife: UFPE, 2016), 7.

2. Paulo Jardim, "O arquiteto e a arquitetura do IPPMG," in *Instituto de Puericultura e Pediatria Martagão Gesteira: 60 anos*, ed. Ana Lúcia de Mello Rodrigues [et al.] (Rio de Janeiro: Universidade Federal do Rio de Janeiro, 2013), 24-32.

for prolonged stays. To achieve this integration effect, Burle Marx defined sinuous contours between the flowerbeds and the pedestrian circulation areas, creating abstract shapes in the floors paving made in Portuguese stone.[3] The association between the patches of vegetation, in the same way, directs the users' gaze towards pre-determined visual axes, creating an active relationship with the surrounding landscape.

In the words of Mário Pedrosa,[4] originally published in 1958:

> *The garden is no longer passive in relation to the spaces and architectural construction plans themselves. Its function is no longer merely to complement the rhythms of structures and open spaces, in the interior-exterior relationship. Instead, it aims to define the spirit of the place. By structuring the surrounding spaces, the artist seeks to create a counter-rhythm that both isolates the architectural unit – allowing it to define and enhance its design and program – and integrates it into a cohesive whole with the environment, climate, atmosphere, light, and nature.*

Materials, colours, and textures accentuate the orthogonality of the façade plans, with a predominance of solid surfaces over voids. Small openings, generally derived from geometric elements, are inscribed in the large masonry panels, and continuous bands of windows are created by the successive alignment of frames.

White ceramic tiles, used in the external masonry, guarantee visual attention, contrasting with the shaded areas of the lower floors and with the artistic panels, whose production refers to two of the aspects of modern tiles in Brazil – patterns and figured compositions –, according to Frederico Morais.[5]

The standardised tiles, signed by Ayrton Sá Rêgo and Yvanildo da Silva Gusmão, were selected through an internal competition among young employees of the Technical Office of the University of Brazil (ETUB in Portuguese). The module proposed by Rêgo covers parts of the outpatient block. It is centred on a meandering blue line that extends diagonally to the adjacent edges. Four small circles, two of which can be found in dark blue, and the other two in yellow, arranged at alternating vertices, serve as complementary connecting elements. The carpet effect, formed by the inverted laying of the pieces, creates a sinuous and continuous weave, with an abstract-geometric character.

The pattern designed by Gusmão wraps parts of the pupillary block. It consists of a diamond-shaped central element, in blue, resembling a weathervane, with the vertices occupied by a quarter of a circle, in yellow. When repeated, this generates a continuous pattern that alters the perception of architectural space.

The figured panel, designed by Roberto Burle Marx, extends into two parts on the southeast facade of the Milk Bank block. The smaller segment, located to the left of the entrance door, serves as the backdrop for a small garden. The other part of the panel, on the right, is also installed on a recessed wall, originally illuminated through a cut-out in the covering slab. The tiles are polychrome in shades of blue and yellow, arranged in layers of

3. Jorge Czajkowski (org.), *Jorge Machado Moreira* (Rio de Janeiro: Centro de Arquitetura e Urbanismo do Rio de Janeiro, 1999).

4. Mario Pedrosa, "O paisagista Burle Marx," in *Dos murais de Portinari aos espaços de Brasília*, ed. Aracy Amaral (São Paulo: Perspectiva, 1981), 287.

5. Frederico Morais, *Azulejaria contemporânea no Brasil* (São Paulo: Editoração Publicações e Comunicações, 1990), 96.

different thicknesses, that interpenetrate or overlap with linear interferences in a composition alluding to cubist aesthetics.

The plot proposed by Rêgo tends towards the informal, while that by Gusmão creates a visual vibration, close to that of kinetic art. In Morais's assessment, both work to "relieve the building of its constructive rigidity; They are like a visual rest area."[6]

The Burle Marx panel, in turn, combines the tile technique with easel painting, serving as a sealing element and a coloured background to enhance the plants. Furthermore, it fosters the interaction between public and private, with art humanising the landscape.

The IPP project was awarded in the hospital buildings category at the II São Paulo Biennial (1953).[7] Two years later, the building was part of the Latin American Architecture since 1945 exhibition organised by the Museum of Modern Art (MoMA).

Regarding the IPP, the New York exhibition catalogue points out the refinement of the architectural solutions in the scale of detail, and the careful execution of the building, rarely observed in Rio. Furthermore, it highlights the presence of elements that characterise modern Brazilian architecture, such as "Burle Marx tiles, openings made of ceramic elements and vaulted roofs, treated with the greatest moderation."[8]

Henrique Mindlin (1956) analyses the University City on his *Modern Architecture in Brazil*, which was considered the largest campus in the country at that time. It cites the IPP and, through photographic reproductions, values the monumentality of the Clinical Hospital building and the geometric accent of the National Faculty of Architecture (FNA in Portuguese). Mindlin also emphasises the sobriety of the IPP's architectural project, whose regional character is accentuated by the contrast between the blocks and their smooth surfaces covered with panels designed by Gusmão, Rego and Burle Marx.[9]

Despite appearing in the main specialised periodicals and in practically all critical inventories of Brazilian modern architecture, the, at present, named IPPMG is only listed provisionally because of Burle Marx's gardens and panels, through a municipal decree established in 2004, to safeguard a set of 84 works, in consideration of their importance for the configuration of Rio's cultural landscape.

3. RISK

As it is impossible to provide a detailed discussion on the process of occupation of the university campus or pinpoint causes and responsibilities for the decisions behind the insufficient funds to build and maintain its academic units, it is worth mentioning some facts that contributed to its degradation.

The transfer of the federal capital to Brasília not only symbolically repositioned the city of Rio de Janeiro in the country but also impacted the distribution of financial resources. Similarly, the reframing of the University of Brazil as UFRJ, part of the federal higher education network, can be considered an authoritarian paradigm of the civil-military dictatorship that governed the country between 1964 and 1985, according to Queiroz.[10] The

6. Morais, *Azulejaria contemporânea no Brasil*, 96.

7. Helio Herbst, *Pelos salões das bienais, a arquitetura ausente dos manuais: contribuições para a historiografia 1951-1959* (São Paulo: Annablume: Fapesp, 2011).

8. Henry-Russel Hitchcock, *Latin American Architecture since 1945* (New York: MoMA, 1955), 84.

9. Henrique Mindlin, *Modern Architecture in Brazil* (Amsterdam: Colibris, 1956), 148-153; 236-237.

10. Andréa Queiroz, "A UFRJ e a sua modernização conservadora durante a ditadura civil-militar (1964-1985)," in *Anais do XXIX Simpósio Nacional de História - Contra os Preconceitos: História e Democracia* (Brasília: UnB, 2017), 3.

university reform, inspired by the US organisational model, contributed to further isolating the already spatially fragmented academic units.

The construction of teaching and research centres on campus was prolonged for decades, in a process marked by a lack of resources and by the refusal of some academic units which opted to remain in central areas. As a result, some of the empty spaces created were occupied by various federal agencies.

In the 1990s, the IPPMG surroundings were severely altered with the construction of a highway that encroached upon, practically suppressing the frontal setback of the Ambulatory block, leading to the destruction of flowerbeds and contributing to deteriorate the atmospheric and noise conditions. Similar losses occurred with the establishment of two bus terminals just in front of the plot.

According to a survey carried out in 1999, which was later included in the last two UFRJ master plans concluded in 2011 and in 2022, the conservation of the IPPMG received a regular rating, and facilities were in full operation at the time. The external coverings were worn and partially detached. Possibly due to poor maintenance of the roof's waterproofing, leaks were observed at several points. In addition, fences were installed on the *pilotis* of the ambulatory block to prevent the occupation of the homeless.

In the aforementioned survey, the kindergarten (Escola de Educação Infantil—EEI in Portuguese), which occupied the premises of the former daycare centre, was equipped with eight classrooms, a reading room, and a toy library. On the ground floor, the *pilotis* were still covered in Portuguese stone, although some had deteriorated. It was identified that several cobogós (ceramic hollow wall elements) were loose, putting users at risk.

It cannot currently be stated that the IPPMG conservation remains regular. In fact, by any asset evaluation criteria, it would receive the worst possible evaluation. Nor can it be said that the building complex remains in full operation: the EEI has been closed since February 2023, as determined by a technical report, which pointed out structural issues in the Pupillary block.

Can we envision some type of reversal to the imminent collapse of the IPPMG? What does the future of the University City deserve?

According to the UFRJ-2020 master plan, drawn up during the economic boom that characterised the decade that preceded the World Cup (2014) and Olympic Games (2016), it was believed this would be the urban requalification of the campus and the full recovery of its built heritage.

The main goal of the PD UFRJ-2020 was the principle of double integration, between the units that make up the campus and its connection with the city of Rio de Janeiro. Aiming to reverse the fragmentation that constitutes the root of a project "whose conception, politically authoritarian and urbanistically faithful to the canons of an uncritical modernism,"[11] it was proposed to introduce shared-use equipment. This change aims to unite the academic community, radically transforming the current standard, which prioritises individual transport, isolation between units, low density and separation of uses.

In design terms, this optimism was translated into a broad urban reformulation, structured into six Convergence Centres, distributed

11. Universidade Federal do Rio de Janeiro, *Plano Diretor UFRJ 2020* (Rio de Janeiro: UFRJ, 2011), 19-21.





Figure 1. Jorge Machado Moreira. IPP. Rio de Janeiro, 1949-1953. Ambulatory entrance. Photo Michael Aersens, undated. Source: NPD FAU/UFRJ

Figure 2. Jorge Machado Moreira. IPPMG. Rio de Janeiro, 1949-1953. Ambulatory entrance. © Helio Herbst, 2024.



Figure 3. Map of types of UTGs in the University City, adapted by the author. © Helio Herbst, 2024, after UFRJ, *Caderno de Diretrizes. UFRJ Plano Diretor 2030* (Rio de Janeiro: UFRJ, 2022), 42.

throughout the island. These hubs would bring together classrooms and shared equipment – auditoriums, restaurants, residences, libraries, commercial establishments –, unified through an innovative internal transport system, whose magnetic levitation trains are powered by electrical energy.

The plan also predicted the construction of a branch of the metropolitan railway company and the implementation of waterway transport to the city centre, diversifying access options.

Almost nothing came to fruition.

At the end of the PD UFRJ-2020 term, a new commission was appointed to prepare the 2030 master plan. In general terms, the plan advocates a non-expansionist approach, focusing on the recovery, optimisation, maintenance and sharing of open spaces and buildings.

The PD 2030 recognises the University as its greatest asset. Under this reasoning, it proposes measures for the recognition, appreciation and dissemination of places, spaces, and activities that participate in the cultural identity of UFRJ. According to the document:[12]

> *The proposal of an integrated conservation plan of the university heritage is a most relevant attitude towards the technical, social, and cultural sustainability of our built and environmental cultural patrimony. Museum spaces, places of memory, and spaces of sociability are important components of the institution's cultural identity.*

Based on the blocks' characteristics of use and occupation, limits were created for the management of spaces and facilities for collective use. This delimitation resulted in the so-called Territorial Management Units (UTG in Portuguese),

12. Universidade Federal do Rio de Janeiro, *Caderno de Diretrizes. UFRJ Plano Diretor 2030* (Rio de Janeiro: UFRJ, 2022), 20.

which contain the buildings and their surroundings, as well as circulation routes, preservation areas and buffer strips around the buildings of each UTG.

Among the nine types of sub-units, we are interested in examining UTG1, which includes the listed modernist buildings. The IPPMG and the Faculty of Architecture and Urbanism (FAU) are found in this category. In accordance with standards recommended by international organisations, UTG1 foresees the establishment of an envelope with the aim of protecting the neighbourhood of the listed property, prohibiting construction that impedes its visibility and that alters the ambience and historicity of its context.

The confrontation between the last two master plans indicates the setting for discussing Brazilian politics. In PD UFRJ-2020, the optimism generated by the economic boom led by the left in the federal government motivated the proposal of an ambitious plan for the densification and diversification of activities on the campus. Those proposals were linked to new modes of transport, aiming to integrate the island with the city centre.

PD 2030, however, takes into account the budget constraints imposed by the extreme right, in power between 2019 and 2022. Such adversities resulted in actions more focused on the management of built heritage, with conservation parameters defined by each UTG.

Unfortunately, despite stopping attacks against democracy and science, the left's return to the federal government has not, to date, had the desired impact on the conservation of the campus. Its listed buildings continue to degrade on a daily basis, contradicting the belief in the capacity of modern architecture, in communion with the arts, to transform society through a new plastic order for the well-being of the entire community.

In an attempt to reiterate the importance of safeguarding the IPPMG and upholding the achievements and promises of transformation embodied in its architectural and landscape project, it seemed pertinent to refer to an excerpt written by César Floriano, in which the work of Burle Marx is recognised as "the blunt expression of an artist committed to and believer in the modern project". Furthermore, in the author's words:[13]

> *We have to look at Brazilian modernity from a broader reality. A modernity that used the resource of creative freedom not as a misleading ideology or as a replacement for an absence of transformations in the social base, nor as a rhetorical formula. Brazilian modern art was fully committed to the country's social, technological, and cultural reforms. An aesthetic statement driven by a desire to connect art and existence, assuming experimentalism as a necessary condition to create an artistic status.* ■

13. César Floriano, "Roberto Burle Marx: Jardins do Brasil, a sua mais pura tradução," *Esboços: Histórias em Contextos Globais*, no. 15 (2007): 21.

BIOGRAPHY

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CIRCULAR ECONOMY AND BUILT HERITAGE: OBSOLESCENCE, CIRCULARITY, INSTRUMENTS AND FUTURE

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ABSTRACT

Building construction contributes 35% of the total waste worldwide annually, and it has the greatest potential to influence a reduction in GHG emissions driving climate change. In this context, heritage conservation and the reversal of built stock obsolescence, be it material, functional, or cultural have become problems and potential strategies for sustainable development. Various authors propose Circular Economy (CE) strategies that seek to extend the useful life of buildings, but: what is the scope of these strategies faced with specific heritage values?

In this article, we discuss and contextualise the concepts of Circular Economy as applied to the built environment and particularly to built heritage to set a context and precisions on several relevant concepts and to enhance the broader discussion.

1. INTRODUCTION

Building construction generates 35% of the total waste worldwide annually, and it has the greatest potential to influence a reduction in GHG emissions driving climate change.[1] The construction industry is thus widely considered a key sector for an effective transition to sustainable development and a circular economy. The linear economy paradigm: "Extraction-Manufacturing-Use-Disposal" must be re-defined towards a production model that guarantees the use of resources at their maximum potential for as long as possible.

The implementation of a new production model based on a Circular Economy (CE), "a system where materials never become waste and nature is regenerated,"[2] is currently proposed as one of the most necessary and effective solutions to combat this problem: the Circularity Gap Report 2021, an annual report that measures the state of circularity at a global level, shows that the world economy is 8.6% circular, making it necessary to achieve at least 17% circularity to live in a prosperous and habitable world. Given its impacts, the construction industry is usually considered a key sector for an effective transition to CE. Within the six industries with the highest environmental impacts, the construction industry has the greatest potential to influence the temperature decrease that impacts climate change.[3]

2. OBSOLESCENCE, HERITAGE AND SUSTAINABILITY

In this context, the construction industry needs to find alternatives to the simple demolition of obsolete built stock, which turns buildings into waste (Construction and Demolition Waste, CDW). Thus, its obsolescence is increasingly widening its traditional scope and becoming a sustainability problem. If the linear structure is characteristic of the conventional production system - from extraction, construction, operation, to disposal - the material conditions, use, and cultural relevance of buildings can also be considered in this process. Such articulation poses a conceptual, economic, and cultural challenge, that must also be placed in the perspective of its environmental impact in a comprehensive manner.

The architectural tradition towards the existing stock has been focused on the cultural value of a built heritage embodying the broader social, historical and technological understanding of the societies that built them. Perhaps influenced by the methods of archaeology, which transformed ruined remnants into material repositories of history to be decoded in spatial, economic, or social terms,[4] or by the representative load of the continuity of social and political institutions such as the church or the state, built heritage gained, in the last 50 years, a status beyond its direct meaning as an asset, to be enshrined as an object of devotion.

Daniel Abramson emphasises the concept of obsolescence as we understand it, being relatively new, triggered by the powerful drive towards urban densification of the 20th century.[5] It was not the derelict infrastructure, succumbing to its weight or being destroyed by a natural catastrophe such as an earthquake that ended the useful life of a building. Instead, it was elements such as sudden changes in use or land price that rendered buildings unfit and led to their demolition, even if they had been built relatively recently or if they were structurally sound.

1. ARUP, *Circular Economy in the Built Environment*, (London: 2016)

2. The Ellen MacArthur Foundation, *Circular Economy - UK, USA, Europe, Asia & South America* https://www.ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview

3. Matthew Fraser, et al., *The Circularity Gap Report*, 2024

4. David Clarke, *Spatial Archaeology*. (London; New York: Academic Press, 1977)

5. Daniel Abramson, *Obsolescence*.

Following Abramson's argument, we could say that obsolescence, beyond the debate between destruction and conservation and albeit broadly understood, is a problem of modern cities and modern architecture.

On the other hand, Calduch proposed the decline of modernist architecture as shown in three ways: 1) physical deterioration; 2) obsolescence of use (the constructions no longer served the purpose they were designed for; and 3) the loss of its cultural and social meaning.[6] These categories act as a starting point to detect obsolescence. After this diagnosis, the problem can be abstracted for future solutions, enhancing the building's attributes. Strategies based on these assessments can then be implemented to extend their useful life. However, what exactly are these strategies? There is no established formula to equally extend the useful life of all buildings; each case requires a specific analysis to diagnose problems and propose solutions.

3. CIRCULAR ECONOMY AND BUILT HERITAGE

Circular Economy has gained wide support as a solution to this problem, aiming for the circularity of the construction, use, and demolition processes of buildings, and thereby prolonging their useful life by taking advantage of the existing structure and restoring the initial function of serving the community again. This trend calls for a radical shift in production and consumption patterns, supported by a raft of new government policies.

Various authors[7] propose circular economy strategies that seek to extend the useful life of buildings. At the same time, applying CE principles to buildings requires overcoming a series of technical, logistic, and cultural challenges, among which the definition of metrics and indicators stands out to evaluate and certify that buildings exhibit these circular attributes.[8]

The concepts of CE applied to the preservation of modern architectural heritage and its projection over time will be the conceptual framework for investigating the architectural potential and discussing proposed projects and tools that problematise various CE strategies applied to modern heritage conservation at various scales.

Specific strategies have been stated and developed nationally and internationally to integrate CE in the construction sector. In academic literature,[9] various strategies necessary for the incorporation of these principles have already been proposed: the careful consideration of the life cycle of the work, the integration of circularity criteria in the design stage ("upstream"): Urban Metabolism, flows and banks of materials; Design for Disassembly (DfD); layered design (layers – 7s); programmatic and structural flexibility; open structures and supports; adaptive reuse; maintenance and repair; urban mining; heritage conservation; improvement and maintenance. In the same way, several official international organisations have raised this need, such as the Circular Economy Action Plan (CEAP) of the European Commission.[10]

All these allow us to understand buildings built from a circular perspective as processes rather than products.

6. Calduch Cervera, *El declive de la arquitectura moderna*

7. ARUP. *Circular Economy in the Built Environment*; The Ellen MacArthur Foundation, *Circular Economy - UK, USA, Europe, Asia & South America*

8. Yifei Yu, et al., *Circular economy in the construction industry*, (May, 2022)

9. Leonora Eberhardt, et al., *Building design and construction strategies for a circular economy*; Guerra et al. *Circular economy applications in the construction industry* (2020)

10. https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en

4. CIRCULAR ECONOMY METHODS

Despite the fact that there are various systems for assessing the environmental impact of products, including construction materials, the structured implementation of CE criteria in buildings has yet to be developed. A variety of methodologies and evaluation criteria were collected[11] when categorising CE concepts applied to the construction industry and reviewing evaluation methods used for CE in this context. Key areas highlighted include waste management, environmental impact reduction, and the design of products, materials, and buildings. From this review, we have built a discussion with two main elements: 1) Metrics for EC in Construction; and 2) Life Cycle Assessment (LCA) as an analysis platform for EC.

4.1 METRICS FOR EC IN CONSTRUCTION

In the shift towards CE, quantifying the circularity of products and services is crucial to designing business policies and strategies, and prioritising evidence-based sustainable solutions.[12] The same authors conclude that "none of the existing metrics is addressing the concept of CE in its entirety". The European Commission has implemented LEVEL's,[13] a European framework for sustainable buildings, which uses basic sustainability indicators to measure the impacts of carbon, materials, water, health, comfort, and climate change throughout the life cycle of a building. Other initiatives are WBCSD's Circular Transition Indicators (CTI),[14] a tool and framework used to measure circularity for different industries and localities, and Circulytics - Circular Building Toolkit,[15] a platform for integrating circular design strategies that are framed in European regulations and certifications.

4.2 CE AND LCA IN THE BUILT ENVIRONMENT AND BUILDINGS

Several authors[16] highlight that one of the most widespread and used EC evaluation methods in the construction industry has been that of Life Cycle Assessment (LCA). Other authors[17] have pointed out that as a result of the variety of studies existing to date, the LCA methodology presents multiple limitations for the evaluation of buildings. These include considerations of the building's context, the complexity of the design model behind it, a scenario of uncertainty about future changes that affect it, impacts on human health and well-being, data on recycled material, and a lack of consideration of social and economic aspects. Some of these observations have already been raised, pointing out that the construction industry is responsible for inefficient resource management due to characteristics specific to each local industry, such as the lack of integration, lack of cooperation, and waste of resources.[18]

The LCA methods applicable to CE face significant gaps that hinder their application in developing specific solutions tailored to the area.[19] Within these, problems associated precisely with their lack of capabilities and conditions to integrate into building design processes and their subsequent administration stand out, given that LCA is not directly articulated with information modelling systems, such as Building Information Modelling (BIM), nor does it include methodologies specifically developed for the construction industry, which in

11. Lana Lovrenčić Butković, et al., *Assessment methods for evaluating circular economy projects in construction*, (2021)

12. Blanca Corona et al., *Towards sustainable development through the circular economy* (19)

13. https://environment.ec.europa.eu/topics/circular-economy/levels_es

14. https://www.wbcsd.org/Programs/Circular-Economy/Metrics-Measurement

15. https://ce-toolkit.dhub.arup.com/

16. Eberhardt, et al., *Building Design and Construction Strategies for a Circular Economy*; Galle et al., Building a Circular Economy; Xue et al., *BIM Integrated LCA for Promoting Circular Economy towards Sustainable Construction*

17. Fnais et al., *The Application of Life Cycle Assessment in Buildings*

18. Xue et al., *BIM Integrated LCA for Promoting Circular Economy towards Sustainable Construction*

19. Abdulrahman Fnais et al., *The Application of Life Cycle Assessment in Buildings* (2022)

turn limits its ability to support decision making in the design stage. In addition, the lack of information and integration capabilities for temporal variables neglects the support that the system could provide during the life stages of the building after its design: construction, use, maintenance, and demolition.

5. CIRCULAR ECONOMY AND MODERN HERITAGE

Very few scholars have specifically discussed the articulation between Circular Economy and Built Heritage. Huuka and Vestergaard articulate them on a conceptual level, proposing that CE and Heritage Conservation aim to preserve "value," which they define differently; they favour a minimum material intervention, on different grounds.[20] Furthermore, they argue building conservation could benefit from adopting the vocabulary and methods of CE, such as Life Cycle Assessment[21] or Material Flow Analysis.[22]

This integration stems from an original contradiction, as CE is born of industrial ecology and thus focuses on reductive cycles and their material re-circulation, while architectural conservation is, in origin, conservative of an original status and meaning, thus "sceptical towards buildings being re-contextualised, re-interpreted." Reciprocally, when it comes to the built environment in particular, CE can find much to learn from building heritage conservation.

Such opposition is suggestive and raises a challenge for mutual learning from these disciplines, for the integration in professional building practice and further research and scholarship.

6. ADAPTIVE REUSE, A PRECURSOR

Adaptive Reuse is an already consolidated strategy to preserve the cultural heritage of significant buildings, through critical rehabilitation and restoration strategies. The objective is to maintain the building's historical and cultural character, adapting it to the new needs of its users while preserving its value, an objective matching those of CE.

Through studying obsolescence, we can thus distinguish between material, functional, or cultural obsolescence[23] to understand the aspects in which the building is not fulfilling its initial function. On the contrary, there is a general purpose, which is to return the usefulness of the buildings to the community without the need for rehabilitation that imitates the original function but rather adapts to current needs.

Francesca Lanz and John Pendlebury outline an overview of Adaptive Reuse approaches, characterising it as an "autonomous discipline" stemming from the reaction to radical urban planning in the 20th century. It emerged in the 1970s and finds today its own conceptual frameworks and disciplinary contributions beyond the disciplines of architecture and design.[24] They claim that since the 2000s, Adaptive Reuse has gained momentum and become a mainstream topic in scholarly circles, if not in professional ones, reflecting a cultural attitude of our time, stemming from the slogan "Reduce – Reuse – Recycle" – a clear antecedent of the circular economy in the 2010s, also appropriated by architectural discourse - if not practiced - in those years, as shown in the German Pavilion at the Venice Biennale 2012[25] or the Australian Pavilion in 2018.[26]

20. Satu Huuhka and Inge Vestergaard, *Building conservation and the circular economy*

21. LCA is defined by ISO 14040 as the compilation and evaluation of the inputs, outputs, and potential environmental impacts of a product system throughout its life cycle. https://eplca.jrc.ec.europa.eu/lifecycleassessment.html

22. Material flow analysis (MFA) is an analytical method to quantify flows and stocks of materials or substances in a well-defined system. Brunner, P.H.; Rechberger, H. (2004). Practical Handbook of Material Flow Analysis. Lewis Publishers, New York.

23. Rafael Calduch Cervera, *El declive de la arquitectura moderna* Palapa, Colima 4 2013

24. Francesca Lanz and John Pendlebury, *Adaptive reuse: a critical review*,

25. Petzet and Heilmeyer, Reduce, *Reuse, Recycle, The Journal of Architecture* 27, 2020

26. Mauro Baracco and Louise Wright, *Repair: Australian Pavilion, 16th International Architecture Exhibition, La Biennale Di Venezia 2018*. (New York, New York: Actar, 2018)

Interestingly, regarding the concept of RRRs, Ana Tostões suggests integrating this Circular Economy sphere with Modern Movement architecture for the first time.[27] We should consider this a precursor in problematising such integration, although not yet in an explicit tone with Circular Economy, but with its conceptual antecedents RRR. Tostões claims: "I consider that the reuse project is starting to "make history" and I share the idea that heritage transforms itself with us". Through Adaptive Reuse, it is possible to preserve the cultural heritage of significant buildings, through rehabilitation and restoration strategies. The objective is to maintain the historical and cultural character of the building, adapting it to the new needs of its users.

The way to integrate Circular Economy and Modern Heritage is therefore open to further exploration of a series of relevant and critical topics, which are in different degrees of consolidation and development, such as Obsolescence, Rehabilitation, RRR, Adaptive Reuse, Curated Decay, among others. These suggest a variety of substantial discussions are still to be sustained and developed.

7. CONCLUSION

In the last decade, the Circular Economy has emerged as the new approach to achieving sustainable economic development in the building sector. The concepts of Circular Economy applied to the preservation of modern architectural heritage and its projection over time will be the conceptual framework to investigate the architectural potential and discuss proposed projects and tools that problematise various CE strategies applied to (modern) heritage conservation at various scales.

The Circular Economy and Life Cycle Assessment tools are suggested for use in investigating architectural potential and preparing a project proposal, defining strategies, evaluating performance, and preparing the design.

The way to integrate Circular Economy and Modern Heritage is therefore open to further exploration, of a series of relevant and critical topics, which are in different degrees of consolidation and development, such as Obsolescence, Rehabilitation, RRR, Adaptive Reuse, Curated Decay, among others. These suggest a variety of substantial discussions are still to be sustained and developed.

The session introduced by this paper invites contributions to discuss such problems integration as a process; to study the impact of the passage of time on buildings, both in material wear and the change in requirements and uses; and to consider their re-design potential, considering the reduction of resource consumption and waste generation in the construction, occupation, and demolition stages. ■

27. Ana Tostões, *Modern Heritage Reuse, Renovation and Restoration* (Basel: Birkhäuser, 2022)

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BIOGRAPHY

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STUBBORN ARCHITECTURE: PREINDUSTRIAL PRINCIPLES OF SLOWING BUILDING MATERIAL USE IN THE USE-STAGE

#07

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ABSTRACT

Material use in the use-stage of buildings today is overlooked, yet significant. This paper explores what design principles enabled a preindustrial 200+year-old building to have lower material resource use – '*metabolism*' – in its use-stage than an industrialised building of Late Danish Modernism. This is to inform contemporary, industrialised building practice to lower material resource consumption and waste generation in a 200-years timeframe. The average lifespan of buildings in Denmark is 200 years. Yet, continuous renovations, transformations, and replacements of building components drive a use of building materials whose environmental impact is largely unaccounted for in Danish building code. This is despite that the renovation industry is about double the size of the new-build industry, and that 65% of environmental impacts from renovations stem from the use of materials. The shift from vernacular to industrialised building practices took off during Danish Modernism (1933-1974) and introduced new material cultures, construction practices, and design thinking that contemporary building culture is reminiscent of. Based on the previous quantitative findings that the metabolisms (in kg CO2-eq./m2/year) of the preindustrial case, Søkvæsthuset (*1755), was 11 times lower than the industrialised case, Tingbjerg Dormitory (*1972), the paper uses a qualitative comparative case study to analyse what design principles led to this difference in metabolisms. The analysis uses the four lifespan-lenses in BUILD/Aalborg University's theoretical lifespan-framework and takes the façade walls of the two cases as the primary object of comparison. Six design principles of low-metabolism were identified in this comparative analysis: *'robustness hierarchy', 'incremental care', 'legibility', 'multiple purposes', 'singularity'*, and *'clear boundary'*. These principles may contribute towards the design of stubborn new-builds and careful adaptive reuses of existing buildings, such as from the Modern period, to resist the pressures of time with a minimum of resource use in a 200+years perspective.

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1. INTRODUCTION

The paper investigates design principles of low material resource use in the use-stage of two cases, one preindustrial building and one building of Late Danish Modernism, to inform contemporary building practices.

Buildings' material change and environmental impact from material use in their use-stage are currently overlooked in Danish building code[1]. While buildings are predicted to last 200 years on average in Denmark[2], parts are often being replaced or altered more rapidly. The significance of resource flows generated in buildings' use-stage is indicated by the Danish renovation sector's production value that is about 65% bigger than the new constructions industry[3], and by the large share (60-65%) of renovations' environmental impact coming from the production of building materials[4]. This resource use is unsustainable from both whole-life-costs and climate perspectives[5], and has been criticised for compromising preservation values, not least in Modern Heritage buildings[6], diminishing lasting architectural qualities.

The paper builds on the quantitative findings in *Hentzer Dausgaard et al. forthcoming* of resource flows and lifespans of components mapped and compared across three cases: one preindustrial case, *Søkvæsthuset* (*1755, **Fig.1**) compared to the industrialised *Tingbjerg Dormitory* (*1972, **Fig.2**), constructed after the *Montage Circular* (1960) subsidised industrialised housing constructions in Denmark[7]. Thus, Tingbjerg Dormitory was chosen to represent the industrialised building culture that persists today. To overcome the difficulty of comparing two primary cases of different locations, weathering conditions, design quality levels, maintenance/repair cycles, and programmes, a third case, the mostly preindustrial *Tingbjerg Family Housing* (*1958, **Fig. 2**), was added as control case, facing the Dormitory in the same street, by the same architect and housing administrator, and with a comparable programme.

The concept of "metabolism"[8] was used as a unit to account for material use in the use-stage of buildings, measured in kg CO2-eq./m^2/year of LCA A1-A3 modules. Despite Søkvæsthuset's many whole-building adaptive reuses – from orphanage, to hospital, barracks/prison/court, academy, offices, and library/association facilities – its metabolism was 11 times lower (0,43 kg) than Tingbjerg Dormitory's (4,83 kg) and 20% lower than Tingbjerg Family Housing (0,54 kg). The small metabolic difference between Søkvæsthuset and the control-case relative to the Dormitory means that the differences in location etc. were marginal contributors to the metabolism results. Further, the heritage-listing of Søkvæsthuset in 1918 only decreased its metabolism by 13% in the following 100 years, which therefore does not challenge the overall results either. The found metabolic shift from preindustrial to industrialised building cultures during Danish Modernism (1930-1974[9]) suggests that design principles of low-metabolism could inform new-builds and adaptive reuse building practices today.

2. RESEARCH QUESTION

What design principles contributed to a low-metabolism in the comparison of façade walls between preindustrial and industrial buildings, and how may they inform the design of low-metabolism architecture today?

1. Tobias Hentzer Dausgaard et al., 'Breaking the Renovation Cycle: Learning from Architectures of the Past for Low-Metabolism Building Design Today' (EAAE/ARCC 2024 International Conference Proceedings, forthcoming).

2. Niels-Jørgen Aagaard et al., 'Levetider Af Bygningsdele Ved Vurdering Af Bæredygtighed Og Totaløkonomi' (SBI forlag, 1 November 2013).

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3. METHODS AND CASE SELECTION

The previous quantitative findings enable a direct qualitative comparison between the lifespan qualities that led Søkvæsthuset and Tingbjerg Dormitory to have different metabolisms[10]. The paper uses a "comparative case study analysis"[11] of cases chosen with *Flyvbjerg 2006*'s strategies to select few cases of rich information contents[12]. The preindustrial case is chosen from before 1824 (200+years-old), and the industrialised case and control case are chosen from the period of Danish Modernism (1930-1974) on either side of 1960. With the earliest case being from 1755 and the latest from 1972, this is the period of study. Søkvæsthuset is analysed with the descriptive theoretical framework by BUILD, Aalborg University, that divides building lifespans into four 'sub-lifespans': "Technical lifespan" where a component is technically/physically able to perform its original function, "Functional lifespan" where the need for a component's original function persists, "Economic lifespan" where maintaining/repairing a component is viable, and "Aesthetic lifespan" were the "aesthetic standard" of a component is maintained in the eyes of the users[13]. Based on differences in lifespans and metabolisms, Søkvæsthuset is analysed and dialectically compared to Tingbjerg Dormitory within these four categories, to form hypotheses of design principles of low-metabolism. Due to page limits, the study focuses on façade walls since the building envelope accounts for most of Danish renovation activities[14].

4. RESULTS

Six design principles were identified from the comparison of Søkvæsthuset's and Tingbjerg Dormitory's façades through the BUILD-framework: *robustness hierarchy*: increasing technical and aesthetic robustness where most wear is expected, *incremental care*: components should be maintainable/repairable rather than needing full replacements, *legibility*: a component's purposes and upkeep should be self-explanatory across generations of users, *multiple purposes*: a component should have qualities within multiple types of lifespan-parameters, *singularity*: a component should be irreducible rather than a composite of sub-elements, and *clear boundary*: an authoritative envelope resistant to changes and expansions.

5. ANALYSIS

5.1 THE CASES

All three cases are located in the Municipality of Copenhagen. Søkvæsthuset was built as a public orphanage and workshop in a then-poor neighbourhood within the city walls, realised by the esteemed bricklayer/builder J.C.Conradi for the Danish King. The two Tingbjerg-cases were realised as part of a big garden city-inspired social housing-only masterplan at the edge of the municipality, facing the green area of Utterslev Bog/lake. Designed by two of the foremost architects of the Danish Modern Movement, professor, author, urban planner, and architect Steen Eiler Rasmussen, and professor and renowned landscape architect, C.Th.Sørensen, the interplay between the large, green open courtyards and the mostly-low housing blocks emerged

Byrummonitor, 18 September 2023, https://byrummonitor.dk/Debat/art9529853/Den-forest%C3%A5ende-katastrofale-renovering-af-SAS-hotellet-%C3%A5benbarer-vores-forhold-til-kulturv%C3%A6rdier.

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13. Aagaard et al., 'Levetider Af Bygningsdele Ved Vurdering Af Bæredygtighed Og Totaløkonomi', 9.

14. Rasmussen and Birgisdottir, 'Livscyklusvurdering Af Større Bygningsrenoveringer'.

as a key motive[15]. In the following analysis, the building envelopes of Søkvæsthuset and Tingbjerg Dormitory are compared.

5.2 TECHNICAL LIFESPAN

The overall robustness of Søkvæsthuset's plastered solid brick façade wall made it survive severe negligence of maintenance[16]. Its particularly robust granite base and visually less vulnerable, dark, brown-plastered plinth at the street level have likely slowed the maintenance cycle where most wear and tear would be expected – akin to the tall concrete base of Tingbjerg Dormitory.

As of 1960, housing – Tingbjerg Dormitory included – was state-subsidised with a requirement to be "untraditional"[17], without the advantage of time to learn from past mistakes, and thus born with prototypical errors that have paved the way for the improved industrialised practices of today. The technical robustness of the Dormitory's façade owe to this fact, but differs more fundamentally from Søkvæsthuset's at two levels: by its making and legibility over time. The Dormitory's hard-surfaced, industrially fabricated-and-perfected components do not lend themselves to be gradually maintained/repaired by hand or otherwise: elements are worn until they are technically obsolete and need replacement or even full-scale renovation. Tingbjerg Dormitory is advertised to prospective tenants as "comprehensively refurbished", "new-refurbished", and "modernised"[18]. In this context, *newness* is used as a quality metric, in which *ageing* would imply loss of performance and value. For Søkvæsthuset, this is different: The softer plaster can be continuously maintained and incrementally repaired by skilled hands, and if anything, ageing signifies that generations of owners have found it valuable enough to continuously care for.

The traditional wall build-up of Søkvæsthuset's façade wall made maintenance and repair cycles more legible to craftsmen and users over time. On the contrary, to comprehend the purposes, qualities, and possibilities of upkeep of Tingbjerg Dormitory's different and materially complex wall build-ups, one needs access to descriptions/drawings and more specialised knowledge.

5.3 ECONOMIC LIFESPAN

The up-front investment of constructing the originally state-owned building with a thick, robustly built façade took a long-term view on state-spending. Tingbjerg Dormitory was realised with a different vision: how to deliver as many inexpensive homes of a decent quality in the shortest amount of time as possible. In a 270-years whole-life-costs perspective, Søkvæsthuset's incrementally maintainable façade is likely economically advantageous compared to Tingbjerg Dormitory's full-scale renovations/replacements every 20 years. Over shorter time-intervals with no renovations needed, say 15 years, the operation costs of the Dormitory would likely outperform Søkvæsthuset, especially since Søkvæsthuset was built at a time of low labour costs and high material costs, contrary to today[19].

15. Birgitte Kleis, Jannie Rosenberg Bendsen, and Mogens A. Morgen, Tingbjerg - vision og virkelighed, 1. udgave (Kbh.: Strandberg Publishing, 2020).

16. Svend Erik Møller, 'De kvæstede søfolks hus behøver hurtig hjælp', Politiken, 23 June 1957, Rigsarkivet.

17. Jørgen Burchardt, 'Vejen Til Det Industrielle Byggeri-15 Års Forceret Teknologiudvikling 1945-1960', Fabrik & Bolig 36 (2018): 9–33, 9.

18. 'Tingbjerg Kollegiet', kbh-Kollegier.dk, 2024, https://kbh-kollegier.dk/spot/tingbjerg-kollegiet/.

19. Realdania By & Byg, 'Livscyklusvurderinger for historiske ejendomme', 2022, https://realdania.dk/publikationer/realdania-by-og-byg/livscyklusvurderinger-for-historiske-ejendomme.

#07

5.4 AESTHETIC LIFESPAN

The stringent, symmetrical architectural order of Søkvæsthuset's façade remained unaltered since 1755, and its heritage-listing in 1918 attests to its architectural/aesthetic and cultural/historic value[20]. The façade wall gains sculptural depth with the rhythm of lesenes framing setbacks around windows, which differentiates the wall into many thicknesses, ranging from 74-98 cm. Increased thicknesses with lesenes enable more structural loads to be carried in the areas that are not punctuated by windows and doors[21]. This dependency of the structural logic on the architectural order is hardly a surprising design insight to architects. Nonetheless, when elements had more purposes – across lifespan parameters – they were found to last longer in the two cases. The Dormitory's window/parapet-elements are examples of visually and materially recognisable non-structural elements, which were fully replaced twice. Tingbjerg Dormitory's non-structural sandwich-elements of the façade have benefitted from appearing as if they were structural and expressed an architectural order – as walls towards the street and column-like wall pieces towards the garden. They avoided replacement, but were, however, partially reclad. Søkvæsthuset's façade frontons are examples of the absence of more lifespan purposes: their narrow aesthetic purpose as adornments resulted in demolition of the rear-frontons and redecoration of the central one, responding to fluctuating aesthetic preferences and functional needs.

5.5 FUNCTIONAL LIFESPAN

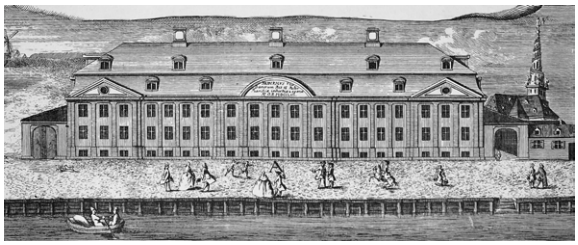
Søkvæsthuset's massive façade walls can, like ancient vernacular walls, "store and radiate" heat in cold temperatures, and even out temperature differences over the cause of the day (cooling at day, heating at night) in warmer temperatures[22]. This thermal quality is inseparable from its technical, aesthetic, and economic purposes/qualities, all properties of its singular form. The Dormitory's façade walls have a more complex wall build-up, and is composed of four parts: sandwich-elements, window/parapet-elements, curtain-wall-glass-facades, and exposed, fibre-cement cladded decks. For example, the parapet originally consisted of five layers, each performing a specific task, yet mainly within functional/technical lifespan dimensions: fibre cement-cladding (waterproofing), wind film and vapour barriers (wind- and watertightness), insulation (thermal capacity), and wood cement boards (stiffness). The separation of purposes into physically separate layers conceptually abstracts the qualities of the parapet into different performance goals where each layer becomes vulnerable to the pressures of modernisation/optimisation – such as increasingly restrictive building codes and technologically advancing insulation materials quickly rendering the window/parapet-elements' performance obsolete, resulting in several replacements.

Another difference between the cases is the 'authority' of their respective boundaries. The Dormitory's non-structural façade, with perpendicular structural walls hidden behind it, enabled outwards expansion. The curtain-wall glass-facades and protruding balconies of the common kitchens formed the formally and structurally least clear boundary which was radically altered

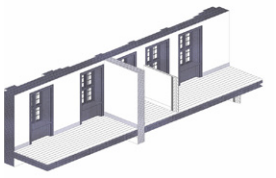
20. SLKS, 'FBB Fredningssag: Søkvæsthuset, Dæksofficerskolen', 2016, https://kulturarv.dk/fbb/sagvis.pub?sag=3102556.

21. Hentzer Dausgaard et al., 'Breaking the Renovation Cycle: Learning from Architectures of the Past for Low-Metabolism Building Design Today'.

22. Zhiqiang (John) Zhai and Jonathan M. Previtali, 'Ancient Vernacular Architecture: Characteristics Categorization and Energy Performance Evaluation', Energy and Buildings 42, no. 3 (1 March 2010): 357–65, 360.







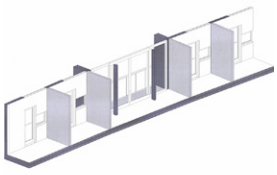


Figure 1. J.C. Conradi, 'Søkvæsthuset', Copenhagen, Denmark, 1755. © Credits: G.W.Baurenfeind, Danish National Archives, 1753. Cropped. License: CC-BY SA 4.0, creativecommons.org.

Figure 2. S.E. Rasmussen and C.Th. Sørensen, Tingbjerg Dormitory (left) and Tingbjerg Family Housing (right), Copenhagen, Denmark, 1958-1972. © Credits: Mogens Falk-Sørensen, Stadsarkivets Fotografiske Atelier, Københavns Stadsarkiv, 1973. Cropped. Original: kbhbilleder.dk/kbh-museum/116613. License: CC-BY SA 4.0, creativecommons.org

Figure 3. J.C. Conradi, 'Søkvæsthuset', Copenhagen, Denmark, 1755 (top). S.E. Rasmussen, Tingbjerg Dormitory (bottom), Copenhagen, Denmark, 1972. © Credits: 1st author. Lifespan/metabolism hierarchy is indicated from longest/lowest to shortest/highest with hatch shades from dark grey to white.

several times. By structural and formal layout, Tingbjerg Dormitory allowed for change – both for operational energy upgrades and expansions of common kitchens. The nearly 1 meter massive façade wall of Søkvæsthuset did not change, apart from the occasional blocking and unblocking of windows in the gable facades, and thus formed a clear and authoritative boundary hesitant to change, even through rising comfort levels and energy efficiency standards. The flexibility and adaptability inherent to the plan layout of the Dormitory clearly delivers value to its users by offering opportunities to expand or alter the spaces over time, yet, from a low-metabolism perspective, the '*stubbornness*' of Søkvæsthuset's wall makes it superior.

5.6 DESIGN PRINCIPLES

ROBUSTNESS HIERARCHY

As seen in the dark-coloured mineral base/plinth of Søkvæsthuset and Tingbjerg Dormitory, technical and aesthetic robustness of the façades were increased in the areas where most wear and tear were expected, which resulted in slower maintenance/renovation cycles.

INCREMENTAL CARE

Differences in construction techniques and in components' maintainability influenced the overall material use in the two cases: The Dormitory's façade components were machine-made and needed full replacements several times, while Søkvæsthuset's human-made façades were incrementally maintained and repaired, leading lower material uses. While Søkvæsthuset's facade had a high up-front cost, its long lifespan offset costs over time and made it an economically viable low-metabolism design principle in a whole-life-cost perspective.

LEGIBILITY

The material complexity of the build-up of Søkvæsthuset's façade wall was low despite its many purposes/qualities relative to the Dormitory's in which the wall build-up complexity was significantly greater. When the façade contained only a few materials and used construction techniques that were well-known for centuries, its properties and upkeep were legible to centuries of users too. This is a design principle of a low material complexity, a minimum of layering of those components intended to last, and of legibility across time with the use of well-established construction methods.

MULTIPLE PURPOSES

Søkvæsthuset's façade served purposes across all four categories of lifespans in the BUILD-framework, whereas parts of the Tingbjerg Dormitory's façade had narrower purposes (i.e. only functional/technical) resulting in several replacements and a greater metabolism. Having multiple lifespan qualities or purposes at once is therefore a low-metabolism design principle.

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SINGULARITY

Søkvæsthuset's façade wall's qualities – its sculptural, rigorously ordered form, structural capacity, thermal properties, and maintainability – could not be separated into parts or layers like in the case of the Dormitory. The singularity and irreducibility of Søkvæsthuset's façade wall, in which no quality could be altered in part without also changing the whole, appeared to be a low-metabolism design principle.

CLEAR BOUNDARY

The clarity of the boundary of Søkvæsthuset, by shear mass and entangled lifespan qualities, made it reluctant to spatial expansion, unlike the Dormitory where the structural walls were perpendicular to the façade and where the façade itself consisted of elements communicating different and contradicting levels of permanence. The authoritative boundary, stubbornly resistant to change, is therefore an underpinning design principle for a low-metabolism design.

6. CONCLUSION

Based on previous quantitative findings of a large difference in metabolisms between a 270-year-old preindustrial case and an industrialised case of late Danish Modernism, this paper qualitatively analysed the entangled relationships between the different lifespan parameters of the BUILD-framework in the use-stage of the two buildings. A series of six design principles of low-metabolism architecture were identified to inform contemporary design of new buildings and adaptive reuses of existing buildings, including from the Modernist Period (1933-1974), to minimise needs for future material consumption. The use of these principles requires contextual, project-specific interpretations by architects to weigh trade-offs. There is a need for future research to study and interpret trends of metabolisms among a larger number of cases to contribute to theory on how buildings change with future needs, and what margins for change in buildings may minimise material uses, as well as to clarify how low-metabolism design principles may be adapted to a contemporary building culture's industrialised processes, material-palette, building codes, budgets, waste-handling, and CO2-emission goals, both in terms of up-front and whole-life carbon. ■

BIOGRAPHY

Tobias Hentzer Dausgaard, architect MAA/RIBA II, MArch AADipl(Cmd), graduated from The Architectural Association School of Architecture, London, with previous studies at The Royal Danish Academy of Fine Arts, School of Architecture. With the Ph.D.-project: *Lasting Architecture in Practice*, Tobias is an Innovation Fund Denmark industrial-Ph.D.-fellow at Aarhus School of Architecture with RØNNOW LETH & GORI architects (RLG). Tobias' work-experience spans new-builds/transformation/preservation a.o. at RLG/Copenhagen, Christian Kerez/Berlin, E2A/Zurich, and Øresund Architects/Copenhagen (co-founder). He served as Junior Advisor to several Danish Ministers of Culture, and co-authored the Danish Agency for Cultural Heritage's *Sustainability Strategy for New-Builds and Modernisation-projects*. He teaches/exhibits/lectures widely in Europe/USA.

EVERYDAY RESIDENTIAL HERITAGE AND CIRCULARITY: POTENTIAL AND LIMITATIONS OF DOCOMOMO FULL DOCUMENTATION FICHES

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ABSTRACT

This contribution investigates how Docomomo Full Documentation Fiches could be adapted to everyday residential heritage and encourage circular renovations in marginalised territories (peripheral and socioeconomically fragile areas).
Existing buildings represent resources for cities but often constitute a degraded, obsolete, and energy-intensive asset. Before renovations, a significant step in shifting to a circular economy is collecting quality data about buildings. Documentation becomes a tool to interpret not only masterpieces but also everyday architectures and to introduce circularity in their analysis.

Docomomo has documented masterpieces using the Full Documentation Fiches (FDFs); these tools contain some specifications that exclusively address masterpieces and lack specifications about buildings' context in terms of circularity of local materials and stakeholders.

This research aims to provide a template to holistically document everyday residential heritage by: (1) adapting specifications from the original FDF template; (2) evaluating the architecture; and (3) mapping local materials and stakeholders to be involved in renovations.

First, the study selects in the marginalised inland Marche region (IT) three 1950–1976 housing projects not of renowned authorship but conveying a modern optimism. Second, the original FDF template is adapted to everyday heritage; an adaptation table identifies specifications not applicable to non-masterpieces and integrates specifications that address everyday housing and circularity. Finally, the adapted template is tested on the selected buildings by collecting information through additional tools (e.g., archival material).

The results are three adapted FDFs for the selected buildings which testify that Docomomo FDFs can be applied beyond masterpieces and widen knowledge about buildings' context. Adapting the FDF template represents an effective method to update the specifications with coherent justification. The adapted template could be digitalised and extended to other building typologies. The study envisions the adaptation of Docomomo's tools as an initial step to guide holistic documentation that suits circular approaches for everyday heritage.

1. EVERYDAY RESIDENTIAL HERITAGE AND CIRCULARITY

INTRODUCTION AND BACKGROUND

Existing buildings represent examples of resilience and resources for our cities.[1] However, everyday architectures—particularly of the second half of the twentieth century—often constitute a degraded, obsolete, and energy-intensive asset.[2] This requires practitioners to develop adequate tools to approach the built environment and to gain more contextual knowledge about buildings.[3]

Before renovations, a significant step in the transition to a circular economy is collecting quality data about buildings.[4] Through documentation, professionals gather data and produce inventories to understand and manage the built heritage.[5] Since the 1960s the Council of Europe has issued charters, conventions, and conferences to develop inventories that identify, interpret, and preserve historic buildings.[6] Besides addressing heritage buildings, documentation has also intertwined with the concept of circularity in tools such as the Building Circularity Passport® or the Building Renovation Passport. The former supports buildings' planning and documentation after finalisation.[7] The latter integrates the documentation of everyday buildings with a renovation roadmap.[8]

When investigating circularity, scholars have moved beyond buildings in cities and are now exploring peripheries, smaller towns, villages, and rural settlements.[9] Some of these contexts suffer from marginality due to demographic degrowth, abandonment, and weak services and infrastructure.[10] Undervalued and decayed buildings in these areas represent a chance to transform and upgrade spaces, infrastructures, and housing.[11]

The value of existing buildings—in this case, housing—has been addressed by the Frankfurt Declaration (2023). The signing parties of the Declaration, Docomomo among them, encouraged the investigation of twentieth-century housing masterpieces to design high-quality spaces, achieve climate goals, and respond to the housing demand.[12]

Within that framework, this paper explores how Docomomo can contribute to the circular transition through the elaboration of holistic documentation tools analysing residential architectures with their context. As recently demonstrated, existing residential buildings can be investigated from a heritage perspective by juxtaposing the terms "everyday" and "heritage."[13] This study adapts Docomomo's documentation tools to everyday residential heritage, embracing marginalised territories to encourage circular renovations. In conclusion, the tools' digitalisation and implementation in other building typologies are suggested.

2. TOWARDS A HOLISTIC DOCUMENTATION OF NON-MASTERPIECES

FILLING THE GAP IN HERITAGE DOCUMENTATION

Docomomo's founding intention as an organisation for the DOcumentation and COnservation of the MOdern MOvement was to document important modern buildings to be protected.[14] Since the early 1990s, Docomomo has designed an inventory of documentation tools known as "fiches."[15] At

ACKNOWLEDGMENTS: The authors are grateful to the community of Serra Sant'Abbondio for the support during field research and to Erin Troseth for English editing.

1. Uta Hassler and Niklaus Kohler, "Resilience in the Built Environment," *Building Research & Information* 42, no. 2 (2014): 122–23.

2. Paola Ascione, "La fragilità dell'architettura moderna e contemporanea tra emergenza ecobonus e problematiche di tutela," *Rivista giuridica dell'edilizia*, no. 2 (March–April 2023): 136.

3. Niklaus Kohler and Uta Hassler, "The Building Stock as a Research Object," *Building Research & Information* 30, no. 4 (2002): 234.

4. "Circular Buildings and Infrastructure," ECESP, accessed April 15, 2024, https://circulareconomy.europa.eu/platform/sites/default/files/circular_buildings_and_infrastructure_brochure.pdf, 17.

5. John Bold, Monique Chatenet, Thérèse Cortembos, and Ksenija Kovačec Naglič, "The documentation of the Built Heritage," in *Guidance on Inventory and Documentation of the Cultural Heritage*, ed. John Bold (Strasbourg: Council of Europe, 2009), 15.

6. John Bold, Monique Chatenet, Thérèse Cortembos, and Ksenija Kovačec Naglič, "Introduction," in *Guidance on Inventory and Documentation of the Cultural Heritage*, ed. John Bold (Strasbourg: Council of Europe, 2009), 9–12.

7. "Circular Buildings and Infrastructure," ECESP, accessed April 15, 2024, https://circulareconomy.europa.eu/platform/sites/default/files/circular_buildings_and_infrastructure_brochure.pdf, 18.

8. "Building Renovation Passports: Consumer's Journey to a Better Home," Buildings Performance

present, three types of fiches are used: the Minimum Documentation Fiche (MDF), the Full Documentation Fiche (FDF), and the Good Conservation and Restoration Practice Fiche (GPF). The MDF and FDF respectively provide two degrees of documentation: a synthetic degree, offering basic information about buildings, and an extensive degree, evaluating the architecture and serving scientific research.[16] The GPF represents an evolution of the FDF to identify and document model approaches for preserving masterpieces. All tools contain specifications about the immediate surroundings of buildings but lack specifications about buildings' context in terms of circularity of local materials and stakeholders.

With the Eindhoven-Seoul Statement (2014) following the founding Eindhoven Statement (1990), Docomomo officially expanded its mission to include other territories, times, and perspectives, as well as topics of reuse and sustainability.[17] In elaborating an inventory of the architecture of the modern Movement and that of the twentieth century more extensively, Docomomo has encouraged the documentation of "both outstanding individual buildings and 'everyday' examples."[18] However, the fiches published by Docomomo's national chapters reveal that the documentation has been primarily carried out for masterpieces.[19]

This contribution addresses the gap in the application of Docomomo tools to everyday residential non-masterpieces of the second half of the twentieth century, as these buildings:

- feature modern traits such as new materials, absence of ornamentation, clean lines, low-pitched roofs, asymmetry but balance in composition, and transparent layers.[20]
- represent, among other building typologies, one case with which to test holistic documentation.

By addressing everyday housing projects that, until now, haven't undergone recent or substantial renovations, this study follows the documentation approach set by the fiches. The contribution advances knowledge in adapting the original FDF template to everyday residential heritage holistically, embracing its context. The adapted template becomes a tool to provide deeper information about everyday housing projects and to identify circular networks of resources for housing renovations. Moreover, circular renovations in marginalised contexts can boost local production and create employment and dwelling opportunities to counteract the condition of marginalisation.

3. UNVEILING THE POTENTIAL AND LIMITATIONS OF DOCOMOMO FDFS

3.1 CENTRAL QUESTION AND OBJECTIVES

This contribution investigates how Docomomo FDFs can be adapted to everyday residential heritage and become the basis for circular renovations in marginalised territories. The research aims to provide a template to holistically document everyday housing projects by:

1. Adapting specifications from the original FDF template: some original specifications address masterpieces (e.g., "status of protection") and

Institute Europe, accessed April 17, 2024, https://bpie.eu/wp-content/uploads/2017/09/Factsheet_D-170918_Final-2.pdf, 1.

9. Jörg Schröder, "Circular Design: Design-Led Innovation for Circular Territories," in *Circular Design: Towards Regenerative Territories*, ed. Jörg Schröder, Alissa Diesch, Riccarda Cappeller, Federica Scaffidi (Berlin: Jovis, 2023), 16.

10. Maddalena Ferretti, Sara Favargiotti, Barbara Lino, and Diana Rolando, "Branding4Resilience: Explorative and Collaborative Approaches for Inner Territories," *Sustainability* 14, no. 18 (2022): 3.

11. Ferreti, et al, "Branding4Resilience: Explorative and Collaborative Approaches for Inner Territories," 4.

12. "Frankfurter Erklärung," Docomomo, accessed April 3, 2024, https://docomomo.com/wp-content/uploads/2023/04/230428-Frankfurter-Erklarung_DocomomoDE_INT_DAM_IDS_FLNKM_COST2.pdf.

13. Lidwine G. K. Spoormans, *Everyday Heritage: Identifying Attributes of 1965–1985 Residential Neighbourhoods by Involved Stakeholders* (Delft: A+BE | Architecture and the Built Environment, Delft University of Technology, 2023), 48–49.

14. Hubert-Jan Henket, "Introduction," in *Conference Proceedings: First International DOCOMOMO Conference, September 12–15, 1990*, ed. Hubert-Jan Henket and Wessel de Jonge (Eindhoven: Eindhoven University of Technology, 1991), 14.

15. Susan D. Bronson and T. C. Jester, "Conserving the Built Heritage of the Modern Era: Recent Developments and Ongoing Challenges," *APT Bulletin: The Journal of Preservation Technology* 28, no. 4 (1997): 7.

16. "Il Catalogo e la Conoscenza," Docomomo Italy, accessed

cannot be applied to everyday residential heritage. Additionally, original specifications lack the concept of circularity. The adaptation process identifies not-applicable specifications and integrates new ones.

2. Providing an evaluation of the architecture: the fiches describe masterpieces according to technical, aesthetic, and social perspectives. This research applies the same perspectives to everyday housing projects.

Mapping materials and stakeholders: the fiches include graphic mat3. erial as an attachment. In addition to plans, sections, and elevations, the adapted template will include maps at the territorial scale to identify local stakeholders and materials to potentially incorporate in renovations.

3.2 THE ADAPTATION PROCESS

This paper follows three phases to adapt the original FDF template to everyday residential heritage: (1) Selecting, (2) Adapting, and (3) Testing.

3.2.1. SELECTING

The first phase entails selecting a focus time frame, a study area, and three housing projects.

This contribution addresses the documentation of everyday housing projects realised in Italy from 1950 to 1976. The year 1950 is taken as a reference year for the housing reconstruction period after the post-WWII housing crisis;[21] 1976 represents the introduction of L.373/1976,[22] the first law in Italy regulating building energy consumption. Within this timeframe, the study focuses on the marginalised municipalities of the Appennino Basso Pesarese-Anconetano,[23] located in the central Apennines **(Fig. 1)**. The municipalities are small centres and rural villages of the inland Marche region.[24] They share similar features regarding urban development, degrowth, migration rates, infrastructure, tourism, and industrial production.[25] In one of them, Serra Sant'Abbondio,[26] through an information-oriented selection,[27] the study has selected three housing projects from 1950 to 1976 **(Fig. 1)**. The buildings were chosen because: (1) they are not of renowned authorship or a specific architectural style but they all convey a modern optimism; (2) they are characterised by the most heterogeneous features among the housing projects whose material was accessible in municipal archives (location, residential typology, construction date, authorship, and dwelling units). The three housing projects are:[28]

1. Housing project A (1965): single-family detached house;
2. Housing project B (1956): former school building, now single-family social housing with a community centre;
3. Housing project C (1974): two social housing blocks.

3.2.2. ADAPTING

To adapt the original FDF template to everyday heritage, this study has developed an adaptation table **(Fig. 2)**. The table identifies in the original FDF template[29] the specifications that do not apply to everyday residential heritage and integrates specifications that are more appropriate for everyday housing and that could link everyday heritage with circularity. The table classifies

March 30, 2024, https://www.docomomoitalia.it/catalogo/.

17. Ana Tostões, "WAKE UP, SLEEPING BEAUTY!" in *Modern Heritage: Reuse. Renovation. Restoration*, ed. Ana Tostões (Berlin: Birkhäuser, 2022), 9.

18. "ISC/Registers," Docomomo, accessed April 23, 2024, https://docomomo.com/iscs/.

19. Meriç Altıntaş Kaptan, Aslıhan Ünlü, and Uta Pottgiesser, "Connecting the Dots: A Global Exploration of Local Docomomo Inventories," *Docomomo Journal*, no. 69 (December 2023): 77.

20. The traits are identified in different volumes about modern architecture.

21. Field research witnessed that most of the archival material about everyday housing dates from the 1950s onwards.

22. "LEGGE 30 marzo 1976, n. 373," Gazzetta Ufficiale, accessed March 29, 2024, https://www.gazzettaufficiale.it/eli/id/1976/06/07/076U0373/sg.

23. The territory represents one of the areas of Italy's National Strategy of Inner Areas (SNAI). SNAI is a national policy promoting socioeconomic development and territorial cohesion to counteract the marginalisation of the "Inner Areas"—territories distant from the main services but rich in natural and cultural resources. "Strategia Nazionale Aree Interne," Agenzia per la Coesione Territoriale, accessed April 3, 2024, https://www.agenziacoesione.gov.it/strategia-nazionale-aree-interne/.

24. Ferretti Maddalena, Maria Giada Di Baldassarre, and Caterina Rigo, "Reactivating Built Heritage with Shared, Creative, and Transcalar Approaches: An Exploration of the Marche Apennine Inner Area," *Sustainability* 14, no. 23 (2022): 6–7.

25. "Consumo di suolo della Regione Marche," Regione Marche, accessed April 3, 2024, https://

the examined specifications as follows: (1) Not-applicable specifications, referring to not-significant or not-available information about everyday residential heritage (e.g., "status of protection"); (2) Critical specifications, providing additional information, often hard to obtain, about the building (e.g., "summary of important modifications after completion"[30]); (3) Integrated specifications, widening knowledge about the building with its context and introducing the concept of circularity (e.g. "land register data," "regional features"). The table justifies the classification with an explanation for each examined specification. Overall, eleven specifications are classified as not applicable, six as critical, and eleven as integrated. Finally, the classification guides the update of the original FDF template.

3.2.3. TESTING

In the last phase, the adapted FDF template is tested on the case studies. Additional tools that provide information about the architecture—such as archival material, 2D representations, photographs, and mapping—are applied to run the test in three steps: (1) collecting information about the housing projects; (2) producing graphic material from archive drawings; (3) filling in the specifications of the adapted FDF template with the collected information and the produced material.

4. DISCUSSION AND CONCLUSION

4.1 POTENTIAL AND LIMITATIONS

The test delivers three adapted FDFs **(Fig. 3),**[31] one for each case study. The resulting fiches highlight aspects for interpretation along with the potential of the adapted FDF template:

- Holistic documentation: the adapted template embraces the context and local resources related to buildings.
- Preservation of archival material: the adapted template can counteract the loss of archival material on buildings, currently in paper form and with no preservation measures.
- Dynamic and interactive documentation: the adapted template could be digitalised to gradually expand information about the building and share knowledge among involved actors.
- Extension of application: the adapted template could be applied to similar buildings in the study area and be further developed for global use. Furthermore, the adapted template can be applied to non-masterpieces beyond the residential typology.
- Community engagement: a more holistic documentation could introduce new specifications in the adapted template to express the assessment of the building by its users.

In addition to these potential uses, documentation through the adapted FDF template also encounters the typical limitations in dealing with tracking private and non-renowned buildings:

- Lack of information: local archives preserve limited material—mainly requests for building permits and drawings without construction details.

www.regione.marche.it/Regione-Utile/Ambiente/Cartografia-e-informazioni-territoriali/Repertorio#13046_Consumo-di-suolo-della-Regione-Marche.

26. Serra Sant'Abbondio was chosen as a representative town for the study area as the result of a random selection. Bent Flyvbjerg, "Case Study," in *The Sage Handbook of Qualitative Research*, 4th edition, eds. Norman K. Denzin and Yvonna S. Lincoln (Thousand Oaks, CA: Sage, 2011), 307.

27. Flyvbjerg "Case Study,"

28. The buildings are described in Fig. 3 (QR codes).

29. Provided by Docomomo Italy.

30. The power of attorney is required to access private documents.

31. The documents are available in Fig. 3 (QR codes). Sensitive material is redacted or not included.

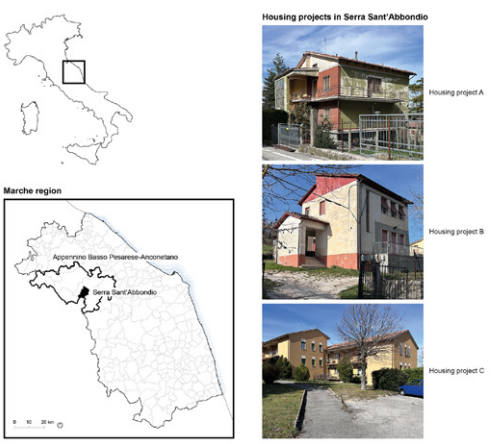
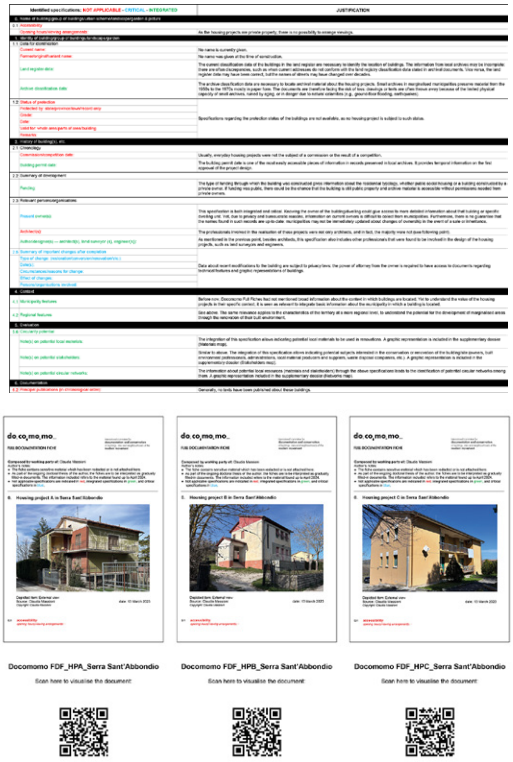


Figure 1. Case studies © Authors, 2024.

Figure 2. Adaptation table © Authors, 2024.

Figure 3. Adapted Docomomo FDFs © Authors, 2024.



- Limits related to approaching private owners:
    1. Accessibility of documents: the collection of information about the current features of buildings requires the power of attorney, granted by private owners, to access the real estate registry.
    2. Privacy: there are regulations regarding the publication of sensitive data related to the buildings—location, archive classification data, etc.—that need to be clarified. In the resulting fiches, this information is redacted or not included.

4.2 SIGNIFICANCE AND IMPLICATIONS

Adapting the FDF template through the adaptation table represents an effective method to update the specifications with coherent justification. Testing the adapted template on tangible case studies unveils the modern traits of everyday twentieth-century housing and hints at comparative observations. Housing projects A, B, and C represent diverse residential typologies, feature different architectural compositions, and suggest strategies for adaptive reuse. The resulting fiches testify that Docomomo FDFs are a flexible and adaptable tool that can be applied beyond masterpieces and widen the contextual knowledge about buildings. The identification of local resources—materials and stakeholders—sets the ground for circular networks to foster circular renovations.

In line with digital instruments applied to the analysis of the built environment, the digitalisation of the adapted template is seen as necessary to:

- improve the collection, correlation, and comparison of acquired information;

- engage administrations to ease access to private documents;
extend the application to other everyday building typologies.

The digital tool could include a standard layer—specifications for all everyday architectures—and an additional layer—customised specifications based on the building typology.

This study demonstrates how Docomomo, as a leading organisation in heritage documentation, can contribute to the circular transition in the built environment. The adaptation of Docomomo's tools constitutes an initial step to guide holistic documentation that suits circular approaches for various typologies of everyday heritage. ■

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ASSESSING THE ENVIRONMENTAL IMPACT: OFFICE BUILDING REUSE AS A SUSTAINABLE ALTERNATIVE TO DEMOLITION

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ABSTRACT

Building reuse is key to sustainability, given its potential to conserve resources, reduce waste, and foster sustainable development. However, determining the precise environmental impact of existing buildings through the quantification of embodied carbon in structures remains a challenge in North America. This research addresses this by examining an existing office building under three scenarios: "doing nothing," "building reuse," and "new construction." Despite variability in results, findings indicate that choosing building reuse over demolition and reconstruction can mitigate the release of carbon into the atmosphere, emphasizing the need for standardized methodology, policies, and incentives.

Buildings contribute significantly to global greenhouse gas emissions, with operations accounting for 39%, split into 28% operational emissions and 11% embodied carbon. While operational emissions have been targeted for reduction, quantifying embodied carbon precisely remains a challenge. Thus, this research focuses on the crucial question: How can assessing environmental impact through embodied carbon quantification champion office reuse over demolition?

The study uses a case study of 360 Laurier Avenue West in Ottawa to measure embodied carbon in three scenarios. These scenarios were chosen to better understand the environmental implications associated with different choices.

The case study emphasizes the importance of measuring embodied carbon for the building industry and identifies the most suitable assessment tools and methods for existing structures. It sheds light on how input variations impact reliability and accuracy, exploring the significance of embodied carbon results, and the potential of adaptive reuse in addressing the environmental, housing, and office building crises. The research concludes by projecting these findings, illustrating how one test case can inform a portfolio of buildings, advocating for building retention and adaptive reuse as effective climate action strategies.

1. INTRODUCTION

Climate change, primarily driven by fossil fuel combustion, has resulted in a 1.1-degree Celsius rise in global temperatures since the 1800s, with recent decades recording the highest temperatures on record.[1] This warming trend intensifies environmental hazards such as droughts, sea-level rise, extreme weather events, and biodiversity loss, exacerbating global challenges like animal extinctions and human displacement.[2] The reality of climate change necessitates transformative actions that promote sustainable emissions development through adaptive reuse.

Canada, among the world's leading per capita emitters, has critical targets outlined in its Strengthened Climate Plan, aiming for net-zero emissions by 2050 and a 40%-45% reduction from 2005 levels by 2030.[3] Despite these ambitious goals, current efforts are insufficient, necessitating rapid transformation, robust policies, and effective incentives to mitigate the looming climate crisis. Without significant shifts in priorities and enforcement, achieving net-zero emissions by 2050 remains precarious.

1.1 THE ROLE OF EMBODIED CARBON IN THE BUILT ENVIRONMENT

Buildings are the largest energy users globally, contributing about one-third of global GHG emissions and nearly half of all energy emissions.[4] In Canada, the building sector is the third highest GHG emitter, responsible for 17% of total national emissions.[5] The building sector's emissions trajectory, projected to reach 12.6 gigatons of energy-related emissions by 2030, underscores the urgency of decarbonization efforts.[6] Efforts have focused on reducing operational carbon emissions from building operations and embodied carbon emissions has remained relatively unexplored.

Embodied carbon encompasses emissions associated with material production, transportation, construction, maintenance, and disposal, constituting 11% of total building emissions globally.[7] Unlike operational emissions that can be mitigated over time through energy-efficient renovations and renewable energy adoption, embodied carbon emissions are in place during building construction.

1.2 EXISTING OFFICE BUILDINGS

Embodied carbon in existing buildings is critical for sustainable development, particularly in the context of modern architecture and the argument for reuse. Many older office buildings in Canada, particularly post-war brutalist structures remain underutilized or vacant.[8]

After World War II, there was rapid economic growth and technological advancements that led to quick construction of contemporary office buildings. As businesses underwent expansion, larger companies started to decentralize their operations. New buildings were designed to adapt to these evolving needs, incorporating features such as open floor plans. Today, these buildings face high vacancy rates exacerbated by shifts in office work trends.

Repurposing these underutilized office buildings into residential spaces presents a dual opportunity to address urban housing shortages and reduce

1. NASA, "World of Change: Global Temperatures," Earth Observatory (NASA Earth Observatory, January 29, 2022), https://earthobservatory.nasa.gov/world-of-change/global-temperatures.

2. IPCC, "Climate Change and Water Intergovernmental Panel on Climate Change IPCC Technical Paper Vi," 2008, https://archive.ipcc.ch/pdf/technical-papers/climate-change-water-en.pdf.

3. Government of Canada, "2030 Emissions Reduction Plan: Clean Air, Strong Economy," www.canada.ca (Government of Canada, March 29, 2022), https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview/emissions-reduction-2030.html.

4. World Green Building Council, "Embodied Carbon," World Green Building Council, 2019, https://worldgbc.org/advancing-net-zero/embodied-carbon/.

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6. UNEP, "The Six Sector Solution to Climate Change," UN Environment, December 7, 2020, https://www.unep.org/interactive/six-sector-solution-climate-change/.

7. UNEP and Yale Center for Ecosystems + Architecture, Building Materials and the Climate: Constructing a New Future. [online]. Available: https://wedocs.unep.org/20.500.11822/43293. [Accessed: Jul. 19, 2024].

8. UNEP, "The Six Sector Solution to Climate Change"

the environmental impact associated with new construction. Ottawa, grappling with high office vacancy rates and housing demand, serves as a poignant example of this conversion potential.

1.3 PROBLEM DEFINITION

The current state of office building vacancies in Canada, the climate and housing crisis, the lack of understanding of the impact embodied carbon has on climate change, and the scarcity of tools to measure embodied carbon of existing buildings, has raised the question of how can evaluating the environmental impact through embodied carbon quantification promote office reuse over demolition? It also raises a set of sub-questions, including:

- Why is measuring embodied carbon imperative for the building industry?
- Why is quantifying the embodied carbon of an existing brutalist office building a relevant test case?
- How could adaptive reuse of buildings aid in the environmental, housing and office building crises?
- Can measuring the embodied carbon of a single building be applied to a portfolio of buildings?

1.4 THE RISE OF UNDERUTILIZED AND VACANT OFFICE BUILDINGS

The COVID-19 pandemic significantly impacted post-war office buildings, with mandates for physical distancing. Many commercial properties couldn't meet these requirements, forcing remote work. Consequently, many companies adopted hybrid models, reducing their physical office footprints. Increased vacancy rates reflect this shift. A healthy office vacancy rate is 10%, but Ottawa's downtown vacancy was 12.5% in Q2 2023 (CUI), and CBRE Canada reported 13.6%. Colliers' 2022 report showed an 11% vacancy rate with two million square feet of vacant downtown space, especially high in Class B and C buildings at 18.7% and 18.9%.[9]

1.5 EMBODIED AND OPERATIONAL CARBON

Existing buildings already have embodied carbon from their initial construction, which refers to all greenhouse gas emissions emitted during material production and construction.[10] This includes emissions from material production, transportation, and disposal over a building's lifecycle.

Embodied carbon emissions occur primarily during construction, renovation, or at the end of a building's life. Initial embodied carbon, occurring during material sourcing, manufacturing, and transportation, constitutes a significant portion of these emissions.[11] Structural materials like steel and concrete, which typically make up a large part of buildings, contribute the most to embodied carbon.[12] In some cases, up to 80% of embodied carbon can be attributed to structural systems.[13]

Operational carbon, on the other hand, includes ongoing emissions from building operations such as fossil fuel combustion and electricity use.[14]

9. Colliers, "Ottawa's Office Market Report Q4 2022," 2022, https://www.collierscanada.com/en-ca/research/ottawa-office-market-report-2022-q4.

10. CLF, "1 - Embodied Carbon 101," Carbon Leadership Forum, December 1, 2020, https://carbonleadershipforum.org/embodied-carbon-101/.

11. "EC3 Tool," Carbon Leadership Forum, October 6, 2021, https://carbonleadershipforum.org/ec3-tool/.

12. Jane Anderson and Alice Moncaster, "Embodied Carbon of Concrete in Buildings, Part 1: Analysis of Published EPD," Buildings and Cities 1, no. 1 (2020): 198–217, https://doi.org/10.5334/bc.59.

13. Urban Land Institute , "Embodied Carbon in Building Materials for Real Estate," n.d., https://americas.uli.org/wp-content/uploads/ULI-Documents/Greenprint-Embodied-Carbon-Report_FINAL.pdf.

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Together, these embodied and operational carbon emissions constitute a building's "whole life" carbon footprint.

1.6 EMBODIED CARBON ASSESSMENT METHODOLOGIES

The shift from operational carbon to embodied carbon in building assessments has spurred the development of tools and methods for conducting Life Cycle Assessments (LCAs). Existing methodologies primarily focus on new construction phases and often overlook the carbon impact of maintenance and replacement materials, which is crucial for prioritizing reuse in decarbonization strategies. Tools favour new construction due to readily available material data and a misconception that building new leads directly to net zero carbon.[15]

Measuring embodied carbon in existing buildings poses challenges such as incomplete life cycle data, inaccuracies in as-built drawings, and difficulty in locating material information.[16] Despite these obstacles, methodologies from new construction assessments can be adapted for existing buildings. Tools such as EC3, CARE Tool, and One Click LCA help professionals estimate GHG emissions to make informed decisions on construction materials and processes.

These tools streamline calculations using preprogrammed data such as Environmental Product Declarations (EPDs), carbon intensity factors, and location-specific information. At the core of these programs, a straightforward calculation to quantify embodied carbon is performed, multiplying the quantity of each material by the corresponding carbon factor for the life cycle being considered:

material quantity (kg) x carbon factor ($kgCO_2ekg$) = embodied carbon ($kgCO_2e$)

***Embodied carbon is measured in CO_2-equivalent and is based on the relative impact of a carbon dioxide on global warming, (its Global Warming Potential (GWP).*

2. METHODS

The methodology used assessed three distinct embodied carbon scenarios - the embodied carbon of the existing building if it were built today, evaluating the embodied carbon of the new components required for building reuse, and determining the embodied carbon associated with a newly constructed residential building.

The methods used were:

1. Case Study Selection

2. Data Collection - Building information was gathered from existing public documentation, site visits, interviews, and archives.

3. Framework Development - A framework for conducting an embodied carbon assessment for three scenarios, "do nothing", "reuse", and "new construction" was developed using previous case studies.

Assessment 1: Manual Calculation - Manually calculate embodied carbon and material quantities, then gather EPDs and GWPs for each component to manually calculate the embodied carbon.

15. CCI, "The Future Passes through Old Buildings - Canadian Climate Institute - Blog," Canadian Climate Institute, May 26, 2020

16. Hayley Cormick, "Comparing Three Building Life Cycle Assessment Tools for the Canadian Construction Industry," INDIGO (University of Illinois at Chicago), May 24, 2021, https://doi.org/10.32920/ryerson.14664510.v1.

Assesment 2: CARE Tool – Use the CARE tool to measure the embodied carbon associated with the scenarios for "reuse" and "new construction".
Assesment 3: One Click LCA - Calculate the embodied carbon of the "do nothing" scenario using the One Click LCA tool.

4. Experimentation and Application

5. Analysis

2.1 NARONO BUILDING OTTAWA, ONTARIO, CANADA: A CASE STUDY

When selecting a case study, it was imperative to look for a high rise building with the potential for residential conversion. Built between the 1960s-80s and constructed of reinforced concrete, these buildings have the durability, configuration and floorplates that are suitable for residential conversions.[17]

360 Laurier Avenue West in downtown Ottawa Ontario was selected. This building lends itself well to conversion as it has a rectangular floor plate, egress on both sides, underground parking, servicing, located in the core, and has a high transit score.[18] There is currently a development application in to renovate and convert it into residential use.

Known as the Narono building, is an 11-storey former Correctional Service of Canada office. Designed by George Edward Bemi and constructed in 1969 in the Brutalist style, it features massive concrete forms.

3. RESULTS

3.1 ASSESSMENT 1: MANUAL CALCULATIONS

SCENARIO 1:

The "do nothing" scenario was crucial for understanding the existing structure's embodied carbon. Focus was placed on quantifying embodied carbon in concrete and steel, readily available from as-built drawings, focusing on floors, structural columns, windows, and ceilings.

Each floor's system comprised an 8" reinforced concrete slab and carpet tiles. The concrete was chosen based on Ontario Industry Baseline 35 MPa ready mix GU concrete with 15% slag cement. Fabricated rebar steel content was estimated at 125 kg/m3, utilizing the North American Material Baseline GWP. Carpet tile GWP was obtained from EC3's database. Structural columns, approximately 352 in total, used the same concrete GWP with 400 kg/m3 of steel content. Window GWP averaged 136 kgCO2e/m2 from EC3 and One Click LCA databases for 360 units. East and west walls, parking walls, stairwells, and elevator shafts used CMU with GWP values from EC3's Ontario database. Reinforced concrete on north and south walls assumed a strength of 42 MPa with a GWP of 367 kgCO2e/m2. Ceiling tiles on floors two to nine used a conservative GWP from EC3. HVAC, plumbing, electrical, roofing materials, insulation, elevator systems, and interior partitions were excluded due to data availability.

Total embodied carbon was calculated at approximately 3262 tonnes CO2e, equating to 179 kgCO2e/m2 of GFA.

17. CUI, "THE CASE for CONVERSIONS Understanding Opportunities for Conversions of Office Space to Housing in Canadian Downtowns," n.d., https://canurb.org/wp-content/uploads/The-Case-for-Conversions-FINAL.pdf.

18. CUI, "THE CASE for CONVERSIONS Understanding Opportunities for Conversions of Office Space to Housing in Canadian Downtowns,"

SCENARIO 2:

The Narono building, with an embodied carbon footprint of 179 kgCO2e/m2, currently stands vacant and is being repurposed. Discussions with the development team revealed plans for extensive upgrades to mechanical systems. However, structural systems will be reused without lateral upgrades. Recycling and donation of interior elements is also planned. New interior finishes, partitions, and windows were quantified for their embodied carbon impact. The replacement of 360 inefficient windows with low-e clear glass and addition of 371 new windows were detailed. New ceilings using C and HAT channels with gypsum board, and interior partitions with steel studs and gypsum were also calculated from architectural drawings. The estimated embodied carbon associated with these changes, including demolition of precast panels for new windows, totals approximately 448 tonnes CO2e or 25 kgCO2e/m2 of GFA.

SCENARIO 3:

The "do nothing" and "reuse" manual calculations provide insightful results. They reveal that reusing the structure would result in 3262 tonnes of avoided carbon. While the embodied carbon associated with new building materials for reuse totals 448 tonnes of embodied carbon.

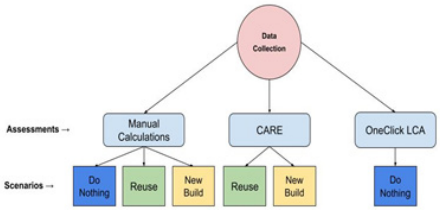
To better understand the significance of these savings, a comparison was made with a hypothetical new residential precast concrete building of the same size. To do this, the results from "do nothing", excluding windows, flooring, and carpet, plus the results from "reuse" were totaled. This equated to 2673 tonnes of CO2e or 147 kilograms of carbon dioxide equivalent per square metre of GFA. If this building were to be constructed today, it is important to note that the 3262 tonnes of CO2e associated with "do-nothing" would be lost through demolition.

ASSESSMENT 2: CARE TOOL

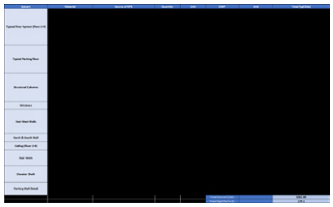
Manual calculations for embodied carbon in the "do nothing," "building reuse," and "new construction" scenarios provided a benchmark for comparison with CARE tool results.

The CARE tool requires users to input data into three tabs. The General Information tab includes project location, climate details, and electricity grid emissions. Buffalo, New York, was chosen for its climate similarity to Ottawa. The Existing Building tab involves inputting building characteristics, use, and energy data. The software defaults to Energy Use Intensity for energy and emissions since the building was unoccupied from 2019 to 2023. The Building Reuse tab includes information about reuse and any additional floor area. No extra floor area was added, but the use was changed to "Other Residential Lodging." Energy use reduction was targeted at 25%, and 24% was chosen for electricity produced on/off-site. Structural system reuse was set to 100%, with new insulation and finishes, and high-performance mechanical systems.

For new construction, the same dimensions and data were inputted, assuming low-emission concrete and high-performance systems.







New Systems	Material	Source of EPD	Quantity	Unit	GWP	Unit	Total (kgCO2e)
Windows	Clear Glass-low E coating	Offline Coated Glass EPD (Global)	1004.37	m2	12.5	kgCO2e/m2	12554.7
Ceiling	41mm C Channel	CLF North American Material Baselines - Cold Formed Steel Framing	29890.00	kg	2.44	kgCO2e/kg	72933.9
	22mm HAT Channel	CLF North American Material Baselines - Cold Formed Steel Framing	2475.00	kg	2.44	kgCO2e/kg	6039.0
	1 Layer of 13mm Gypsum	Conservative EC3 Data based on Global Averages	12518.06	m2	3.97	kgCO2e/m2	49690.7
Typical Interior Partitions in Units	1 Layer of 13mm Gypsum	Conservative EC3 Data based on Global Averages	9320.00	m2	3.97	kgCO2e/m2	37075.8
	Steel Stud	CLF North American Material Baselines - Cold Formed Steel Framing	49920.00	kg	2.44	kgCO2e/kg	121804.8
	1 Layer of 13mm Gypsum	Conservative EC3 Data based on Global Averages	9320.00	m2	3.97	kgCO2e/m2	37075.8
Typical Built-Up Floor	Floor Finish	CLF North American Material Baselines - Homogeneous Vinyl Flooring	12518.06	m2	8.84	kgCO2e/m2	110656.6
						Total(tonneCO2e):	447.84
						Total (kgCO2e/m2):	24.80

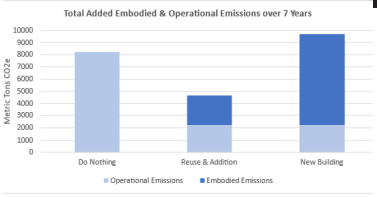


Fig.1: Methods for Assessing the Embodied Carbon of three scenarios. Credits: Taylor Quibell 2024

Fig. 2: 360 Laurier Avenue Narono Building, Bemi's Original Drawings. Credits: George Bemi Fonds, BEMI-3-8-21, A-479

Figure 3: Assesment 1, Scenario 1. Manual Calculations for Embodied Carbon in the Narono Building. Credits: Taylor Quibell, 2024

Figure 4: Assesment 1, Scenario 2. Manual Calculations for Embodied Carbon in the Reuse of Narono Building. Credits: Taylor Quibell, 2024

Fig. 5: Total Added Emissions over 7 Years. Credits: T. Quibell

CARE calculated 2450 tonnes of CO2e for reuse and 7465 tonnes for new construction.

ASSESMENT 3: ONE CLICK LCA TOOL

The CARE tool compares "reuse" and "new construction" but not "do nothing" scenarios. One Click LCA was used for assessing the reuse scenario, focusing on the carbon footprint of product and construction stages, such as raw material extraction, transportation, manufacturing, and installation. The assessment included inputting building information and material quantities from original drawings into One Click's material database. Adjustments were made for differences in available materials and declared units, converting volumes to kilograms when needed. One Click LCA auto-generates transportation distances and construction waste percentages. For existing buildings, initial site operations were challenging to determine and thus not inputted. The software processed the data, showing that ready mix concrete accounts for 34.8% of the total CO2 emissions. Results included graphs and pie charts, highlighting that floor slabs, ceilings, and beams contribute 33.3% to the GWP, helping identify materials with the most significant environmental impact.

One Click LCA calculated an estimated 3241 tonnes of CO2 equivalent for the existing building, which is equivalent to 178 kilograms of carbon dioxide equivalent per square meter of GFA.

4. PROJECTING THE RESULTS

Reusing the building would have the equivalent impact in lowering GWP as planting 130 -140 000 trees, removing 99 vehicles off the road, or eliminating the burning of over one million litres of gasoline.[19]

Reusing the structure also accounts for saving 957,811 kilograms of reinforced steel which is approximately the weight of 140 grown elephants.[20] Reusing also saves 14,180,640 kilograms of concrete which is equivalent to 545 truckloads of concrete.[21]

19. NRC, "Greenhouse Gas Equivalencies Calculator | Natural Resources Canada," Nrcan.gc.ca, 2020, https://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/calculator/ghg-calculator.cfm#results.

20. IFAW, "Elephant FAQ | How Much Do Elephants Weigh?," IFAW, 2021, https://www.ifaw.org/ca-en/journal/elephant-faq.

21. RMCAO, "Seasonal Load Restriction (SLR)," n.d., https://www.rmcao.org/wp-content/uploads/2021/09/RMCAO_SLR_Overview.pdf.

Statistics show that Ottawa has the most potential conversions in Canada due to the quantity of high and low-rise mid-century buildings. Of the building's studied, approximately 11 to 17 have the potential to be converted.[22] Assuming 11 of these are reinforced concrete structures, pursuing office conversions could potentially avoid 36 000 tonnes of carbon. The same projection can be made for Canada's Federal government who is planning on disposing ten buildings in the national capital region. Of these, 7 buildings could lend themselves well to conversion. Assuming these buildings have a similar embodied carbon value as the Narono building, there is potentially 23 000 tonnes of carbon embedded within the structures. Repurposing these buildings could have the equivalent impact in lowering GWP as planting one million trees.[23]

5. RECOMMENDATIONS

The findings of the study highlight the importance of reusing the Narono building and reveal the positive impact conversion could have on our environment. However, additional work needs to be done, such as:

1. Explore the development of a dedicated embodied carbon calculation tool for existing structures.
2. Propose policies mandating developers to quantify the embodied carbon of their existing building before proposing demolition.
3. Investigate the possibility of introducing carbon credits for salvaging building materials.
4. Monetize embodied carbon reductions through mechanisms such as carbon credits and tax rebates.

6. CONCLUSION

The research highlights the significant environmental benefits of reusing office buildings, specifically in the case of the Narono Building. It was found that leaving the building as is avoids 3252 metric tons of carbon emissions, reusing it produces 1449 metric tons, and new construction results in 6208 metric tons. The study extended these findings to estimate that reusing seven federal office buildings in Canada's Capital region could avoid 23,000 metric tons of CO2e, akin to planting one million trees or removing 7046 cars. The study concludes that standardizing methodologies, developing databases, and creating policies and incentives are essential. ■

22. Canadian Urban Institute , "THE CASE for CONVERSIONS Understanding Opportunities for Conversions of Office Space to Housing in Canadian Downtowns," n.d., https://canurb.org/wp-content/uploads/The-Case-for-Conversions-FINAL.pdf.

23. NRC, "Greenhouse Gas Equivalencies Calculator"

BIOGRAPHIES

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CURTAINS FOR CROWN HALL: A BIOPLASTIC ADAPTATION

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#07

ABSTRACT

This paper presents two installations at Mies van der Rohe's Crown Hall, on the campus of the Illinois Institute of Technology, one in Fall 2023 and one in Spring 2024. "Curtains for Crown Hall" (Pt. 1 and 2) serves as a test case for the use of tensile biomaterials in the adaptive reuse of Modern glass facades—both for aesthetic adaptation and to alter the performance of the glass. The biomaterials used in this installation were developed in 2023-24 by the author and have not been previously used in any architectural application.

While much testing remains to be done to assess the material's performance, the immediate purpose of this installation was to mitigate fatal bird collisions. Each migration season, hundreds of fatal bird collisions occur on Crown Hall's doorstep alone, and a billion birds are believed to die in glass collisions nationwide each year. While new glass technologies exist to deter collisions, older buildings must be retrofitted for deterrence. In protected buildings like Crown Hall, the glass itself cannot be replaced or altered—and the tenants of these buildings often eschew traditional drapery and window treatments—making a non-invasive temporary treatment like this installation an attractive alternative.

As the materials in "Curtains for Crown Hall" are made entirely from food industry waste, they are compostable and non-toxic—so while they are sturdy and reusable, if they are discarded, they will biodegrade quickly. Alternately, unlike traditional plastics, they can be reheated and remolded into new forms easily and without specialty equipment.

This paper finishes by discussing how Modernist glass buildings might be the perfect entry point for these novel biomaterials, long courted but ultimately dismissed by the architectural community, to play a viable role in buildings.

1. INTRODUCTION

Mies van der Rohe's Crown Hall was completed in 1956 to house the Illinois Institute of Technology's College of Architecture, where van der Rohe was the dean from 1939 to 1958. The building is considered a masterpiece of the Modern Movement and has National Historic Landmark status in the United States. Although van der Rohe is remembered largely for his use of glass and steel, Crown Hall is his only building whose visible structure is composed solely of glass and steel, and he called it "the clearest structure we have done, the best to express our philosophy."[1] According to anecdotes passed down from its original users, the building's original layout and systems allowed for reasonable thermal, acoustic, and visual comfort; however, with its significantly denser layout and contemporary HVAC systems, 21st-century Crown Hall is often far from comfortable by all these metrics, thanks to its extensive glass façade.[2]

In addition to concerns about energy performance and comfort, one of the building's great ecological tolls is to the migratory bird population each spring and fall as millions of birds fly through Chicago, which sits on a major migratory pathway known as the Lake Michigan Flyway. Despite the building's single-story stature, during migration seasons, Crown Hall's porches are littered with migratory songbird carcasses every day. The American Bird Conservancy estimates that a billion birds die in the United States alone every year due to collisions with glass windows and buildings.[3]

While new glass technologies exist to deter collisions, older buildings must be retrofitted for deterrence. In protected buildings like Crown Hall, the glass itself cannot be replaced or altered easily—and the tenants of these buildings often eschew traditional drapery and window treatments—making a non-invasive temporary treatment like this installation an attractive alternative.

This paper describes the development of two installations—one on the north face of the building in Fall 2023 and one on the south (primary) face in Spring 2024—whose immediate purpose was to mitigate fatal bird collisions **(Fig. 1)**. These installations use novel compostable tensile biomaterials developed in 2023-24 in the Roark lab at IIT using seafood industry waste products. The installations serve as a test case for using such experimental materials in the adaptive reuse of Modern glass facades, both for aesthetic adaptation and to alter the performance of the glass.

Crown Hall is, of course, just one representative—albeit quite a famous one—of a typology seen throughout Chicago and many cities across the world. In fact, while Modern buildings with extensive glass facades continue to define much of the Chicago skyline and streetscape, many of these buildings fall significantly short by contemporary standards for building performance, and they cannot always be permanently retrofitted—whether due to budgetary constraints or historic listing status, as in the case of Crown Hall.

Meanwhile, many novel biomaterials have failed to gain traction in the architectural community, despite initial enthusiasm, due to their semi-permanent nature and their unsuitability for long-term exterior applications—that is to say, they cannot stand in for primary structure or weatherproofing. In

1. Eric Thompson, *Crown Hall National Historic Landmark Nomination file*.

2. Mitkees, et al., "Occupant thermal comfort and indoor environmental conditions in Mies van der Rohe's S. R. Crown Hall.", 249.

3. Scott Loss, et al., "Bird–building collisions in the United States: Estimates of annual mortality and species vulnerability" 8.

the context of a building that already has structure and weatherproofing (but not much else), such materials may finally find their architectural purpose.

2. THE SHORTCOMINGS OF MINIMALISM

While few buildings are as strictly minimalist as van der Rohe's glass and steel buildings, contemporary energy conservation standards have conjured a minimalist ideal of the wall-that-does-it-all, with thermal insulation, waterproofing, air and vapor barriers, aesthetic finishes, and often structure all packaged tightly into one presumably hyper-efficient wall section. Passive House standards, among others, have bolstered the development of these wall types and the relatively airtight constructions that accompany them. Recently, however, this type of construction has faced critique, especially after the global Covid pandemic drew renewed attention to the importance of indoor air quality and open building systems.[4] More and more architects and educators have been revisiting lower-energy pre-modern building practices and even indigenous practices,[5] as well as new paradigms of circular economies and biogenic building practices, as evidenced by the popularity of books like Lewis Tsurumaki Lewis's *Manual of Biogenic House Sections* (2022), multiple open-access publications on circularity and "bio loops" by Arup, and myriad recent conferences focused on material provenance, embodied energy, and low-carbon construction.[6]

Arup's "Circular Economy in the Built Environment" (2016) is one of many publications to borrow a key diagram from Stewart Brand's *How Buildings Learn* (1994), illustrating the different layers of a building which age differently and have different expiry dates **(Fig. 2)**.[7] As Brand points out, buildings are often demolished prematurely if their systems (HVAC, plumbing, electrical, etc.) are "too deeply embedded to replace easily";[8] the same can be said of insulation, waterproofing, or any layer that becomes obsolete before the structure does. In developing his "six S's", Brand looked in turn to Frank Duffy, cofounder of British firm DEGW, who had previously identified four layers (to which Brand added *site* and *structure*). Duffy wrote that:

> *…there isn't such a thing as a building. A building properly conceived is several layers of longevity of built components…. Thinking about buildings in this time-laden way is very practical. As a designer you avoid such classic mistakes as solving a five-minute problem with a fifty-year solution, or vice versa.*[9]

As a highly protected historic building, Crown Hall's skin is sacrosanct, and its three shortest-lived S's—systems, space plan, and stuff—have been more closely protected than they would be in most buildings, accounting for some lag in meeting contemporary performance standards. For example, to this day students sit on backless stools, causing discomfort and orthopedic compromise, in the name of authenticity. There have been some necessary alterations over the years, including a 2005 renovation by Krueck and Sexton Architects and Harboe Architects, who refinished the steel, upgraded the single-pane glass

4. See, for example, Lydia Kallipoliti's *The Architecture of Closed Worlds, Or, What Is the Power of Shit?*

5. See, for example, Julia Watson's *Lo-TEK, Design by Radical Indigenism*, or international interest in Pritzker Prize winner Francis Kéré's low-tech, low-budget projects in Burkina Faso.

6. For example, the 2023 AIA/ACSA Intersections Research Conference was called "Material Economies" and focused entirely on sustainable materials, primarily focusing on their embodied carbon. More radically, in 2021, EPFL Assistant Professor Charlotte Malterre-Barthes (at the time affiliated with Harvard) launched an initiative called "A Global Moratorium on New Construction," beginning with a roundtable conversation entitled "Stop Construction? A Global Moratorium on New Construction" at Harvard's Graduate School of Design in 2021.

7. Stewart Brand, *How Buildings Learn: What happens after they're built*. (New York: Penguin Books 1994). 13.

8. Brand, *How Buildings Learn: What happens after they're built*, 13.

9. Francis Duffy, "Measuring Building Performance." *Facilities* (May 1990): 17.

to double-pane, and restored the sandblasted glass originally specified by van der Rohe to the lower panels which had been replaced with a facsimile by SOM in a 1975 restoration.[10,11] However, the building's energy performance and occupant comfort continue to suffer in the name of Modernist beauty.

3. EMBRACING IMPERMANENCE

Perhaps counterintuitively, the imperative that interventions into protected historic buildings be reversible—that is, impermanent—makes them attractive candidates for the deployment of experimental biomaterials whose appeal lies in their biodegradability and cyclability. In most contexts, it is difficult for architects and non-architects alike to overcome the notion that a material needs a high degree of permanence to be used in a building, but here the new materials' ephemerality makes them more palatable to those known locally as the "Mies police", as the materials are clearly deferential in hierarchy to van der Rohe's glass and steel. For instance, when we first installed our biopolymer-based plastics on the north face of Crown Hall for an extended period, we faced no pushback because we could affirm that, even if the plastics stuck to the glass (which they did in places due to repeated heating and cooling), they could be detached with nothing more abrasive than hot water.

The materials used in the windows at Crown Hall were made using various combinations of two biopolymers: gelatin derived from fish skin and bones and chitosan, which is derived from the shells of crustaceans like shrimp, crabs, and lobsters. The plastics were dyed with a range of natural pigments, including blue and green spirulina (a seaweed product), red beet root powder, golden turmeric, crimson madder root, and green alfalfa extract, among others.

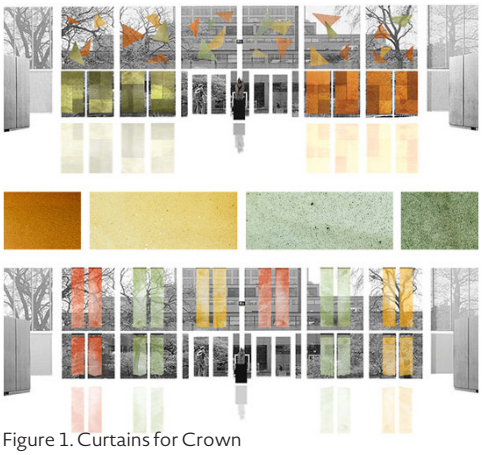
As the materials in "Curtains for Crown Hall" are made entirely from food industry waste and trace amounts of natural modifiers, they are compostable and non-toxic—so while they are sturdy and reusable, if they are discarded, they will biodegrade quickly. Unlike traditional plastics, they can be reheated and remolded into new forms easily and without specialty equipment. Despite their impermanence, these bio-curtains—and other analogous biomaterials one might introduce into the space—arguably do more to define the division between inside and outside than does the glass façade, at least along the entryways where all panels are transparent.

4. DEVELOPING NOVEL BIO≤MATERIALS

While tensile bioplastics are rarely deployed for architectural applications or at this scale, there are many makers worldwide experimenting and publishing open-access recipes for both tensile bioplastics, which are composed primarily of biopolymers, and compressive biomaterials, which also contain filler materials like agricultural waste, coffee grounds, biochar, or countless other organic materials. Most of this innovation can be attributed to product designers, industrial designers, fashion designers, and other makers of smaller-than-architectural-scale "stuff", to borrow Brand's term—and much of the work is shared openly through platforms like international crowd-sourced online database Materiom, where we started our research.

10. Sara Hart, "The Perils of Restoring 'Less is More'." *Architectural Record* (January 2006): 149.

11. Reversible additions by Dirk Denison Architects in 2013 made significant changes to the interior space planning for the first time, adding two sandblasted glass cubes inside van der Rohe's "universal space", to accommodate the administrative offices and three seminar rooms.



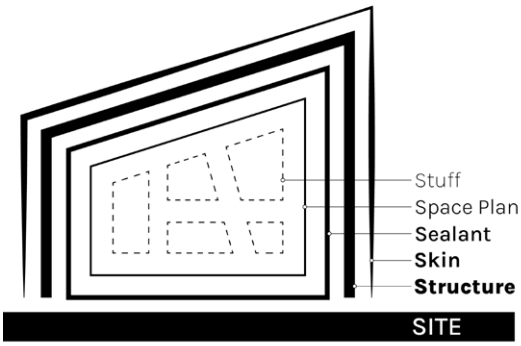


Figure 1. Curtains for Crown Hall Installations. Top: Collage showing Fall 2023 arrangement which was installed on the north façade in September through December 2023 (although both collages show the south façade). Bottom: Collage showing Spring 2024 arrangement which was installed on the south façade in May 2024.

Figure 2. The 'Six S" layers of a building, which all have different life spans, adapted from a diagram in Stewart Brand's *How Buildings Learn* (1994). Brand's diagram includes "Services"; here "Sealant" is added in its place.

The barrier to entry for the development of such biomaterials is low and the work to be done seemingly endless: we began by replicating recipes from the site that seemed likely to scale architecturally and that required only domestic kitchen equipment. From there, we hybridized recipes that showed promise and continued to refine those based on my observations of their performance. Some of the biopolymers we experimented with, which other bio-makers have developed much further, include seaweed-based polymers agar, alginate, and carrageenan; various forms of plant-based cellulose; starch-based polymers like tapioca; and fungal-derived chitosan. In the end, we decided to focus on materials made from a combination of gelatin and chitosan derived from fish, not only because they can be made from unavoidable food waste, but also because we found their properties most promising. Some properties we observed directly include tensile strength, heat resistance, water resistance, transparency (in the case of gelatin), moderate elasticity (in the case of chitosan), and near complete resistance to mold and bacteria. While we are still testing more quantitative performance metrics, literature indicates that these mixtures are also fire-retardant and compostable and should reduce UV penetration, as well as providing acoustic benefits and a degree of thermal insulation.[12,13,14,15]

5. DETAILING CURTAINS FOR CROWN HALL

Alongside the material development, it was critical to develop non-invasive means of attaching these new wall components to the existing structure of Crown Hall.

The first installation, which was designed in tandem with the development of the initial material recipe and all fabrication protocols, was initially designed only as a series of panels to cover the lower transparent windows along the entryway. As these windows are 7'-9" tall, the attachment detail was close enough to eye-level to warrant special attention to its concealment. Each of van der Rohe's windows is framed with extruded steel, separated from each other by a 1-inch-tall gap. For the lower windows we designed what we call the Mies Mullion Modifier (MMM), a 3D-printed plastic expansion screw that fits into the 1-inch channel and supports the hardware from which the curtains are suspended.

12. Inmaculada Aranaz, et al., "Chitosan: An Overview of Its Properties and Applications." *Polymers* (Basel) 3 no 19 (2021), 3256.

13. Giulio Malucelli, "Flame-Retardant Systems Based on Chitosan and Its Derivatives: State of the Art and Perspectives." *Molecules* 25 no 18 (2020), 4046.

14. Shakeel Ahmed and Saiqa Ikram, Chitosan and gelatin based biodegradable packaging films with UV-light protection." *Journal of Photochemistry and Photobiology B: Biology* 163 (2016), 115.

Once it was decided to use the bioplastics to deter bird collisions in Fall 2023, it became necessary to cover as much of the 11'-6" upper windows as fast as possible with our remaining stock of material. To this end of maximal coverage, we held a one-day workshop with volunteering students to teach them how to arrange triangular pieces of the material in planar tensile equilibrium using fishing line and hooks attached to magnets. The Spring 2024 installation is suspended entirely by the same magnetic hooks on both upper and lower windows.

Between August 2023 and January 2024, our casting capacities scaled up enough that, while our maximum panel size in Fall 2023 was about 2'x5', our Spring 2024 installation was crafted from 16'x4' bioplastic pieces, cut down based on the design. One other difference was that in Fall 2023, we created the full panels by heat-seaming the smaller cast panels, whereas in Spring 2024, the whole panels were single casts (spliced from two separate pours each, because the material becomes touch-dry quickly at our desired thickness)hile tensile bioplastics are rarely deployed for architectural applications or at this scale, there are many makers worldwide experimenting.

6. CONCLUSION: TRUE WALLS

Approximately a hundred years before the construction of Crown Hall, influential German architect and critic Gottfried Semper deconstructed the layers of a building in his *Four Elements of Architecture* (1851). Although his contemporaries would likely still think of walls in terms of masonry, which would provide structure, privacy, visual exclusion, and elemental protection, among other functions—their own pre-modern version of the wall-that-does-it-all—Semper, who was interested in frame construction, drew a stark distinction between structure and enclosure. In describing his prototypical building, as exemplified in a Caribbean hut he saw on display at the Great Exhibition in London in 1851, he affiliated the structure with the roof or frame, while he described the "true walls" as textiles which served the purpose only of defining enclosure (in versus out).[16] The other two elements cited by Semper were the hearth—the building's raison d'être—and the "mound" or elevated foundation which separates it from the ground.

Although Semper was describing what has since been described as a "primitive hut"—the most essential embodiment of architecture—he could well have been describing Crown Hall's plinth-like relationship to the ground and its massive roof trusses from which the visible structure of the building hangs. Whether the glass membrane can be considered Semper's "true walls" is more debatable: they provide security and protect from (many of) the elements, but they do not visually distinguish between inside and outside, nor are they reconfigurable to accommodate varying requirements throughout the seasons and days.

In this sense, many glass Modernist buildings might be considered lacking in Semper's premodern conception of enclosure—a temporally sensitive flexible means of defining different spatial occupancies—which has also become desirable in the pandemic era as open planning comes under question and architectural spaces are called upon to serve multiple

15. Lautaro Lujan, et al., "Cellulose–Chitosan Biodegradable Materials for Insulating Applications." *ACS Sustainable Chemistry & Engineering* 10 no 36 (2022), 12000.

16. Semper, originally from The Four Elements, 537. His diagram of the Caribbean hut was first published in 1863 in Volume II of *Der Stil in den technischen und tektonischen Künsten oder Praktische Ästhetik*.

functions. Semi-permanent biogenic walls—whether tensile bioplastics or other types—are an attractive option for retrofitting these buildings without infringing upon their long-term identities, creating construction waste, or significantly adding to their carbon footprint. ■

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BIOGRAPHY

Ryan Roark, AIA, PhD, is a licensed architect, writer, biochemist, and Assistant Professor of Architecture at the Illinois Institute of Technology, where she runs the Biomaterials Lab and directs the second-year undergraduate studio. She writes about the history of adaptive reuse, preservation, urbanization, and social constructions of solitude. Her work has been published in *JSAH*, *Studies in the History of Gardens and Designed Landscapes*, and the book *Ruskin's Ecologies* (Courtauld Books Online, 2021), among others. She has previously taught at Georgia Tech and Rice University. She has a PhD in research science from Cambridge University (2011).

HAS FOSSIL MODERNISM LED US TO A DEAD END?

#07

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ABSTRACT.
Starting with a critical look at the fossil modernism that has led us into the climate crisis, the paper attempts to show the causes and history of the problem, along with the solutions that have emerged from the innovative power of modernism.

Fossil fuels provided a huge amount of energy. Crude oil, or 'black gold', and natural gas were cheap and easy to transport all over the world. The energy industry and resource-intensive construction industry benefited from this in particular. Modernist architecture also began its ascendancy at the same time as the boom in oil. However, nobody realised at the time what would happen as a result of cheap and reckless energy consumption and the construction that took place based on this. Modernism needs to be put into context and re-evaluated from this point of view, with a critical view taken from today's perspective. What can we learn from the mistakes made at that time?

In addition to concrete, steel and glass as construction materials, modernism also relied on extremely energy-intensive aluminium and plastic. Energy-intensive building systems posed a particular problem. Barnabas Calder's analysis "Form Follows Fuel", Vittorio Magnago Lampugnani's criticism of the use of resources in the construction industry and Werner Sobek's analyses of the construction industry and climate crisis are examined in an attempt to find solutions.

Simple approaches aimed at finding a solution are shown using examples from Vienna: Villa Beer (1931) by Josef Frank and Oskar Wlach, Wiener Stadthalle (1958), the Stadthallenbad indoor swimming pool (1974), Hotel Daniel (1959), Ernst Happel Stadium (1931/1959), the apartment of architect Margarete Schütte-Lihotzky, the Austrian Expo 58 pavilion (1958/1962) by architect Karl Schwanzer, and Wien Museum (1959) by architect Oswald Haerdtl.

Construction of the future needs to focus on preserving existing buildings, rather than reckless demolitions and constructions of new buildings as has been the case up to now. The longer a building exists, the more ecological it becomes. In addition to 'grey energy', the concept of 'golden energy' is also useful when it comes to conveying the idea of sustainable construction.

1. "BLACK GOLD" AND MODERN ARCHITECTURE

A critical examination of the fossil modernism that has led us into the climate crisis can help give us a better understanding of the history and causes of this problem. Understand, assess, act. A problem can only be solved once it has been analysed.

On the one hand, "fossil fuels made the world a much better place for humans", on the other hand, "we will make the planet apocalyptically horrible for humans" as a result of fossil fuels.[1] The abundance of crude oil provided energy in quantities that had previously been unimaginable and that could not have been achieved with human labour. Crude oil also meant that energy was no longer tied to one place, such as in the case of a water mill with its mill wheel. "Ever-larger oil tankers carried the world's new leading energy source around the globe with relatively low overheads, powering engines for a huge variety of purposes."[2] The energy could be shipped anywhere as a result and the cheap crude oil also made it possible to build a lot of beautiful and impressive constructions.

Modern architecture has broken with traditional forms and conventions. Barnabas Calder's analysis "Form Follows Fuel"[3], which states that modernity would not have been possible without environmentally harmful oil and gas, makes it clear to us, however, that this was also accompanied by another break with convention, which led to the large-scale use of fossil fuels and the building materials produced with these. It was no coincidence therefore that modern architecture - with its predominant use of steel, glass and reinforced concrete as building materials - began its ascendancy with the major break that followed from the use of fossil fuels such as coal, oil and gas.

Crude oil or 'black gold' has been one of the most important raw materials in industrialised society since the first half of the 20th century. Many of the innovations of modern times would not have been possible without petromodernity. New materials and technologies became possible and accelerated a whole range of processes. Modern architecture was only made possible through the availability of cheap energy. Hardly anyone at the time suspected the harm that might be caused as a result of the manner in which fossil fuels were changing the atmosphere.[4]

The analysis shows "how dependent we are on fossil fuels for our current standard of living and how comprehensively entangled our current architecture is with heavy use of fossil fuel energy."[5] Construction is "one of humanity's most energy-hungry activities".[6] This relationship between architecture and energy consumption is now subject to discussion once again, with the construction sector responsible for around 40% of CO2 emissions today. "The construction sector tops the list of material-consuming industries worldwide – and the demand for building materials continues to rise dramatically", says Werner Sobek in one of the key statements from his book 'non nobis – About Building in the Future'.[7] "A large share of energy consumption and emissions in the mobility sector is generated by transport in the construction sector."

"The fossil party is over", says Luisa-Maria Neubauer, a German climate protection activist, pointing to the energy-hungry construction sector up

1. Barnabas Calder. *Architecture: From Prehistory to Climate Emergency*, (Pelican, 2021), xi.

2. Calder, *Architecture: From Prehistory to Climate Emergency*, 367

3. Calder. *Architecture: From Prehistory to Climate Emergency*.

4. Calder, *Architecture: From Prehistory to Climate Emergency*, 367.

5. Calder, *Architecture: From Prehistory to Climate Emergency*, xviii.

6. Calder, *Architecture: From Prehistory to Climate Emergency*, xix.

7. Werner Sobek,. *non nobis – über das Bauen in der Zukunft, Band 1(2022), Band 2(2023)*, Stuttgart, avedition

until now. We must end the consumption of fossil fuels if we are to prevent catastrophic climate change.[8] The problems of global warming could be solved by switching from fossil fuels to renewable energies. "Solar, wind and other renewables will soon replace fossil fuels".[9]

2. EXISTING BUILDINGS ARE THE FUTURE

We need more renovations and adaptive reuse instead of demolition, therefore more 'demolition shaming'. We have solutions for the climate crisis through the tools of heritage conservation, such as resource economy, material continuity, minimal interventions, reversibility, use of natural construction materials, as well as preservation and repair before replacement. The focus is on preserving and complementing resources and on construction based on preserving our existing buildings and their value.

In addition to concrete, steel and glass as construction materials, modernism also relied on extremely energy-intensive aluminium.

2.1 ALUMINIUM

The small business premises 'Retti' in Vienna's city centre, which was completed in 1966, was Hans Hollein's first built property and marked the starting point for his famous architectural career. Hollein (1934-2014) received the Reynolds Prize in 1966 for these business premises with their aluminium façade and aluminium interiors in honour of an "extraordinary architectural achievement, with special use of aluminium".[10]

"Aluminium is used as the primary material because it is a true material of our century", Hollein writes in the architect's statement in which he described his project in 1966. The US company Reynolds Aluminum was the second biggest producer of aluminium in the USA and the third biggest in the world before it was taken over by competitor Alcoa in 2000.[11]

"The Reynolds competition was one of many tactics employed by producers to promote aluminium as the quintessential modern material. By publishing competition-winning works of aluminium architecture in marketing materials, producers enacted them (the architects) as 'silent salesmen'. The Reynolds award was largely a tool of competition between industry titans such as rival Alcoa, whereby architects and their projects were appropriated as a marketing medium", says Tait Johnson in his critical article on the history of the Reynolds Prize.[12]

Was modernism a marketing project by material manufacturers with the aim of seeking profit by influencing opinions and shaping the built environment? These types of architectural awards still exist today, whether they are for concrete, brick, metal, wood or other materials, and include aluminium architectural awards. Lobbyists from the respective interest groups try of course to position their product as the best and ecologically sound option. Greenwashing, which is also known as 'ecopornography', has been around for decades. Producing aluminium requires large amounts of electricity for the purposes of electrolysis from bauxite ore. A large part of the energy required to produce aluminium is still obtained from fossil fuels.

8. Calder, *Architecture: From Prehistory to Climate Emergency*, xxi.

9. Calder, *Architecture: From Prehistory to Climate Emergency*, xv

10. Honour awarded by the international jury of the American Institute of Architects (AIA)

11. China is now the biggest producer of aluminium by far.

12. Tait Johnson, "Marketing Modernism with the R.S. Reynolds Memorial Prize." In *2022 ACSA 110th Annual Meeting Proceedings, Empower, Conference in Los Angeles May 19-20 2022*, 432-438. ACSA Press, 2023.

The latest aluminium factories are located in countries with low energy costs, such as the United Arab Emirates, Bahrain, Saudi Arabia, Qatar (crude oil, natural gas) and Australia and South Africa (coal).

Aluminium represents a good option as a material due to its long service life resulting from its high corrosion resistance, as can be seen in Hollein's 'Retti' boutique, where the aluminium façade still looks new after almost 60 years.

The glass and aluminium curtain wall façade of Hotel Daniel in Vienna, which was previously the Hoffmann-La Roche building (1962), has barely aged even after more than 60 years. The good state of preservation is one of the reasons why Hotel Daniel is a rare international example of a property that has succeeded in substantially preserving its original curtain wall façade, including after a general renovation and conversion of the building, unlike for instance the glass curtain wall of the United Nations Secretariat Building (1951) or Lever House (1952) in New York City, which needed to be replaced.

2.2 ENERGY-HUNGRY BUILDING SYSTEMS WITH CONSEQUENCES

"The wonderful buildings of modernism were the very antithesis of everything that sustainable architecture needs to become: they gloried in profligate heating, cooling, ventilation and lighting systems, in new energy-hungry materials, in car-based cities and unlimited international air travel," is how Calder summarised this in his book.[13]

Our industrialised society of the 20th century and its achievements are inconceivable without the most important energy resource, namely crude oil. However, there are also considerable downsides that arise from these developments with this fossil fuel, including the fact that it is the main cause of global warming and also causes environmental damage when the oil is extracted and transported. The environmental damage caused by oil, coal and gas has not yet been taken into account in assessments of modernism. Oil has also had an impact on various other areas in addition to the construction industry, including mobility. Private transportation fuelled by oil, the 'carchitecture' of modernity, roads, motorways, parking spaces and car parks, underground parking areas, etc. involved huge changes to landscapes, urban planning and architecture.

Patterns of evaluation that are considered to be fixed and the values associated with these, including those of modernism, must be scrutinised and examined with a new and critical eye from today's perspective. The narrative of architectural history, in particular that of the 20th century, must be adapted to include a contextual framework and re-evaluation in the context of the environmental changes and damage that it has caused.

It is not about discrediting modernism, but rather learning lessons for the future based on the mechanisms and decisions from that time, in particular the hunger for energy and oil as the basis for many of the developments. The architects and the construction industry have a particular responsibility and duty in this regard.

It was only on the fringes of the mainstream that a small number of not yet influential figures began to question the relationship between architecture,

13. Calder, *Architecture: From Prehistory to Climate Emergency*, 446

humanity and nature.[14] These included Austrian artist Friedensreich Hundertwasser (1928-2000), who was an early champion of architecture that was both more in tune with nature and with humanity. He railed against the rationalism and functionalism of modern construction in his article 'Verschimmelungsmanifest gegen den Rationalismus in der Architektur' (Mouldiness Manifesto against Rationalism in Architecture)[15], which was published in 1958. Hundertwasser for a long time came under heavy criticism for his alleged populist funfair aesthetics, his 'façadism' and for being a 'prettifier'. The thoroughly visionary nature of Hundertwasser's philosophy of architecture in harmony with nature, ecological commitment and dedication to the preservation of mankind's natural habitat is only clear today.

3. POTENTIAL SOLUTIONS

Can the principles of modern architecture help us today, i.e. those of simplicity and minimalism, form follows function, use of new materials, openness and flexibility and integration of technology? The innovative power of modernism has the potential for helping to develop solutions.

3.1 SUSTAINABLE QUALITY OF LIVING

The pioneering apartment in Vienna[16] by architect Margarete Schütte-Lihotzky (1897-2000), which she designed herself and in which she lived from 1970 to 2000, has a large terrace with plenty of plants, greened façades, urban gardening and large awnings providing protection from the sun. The terrace is an important part of the apartment's holistic concept. Despite being only 55 square metres in size, the apartment (through its terrace) conveys a sense of being close to nature, which contributes towards the pleasant living environment and high level of quality for anyone residing there.

It is often not possible to implement standard energy-saving measures in modernist buildings of particular significance, such as thermal insulation for the exterior façades, as this would involve major changes to the building's character.

Following extensive investigations into restoration options and coordinated planning efforts, Vienna's famous Villa Beer (1931) **(Fig. 1)** by Josef Frank and Oskar Wlach will be comprehensively restored from 2024 to 2025 for the first time since its initial construction. The energy for the heating was originally supplied by coke, followed by crude oil. The elements used will include a heat pump, geothermal energy in the garden and photovoltaics on the flat roof in order to improve the Villa's energy footprint during future use without compromising the property. The original refurbished tubular radiators can be retained with this.

The recently renovated and expanded Wien Museum (1959) also uses a combination of photovoltaic systems and geothermal energy.

3.2 THE CONTROVERSIAL ERNST HAPPEL STADIUM IN VIENNA

Austria's national stadium, the Ernst-Happel Stadium (1931/1959) **(Fig. 2)** in Vienna's Prater public park is one of Austria's largest buildings. It was built

14. Calder, *Architecture: From Prehistory to Climate Emergency*, 414

15. www.hundertwasser.at, www.hundertwasser.com/en

16. 16 Franzensgasse, MSL-Margarete-Schütte-Lihotzky-Zentrum, www.schuette-lihotzky.at

between 1929 and 1931 for the second Workers' Olympiad based on a design by German architect Otto Ernst Schweizer (1890-1965). In addition to football matches, it also hosts major events that include concerts by Taylor Swift, The Rolling Stones, U2, Elton John and Bruce Springsteen, with capacity for up to 70,000 spectators. Discussions have been ongoing for many years about demolishing and rebuilding the stadium, even though it is protected as a building of historic significance. A right-wing populist political party in Austria and the Austrian Football Association (ÖFB) want to see the stadium replaced with a new and modern building. However, any new building would only host an average of six international football matches each year. The high costs of a football arena for just a few international matches per year have caused controversy for years. Interestingly, the media debate involving whether to demolish or rebuild the stadium has barely mentioned the ecological impact of any such project. Demolishing such a huge concrete building that has been proven to be intact and constructing a new one in its place seems absurd to many people during a climate crisis. There would be a huge amount of 'grey energy' (embodied energy) destroyed during the demolition process that would then also be required to construct a new building. The City of Vienna has decided to preserve the stadium, given that it has turned from a sports stadium into a concert arena and 93 per cent of its revenue comes from open-air concerts as a result of this. One of the largest photovoltaic systems in Austria with 12,000 photovoltaic modules was finally installed on the roof of the stadium in 2024. Geothermal energy is also being utilised with 270 boreholes and ground collectors adjacent to the stadium in the aim of converting it into a carbon-neutral sports facility and the first energy self-sufficient stadium in Europe. Plans are also being considered for a mobile roof structure that would allow the stadium to be used more frequently.

Photovoltaic systems are also in use at the legendary Wiener Stadthalle (1958) **(Fig. 3)**, the Stadthallenbad indoor swimming pool (1974) and the rescued Hotel Daniel (1959) in Vienna.

The Austrian Expo 58 pavilion (1958/1962) by architect Karl Schwanzer is one of the few pavilions still remaining from the 1958 World Exhibition in Brussels. After being relocated to Vienna, it has been used as a museum since 1962 and is a good example of adaptive reuse. An exemplary overall refurbishment that took place between 2008 and 2012 by architect Krischanitz allowed the building structure to be preserved and extended. A PV system was installed on the roof in 2024 in order to improve the energy footprint.

Architect and historian Vittorio Magnago Lampugnani also criticises the use of resources in the construction industry.[17] He makes a radical case for sustainable architecture while pleading against disposable architecture and the throwaway ideology of capitalism. Lampugnani criticises 'masking fundamentalism', i.e. the installation of insulation panels, and calls for an end to consumerism in urban planning and architecture. He talks about the short lifespan of new architecture and describes architectural projects as "short life toys", cheap and therefore less durable building designs and the "progressive obsolescence" in modernist architecture. He claims that this

17. Vittorio Magnago Lampugnani. *Gegen Wegwerfarchitektur*. Berlin, Klaus Wagenbach, 2023

18. Lampugnani, *Gegen Wegwerfarchitektur*.

19. www.goldeneenergie.de, Bundesstiftung Baukultur

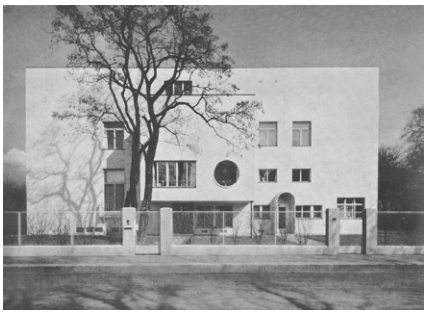






Figure 1. Josef Frank and Oskar Wlach, Villa Beer, Vienna, Austria, 1931. Julius Scherb (photographer) © MAK

Figure 2. Otto Ernst Schweizer, Ernst-Happel-Stadium, Vienna, Austria, 1931/1959. Martin Gerlach jun. (photographer), around 1935 © Wien Museum Inv.-Nr. 59241/62, CCO (https://sammlung.wienmuseum.at/objekt/129685/)

Figure 3. Roland Rainer, Wiener Stadthalle, Vienna, Austria, 1958, Installation of 2,956 photovoltaic panels on the roof of Hall D. © David Bohmann

introduced an excessive and reckless transient euphoria into architecture, particularly in the 1960s. He speaks of architecture as a transitory fashion item: "fast fashion" and "fast architecture", with the refrain "ending is better than mending". In addition to this, the commercial value of buildings also became detached from their material value. This led to demolitions after just a few years, even for buildings that were completely intact, because an even more profitable business could be conducted on the plot of land. People felt as though there was an abundance of energy during the period of the economic miracle. It was not until the shock of surging oil prices in the 1970s that heating and cooling systems started to become more efficient.

According to Lampugnani, this throwaway world and consumerism is the main cause of our environmental emergency. Not a case of demolishing and rebuilding, but renovating, unbuilding and expanding or transforming. The longer a building exists, the more ecological it becomes.[18]

4. GOLDEN ENERGY OF MODERN ARCHITECTURE

Modernist buildings also play their part in this regard, not simply by preserving the 'grey energy' that they contain, but also through their 'golden energy'. The concept of 'golden energy' aims to illustrate that existing buildings are made up of more than 'grey energy' and of more than the construction materials and emissions stored within them, since intangible cultural values are also linked in with existing buildings. Every location and every building has its own history, which is inextricably linked with the lives of the people who have lived, worked, learned, loved, played and celebrated there. The concept of 'golden energy' successfully reflects this cultural, social, atmospheric, emotional and creative added value of developing existing buildings. It reinforces the importance of architecture that creates an identity and of social sustainability as an urban resource.[19] ■

BIOGRAPHY

Wolfgang H. Salcher has been an architect at the Federal Monuments Authority Austria (Bundesdenkmalamt) since 2003. As State Conservator in Vienna, he is responsible for the preservation and conservation of buildings that include those by Otto Wagner, Adolf Loos, Jože Plečnik, Margarete Schütte-Lihotzky, Josef Frank and Hans Hollein. He worked at architectural offices in Austria, Italy and Germany, and at the Institut français d'architecture (IFA). He has taught at universities in Innsbruck and Vienna. Salcher has written publications on concrete conservation, postwar architecture and conservation management plans, and has organised international symposia on post-war modernism. He has been a member of Docomomo International since 2006.

CONCRETE LONG-SPAN BUILDINGS' ADAPTIVE REUSE: SUSTAINABLE RETHINKING OF PUBLIC ARCHITECTURE AND INDUSTRIAL HERITAGE

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ABSTRACT

Twentieth-century large-scale public and industrial buildings are scattered worldwide fostering a wide debate in the fields of reuse, transformation, sustainable construction processes, and the ensuing balanced development of the involved urban areas. Redesigning a new life cycle for those buildings and their contexts that have lost function, use and significance provides a unique opportunity to contribute to making human settlements inclusive, safe, resilient, and sustainable (UN2030 Agenda, Goal 11). Among the buildings at risk, a prominent role is played by those in reinforced concrete in which well-known architects and engineers, set free from traditional structural requirements, introduced unprecedented, innovative solutions. In this realm, long-span buildings of the second post-war, such as sports and social facilities, warehouses, pavilions, hangars, markets, movie theatres, and auditoriums arouse considerable interest for their intertwined urban, architectural, and engineering significance. The awareness of their historical, cultural, and social values, combined with the serious and growing problems of structural safety, fuels today a greater sensitivity to this heritage. It is, therefore, worthy to protect and reuse these buildings as tangible evidence of a particular historical moment, rich in discoveries, novel construction techniques, and experiments on new materials. The issues of aging, poor energy, structural performance, change of function, use, and social role are amplified in this modern heritage, prompting the need for careful analysis and making its sustainable rehabilitation and reuse a demanding technical and economic challenge.

1. INTRODUCTION

The session aims to delve into methodologies geared towards the proactive protection and adaptive reuse of endangered or overlooked landmark reinforced concrete long-span buildings from the 20th-century cultural heritage. One of the hallmarks of this session lies in its multidisciplinary approach, which not only invites architects and engineers but also encourages collaboration across various fields to share recent approaches, studies, and interventions aimed at revitalizing these urban landmarks. The overarching goal is to transform these structures into catalysts for sustainable regeneration, thereby igniting cultural, social, and economic development within the communities they inhabit.

By reconceptualizing dismissed significant buildings as both cultural and economic assets, and by recognizing their potential for reuse and restoration within an integrated framework, a dual objective is achieved. Not only will their historical significance be preserved and enhanced, but their inherent resilience in the face of climatic and social changes will also be reinforced. Moreover, by reshaping their urban context, these buildings can reclaim their roles as vibrant hubs within their communities, contributing to the overall livability and vitality of the surrounding areas.

The session draws heavily upon the operational expertise and knowledge of the chairpersons, who have been actively engaged in the professional realm of the topic for several decades. Francesco Romeo, for instance, has conducted in-depth studies on the "Palazzetto dello Sport" in Rome, designed by Pier Luigi Nervi, and has contributed as a scientific consultant to its recent renovation (**Fig. 1**,**2**). Similarly, Giovanni Multari, through his professional practice at Corvino+Multari, has undertaken the renovation of iconic structures such as the Pirelli skyscraper, designed by Gio Ponti and Pier Luigi Nervi, at the onset of the previous decade (**Fig. 3**,**4**). Their hands-on experience will stimulate discussions and provide valuable perspectives on the complexities involved in the protection and adaptive reuse of modern heritage buildings.

2. KNOWLEDGE PATH AND SIGNIFICANCE ASSESSMENT

Long-span buildings can be considered emblematic of structural concrete architectural heritage assets. The scientific approach implied in the reuse of this building typology reflects the complexity of conservation, restoration, and valorisation policies requested for landmarks of modern architecture. The reasons are connected not only to a reduction or loss of serviceability and physical integrity often affecting such buildings, but also – and sometimes prevalently – to changing technologies, varying economic demand, market constraints, new regulations, and social and cultural modifications. Contemporary society is particularly sensitive to functional requirements and related legal responsibilities (as reflected in the progressive evolution and increase in codes and technical-administrative regulations), but much less to the preservation and re-elaboration of historical memory.

As sport and social facilities, warehouses, pavilions, hangars, markets, movie theatres, and auditoriums testify, long-span buildings are

a paradigmatic architectural context in which "form follows function". Therefore, the knowledge phase needs to be tailored to the features of this specific heritage asset. The gradual shift from traditional building materials such as brick, stone, earth, and timber, to concrete and steel that took place over the course of the twentieth century allowed to reach unusual free-span structures. So, reinforced concrete, whether in situ, precast, prestressed, or post-tensioned, warrants special attention as it has been used in countless ways to define a new architectural language. The challenge prompted by such large free-span buildings' spaces has led the designers to look for original innovative answers with pioneering technical proposals, often ad-hoc patented and experimentally validated through lab testing on scale models. The knowledge of these aspects plays a significant role to complement the on-site investigations and understand the technical underlying assumptions adopted by the designers.

The initial activity required by any adaptive reuse process for reinforced concrete long-span heritage buildings consists of gathering and analysing evidence enabling the assessment of significance. The latter is linked to the set of intangibles (social, historical, cultural) and functional properties, as well as to the structural envelope, that is, to the set of elements that connote their materiality (structures, materials, finishes) (ICOMOS-20C 2017, Diacodimitri et al. 2022).

The main objective of this knowledge phase is to investigate the original design, based on archive drawings and documents, the construction features, and the urban context of the building, with a special focus on the evolving historical background and social context. In addition, a massive survey campaign provides detailed information on the actual state of the building. The survey is aimed at developing a deep understanding process, allowing us to analyse, verify, interpret, and contextualize structural and architectural elements of the building. This survey would also allow us to delve into the comprehension of the intrinsic nature of these elements, for identifying transformations in time and variations from the original project as well as to provide documentary evidence of the current condition of the building. Due to the usual complex and extended volumetry, the survey project must deal with the necessity of integrating different survey methodologies and equipment. The whole survey shall be planned with the awareness of the structural elements' relevance. Therefore, the data acquisition operations must be aimed to obtain an accurate description of structural elements' geometries (Tostões and Ferreira 2016).

The data acquisition and processing phases lead to a reality-based (point cloud) 3D model; the latter could be adopted to develop a Heritage-BIM (HBIM) platform. The advantages offered by information management tools, combined with the possibility of gathering in a single digital database a multitude of generally scattered and fragmented data, make the HBIM a tool well suited for the multidisciplinary nature of a reuse project.

Once examined documentary and physical evidence, the knowledge path is enriched by the structural diagnostics phase to be implemented mostly relying on non-invasive methods (Non-Destructive Testing – NDT).

The knowledge path is also conducted on a sociological basis, aiming to establish a 'cultural, sociological and economic landscape' around the considered heritage site, analysing the role played by the building in the life of the urban context and how it is perceived by its inhabitants.

3. STRUCTURAL AND ENERGY PERFORMANCE ASSESSMENT

Based on the significance characteristics outlined in Section 2, the structural performance assessment of long-span heritage buildings of the 20th century must be rooted in their in-depth technical knowledge. Therefore, the assessment process for reuse purposes involves at first the retracing of construction history and techniques and the identification of the structural details. The physical conditions and structural integrity assessment and management are key prerequisites for any practical conservation and reuse policy. Therefore, the safety assessment, possibly including seismic vulnerability aspects, and structural retrofitting solutions must be carefully analyzed.

The structural conservation and rehabilitation process consists of a condition survey, identification of the causes of damage and decay, choice of remedial measures, and control of intervention efficiency. Each step is to be possibly conducted in compliance with cultural heritage general principles, namely minimum intervention, compatibility, and reversibility. The issue of the 'duration' of the material over time and the sources of degradation, nowadays accounted for by durability requirements and the 'service life' concept, must be dealt with since these aspects were not explicitly considered at the design time we are looking at.

Further investigations will be addressed to estimate the ideal response of the original intact structure concerning today's standards for live load values and combinations. Considering possible degradation aspects enables to estimate of the residual load-bearing capacity and gives indications about possible strengthening needs. According to ICOMOS/ISCARSAH Guidelines, and, more recently, fib Model Code 2020, preventive and proactive approaches shall be pursued for an effective through-life management strategy of this heritage asset (fib Model Code 2023, Di Re et al. 2021).

As far as the energy analysis is concerned, the best solutions for the construction of the digital twins of the buildings using BIM and BEM (Building Energy Modeling) techniques is identified optimizing the interaction of the two software tools in terms of the import of BIM into the BEM environment. The detailed physical model of the target building will be built paying attention to its history, intended use, and period of construction and the data collected during the survey activity will allow building both the BIM and the BEM models. To make the energy model as close as possible to the real building, calibration methods shall be implemented using the monitoring data. The calibrated energy model will firstly provide the current state of the building and secondly, it will be used to test various retrofit solutions compatible with the reuse concept. The aim is to find the best retrofit solution able to maximize the comfort of the occupants and

minimize energy consumption and retrofit costs (Stein 2010). Towards resource-efficient life-cycle planning, the vocation for the buildings' reuse related to natural light, ventilation, and passive climatic building envelope's solutions (presence or absence of solar devices, designed ventilation flows, proto-bioclimatic design elements, and components, including hygro-thermal multi-layered infill-walls) shall be thoroughly explored.

In essence, the ideal reuse project aims to embrace, on the one hand, the preservation of architectural features, on the other, functional updating, seismic adaptation/improvement, energy efficiency, MEP systems, the increase in the physical and technical performance of the envelope, the treatment of alterations, the relationship between the structural and architectural part.

4. RETHINKING, REDESIGNING AND REUSE

4.1. CONTEXT AND ANALYSIS

In embarking upon the journey of adaptive reuse for 20th-century landmark reinforced concrete long-span buildings, it is imperative to conduct a thorough assessment of contemporary needs. This entails a comprehensive understanding of the current socio-economic, cultural, and environmental dynamics shaping urban environments. Rapid urbanization, demographic shifts, technological advancements, and evolving lifestyle preferences all influence the demand for adaptable, sustainable, and inclusive built environments. By aligning adaptive reuse efforts with present-day needs, stakeholders can ensure that revitalized structures serve as relevant and functional assets within their respective communities.

Central to the contextual analysis is a commitment to conservation principles that prioritize the preservation of architectural heritage and cultural significance, especially in line with Docomomo's prescriptions. The conservation of modern heritage buildings extends beyond mere physical restoration to encompass broader considerations of authenticity, integrity, and contextual relevance, keeping in mind that many of these buildings worldwide are yet not listed as heritage due to the short historical span.

In response to shifting urban dynamics, adaptive reuse strategies offer innovative approaches to repurposing existing structures for new functions and purposes. These strategies encompass a range of interventions, including functional adaptation, spatial reconfiguration, and technological upgrades, aimed at enhancing the usability, efficiency, and sustainability of modern heritage buildings. From repurposing industrial warehouses into mixed-use developments to transforming historic theaters into vibrant cultural hubs, adaptive reuse offers a versatile toolkit for revitalizing urban landscapes while honoring architectural legacy (Smith, Johnson, and Garcia 2020).

Beyond the physical transformation of buildings, adaptive reuse projects hold the potential to catalyze social regeneration within communities. By fostering inclusive public spaces, promoting cultural activities, and supporting local economies, revitalized structures can become nodes of social interaction.

An effective intervention methodology for adaptive reuse integrates research, analysis, planning, and implementation phases to ensure a universal

and sustainable outcome. This methodology begins with thorough site assessments, historical research, and stakeholder consultations to inform strategic decision-making and design development. Subsequent phases involve conceptual design, feasibility studies, regulatory compliance, and project management to guide the execution of adaptive reuse initiatives with efficiency and precision. Throughout the process, a collaborative and iterative approach encourages flexibility, innovation, and responsiveness to evolving project requirements and community aspirations (Adams, Roberts, and Garcia 2018).

In addition to functional adaptation and aesthetic restoration, attention to repair actions and structural integrity is paramount in ensuring the longevity and safety of adaptive reuse projects. Structural assessments, material testing, and retrofitting interventions may be necessary to address age-related deterioration, seismic vulnerabilities, and environmental impacts. By investing in proactive maintenance and conservation practices, preservationists can safeguard the structural integrity and resilience of modern heritage buildings, ensuring their continued relevance and viability for future generations.

4.2. DESIGN STRATEGIES

Many attempted to draw an atlas of best practices for such interventions, nonetheless, it appears hard to state a precise list. However, it is surely by embracing mimesis, overlapping, completion, juxtaposition, substitution, opposition, dialogue, inclusion, and distinguishability that architects can think of adaptive reuse projects that honor the past, respond to the present, and inspire the future. Through thoughtful integration of historical context, innovative technologies, and community engagement, adaptive reuse projects can become catalysts for sustainable development, cultural enrichment, and social cohesion within urban environments. Within the session, selected interventions will undertake the strategies of adaptability (Garcia, Smith, and Brown 2018). For instance, upcycling materials offer a sustainable approach to construction by repurposing existing elements, such as prefab beams or columns, and giving them new life in different projects. By relocating these structural components, architects and designers can not only reduce waste but also imbue new constructions with a sense of history and character. This practice not only promotes circularity in the construction industry but also fosters creativity and innovation in design.

Mimesis, or imitation, involves the reinterpretation of historical forms, materials, and typologies within contemporary design frameworks. By echoing the architectural language of the past while incorporating modern amenities and technologies, designers can create spaces that resonate with historical continuity while meeting present-day needs.

Overlapping design strategies involves the layering of new interventions onto existing structures in a manner that respects their intrinsic qualities and spatial narratives. Rather than imposing singular design gestures, overlapping embraces the richness of architectural palimpsests, allowing historical and contemporary elements to coexist and interact synergistically.

Dialogue strategies emphasize the importance of collaboration,

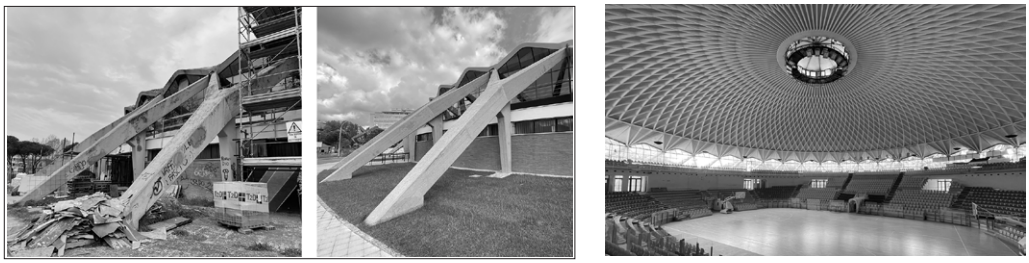


Figure 1. A. Vitellozzi and P.L. Nervi, Palazzetto dello Sport, Rome, Italy, 1956-57. Listed in 2021, the Palazzetto underwent conservative restoration works that ended in 2024. @ F. Romeo

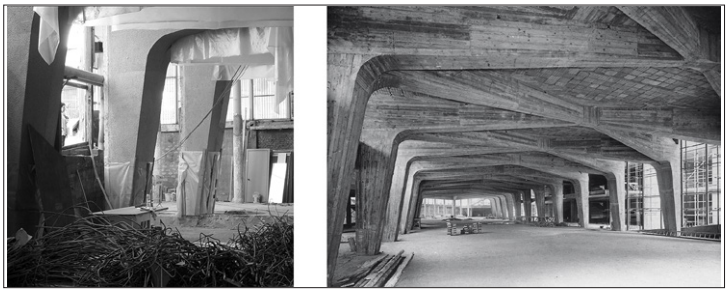


Figure 2. A. Vitellozzi and P.L. Nervi, Palazzetto dello Sport, Rome, Italy, 1956-57. The Palazzetto after the recent restoration works. @ F. Romeo

Figure 3. G. Ponti and P.L. Nervi, Pirelli Skyscraper, Milan, Italy, 1955-59. Left: Auditorium during the 2002-2005 restoration works, @ Archivio Corvino+Multari. Right: Auditorium during construction @ Archivio Pirelli.

communication, and community engagement in the adaptive reuse process. By fostering dialogue between stakeholders, designers, and residents, adaptive reuse projects can reflect diverse perspectives, values, and aspirations.

Substitution strategies entail the selective replacement or augmentation of existing building components with contemporary materials, systems, or technologies. This approach allows designers to address functional obsolescence, structural deficiencies, or environmental constraints while preserving the overall character and integrity of the original structure (Lee, Martinez, and Johnson 2022).

Distinguishability strategies emphasize the importance of preserving the distinctiveness and identity of modern heritage buildings within the urban landscape. By highlighting their unique architectural features, cultural significance, and historical narratives, designers can ensure that adaptive reuse projects retain their intrinsic value and character.

5. CONCLUSIONS

The journey toward adaptive reuse of 20th-century landmark reinforced concrete long-span buildings is complex, requiring a holistic approach integrating technical expertise, historical insight, and community involvement. This session underscored the significance of multidisciplinary collaboration among architects, engineers, historians, and community stakeholders to develop innovative solutions addressing both technical and socio-economic challenges.

Key to the success of adaptive reuse is a commitment to conservation principles prioritizing authenticity and contextual relevance. Balancing preservation with contemporary needs ensures revitalized structures become sustainable assets within their communities. Design strategies emphasizing historical reinterpretation, collaboration, and architectural identity are pivotal in creating projects that honor the past while meeting present demands and inspiring future developments.

Ultimately, proactive protection and adaptive reuse offer not only technical challenges but also opportunities for cultural enrichment, social cohesion, and sustainable urban development. Through collaborative and inclusive efforts, these iconic structures can continue to catalyze positive change for generations to come. ■

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BIOGRAPHIES

Giovanni Multari. Graduated from the University of Naples Federico II (1990), PhD in Urban Design (1997), founded the studio Corvino+Multari in Naples with Vincenzo Corvino (1995). Teaches architectural and urban design at the University of Naples Federico II, Department of Architecture. His thirty years of activity as an architect are strongly characterized by the coexistence of university research with design research and construction experience. Research themes are: readaptation of modern architecture, and architecture for the existing in fragile territories. His main awards include the Gold Medal for Italian Architecture in 2006 for the restoration of the Pirelli skyscraper.

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WHAT IF? OPEN QUESTIONS AND DESIGN SCENARIOS ON THE UPCYCLING OF LONG-SPAN STRUCTURAL COMPONENTS FROM 20TH CENTURY AUTHORIAL ARCHITECTURE

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ABSTRACT

This paper delves into the urgent priority of energy saving in building contemporary architecture, particularly focusing on the environmental impact of demolishing 20th-century long-span reinforced concrete structures. The study ponders an upcycling process as a promising solution in reusing existing structural components in new constructions to reduce resource waste and pollution. Rooted in the "Design for Disassembly" principle, the research explores the theoretical implications of disassembling, remanufacturing, and reassembling structural elements also in the heritage field, extending the theoretical implications of tectonics in architecture.

Drawing from existing literature, the paper discusses good practices of salvaging architectural elements, emphasizing the need to preserve valuable heritage through pragmatic disassembly and reassembly processes; furthermore, it aims to deepen the transformative potential of upcycling while addressing ethical, methodological, and design challenges.

The investigation highlights the criticality of concrete structures' demolition in today's construction industry and advocates for a circular construction approach that prioritizes reusing building components. Through two case studies of Pier Luigi Nervi's not-heritage-listed industrial architecture, the paper questions the fate of abandoned structures and proposes an upcycling process as a means to preserve both material and intangible heritage. Nervi's innovative approach to prefabrication serves as a model for integrating structural correctness with aesthetic expression, offering insights into the potential of upcycling long-span structural components for the design of new buildings, thus preserving the memory of construction techniques and architectural spaces. Beyond environmental benefits, the "Design for Disassembly" approach and upcycling process facilitate the transmission of cultural heritage, foster local value chains, and inspire innovative design solutions.

This paper is part of the results of an ongoing research project named *Upcycling Architecture in Italy. Forging and Promoting a Renewed Building Culture*, funded by European Union-NextGenerationEU (PRIN 2022 PNRR) of which Alberto Bologna is the Associate Investigator for the Sapienza University of Rome research unit. The paper structure and narrative are the result of the combined work of the two authors: Alberto Bologna and Margherita Maurea consider their individual contribution to the paper with an equal percentage of 50%.

1. INTRODUCTION

This paper aims to explore the ethical, methodological, and design implications of upcycling long-span structural components from 20th-century authorial architecture.

In the contemporary architectural scene, the issue of saving and optimizing energy resources emerges as an undeniable priority. Particularly, the demolition of reinforced concrete structures poses a problematic critique to be addressed, given its relevance in terms of global environmental impact.

The interest towards upcycling practices, in line with current governmental agendas and regulations, emerges as a promising response to this challenge. Upcycling understood as the process of reusing/remanufacturing pre-existing structural components in new constructions, could represent a significant opportunity to reduce resource waste and pollution stemming from cement production. However, this approach raises a series of questions, especially when it involves buildings designed by architects celebrated by historiography.

This research is based on a methodological premise rooted in the "Design for Disassembly" principles,[1] as well as in the "Assemblage Theory,"[2] provided by the American philosopher Manuel De Landa, which prompts us to reflect on how the use of disassembly and reassembly of structural elements can further fuel the concept of tectonics in architecture, a theme with deep roots in the design discipline's history.

Works such as Kenneth Frampton's "*Studies in Tectonic Culture"* have examined the relationship between construction, form, and architectural meaning, highlighting the transition from technical necessity to spiritual expression through construction.[3] The notion of assemblage adds another dimension to this reflection, pushing beyond the traditional concept of tectonics as a design tool.

This theoretical framework will be extended through a critical examination of two case studies of Pier Luigi Nervi's work: indeed, this research aims to provide insights into the transformative potential of building components' reuse while promoting a deeper understanding of its implications for architectural practice and heritage conservation.

This research aligns with the rise of "Design for Disassembly" and upcycling as energy-saving strategies in national and supranational regulatory frameworks, in the global construction industry as well as in academic research. However, while professional, entrepreneurial, and academic initiatives are exploring the potential of building components' reuse, it remains not yet explored the possibility of applying this approach to the context of architectural heritage, in figuring out the future of authorial architecture.

2. EXTRACTING STRUCTURAL COMPONENTS FROM LARGE CONCRETE STRUCTURES

Reinforced concrete constitutes a significant portion of the load-bearing structures in existing and new buildings. However, its manufacturing processes and extensive use contribute significantly to environmental

1. International Standard ISO20887:2020 (E), *Sustainability in buildings and civil engineering works – Design for disassembly and adaptability – Principles, requirements and guidance*, January 2020.

2. Manuel De Landa, *Assemblage Theory* (Edinburgh: Edinburgh University Press, 2016), 20.

3. Kenneth Frampton, *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture* (Cambridge: MIT Press, 1995).

impacts, including waste streams, global warming, depletion of raw materials, and destruction of natural ecosystems.

Buildings are increasingly being demolished after shorter service lives, driven more by the obsolescence of their functionality than by structural decay. This wastes resources and worsens environmental degradation, as cement production emits global emissions.

Disposable construction fails to acknowledge the significant economic and environmental advantages of reusing building components, giving them a new lease of life even after minor modifications can improve their performance.[4]

To address these challenges, there's a growing interest in adopting upcycling practices, in line with all current government agendas.

Circular strategies prioritize refusing, reducing, repairing, and reusing materials before recycling them, giving new usage cycles to the building stock, thereby allowing their lifespan to be exploited fully.

In the technical literature, the term "upcycling" subsequently established itself in the construction industry for the reutilization of components, irrespective of their function on the new site and once they are reconditioned and perfected in their performance, as distinct from "recycling", which merely describes the recovery of materials,[5] often falling into what has already been referred to as "down-cycling."[6]

In 1994, Joseph Alchermes analyzed ancient legal documents, particularly *De operibus publicis* (*On public works*) from the Theodosian Code,[7] showing an ethical approach to reusing materials from the Roman Empire's end.

Demolition was allowed only for irreparable damage, requiring carefully dismantling and salvaging as many components as possible for future use. Thus, deconstruction is portrayed not as a final option, but as a deliberate measure essential for the maintenance of buildings approaching the end of their life cycle.

Nowadays, the reuse of concrete components is not a novel approach: initiatives such as the business of the Belgian company RotorDC Deconstruction & Consulting and the research activities of the Structural Xploration Lab of the École Polytechnique Fédérale de Lausanne (EPFL), demonstrate the feasibility and potential of reusing precast concrete elements from obsolete structures and integrating them into new buildings.

These experiences show a variety of elements, ranging from small blocks to large slab elements, confirming that reusing concrete components significantly diminishes the initial global warming potential of new construction. This sets a new lower-bound benchmark for sustainable, circular construction.

In this regard, the K.118 building stands out as a significant best practice. Located in Winterthus (Switzerland): K.118 tangibly illustrates how even ordinary pieces of buildings can find new meaning. These kinds of examples represent a fundamental path for best practices, highlighting how the approach to reuse and upcycling is gradually spreading into practical applications as well. The implementation of the K.118 project demonstrated that reuse is a concrete path that can quickly lead to this goal.[8]

4. Maléna Bastien-Masse, Célia Küpfer, and Corentin Fivet, "A concrete answer for circular construction: three prototypes reusing saw-cut elements," *The Structural Engineer,* 102, no. 4 (April 2024): 32-37.

5. Bill Addis, *Building with Reclaimed Components and Materials: A Design Handbook for Reuse and Recycling* (New York: Routledge, 2006); Duncan Baker-Brown, *The Re-use Atlas: A Designer's Guide towards a Circular Economy* (London: RIBA Publishing, 2017).

6. William McDonough and Michael Braungart, *Cradle to Cradle: Remaking the Way We Make Things* (New York: North Point Press, 2002), 56.

7. Joseph Alchermes, *Spolia in Roman Cities of the Late Empire: Legislative Rationales and Architectural Reuse* (Dumbarton Oaks Papers 48, 1994),167-178.

8. Barbara Buser, "Reuse!", in *Reuse in Construction. A Compendium of Circular Construction,* ed. Park Books (Zurich: Park Books, 2021), 13-14.

Through a practice of material reuse, buildings themselves are considered repositories, not just of materials but also of knowledge and past practices that might find new applications, becoming part of new value systems. Apart from collecting information and producing overviews of design development, this design approach seeks to find out which elements of this historical production lend themselves for reuse and re-assembly. This question is also intended as a provocation to trigger a debate on the value and role of history and the archive in contemporary off-site reuse practices and architectural design. Not only does this approach touch on urgent questions on the rationalization of building components and materials, but it also implies a need for a different view of history and historical production as a resource for innovation.

3. RETHINKING HERITAGE: THE 20TH CENTURY INDUSTRIAL ARCHITECTURE AND NERVI'S DESIGN PHILOSOPHY

Despite their historical significance and architectural quality, a significant number of industrial buildings from the 20th century are now abandoned, also in Italy: the causes lie in the difficulties in identifying potential uses, balancing functional needs with conservation imperatives, and the high costs of restoration and adaptation. A question follows: is it better to accept the inevitable state of uncontrolled ruin of architecture, or is it legitimate to rethink a new life for it by dismantling and reusing its components through an upcycling process?

In his work "*Histoire matérielle du bâti et projet de sauvegarde*", Franz Graf addresses the theme of contemporary architectural heritage by proposing an approach based on the material history of construction and preservation projects. He emphasizes the need to merge history with construction practice, stating that "the connection appears inevitable for architects and engineers working on existing structures", especially those of historical value.[9]

Such a design approach relies on a deep understanding of the historical value of the building by drawing on the recent history of materials and construction systems.

The objective of applying "Design for Disassembly" and upcycling processes to 20th-century concrete industrial architecture is to open questions essential for the management of a built heritage whose future is difficult to guarantee if the design approach is limited to the change of its intended use.

One exemplified through the industrial architecture built by Nervi: in questioning the future of his not-heritage listed buildings in the Mirafiori plant (1954-1955) in Turin or the Fiat Cromo plant in Venaria Reale (1962-1963), can the dismantling and reuse of their prefabricated structural long-span components be understood as an action aimed at the future transmission of both the construction techniques and the distinctive spatiality of Nervi's design approach? How will such an approach influence the design process and its implications on spatial configurations using these structural components? In the future, could this be considered a new form of heritage? Finally, from a purely technical point of view, what upcycling practices might

9. Franz Graf, *Histoire matérielle du bâti et projet de sauvegarde. Devenir de l'architecture moderne et contemporaine* (Lausanne: EPFL PRESS, 2014), 11.

be the most suitable to allow (also on a regulatory level) the reuse of these structural elements without them losing their original feature and character?

As known, Nervi was one of the most influential structural engineers on the international scene of the 20th century. He was renowned for his engineering audacity, architectural creativity, and entrepreneurial pragmatism directly carrying out building sites in Italy with his construction company Nervi & Bartoli.

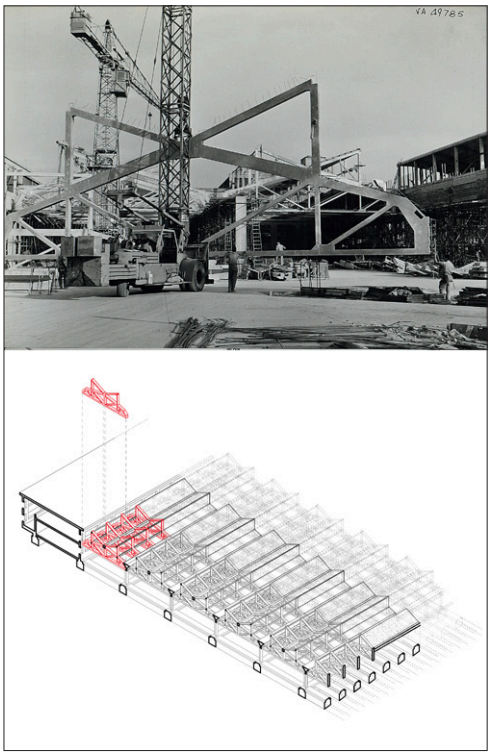
Around structural prefabrication, Nervi conceived his constructive systems by applying the very concept of tectonics (intended as the art of assembly): indeed, his structures are always composed of on-site precast components that are subsequently assembled to shape domes, vaults, or long-span roofs obtained by the serial repetition of trusses.

Nervi & Bartoli achieved a remarkable feat in 1954-55 with the rapid construction of the northern extension of the Fiat industrial plant in Turin, demonstrating the efficacy of his prefabrication techniques: he used sliding scaffolding with frames fitted with ferrocement forms onto which he could cast in place the structure, and for the other storeys, where the beams only rested on the ends, he used T-beams prefabricated through ferrocement moulds (**Fig. 1**).

Nervi's mastery extended to incorporating ferrocement alongside reinforced concrete, employing advanced casting and formwork techniques to ensure an effective economy of execution. An example is the construction of the Chrome Plant for Fiat in Venaria Reale in 1962-63 (**Fig. 2**). Using a pneumatic system for concrete transport and special machinery for creating concrete subfloors, Nervi & Bartoli prefabricated various components, including the colossal roof trusses and infill panels, while managing their construction site. These "minor" and now, not-listed works conceived by Nervi show interesting applications in which design considerations were not merely aesthetic or functional but instead met specific technical and economic requirements. In both cases, Nervi's innovative approach to prefabrication, combined with the specialized lifting tools he devised for installing the beams, allowed for rapid construction and great quality.

However, despite their initial functionality, these complexes now find themselves partially decommissioned or at the risk of being totally or partially demolished, due to the current industrial policies of the owner who has moved car production away from Turin over the years.

Is there any alternative to the real risk of the total loss not only of architectural heritage but also of the legacy of Nervi's constructive intelligence? Such circumstances present an opportunity to salvage existing building structural components and reuse them for new ventures, certainly activating a process of saving energy and resources to produce new ones. This pragmatic disassembly and reassembly align with Nervi's design and building philosophy. Here, then, the upcycling process would make it possible to also preserve the intangible heritage of ideas, as well as architectural spaces (precisely generated by the assembly of prefabricated components) that can be admired in other circumstances in the future.



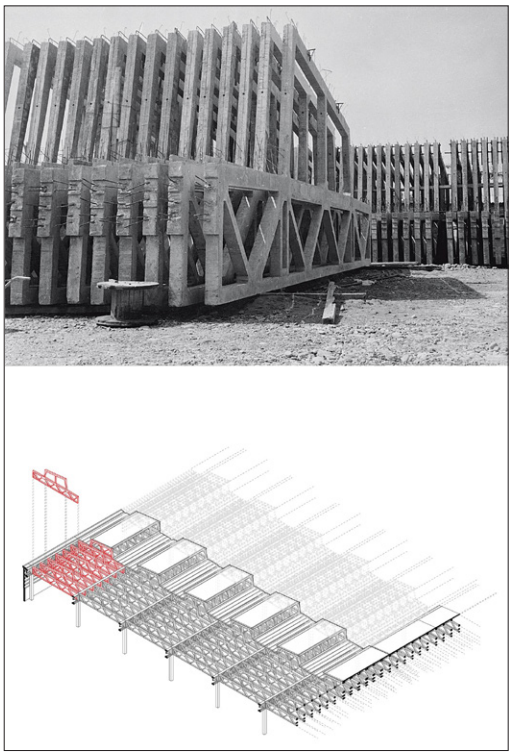


Figure 1. P.L. Nervi, Mirafiori Plant, Turin. Photograph and axonometric view of raising a reinforced concrete roof truss. © MAXXI Rome - PLN, F08949; T. and G. Vasari; Authors' drawing.

Figure 2. P.L. Nervi, Cromo Plant in Venaria Reale, Turin. Photograph and axonometric view of precast reinforced concrete roof trusses. © by courtesy of the University of Florence, 024-5350; Authors' drawing.

4. CONCLUSION: OPEN QUESTIONS – OPPORTUNITIES AND HERITAGE FRONTIERS IN AUTHORIAL ARCHITECTURE

The practice of reuse and upcycling of building components is not only about saving resources and embodied energy but also about preserving valuable intangible heritage.

When we consider the fate of the structural components of buildings, we cannot ignore the fact that they harbor legacies of craft expertise and of historical values and traditions.

In this sense, behind disused industrial buildings such as those discussed above, lies the legacy of the constructive intelligence of designers like Nervi, which is in danger of fading with them.

In 1947 Nervi summed up his design philosophy into two words, *Corretto costruire*, that is "to build correctly", Nervi's essence of architecture. Structural correctness is linked "with the requirement of the technology and statics, economic and functional truthfulness,"[10] and is a necessary and sufficient condition of satisfactory esthetic results.

For Nervi, this working method assumed above all a rigorous, creative, rational approach, with a continuous critical constructive focus which produced a plastic and formal result in a balanced and harmonious whole, which became a new kind of beauty.

In this context - as also Kenneth Frampton argues - tectonics is not simply a matter of construction technique but rather a complex articulation that integrates structure, material, and formal expression.

10. Pier Luigi Nervi, "Corretto costruire", in *Strutture. Rivista di scienza e arte del costruire*, no.1 (April 1947), 4-5.

Nervi's practice in the field of prefabrication has shown that the monolithic qualities of his concrete structures are derived from a construction concept that is achieved through the assembly of individual components.

From a speculative point of view, Nervi's approach stands out for the progressive use of structural components, which, while different in each project, are characterized by conceptual and methodological continuity. This approach is based on the accumulation of past experiences, which are assimilated and reworked rather than completely renewed with each new construction. This process fosters the development of constants, namely recurring principles or elements that manifest themselves through Nervi's design practice.

This approach can create a procedural parallelism with the contemporary practice of upcycling: the recovery of long-span structural components reused in the new building design process (which may require an improvement in their performance, including the repair of any structural portions that have deteriorated over time) leads to the preservation of an idea of space over time.

To conclude, the adoption of "Design for Disassembly" and upcycling practices encourages a series of open questions about the opportunities and frontiers in the field of 20th-century authorial architecture.

First, it represents an opportunity for the preservation and transmission of cultural and intellectual heritage to future generations. It's not just about physically preserving buildings and structural components, but also safeguarding the very essence of the ideas, innovation, and vision that guided their creation. This immaterial dimension is just as precious as the material one and the upcycling of components offers an alternative that enhances both dimensions. Secondly, upcycling constitutes a tangible opportunity for the creation of new local value chains.

Finally, we must consider that with these practices, design begins by engaging with specific building components, this informs both the process and the outcome. Consequently, the possibility of reusing existing concrete structural components inspires surprising and innovative spatial solutions, broadening the panorama of contemporary architecture. This approach not only reduces the environmental impact of the construction industry but also opens new frontiers and design scenarios. ■

BIOGRAPHIES

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Margherita Maurea is an architect and a PhD candidate in Architectural Design for Urban Environment at the Department of Architecture of the University of Naples Federico II. Graduated with honors from the same University, she is dedicated to academic research and actively contributes to teaching through participation in architectural and urban design workshops. Her research interests address methodological and processual issues within the field of architectural design, particularly focusing on the work of Pier Luigi Nervi.

VILNIUS CONCERT AND SPORTS PALACE – TRANSFORMATION OF THE PRESERVATION APPROACH

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#08

ABSTRACT

The text examines the dramatic transformation of evaluation and preservation approaches for one of Lithuania's most widely-known concrete heritage icons—Vilnius Concert and Sports Palace. In the last twenty years, the approach has led to a change from a concrete monster to an appreciated heritage object by the public. During these years, different scenarios for the Vilnius Concert and Sports Palace have been considered: demolition, adaptive reuse with extensions, and conservation as a monument. The latter scenario raises more questions than answers, especially considering the global climate crisis and the urgent need for responsible energy use. However, despite the public's and experts' attention and appreciation, the Palace remains abandoned in the city centre.

A multi-layered holistic value analysis, represented in a text, reveals arguments as to why it should be adopted rather than conserved as a monument and left to become a fenced concrete ruin in the middle of the city centre.

1. INTRODUCTION

Many dismissed landmarks of concrete long-span buildings of the 20th century worldwide face functional obsolescence and have become a puzzle for heritage specialists and city governments. On the one hand, the dilemma of preserving buildings is maintaining their authenticity and leaving them as "*distinct signs of modern,*"[1] and on the other – adapting them to the changing needs of modern society and the challenges posed by both the global climate crisis and "*inspiring creativity*."[2] The Vilnius Concert and Sports Palace is one such case in Europe. It is an icon of modernist planning and brutalist aesthetics in Lithuania, which has lost its functional relevance. Besides all that, the Palace faced an extra challenge—dealing with the negative and brutal consequences of the Soviet regime, which complicated its sustainable future all the more so.

The Palace is notable for its hanging cable-suspended roof covering an ample interior space of 60 x 60 metres. It was designed as a part of a newly formed sports complex in the centre of Vilnius as a universal arena of international standards for an ice hockey rink to host 6000 spectators (**Fig. 1**). It was built from 1965 to 1971 in Soviet-occupied Lithuania in the historic part of Vilnius, next to the old town and in front of the medieval Gediminas Castle in the bend of the river Neris. The group of talented architects Eduardas Chlomauskas, Jonas Kriukelis, Zigmantas Liandzbergis, and engineers Henrikas Vytautas Karvelis, Algimantas Katilius, Aleksandras Kamarauskas and Sofija Kovarskaja designed the Palace. The structural solution of the elegantly curved roof – the inverted arch – was recognized as the invention of engineer Karvelis, and the authors were awarded the Prize of Lithuanian SSR in 1973.[3] The Palace was built as a part of the larger cultural-sport complex with Žalgiris Stadium and an Indoor Swimming Pool (both were demolished and replaced by new developments).

Ironically, the Palace never hosted ice hockey. Instead, it hosted essential basketball games in 1987-89, and "*basketball became one of the catalysts for the national revival movement.*"[4] The Palace also hosted the first National Liberation Movement "Sąjūdis" congress in 1988, which was a strong catalyst for Lithuania's restoring independence, achieved in 1990. Additionally, the victims of the independence struggle in 1991 were honoured there.

A more significant concern for preserving the Palace did not occur until the first decade of the 21st century when real demolition threats appeared. Despite its vital contribution to the restoration of independence, the Palace was primarily criticised by the public because of its grey aesthetics and was treated as a concrete monster. Further pressure was applied by developers to replace the Palace with new contemporary buildings. In 2006, due to the threat of demolition, the Vilnius Concert and Sports Palace was listed on the National List of Cultural Heritage. The inscription was determined by heritage experts not only because of its significant architectural and structural solutions but also as a result of its historical value related to events of independence, which played a crucial role in listing the building.

The future or adaptation of the Palace would not be so complicated if it were not for the history of the location where the building stands. The

1. Adrian Forty, *Concrete and Culture* (London: Reaktion Books LTD, 2012), 12.

2. Marieke Kuipers, and Wessel De Jonge, *Designing from the Heritage*. Strategies for Conservation and Conversion (TU Delft -Heritage & Architecture, 2017), 23.

3. Marija Drėmaitė, *Baltic Modernism. Architecture and Housing in Soviet Lithuania* (Berlin: DOM Publishers, 2017), 291.

4. More about the events in the article: Liutauras Nekrošius, "Soviet Era Architecture and the Meaning It Holds for the People of Lithuania," *Place Meaning and Attachment. Authenticity, Heritage, and Preservation*, ed. by Dak Kopec and AnnaMarie Bliss (New York: Routledge, 2020), 35.

Palace was built on the old Jewish cemetery dating back to the 16th and 18th centuries. Despite the neglect of the old cemeteries, their location during the construction was hidden from the public, and it shows the strategy of the former Soviet regime to introduce new, massive buildings in or near essential and sensitive historical and religious sites in order to erase memory. The territory of the old Jewish cemetery was included in the national heritage list several years after the Palace in 2008. The difficulty lies in the fact that the Palace, as immovable cultural property, has territorial boundaries with the land under the building, while the protected boundary of the cemetery territory is the delineation of the land on which the Palace stands (**Fig. 2**).

Such demarcation of territories raises many questions and conflicts. If the Palace is not within the territory of the Jewish cemetery, can it be adapted for cultural purposes? How can the territory of the cemetery be marked while maintaining the modernist principle of open public space? How can a vast area in the city centre be arranged so that respect for the Jewish cemetery is maintained, but it does not become a closed and inaccessible public space?

2. APPROACHES TO REVIVE THE PALACE

Three scenarios are commonly used to preserve concrete heritage: *conservation*, *upgrade*, and *adaptive reuse*.[5] The first scenario – *conservation* – is primarily described in recent international documents as a strategy for preserving highly significant concrete buildings recognized internationally and nationally.[6] In the case of conservation, interventions and minor additions are allowed to ensure the proper functioning of the building, and the purpose should be to replicate the original as possible. Suitable methods to keep fair-faced concrete surfaces and structures as authentic as possible are to be employed. The second scenario – *upgrade* or *renovation* – is mainly used to improve engineering systems, usually for residential housing objects or as a temporary solution for public buildings to solve urgent problems. The third one – *adaptive reuse* – is the most widely used scenario suitable for significant concrete objects with an outdated, no longer relevant function, which needs a major transformation to fit a new purpose. It combines conservation and reconstruction approaches to concrete surfaces and structures, prioritizing methods that keep fair-faced concrete surfaces as authentic as possible. The scenario of adaptive reuse *"gained more popularity in Europe than strict conservation, except for the small number of iconic objects*."[7]

Considerations for the preservation of the Palace began as early as 2008 when the Vilnius municipality announced an architectural competition to transform the territory of the Palace and the adjacent Žalgiris Stadium into a multi-purpose centre. The Architectural Studio of Sigitas Kuncevičius won the contest. The reconstruction project of converting the Palace into a Congress Centre with an extension volume was prepared in 2016, preserving all specified valuable attributes.[8] However, the implementation of the reconstruction was stopped by the Jewish community, which claimed that there could be burials under the Palace and that such an entertainment purpose as the congress centre was unsuitable for this historic place.[9]

5. Three scenarios for post-war concrete heritage are analysed in more detail in the article: Aušra Černauskienė, "Preservation Scenarios for Post-War Concrete Architecture: The Case of Lithuania," *Architecture and Urban Planning*, vol.19, no.1 (2023): 217-229. https://doi.org/10.2478/aup-2023-0020

6. Based on recent documents: *Cádiz document* by ICOMOS (2021) and *Conservation Principals for Concrete of Cultural Significance* by GCI (2020)

7. Theodor H. M. Prudon, *Preservation of Modern Architecture* (New Jersey: John Wiley and Sons, 2008), 13.

8. More about the conversion project of the Palace to Congress Centre: https://www.vas.lt/portfolio/items/sporto-rumai/

After several years, the government put forward another use for the Palace—converting it into a Jewish Museum, proposing the Polin Museum in Poland as an example.[10] The Jewish community rejected this idea based on the same argument – that no cultural purpose should be introduced for the building, in order to avoid large gatherings of people for entertainment. To solve the complicated situation, in 2023, an international workgroup of experts was established under the order of the LR prime minister. The experts were asked to find a suitable solution that included respect for the Jewish cemetery and the Palace's contribution to the Lithuanian Liberation Movement. The expert group completed their work this February, and the government will announce the final resolution soon. According to the latest expert reports in the media, only minimal adoption of premises for the Palace has been considered for a memorial purpose.[11] A memorial will be dedicated to Jewish historical memory and the struggles of the Lithuania Liberation Movement "Sąjūdis." In such a way, historical justice will be restored.

It must be noted that the most realistic scenario now is to conserve the giant concrete building as a monument, with the ancient Jewish cemetery being physically fenced off. The proposed revival of the Palace involves *conservation without use*. This is seen as a political action to acknowledge and take responsibility for past mistakes made by the Soviets in Lithuania, a democratic country. The primary focus is on preserving historical values and restoring historical justice. Other important features of the Palace, such as its iconic modern design, innovative roof construction, or rare brutalist aesthetics, are considered less significant. Moreover, the public was not consulted or included during the expert work, which contradicts the principles of holistic evaluation of heritage objects.

It appears that the appropriate time for adaptive reuse of the Palace has already passed, and now it could be treated as a concrete ruin in the middle of the city telling its own complicated story. A new architectural competition will be held to meet the new requirements established by the working group and approved by the government of the Republic of Lithuania.

Considering the context of Baltic states, the Palace could be compared with LinnaHall in Tallinn, Estonia (1975-1980, arch. Raine Karp, Riina Altmäe). LinnaHall is also a listed object, built for the Olympic games, but it is still next to an old town and is ill-suited to new life.

3. HOLISTIC EVALUATION OF THE PALACE

Before selecting the appropriate preservation plan, it is essential to conduct a multi-layered assessment of value, identify unmet contemporary social and technical needs, and evaluate the physical condition—this overall process could be considered a holistic evaluation.

Value is a constantly changing dimension describing an object's relationship with a broader context, "*values and other forms of meaning are produced out of the interaction of artifacts and their contexts, not from the artefact itself*."[12] It means that various social and economic relations, exchanges, and acts of "local agents" circulate in or close to the heritage

9. More about the lawsuit of the Jewish community and the court decision in publication: "Teismas atmetė litvakų ieškinį dėl Koncertų ir sporto rūmų rekonstrukcijos stabdymo," *Statyba ir architektūra*, accessed in May 03, 2024. https://sa.lt/teismas-atmete-litvaku-ieskini-del-koncertu-ir-sporto-rumu-rekonstrukcijos-stabdymo/

10. Prime minister in relation to the conversion of the building to the Museum of Jewish History in publication: "Vilniaus sproto rūmai galėtų tapti žydų istorijos muziejumi," *15min*, accessed on May 04, 2024. https://www.15min.lt/naujiena/aktualu/lietuva/i-simonyte-vilniaus-sporto-rumai-galetu-tapti-zydu-istorijos-muziejumi-ar-memorialu-56-1633762

11. Conversation with Vilnius city chief architect Laura Kairienė about the destiny of Vilnius Concert and Sports Palace, recorded on March 26, 2024: https://www.youtube.com/watch?v=6Fgn0p6EXDg.

12. Randall Mason, *Assessing Values in Conservation Planning: Methodological Issues and Choices* in the GCI research report "Assessing the Values of Cultural Heritage," (2002), 16.

itself, creating new values over time. In addition, cultural objects, especially large-scale cultural ones, shape the identity of the cities, contribute to the economic value of the surrounding environment, and form part of "*territorial capital*."[13] Therefore, evaluating heritage objects is a multi-layered process in which expert and non-expert evaluation[14] is essential.

The author created the 5+5 evaluation matrix (**Fig. 3**) to examine the objects of concrete heritage in Lithuania holistically. In the case of Vilnius Concerts and Sports Palace, it is used to reveal why the Palace should be repurposed for cultural purposes concerning all layers of history and culture rather than left as a fenced concrete ruin, conserved as a monument.

The matrix comprises five aspects of cultural value: urban, artistic-aesthetic, social-anthropological, historical, and technological.[15] In addition to aspects of value, five factors have been identified that either strengthen or weaken the object's cultural value. These factors are: TT comparative analysis (comparing buildings of the same technology and typology), authenticity and integrity, physical condition and possibilities of reuse, sustainability and economy, and non-expert evaluation.

Certain matrix elements are widely used in the evaluation of heritage sites. Among these, we can single out historical, aesthetic, and technological aspects and strengthen factors such as authenticity, integrity, and physical condition. They are commonly used to describe the valuable features of heritage objects in Lithuania. Other aspects such as urban and social value aspects and factors of sustainability, economy, and non-expert evaluation, are used less frequently and affect the incomplete realisation of potential values.

While holistically analysing the Palace's values, in addition to historical, aesthetic, and technological, an urban value revealed itself that contributes significantly to the identity of the capital, Vilnius, and the district of Šnipiškės. It raised the value of the surrounding territory and brought about new development. Moreover, the open public space surrounding the Palace, created by terracing the relief, is a vital and valuable attribute of modernist planning, which could be easily destroyed by enclosing the territory of the Jewish cemetery. This is also closely related to social value – a public place important for local communication.

Evaluation of sustainability and economic factors are also missing, which are essential in choosing a suitable preservation scenario. Heritage objects work well when used and visited, arouse curiosity, express past innovations, are educationally engaging, and reveal various layers of history and renewal methodologies. In addition, the Palace is a large concrete building spanning 14,750 square meters featuring raw concrete surfaces that will require heating, ventilation, constant maintenance, and monitoring.

Finally, it is important to include a non-expert evaluation as part of a more comprehensive evaluation process. In recent decades, the evaluation of the Palace has dramatically changed from that of public neglect to appreciation in Lithuania. The Palace has been recognised as an essential part of modern heritage, as evidenced by the Open House Vilnius festival, during which the Palace has attracted many curious visitors for several years

13. Heritage as an important part of "territorial capital" was analysed in the recent book: Mariusz Sokołowicz, Aleksandra Nowakowska, and Blazej Ciarkowski, *The Ambiguous Legacy of Socialist Modernist Architecture in Central and Eastern Europe* (Abingdon, Oxon: Routledge, 2023), Chapter 2 and 3.

14. Expert and non-expert evaluation of the heritage is emphasized by Rodney Harrison (2013) and Janet Stephenson (2008).

15. Five aspects of value were selected after examining a wide range of theoretical works (Riegel, Alois (1902), Lipe, William (1984), Mason, Randall (2002), Keene, Edward (2005) and others) and evaluation criteria applied by international heritage institutions UNESCO, ICOMOS, DOCOMOMO.



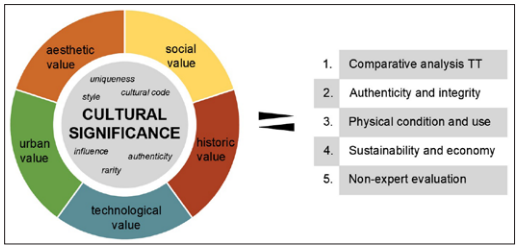


Figure 1. Vilnius Concert and Sports Palace, arch. E. Chlomauskas, J. Kriukelis, Z. Liandzbergis © Photo by Gediminas Svitojaus, 1977, LCVA

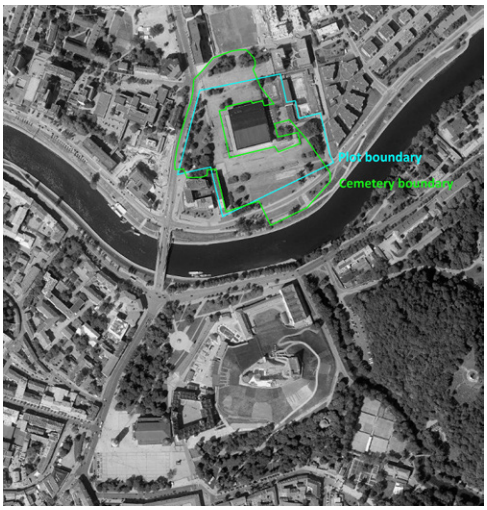


Figure 2. Topography with Vilnius Concert and Sports Palace plot (blue line) and marked territorial boundaries of Jewish cemetery (green line) © Aušra Černauskienė, 2024

Figure 3. Matrix of holistic evaluation © Aušra Černauskienė, 2024



Figure 4. Vilnius Concert and Sports Palace during the Open House Festival © Norbert Tukaj, 2019

(**Fig.4**). The significance of the building is also proven by international databases such as "100 from the 20th" or "SOS Brutalism," which included the Palace as an iconic example of concrete heritage objects in Lithuania.

However, despite the public's and experts' attention and appreciation, the Palace remains abandoned in the city centre, awaiting a political decision and new architectural competition. Meanwhile, raw concrete surfaces rapidly deteriorate because of lack of maintenance, graffiti, weathering, and biological coating.

4. CONCLUSIONS

Over the past few years, the approach to preserving the Vilnius Concert and Sports Palace has changed dramatically from considering adaptive reuse with additions to now conserving it as a monument, without using the building for even cultural purposes. From a holistic assessment perspective, the chosen scenario does seem the most appropriate for a building of this size and brutalist aesthetic. The Palace holds significant value in a number of aspects, and deciding on its future preservation should not be a mere political decision or a model based on expert assessment and historical value.

The Palace, as an icon of modernism and brutalism, is worth being used and adapted for a cultural purpose while maintaining respect for the Jewish cemetery and honouring the Lithuanian Liberation Movement. Inspiring creativity and open dialogue with the public is urgently required to prevent the Palace from becoming just a fenced-in concrete sculpture that will require high maintenance costs. All value aspects and factors such as sustainability, the economy, and the public's opinion must be considered when formulating new competition conditions for the Palace. ■

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BIOGRAPHY

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METHODOLOGICAL APPROACHES THROUGH THE USE OF ADVANCED INFORMATION SYSTEMS (BIM-GIS AND CDE) FOR THE MANAGEMENT AND VALORISATION OF 20TH CENTURY INDUSTRIAL HERITAGE

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ABSTRACT

The industrial heritage of the 20th century represents a significant fragment of architecture that requires fundamental preservation. The rehabilitation of industrial buildings not only offers an opportunity to conserve historical memory, but also provides an occasion for the functional rehabilitation of such structures.

In terms of environmental and economic impact, the redevelopment of industrial buildings emerges as a sustainable solution that avoids the demolition and construction of new structures. This process can be identified as a form of urban regeneration.

The aim of this research is to propose a comprehensive and integrated methodological approach for the management and enhancement of the rich industrial heritage of the 20th century. This approach is founded on the utilization of sophisticated information systems, including interoperable digital models obtained through the integration of BIM- GIS (Building Information Modeling Geographical Information System) and CDE (Common Data Environment) implementation.

The primary objective is to develop effective tools and strategies to ensure the continuity and preservation of these valuable historic sites. To that end, the creation of a dedicated platform, linked to an open- source interactive map, is proposed. Such platform would enable efficient and accessible management of all data and information relevant to the sites uploaded within it.

Through this innovative platform, it will be possible to store and share detailed data on industrial sites, as well as to facilitate the collaboration and participation of stakeholders in the planning and management of conservation and enhancement activities.

To develop this methodology, three significant case studies were considered in which the adaptive reuse approach has been applied: the Ex Manifattura Tabacchi in Florence (Former Tobacco Factory), the Ex Magazzini-Generali in Verona (Former General Warehouses) and the Ricevitrice Nord AEM in Milan (North Receiver AEM).

1. INTRODUCTION

The enhancement of the industrial heritage is of considerable importance and is embraced by a broad vision aimed at the preservation of artifacts that hold intrinsic cultural and architectural significance, which has marked and continues to characterize our territories from the earliest stages of the industrialization era.

The adaptive reuse of existing buildings, as opposed to demolition, is a method aimed at reducing construction costs and accelerating construction time. Such practice provides an opportunity to improve the energy efficiency of existing structures, while ensuring their long-term sustainability, thus preserving the important architectural heritage. Furthermore, adaptive reuse allows buildings to be reimplemented with new features, thereby contributing to the revitalization of surrounding areas, combating urban sprawl and the resulting land consumption.

The industrial heritage of the 20th century represents an invaluable cultural legacy, serving as evidence of a bygone era that shaped both society and its surrounding environment. Nevertheless, the preservation and enhancement of such assets face challenges of a complex nature, in part due to their lack of digitization.

The synergistic integration of advanced technologies, such as Building Information Modeling (BIM) and Geographic Information System (GIS), along with the use of Common Data Environment (CDE) and other innovative systems, assumes a pivotal role in the digital transformation of architectural heritage, which is still lagging behind on the digitization front despite the interest aroused by the scientific community.

The present paper, through three case studies characterised by adaptive reuse approaches, proposes a methodological process structured in a replicable manner, divided into several phases, aimed at digitizing such heritage. The use of integrated digital twins enables an accurate management of recovery and enhancement activities.

Furthermore, sophisticated technologies such as BIM-GIS and CDE facilitate proactive protection, which focuses on preventing safety issues and mitigating risks before they occur. Digitization through such systems currently represents the most effective approach for the management and maintenance control of the building throughout its life cycle.

2. CASE STUDIES

2.1. THE EX MANIFATTURA TABACCHI IN FLORENCE (FORMER TOBACCO FACTORY)

The practice of tobacco use in Tuscany can be traced back to the second half of the 18th century. However, it was not until the 19th century that it became a common practice in daily life. This mass diffusion rapidly gave rise to the formation of the "Manifatture". In the early 1930s, a substantial construction project began, with the construction of the Nuova Manifattura Tabacchi (New Tobacco Factory), which assumed a pivotal role in the economy, the urban planning, and the socio-economic

life of Florence. The official inauguration occurred in November 1940 (Manifattura Tabacchi, 2024).

The architectural design is the work of Pier Luigi Nervi, associated with the firm Nervi & Nebbiosi. The architectural layout of the new facility adheres to precise distribution principles: along the urban frontage of Via delle Cascine, we find the executive offices and the Puccini Theater; along the rear boundary of the lot, the warehouses and the workshop are located; in the center of the complex there are the production areas and the general services. The various functional units are connected by a network of pedestrian walkways and driveways within the area; outside the lot, the railway provides the service infrastructure for the factory (Manifattura Tabacchi, 2024).

After more than 70 years of operation, the complex was closed in 2001. In 2016, an ambitious project was initiated with the goal of transforming it into a new cultural hub, featuring the vibrant energy of fashion, art and design. This project envisions a multifaceted mix of functions, in which the original and new buildings house schools, ateliers, workshops, offices, co-working spaces, lofts, a hotel, a student residence and a brewery. The initial plan, later developed by SANAA and Studio Mumbai, involves a group of top professionals: Q-bic for technical consulting, landscape architect Antonio Perazzi for green spaces, Piuarch Studio for new construction and Patricia Urquiola for interior design of 45 residences. The project's approach to minimizing demolition allows for the reinterpretation of the original structures in a sustainable manner, making them more efficient through the use of geothermal systems and active management of water resources; the planting of over 1,000 trees is accompanied by a roof garden, which is situated above the building (Cantoni, 2023).

2.2. THE EX MAGAZZINI GENERALI IN VERONA (FORMER GENERAL WAREHOUSES)

The idea of creating central warehouses in Verona originated in the latter decades of the 19th century. The city needed a complex of centralized facilities for the collection, storage and distribution of fruit, vegetables, and grain products. The project, which was realized during the 20th century, resulted in the construction of one of the most sophisticated facilities of its kind in all of Europe. It served as a symbol of the policy of modernizing industry and infrastructure through a vast program of public works.

Several buildings were constructed between 1925 and 1938 with the aim of creating central facilities for the collection, storage, and distribution of fruit, vegetables, and grain products. One of the most important buildings is the Stazione Frigorifera (Refrigeration Station), designed by engineer Pio Beccherle. This circular building echoes the structure of the earlier Forte Clam and was inspired by the Halle au Blè building in Les Halles in Paris (Curtis, 1999).

The Stazione Frigorifera designed by Beccherle features a circular floor plan with a large domed hall in the center that represents a technological innovation that makes it the most important in Europe (Albertini, Colato, Segala, 1996-97). The building's external appearance is striking due to its

considerable size and the large 30-meter-high dome that towers above the structure (Pisani, 2011).

Abandoned in the 1980s due to the relocation of the Magazzini Generali to another area, the building is currently undergoing a process of revitalization, with a new vision and philosophy guiding the project, equipping the complex with the latest technological standards while preserving valuable architectural elements. The intention is to create a hub of innovation, work, culture, art and gastronomy. A true Commercial District, which already houses several buildings.

2.3. THE RICEVITRICE NORD AEM (NORTH RECEIVER AEM, MUNICIPAL ELECTRIC COMPANY)

The Ricevitrice Nord, inaugurated on December 8, 1932, by then Prince Umberto II of Savoy, with its composite architecture slightly influenced by the Deco style, has long been a landmark in the working-class Precotto area. Constructed to serve as an electric receiver in the northern area of the city in response to the increased power output of the Valtellina hydroelectric systems, the "Ricevitrice" continues to this day to fulfill its original task, supplying power to a large portion of the Milan metropolitan area (Fondazione AEM, 2024).

The Ricevitrice Nord, currently owned by the a2a company, continues to fulfill its primary function in a manner that is naturally adaptable to contemporary needs. The renovations did not entail significant alterations, particularly with regard to the fundamental structure of the building.

The central electrical devices in the energy transformation process are transformers. The complex includes the Sala Operativa (Operations Room), which provides an opportunity to observe how new telecommunications infrastructure and modern protection and control system technologies are gradually improving the power grid in and around the city of Milan.

Such technological advances are undeniably transforming power distribution networks, making them increasingly advanced and intelligent.

3. BIM-GIS, CDE AND THE APPLIED METHODOLOGY

At a time when technological advancement is transforming many sectors, the need to manage and digitize the building stock arises. The following section proposes a strategy for addressing these issues.

The BIM approach, when combined with GIS, provides an appropriate tool to meet the challenge of digitization. In fact, the integration of BIM with GIS provides an opportunity to optimize the heritage management process, enhancing its efficiency, cost-effectiveness, and sustainability. The use of integrated digital models enables accurate synchronization of this process. In short, BIM provides a wide range of detailed information about the work, both in terms of geometry and semantics. However, it does not include information about the surrounding environment (Rafiee A. *et al*., 2014). In contrast, GIS uses the functional and physical relationships of the surrounding environment on a larger scale, to conduct spatial analysis. However, it has a significant shortcoming: the lack of a comprehensive and detailed digital archive regarding building information (Amirebrahimi S. *et al*., 2015).

From an information perspective, it is precisely this complementarity between BIM and GIS that makes their integration an advantageous combination to achieve significant results on multiple fronts.

The purpose of this research is to propose innovative solutions, through advanced technological systems, to facilitate the digitization of architectural heritage processes. This goal led to the construction of a replicable methodology, organized in phases.

The research focus is the development of a comprehensive and integrated methodological approach for the management and enhancement of the 20th century industrial heritage. This approach is founded on the utilization of sophisticated information systems, including interoperable digital models obtained through the integration of BIM-GIS and CDE implementation.

The primary objective is to develop effective tools and strategies to ensure the continuity and preservation of these valuable historic sites. To that end, the creation of a dedicated platform, integrated with an open-source interactive map, is proposed in order to facilitate the efficient management and the access to all relevant data and information related to the sites.

Through this innovative platform, it will be possible to store and share detailed data on industrial sites, as well as to facilitate the collaboration and participation of stakeholders in the planning and management of conservation and enhancement activities. As a first step, a survey was conducted to identify buildings that could serve as case studies within the 20th century industrial heritage in Italy. The choices were the Ex Manifattura Tabacchi in Florence (Former Tobacco Factory), the Ex Magazzini-Generali in Verona (Former General Warehouses) and the Ricevitrice Nord AEM in Milan (North Receiver AEM).

Subsequently, a variety of documentary materials pertaining to the selected building underwent a process of retrieval and research.

Following the collection of the documentary materials, the cataloguing sheets were organized. These sheets contain the main information regarding location, classification, the artifacts that comprise the site, historical annotations and other general details.

The collected data were saved in a desktop folder and then stored in the Common Data Environment (CDE) platform.

Subsequently, a fast digital survey of the buildings was conducted using the photogrammetry technique. The frames were obtained from the Google Earth Pro virtual tour by obtaining ten frames for each second of the tour.

The acquired frames were imported into the Agisoft Metashape software, whereupon they were processed in order to obtain a point cloud of the detected object, followed by the generation of meshes and a textured model **(Fig. 1)**.

Once the models had been developed, they were exported in the .dxf interchange format to be opened within Autodesk's BIM software, Revit **(Fig. 2)**.

The obtained files were opened and georeferenced within the Autodesk Revit software, serving as the basis for the construction of the parametric model in BIM into which, subsequently, building information data were

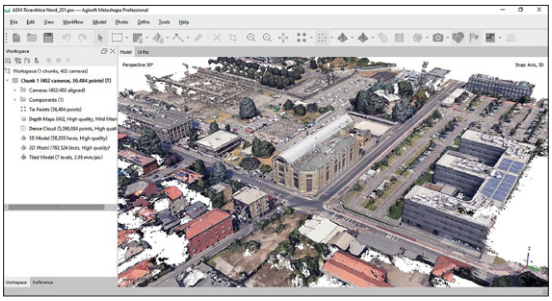


Figure 1. Ricevitrice Nord AEM (Nord AEM receiver), creation by photogrammetry of the point cloud and mesh from the Agisoft Metashape software (elaboration A. M. Nese 2024).

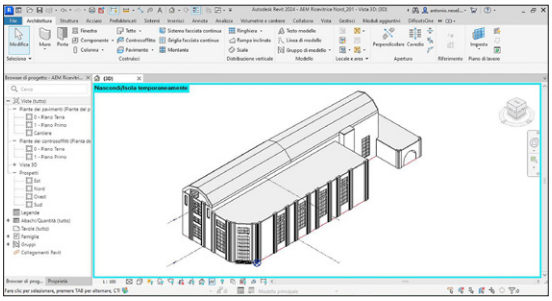


Figure 2. Ricevitrice Nord AEM (Nord AEM receiver), development of BIM models in Autodesk Revit (elaboration A. M. Nese 2024).

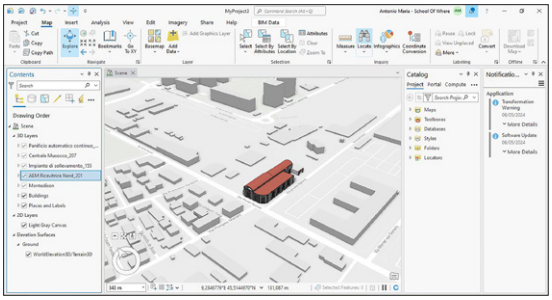


Figure 3. Ricevitrice Nord AEM (Nord AEM receiver), integration of BIM models on ArcGIS software (elaboration A. M. Nese 2024).

incorporated. The realized models were exported in .ifc (neutral and open file format used for BIM).

Once completed, the BIM models were uploaded into ESRI's ArcGIS Pro software. This step allows the combination of BIM and GIS territorial data, input and visualization, analysis and management in its real-world context. Such integration is increasingly being investigated by the scientific community as well as by professionals, since, as previously stated, information management can be achieved both from a territorial perspective (GIS) and in the detail of individual building elements (BIM), with obvious advantages **(Fig. 3)**.

All materials, both retrieved and produced, were archived on the CBOX (CDE) platform, owned by Anafyo Sagl. CBOX is a digital environment, suitable for the collaboration among the various figures involved in a project, supported by cloud technology, which allows the archiving, sharing, and visualization of documents and BIM models. Additionally, the platform offers a degree of configurational flexibility, capable of adaptation to a variety of distinct operational contexts.

All materials generated throughout the various stages of the process were uploaded within CBOX through specifically organized folders and subfolders. Such materials encompass all data pertaining to the building of any kind.

Finally, through ArcGIS Pro, a web map is created that allows the online publication of BIM models positioned in their actual context. It also gives the possibility of downloading the building's cataloguing sheet and opening the link for access to the CBOX platform.

4. CONCLUSIONS

The study in question attempts to demonstrate the considerable advantages of integrating the various technological systems employed, with a particular focus on heritage management and governance. However, it is important to acknowledge that there is still room for improvement, particularly in relation to the more synergistic integration between BIM and GIS, which assumes an increasingly crucial role in land planning and management.

The selected methodological proposal aims to encourage the digitization of architectural heritage - in this case 20th-century industrial heritage - which has been experiencing delays. This approach also encourages a broader reflection on the importance of preserving and enhancing these assets, which have assumed historical and cultural value. Such approach is essential for addressing a number of challenges related to the preservation and the sustainable enjoyment of these resources, thus setting the stage for a more conscious and respectful future for our common heritage. ■

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BIOGRAPHY

Antonio Maria Nese (Salerno 1991), is currently a PhD candidate for the 37th cycle at the University of Pescara. His research focuses on the integration of BIM-oriented processes with GIS and Common Data Environment systems for the management of architectural heritage, with a deep analysis on industrial heritage. He graduated from University of Chieti-Pescara in architectural restoration with the thesis work "Conservare un tabacchificio dismesso" in 2020. After graduating, he embarked on his professional career at an architectural firm, where he had the opportunity to follow international projects. In order to further explore the research in the industry, he spent six months at Anafyo Sagl based in Lugano, Switzerland.

RE-INHABITING THE MODERN FACTORY: THE FORMER MILK PLANT BY LUIGI COSENZA

#08

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ABSTRACT

Between Caserta and Naples, there is a vast architectural sampler generated by high quality experimentation: from Mangiarotti's Siag factory (1962) to the Ex-Olivetti factory in Marcianise (1972), which Zanuso carried on with Eduardo Vittoria, and the Kodak factory in Marcianise (1974), which saw Gianluigi Ghò flank Aldo Favini. For such designers, industrial architecture became the ideal place in which to codify a rich vocabulary of structural forms, capable of ensuring distributive flexibility and being programmed for subsequent extensions. Today, this sample of factory buildings, constitutes a heritage almost totally in a state of abandonment. The aim of the research is to rethink the role of work and production spaces in the contemporary city with reference to the case of Luigi Cosenza's former milk plant in Scampia (NA), now decommissioned. The building has a cross-shaped layout and is articulated in a series of bodies with reinforced concrete pillars and beams cast in situ. The purpose of this study is to broadening the debate on the possible strategies of protection and valorization of the Modern Movement production. Through an historical and archival research of the original project, both the reasons for the disuse of the complex and the specific characteristics of the architectural, technological and functional elements will be reconstructed. As regards the building envelopes, in order to balance conservation actions and thermal and energy adaptation actions, a multi-criteria methodology has been adopted to select the most appropriate hypothesis of intervention. The research looks to the "incremental reuse "approach as a possible solution of intervention in order to return, over time, available surface area to the community, and defining an incremental use of spaces in programmatic and temporal terms, elaborating experimental models of continuity and updating of the works of the Modern.

1. INTRODUCTION: RETHINKING MODERN INDUSTRIAL HERITAGE

The research on 20th-century architecture has become increasingly central in the field of research, as evidenced by numerous programmes for the documentation, conservation and enhancement of Modern heritage. Although many authors studies the theme of industrial architecture, it is necessary to focus on the disused heritage which offers a possibility of renewal based on what already exists. When Giuseppe Pagano into the pages of *Casabella 1942* claimed for the Industrial heritage the significant of a true expression of life and manifestation of the spirit, he intended to recognise the place of production with the same dignity as any urban place[1]. In this context, issues related to the requalification and reuse of industrial buildings also emerge, with the aim of responding to future usage demands and contemporary regulatory, functional, structural, and environmental contingencies. In fact, the main characteristics of these building types - part of that "category of the existing"[2]- today show the main problems in terms of degradation, energy-technological performance, and requalification strategies. Luigi Cosenza's position is significant because his rationalist approach to architectural design is balanced by a "compositional freedom of spaces inherent in spontaneous architecture"[3], warning of the danger of overvaluing preconceived compositional schemes detached from real needs[4]. In 1960 century in Italy, architects and engineers designed large concrete works in which the large size of the space led to the spread of the typical single-storey pavilion with high internal seriality and a wide structural grid. However, the problems associated with the use of concrete building systems led to the emergence of possible intervention approaches. Therefore, alongside more durable and suitable solutions in terms of material characteristics and design of concrete components, in recent years adaptive practices of Industrial authorial architectures, have emerged in Europe, accompanied by original housing policy programmes.

2. DIUSED HERITAGE AND URBAN PLANNING PROCEDURES: THE MILK PLANT BY LUIGI COSENZA (1968)

Despite the technological progress in the industrial sector arrived lately in Campania Region, we can recognise the presence of some paradigmatic cases of Modern industrial architecture by Luigi Cosenza, which have progressively been affected by abandonment; for example, the "Mercato Ittico" and the *Olivetti Factory* project[5]. In the northern area of Naples, the Scampia district, embodies the term "suburban", no longer with a geographical connotation, but as a place of monofunctionality, between dormitory industrial neighbourhood. With the *Law 167-1962*, the urban layout of the district was characterised by the presence of equipped axes and heterogeneous building types, united only by their large scale and the massive amounts of undefined open space that divided them[6]. After the *Piano delle Periferie* of the 1980s, several requalification and urban reclamation plans followed: from the 1995 *Programma di Riqualificazione Urbana del quartiere Scampia*, which rehabilitated numerous abandoned spaces and buildings, to the new *Restart Scampia* project in 2019. Following the

1. Cfr. Renato Cattaneo and Stefano Pavarini, *Mario Antonio Arnaboldi e l'architettura industriale* (Firenze: Alinea, 1988), 12-14.

2. André Corboz, "Il territorio come palinsesto", *Casabella*, no. 516 (Settembre 1985): 22-27

3. Giuseppe Giordano and Nunzia Sorbino, "L'impostazione razionalista del progetto architettonico", in *Luigi Cosenza: architettura e tecnica* (Napoli: Clean Edizioni, 2003), 51.

4. Cfr. Giulio Carlo Argan, "L'architettura ragionata di Luigi Cosenza", in *Luigi Cosenza scritti e progetti di architettura*, ed. Francesco Domenico Moccia, (Napoli: Clean Edizioni, 1994).

5. See Alfredo Buccaro and Giancarlo Mainini, *Luigi Cosenza oggi: 1905/2005* (Napoli: Clean Edizioni, 2006) 54-73, 152-180.

6. Cfr. Anna D' Ascenzio, "Un'epica Scampia", in *Discorsi su Napoli, Rappresentazioni della città tra eccessi e difetti*, ed. Stefania Ferraro, *Disembedding 4, Tempi e spazi di modernità radicale*, (Napoli: Aracne Editrice, 2015): 143-172.

progressive disregard by the administrations, Scampia today registers a lack of a whole series of services. Luigi Cosenza's former Regional milk plant (1968) (**Fig.1**), stands at the opposite end of the well-known *Olivetti Factory* in Pozzuoli, progressively invested by a slow process of abandonment and subsequent decommissioning. Given the lack of scientific publications on this building, an attempt has been made to reconstruct the history of this building through archival documentations. The reasons for the divestment are related to failure revisions of the urban road system, in derogation of the architect's original project indications. From the urban planning project, in the *Provvedimenti di attuazione, Art. 132, ambito n.7, scheda 60*, a building capacity of about 1,560 rooms (450 dwellings) was provided in addition to the 190 rooms (50 dwellings) indicated by the urban regulations. The *Relazione tecnica* of 1974, states that access to the industrial complex was to be from the external ring road. Subsequently, in the *Relazione generale* of 1985, was reported that the lack of any information on the presence of the new Regional Milk factory - already constructed in its structure and therefore with a completely defined internal mobility system - led the Municipality of Naples to build an elevated road, independently of the needs of the Milk Centre. Subsequently, architects Mario Rispoli and Giancarlo Cosenza questioned the criteria, placements, and existing constraints, because they lacked a general unified project, without seeing any follow-up.

2.1. ANATOMY OF AN ARCHITECTURE: TYPOLOGY, TECHNOLOGICAL AND CONSTRUCTION SYSTEM

Luigi Cosenza's works "demonstrate that it is not possible to adopt universal solutions in every case, but that the surroundings of the building play a very precise defining role"[7]. The cross-shaped plan of the former Milk Centre is articulated in a series of factory buildings between 4.50 and 7.50 metres high, characterised by the use of reinforced concrete frames with cast-in-place columns and beams, using formwork, with spans covering up to 18.00 meters. The structural pillars in a first version were circular in cross-section and equipped with a central steel pipe for the drainage of rainwater from the roofs, while in the final version, they were redesigned with a rectangular cross-section covered with an angled sheet metal to allow the passage of any electrical conduits from the floor to the roof beams. This type of industry required specific installations for the milk production chain, its thermal treatment, storage, and transfer to silos. From the gatehouse it was possible to access the common services, the administrative offices, and to a courtyard from which one could reach the laboratory floor, the conference room and access to the roof gardens. The flooring varied according to the functional compartment and the internal finishes are: coloured by quartz plaster for the office/direction area; exposed glazed bricks for longitudinal walls between pillars for processing rooms; exposed concrete with *Sqndtex* type protection for pillars/overhanging intrados; smooth cement plaster for social service storage areas walls. The external finishes are made of exposed concrete, light red facing brick for the back walls and blue litho-ceramic brick cladding

7. Benito de Sivo, "Presentazione", in *Luigi Cosenza: architettura e tecnica*, *op. cit.*, 8.

for the ends of the canopy. The window frames are mainly in aluminium of *Fenzi type* with opening sashes, whose thermal transmittance value (U=5.70 W/m^{2}K) does not satisfy the current standards. Finally, the use of external sunshades of *Huinter Douglas* type for the canopies and façades was foreseen and proportionate to the individual spans and differently inclined according to the needs of each specific façade. Therefore, after a careful analysis of the original project and technological elements, a thermal investigation of the building envelope was conducted to determine the actual performances. The recorder current thermal performance of the opaque envelope, with reference to the thermal transmittance value U=1.33 W/m^{2}K, does not comply with the norm restrictions. To preserve the original characteristics of the building, functionality, economy, and aesthetics of the elements, a multi-criteria comparison was carried out to select the preferable intervention hypothesis: integral preservation of the external envelopes, internal insulation, replacement of windows, and addition of external horizontal louvre sunshades in accordance to a preliminary version of the project as found in Luigi Cosenza's archival documentation (**Fig.2**). With these measures, the new thermal transmittance value (U=0.24 W/m^{2}K) complies with the current regulations, which admit the maximum value of U= 0.30 W/m^{2}K.

3. REUSE STRATEGIES FOR MODERN INDUSTRIAL HERITAGE: BETWEEN CONSERVATION AND ENHANCEMENT

The spread of disused author architectures calls for a reflection on the practices of design as a process of modification of the existing, aimed at revitalizing a latent and forgotten heritage, which is, nevertheless, a valuable resource for the community. When author architectures are also industrial architectures, the problem becomes more complicated: born out of the architects' desire to experiment with the tectonic and expressive potential of the factory, they housed in their spaces functions of a productive nature, sometimes even specialized, which seem nowadays anachronistic in the now changed urban context. As a result, the rules guiding interventions on works of a historic nature cannot be employed on this type of material: restoration, as well as the rehabilitation of the state prior to abandonment, are not enough, it is necessary to reflect on the role that the building can play in contemporary times. Starting from the consideration that "The vitality of an architecture is a product of heterogeneous factors, and the effectiveness of the performance of the function for which a building is intended is undoubtedly a foundational condition for its survival"[8] adaptive reuse represents a possible solution, which is understood here as " The process of reusing an obsolete and derelict building by changing its function and maximizing the reuse and retention of existing materials and structures"[9]. Accommodating new uses within the abandoned building allows it to redefine its role and extend its lifespan. Consequently, in this case, it is necessary to reflect on the "disruption of the coherence between their original function and the figurative system related to it"[10], but not only that. To the question of semantic reconfiguration is added the purely spatial one: how to update the spaces that had been determined by

8. Federico De Matteis, *Architettura in trasformazione. Problemi critici del progetto sull'esistente* (Milano: FrancoAngeli 2009), 119.

9. Sheida Shahi, Mansour Esnaashary Esfahani, Chris Bachmann, Carl Haas, "A Definition Framework for Building Adaptation Projects", in *Sustainable Cities and Society*, vol. 63 (December 2020):4.

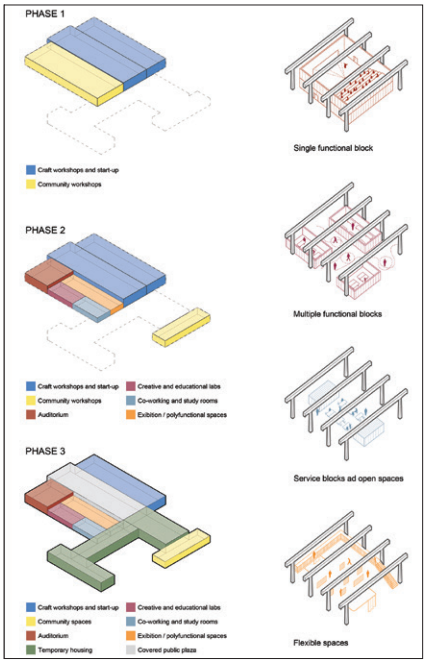
10. Federico De Matteis, *Architettura in trasformazione. Problemi critici del progetto sull'esistente*, *op.cit*, p.120.

the original function so that they adapt to the new intended use? The former Luigi Cosenza milk plant, because of its size and structure, can be configured as an 'open' building, not locked into a single form but at the service of program flexibility and diverse uses. In the field of industrial heritage intervention, different strategies have emerged over time: on the one hand, some design approaches adopt what is called a 'wrapping strategy', covering the building with new functional layers, inside and outside; this solution might involve structural analysis and upgrade, energy retrofit and new aesthetic and formal connotation. Some other approaches opt for an 'inside strategy', including new lightweight structures and autonomous/self-supporting functional modules within the existing space. Finally, some solutions, pursuing the higher level of transformability and design experimentation, implement a 'naked strategy', with the removal of all the complementary system, as much as allowed by the building, and the conservation of the bare structure of the building[11]. The project seeks to combine the first two strategies by focusing in the relationship between the reinforced concrete wide span bays, which cover the now empty large ex-industrial rooms, and a series of volumes of various sizes that are configured as containers of new functions available to future users (**Fig.3**). The new volumes are made with dry prefabricated solutions, which can ensure fast construction at a lower cost, as well as allow the reversibility of the intervention. The use of infill makes it possible to improve the thermal and acoustic insulation of only a small part of the building and to keep the main structure in its original state, ensuring its preservation. This choice is due to the need to consider the limited budget that renovation operations of objects like this one have at their disposal. In addition to retrofitting, the budget will also have to cover the costs of restoration work and maintenance of the building over time. Due to the large size of the industrial structure, the most economically viable option is the subsequent occupation and transformation of the space: adaptive reuse, consequently, takes on an incremental dimension in this case, both temporally and spatially. The chosen functional program seeks to reinterpret the building's past, as a place of work, updating it according to new needs: the use of empty spaces to settle start-ups and production workshops, including artisanal ones, would improve the local economy, especially for young entrepreneurs, and provide a source of income to finance the transformation of the other spaces intended for the community. Within the former plant it is possible, subsequently, to place exhibition spaces, educational laboratories, auditoriums and multipurpose areas to provide the neighborhood with those public facilities it lacks. Finally, the wing of the building originally dedicated to administration and offices can be converted into temporary housing that offers an initial response to the area's housing emergency. Incremental reuse[12] is also an interesting strategy because of its social implications: given the prolongation in time of the transformations, it is possible to initiate workshops and discussion activities with the local community, so as to ensure participation in the design activities and test the effectiveness of some design choices in the initial stages of operation. Ultimately, the project aims to make

11. As explained by Roberto Ruggiero in "Capannoni: caratteristiche tipo-tecnologiche e strategie di riciclo", in *Riciclasi Capannoni*, ed. Luigi Coccia and Alessandro Gabbianelli (Roma: ARACNE, 2015).

12. As defined by the Belgian group of architects 51N4E in Eva De Bruyn and Leyssen Dieter "Old Buildings, New Ideas: The Incremental Reuse of D'Iteren Car Repair Plant", in *Hybrid Factory Hybrid City*, ed. Nina Rappaport (Barcelona: Vertical Urban Factory, 2022), 86-101





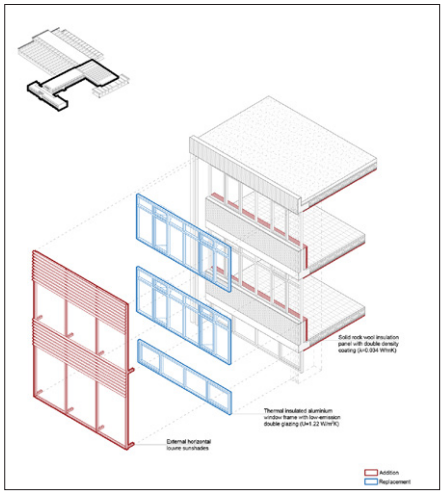


Fig 1. Luigi Cosenza, *The Former milk plant*, Scampia, 1968. © CLEAN, Archivio Luigi Cosenza

Fig 2. Preferable design solution in terms of preserving the authenticity of the building, interpreting the characteristics of the original design and adapting to current energy standards. © Lorenzo Renzullo, 2024.

Figure 3. Hypotheses of incremental re-use of factory volume and scenarios of possible uses of space. © Francesco Iuliano, 2024.

the building radically public, not only in the interpretation of the program but also and especially in its spatial design. The architectural interventions also combine with this goal the desire to maintain the extraordinary spatial qualities already existing, the atmosphere and tone conferred by the materials, proportions, lights, and strong industrial character.

4. CONCLUSIONS

In the context of intervention on disused Modern heritage, the importance of the author and the notoriety of the project exercise a cultural pressure that has paralyzed any attempt to react to the contemporary condition of decay. The result is a stasis that concretely ends up aggravating the building's condition. If we then refer to the specific case of industrial architecture, we add a consistency that is often oversized and out of scale with respect to the conditions of the context. Conceived as pieces of the city, these industrial heritages are in a completely unproductive condition that clashes with the vitality of the immediately adjacent areas. There are two reactions to the current state of these architectures attitudes of rejection that consider these artifacts as abandoned waste that needs to be demolished, and some attentions of the authorities in charge of protection and preservation, who recognize in

these works the trace of the work of an important author and the testimony of a crucial season of Italian architecture. For this category of artifacts, the established practice of recovery, to its original condition, shows all its limitations: we are talking about works that have ceased to play the role they had in the past or even cases in which they have never been in function. The possibilities for a change in the design approach are due to the ambiguity of such materials, placed on the borderline between the monumental and the ordinary heritage, and difficult to be ascribed to a specific field of action. The first step is to consider the disused building as a work available to the superimposition of new uses: the building is no longer a fixed, defined and concluded object, but rather becomes a device, a process in the making that reveals the intelligence of the strategies that guarantee its survival. In this context, author's industrial architecture represents a field in which deeper reflection is needed: articulated in large vacant spaces and now devoid of their original function, they perfectly offer themselves to transformation operations. Actual transformability is, however, constrained by many issues related to typological and technological characteristics, such as the scale of the building and an essential and bare construction system, realized with elementary systems and simple technologies (inspired by economic criteria). Large spans and unobstructed interior space-the absence of pillars or other structural elements are the most prominent features of this type of building while, in most cases, the building envelope rarely presents elements of interest and characterization. Their reuse often introduces alterations and experimentation by which the cultural values of the industrial heritage could be preserved and promoted through the preservation of the memory of the industrial past, but the architectural features and values could be lost. The preservation of the structure ensures the transmission of precisely those values that architects like Luigi Cosenza have concretized with their works where "the ornament is embedded in the process of construction and growth of the building and emerges from the material of which the building is made. It is 'constructed decoration' rather than 'decorated construction' as in the definition of architecture by Auguste Perret"[13]. In order to preserve them, it is necessary to reuse them and adapt those concrete structures that are now empty and without purpose to contemporary times, admitting a certain degree of modification: adaptive reuse combined with an incremental logic, and filtered through the lens of preservation represents the tool available to contemporary architects that is most appropriate to safeguard this at-risk heritage and re-inhabit it. ■

13. Irene Curulli, *The making and remaking of dismissed industrial sites* (Firenze: Alinea, 2014).

BIOGRAPHY

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THE MARCHIONDI SPAGLIARDI INSTITUTE AND THE MARXER INSTITUTE: GOOD PRACTICES FOR THE CARE OF REINFORCED CONCRETE AND NEW FORMS OF DIALOGUE WITH EXISTING SPACES

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ABSTRACT

The 1950s represented a historical moment of maximum fervor for research on reinforced concrete, which began to assume no longer only a structural value but was reinterpreted in its aesthetic dimension. Although reinforced concrete is the undisputed protagonist of these plastic architectures, it is a material that can be considered "fragile" with respect to the issues of durability and permanence over time as it imposes a limited life cycle on the artifact to be preserved and protected. Two buildings are proposed: the Marxer by Galardi and the Marchiondi Spagliardi by Viganò, currently disused, which need to be recovered in order to ensure their new life. The Marxer Institute is a Brutalist building designed in 1962 in Laranzè (Turin). The complex is dedicated to pharmaceutical research and it is an expression of the plasticity and versatility of reinforced concrete, which is declined in different forms to fulfill the proposed objectives. The Marchiondi Spagliardi Institute, built in Baggio (Milan), is an inclusive building designed for the community, a place charged with historical architectural and engineering values proper to the second half of the twentieth century. The building was designed in the 1950s to accommodate children with difficulties and consists of a dormitory for students, a volume for teachers and a school center. Through a comparative methodology, we analyze the two buildings in which the poetics of reinforced concrete is made explicit through some common elements: the relationship with the urban and the public space, the relationship between the interior and the exterior, the architectural space as one, the great light, the filter-facade, the exposed concrete, the double height and the attention to structural details. The two buildings can thus, mutually, on different themes, represent illustrative tools of a regeneration process that focuses on the design of the existing.

Post-World War II brutalist architecture in reinforced concrete pioneered a series of experimental interventions where the structure served as a model of architectural design that often met the functional requirements of buildings due to its total flexibility. Architects engaged with the material as a design tool: the structure evolved from "load-bearing to supported"[1], with light frames freeing architecture from the superfluous, giving the structure an aesthetic dimension. However, the modern heritage exhibits high fragility due to both technological and structural aspects as well as cultural ones. Reinforced concrete is a vulnerable material requiring constant care and maintenance. Moreover, the brutalist heritage that has come down to us is not yet universally recognized, making the idea of recovering, healing, and preserving structures from the second half of the 20th century less commonly conceived. These conditions have often led to the degradation of buildings long abandoned and disused, now in seriously deteriorated condition due to inactivity. Understanding the abandoned reinforced concrete heritage and rethinking its design, structural, and technological aspects means addressing an increasingly relevant issue. Rethinking reinforced concrete construction and rejecting demolition, allows for a complex and challenging path: "it is an opportunity to design a second chance of redemption for "fragile" modern buildings after the end of the Modern Movement"[2]. Aware of the 'vulnerability' of modern buildings in relation to their longevity, this essay aims to contribute to a growing body of literature focusing on the delicate issue of diagnosing and caring for post-World War II buildings. It seeks to establish models of intervention and good practices for the recovery of built heritage. The 2021 Pritzker Prize[3], awarded to architects Lacaton and Vassal, confirms the growing attention to this issue, which has become increasingly central in recent years. Currently, most interventions focus on structural consolidation and retrofit actions of building envelopes, as they represent the building's face and regulate its relationship with the city. The objective of this essay is to identify practices of space reuse capable of spontaneously reactivating an initial phase of building regeneration. To this end, two disused buildings are analyzed, considered useful for establishing general criteria and good practices for interventions that see the idea of re-inhabiting the existing structure as a possible recovery strategy. Vittoriano Viganò's Marchiondi Spagliardi Institute in Baggio (Milan) and Alberto Galardi's former Marxer Pharmaceutical Industry in Loranzè (Turin) are two emblematic buildings of this type (**Fig 1**). Both are located in peripheral areas, away from built-up contexts , and were constructed for functions that no longer meet current demands. These factors contributed to their abandonment and degradation. It is believed that reactivating these buildings could revitalize entire areas because "it is precisely the suburbs that are the city of the future, where human energy is concentrated and which we will bequeath to our children"[4]. Galardi and Viganò were awarded the 1962 AITEC National Prize for their architecture together with illustrious figures such as Nervi, with the following motivations: "The architect Alberto Galardi of Milan for the importance and idealism of the work presented. [...] Architect Vittoriano Viganò of Milan,

1. Gio Ponti, "Dalle simmetrie classiche all'architettura contemporanea*" Corriere della Sera* (Settembre 1951): 24-25.

2. Spartaco Paris and Roberto Bianchi, "*Re-inhabiting the modern: the project for the renewal of housing"* (Macerata: Quodlibet, 2018), 30.

3. Gangwei Cai and Lei Xu, Weijun Gao and Ka Wang, Yan Hong and Yan Wang, "Knowledge Archaeology on Relations between the Venice Architecture Biennale (1980-2018) and the Pritzker Architecture Prize (1979-2019)" in *Journal of Asian Architecture and Building Engineering* 21, (no. 2 2021): 224-33.

4. Renzo Piano, "The World of the Suburbs" in *Il Sole 24 Ore*, (26 January 2014).

for the conspicuous value of architectural unity expressed in the Marchiondi Institute in Milan, in which cement is the protagonist"[5]. The prize, announced by the Associazione Italiana Tecnico Economica del Cemento (AITEC) in collaboration with the magazines Domus, Casabella, Stile Industria, and Industria Italiana del Cemento, has the aim "to make known the highest Italian developments and the applicative characteristics of concrete in the most important architectural and technical works, which means to make them recognized also on a cultural [...] and social level"[6].

1. THE MARXER INSTITUTE AS AN EXAMPLE OF THE REDEVELOPMENT OF OUTDOOR SPACE

The Marchiondi Spagliardi Institute designed by Vittoriano Viganò arose from the need to relocate, following World War II bombings, an educational facility for difficult children previously located on Via Quadronno in Milan. The choice of materials and colors used, as well as the arrangement of the buildings in a comb-like layout relative to the main body, reflect an architectural vision integrating functionality and aesthetic value. Recent decades have seen renewed interest in this building and efforts to protect it, thanks to administrative actions that have revalued it "as an eminent work of 20th-century architecture, up to the recent monumental constraint placed by the Lombardy Superintendency of Architectural Heritage"[7] . The building was constructed on the western outskirts of Milan, in Baggio, due to the need for an isolated environment to protect the children from negative city influences. However, the decentralization contributed to social isolation from the surrounding community, which never really engaged with the building. The complex, with its relatively tall and compact building blocks, appears as an alien object in the sparse built fabric of the Milanese suburbs. The arrangement of buildings along an east-west axis and the presence of a concrete perimeter wall, necessary to comply with regulations, further accentuated this sense of separation, also due to the absence of a street onto which the dormitory structure would face. Thus, the complex became completely isolated from the urban context. The only potential link to the outside space was the surrounding green area, but this was never integrated into the project. Since abandonment, nature has been re-appropriating the concrete, almost marking the desire for this missing link. The former Marxer pharmaceutical factory designed by Alberto Galardi on a commission from Adriano Olivetti is located in a more rural area, surrounded by greenery near Loranzè, a small municipality in the province of Turin about 6 kilometers from Ivrea, an important industrial city known for being the hub of Olivetti's activities[8]. This proximity provides easy access to main urban infrastructures while maintaining a certain distance to preserve the natural integrity of the site. Unlike the Marchiondi Spagliardi Institute, the former Marxer factory seeks to establish a harmonious dialogue with its surroundings: a green buffer zone, originally intended as a park, frames the building and isolates it from the external system. The decision to place the building in a green area reflected the desire to create a healthy and stimulating working environment where

5. "AIAITEC Award Report" *Domus*, no. 398 (January 1963): 10.

6. "AIAITEC Award Report" *Domus*, no. 398 (January 1963): 10.

7. Massimo Fortis and Orsina Simona Pierini, "La lezione del Marchiondi. Restauro e recupero funzionale dell'Istituto Marchiondi Spagliardi a Milano, 2007-2011", in *Progetto di Restauro e Recupero funzionale dell'edificio ex Istituto Marchiondi e Spagliardi da dstinare a Residenza Universitaria* (Milano, Politecnico on Milano 2011): 2.

8. Cft Posener, "Vittoriano Viganò", in *L'Architettura. cronache e storia*, no. (1959): 42.

workers could benefit from being close to nature, purposely chosen away from the chaotic urban center. (**Fig.2**) Olivetti's influence on Viganò and Galardi's designs can also be perceived in the design of outdoor spaces and the relationship with the natural and urban context. In the case of the Marchiondi Spagliardi, the relationship with the surrounding context is perhaps less pronounced due to the type of function it houses, closed in on itself; the Marxer, on the other hand, follows an approach that fully reflects Olivetti's ideas. However, neglect and lack of maintenance have led to the progressive degradation of both the building and its surroundings, compromising the initial link between architecture and landscape. A proper good practice for intervening on the Marxer—being immersed in a green area and built to create a dialogue with neighboring areas—could involve using green spaces as a connecting element between the two neighboring municipalities, creating a green lung and large urban park that serves as a hinge for the small surrounding towns. Regarding the relationship between the building and the context, the Marchiondi Spagliardi can learn from the Marxer to establish new forms of dialogue with external spaces, reconstructing the failed relationship with the adjacent green space to interact with the inhabitants.

2. THE MARCHIONDI INSTITUTE AS AN EXEMPLARY CASE FOR FUNCTIONAL REUSE

The architectural structures of the Marchiondi Spagliardi Institute and the former Marxer industry exhibit innovative characteristics for their era. The comparison shows how the use of reinforced concrete was interpreted differently to meet specific functional requirements. In both projects, the use of exposed concrete, which is constantly subjected to atmospheric agents and has lacked proper maintenance, has led to degradation requiring urgent restoration work and the implementation of good practices for functional reuse. In the case of the Marchiondi Spagliardi Institute, Viganò's (**Fig. 3**) decision to use metal formwork for the concrete casting instead of wood has led to cambering of the walls. In the former Marxer industry, the degradation of reinforced concrete is evident in the exposed surfaces and construction details. The Marchiondi Spagliardi Institute uses a trilithon structural system, with a double internal and external structure providing stability and three-dimensionality to the elevation. This system allows a clear distinction between load-bearing and non-load-bearing elements, creating a dynamic effect between the static masses of the service blocks and the beam-and-pillar structure. The clarity of the structure ensures it can never be confused with non-load-bearing elements, usually transparent or finished in primary colors. Similarly, in the former Marxer industry, the use of reinforced concrete is innovative: a porous and open filter-façade consisting of concrete elements serves as both a load-bearing structure and a system of skylights, giving the building a balance between functionality and aesthetics. The structure expresses the plasticity and versatility of reinforced concrete, used in various forms to meet the project's functional requirements. A remarkable play of light and shadow, achieved through natural lighting solutions using polycarbonate skylights and

facades shielded by concrete elements, is a distinctive feature of Galardi's design. The interior of the Viganò building is specifically structured for its intended function: an elegant spiral staircase provides access to the structure's four floors, with rooms connected by a long, bright corridor characterized by extensive glazing. A series of further spiral staircases in the hallway at the entrance to the various floors adds an element of abstract lyricism to the complex, together with the pastel colors of the interiors, which are still partly visible although much deteriorated. The bond that was established between the building and its users, the 'difficult boys' of the reformatory, is confirmed by Viganò's words: "Those who really understood the Marchiondi were not the organizers, the school and pedagogical authorities, the colleagues, the architecture critics, who also paid me many compliments: it was the boys. I will not, I think, be able to forget the shout of joy with which they swarmed inside, the enthusiasm with which they took immediate possession of the equipment, the lockers, the clothes racks"[9]. The former Marxer factory, on the other hand, presents a different approach in the configuration of the interior spaces[10]. The four reinforced concrete volumes are designed to house laboratories and workspaces requiring good natural lighting and a healthy environment. The interior spaces are characterized by amplitude, by spaces that can be crossed from side to side, without the use of the partition found in the Marchiondi. Polycarbonate skylights, distributed on the roof, allow light to filter evenly into the interior spaces, creating a bright and pleasant environment for workers. Facades shielded by concrete elements act as solar barriers, protecting the interior from overheating and ensuring optimal thermal comfort. Viganò's design has been thought out by the architect down to the smallest detail, each room reflecting the function it is to house. Viganò leaves no room for flexibility in the spaces[11], but gives the children who are to use the facility the places they need. While this compliance of the building with the required use gives credit to the architect for having designed a building consistent with its purpose, it now makes it difficult to rethink future uses. Several solutions have been proposed in recent years, but the deteriorated condition in which the Marchiondi currently stands imposes good restoration practices on the existing building to prevent the problem from occurring again. Most of the projects that have been proposed for the restoration of the Marchiondi have imagined functions such as student halls or dormitories. Even the latest project approved by the PNRR (National Plan for Recovery and Resilience) envisages a university residence for students. However, to avoid abandonment again, it is important to envisage some functions of a public nature, capable of bringing the community closer to the building—neighborhood functions, suitable for the daily use of the space, re-establishing a relationship between the internal and external realities, directly with the neighborhood. Architecture for university housing can certainly become a driver of urban regeneration by attracting external students, but this type of use must be flanked by others that encourage citizens to use the Marchiondi's spaces to ensure reliable and lasting use. Through these actions, university housing can be transformed into a catalyst for processes of social and cultural

9. Vittoriano Viganò, "An Institute for 300 Boys," in *Domus*, no. 318 (May 1956): 5.

10. Alberto Galardi, *"Alberto Galardi: Architect, Fundaciòn Gordon"* (Buenos Aires 2001).

11. Franz Graf and Letizia Tedeschi, eds., *"L'Istituto Marchiondi Spagliardi di Vittoriano Viganò"* (Mendrisio Academy Press, Mendrisio 2009), 25



Figure 1. Comparative interior photos of the two buildings - on the left Marxer by Alberto Galardi © PMP - Paolo Mazzo Photo - and on the right the Marchiondi Institute by Vittoriano Viganò © Alesandro Colombo.

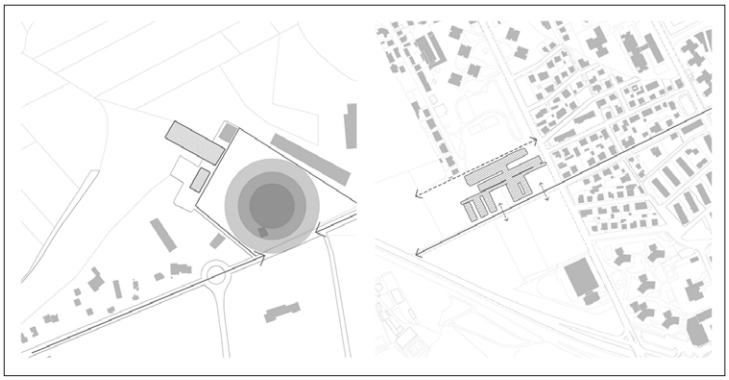


Figure 2. Plan drawing of strategy diagram of the two buildings compared - on the left Marxer by Alberto Galardi- and on the right the Marchiondi Institute by Vittoriano Viganò. © Drawings by the authors Chiara Assante and Bianca Maria Rodriguez.

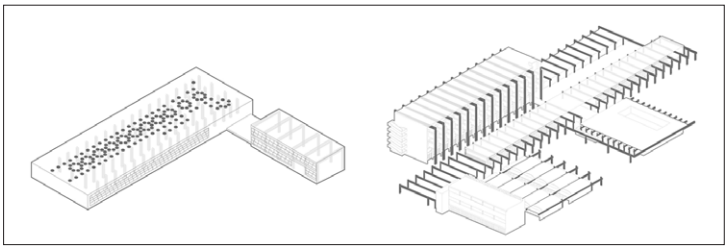


Figure 3. Axonometric drawings of the two buildings compared - on the left Marxer by Alberto Galardi- and on the right the Marchiondi Institute by Vittoriano Viganò. © Drawings by the authors Chiara Assante and Bianca Maria Rodriguez.

change, capable of acting at multiple levels and scales, supporting actions to include rather than exclude, becoming 'an architecture free from that monogamous conception that wants it to be the bride of a single interest or a single idea. A pragmatic-utopian architecture that aims to create socially, economically and environmentally perfect places[12].

Due to the current focus on the Marchiondi, the various possible actions proposed, and the intention to return it to the neighborhood by introducing public functions that reactivate the building, the Marchiondi may be a case of good practice to be analyzed for the reuse of the Marxer. The two projects reflect Adriano Olivetti's ideas of integrating aesthetic and social functionality into the project. Indeed, the Istituto Marchiondi Spagliardi, with its focus on pedagogical principles and the creation of spaces that foster socialization and personal development, reflects Olivetti's approach to education and social welfare. The layout of the buildings and the choice of materials create a stimulating and comfortable environment for the children housed. The use of exposed reinforced concrete and attention to construction details are the

12. Bjarke Ingels, *BIG. "Yes is More. An Archicomic on Architectural Evolution"* (Cologne: Taschen, 2009)

distinctive elements of Viganò's design. Similarly, in the Marxer, Galardi designed the building with natural lighting, ventilation, and comfort in mind, creating a healthy working environment. The innovative architectural solutions he used are examples of how design can improve the quality of life for workers, in line with Olivetti's ideas. Olivetti's vision of architecture that focuses on human well-being and the quality of space is a crucial element in the future of projects to restore Brutalist buildings such as the Istituto Marchiondi Spagliardi and the former Marxer factory. Olivetti's influence extends to a holistic approach that considers the social and environmental impact of architecture[13]. This contemporary vision can serve as a guide for renovations that not only preserve the historical and structural integrity of the buildings but also make them relevant and functional for contemporary communities. The two buildings can thus mutually exemplify, on different themes, a regeneration process that puts the design of the existing at the center. In short, post-war Brutalist architecture, representing a heritage of architectural innovation, structural attention, and social vision, offers an important opportunity. The challenge of contemporary architecture is, therefore, to pose the problem of the restoration of the modern, of the adaptive and functional reuse of abandoned places, proposing a project tailored to the existing, capable of adapting to what precedes it as much as stimulating collective interest in a building to reactivate a regeneration that is not just punctual but widespread on an urban scale, while respecting the principles of quality, functionality, and well-being of the original projects. "Transforming these points of rupture of the urban fabric, these points of laceration of the harmonic expansion of the city's structures into points of suture—in which to undertake growth once again according to large parameters, appropriate to the life and function of the contemporary city—is a task of the utmost importance; in that it is not only worth recovering the very areas in which one intervenes, but also influencing the city's more external development'[14]. ■

13. A Saibene., ed., *"Adriano Olivetti. Il mondo che nasce"* (Rome: Edizioni di Comunità, 2013).

14. Aldo Rossi, Gianugo Polesello and Francesco Tentori, "La ristrutturazione della vecchia periferia" in *Casabella-Comunità*, no. 241, (July 1960): 39-55; republished in Aldo Rossi, Scritti scelti sull'architettura e la città 1956-1972, (Macerata: Quodlibet, 2012): 114.

BIOGRAPHY

Bianca Maria Rodriguez, architect, born in Naples in 1992, graduated in Architecture in Naples from the University of Naples Federico II in 2018 with a thesis in architectural design titled "Baghdad Design Center: a new building on the remains of the Old Governorate Building" on the topics of infill intervention in a twentieth-century building in Baghdad. During his university years she participated in several competitions, winning some of them such as the competition entitled "Neapolis. Living as a student" awarding herself an internship at Atelier Alfonso Femia studio. She has collaborated in university courses on the topics of restoration of the modern and the existing as project material. Her interest in research and academy led to a PhD from the University of Naples Federico II that was completed in 2023 with a thesis entitled "Gio Ponti. The urban fifth in the dialogue between the places of living" and was a speaker in a lot of conferences such as the 14th fib Symposium on reinforced concrete issues with a contribution entitled "The role of structure in the dialogue between The places of living in Gio Ponti's projects." She currently continues to collaborate with the university.

Chiara Assante, architect, born in Benevento in 1999, graduated in Architecture in Naples from the University of Naples "Federico II" with highest honors. Her thesis, titled "Living with risk: the case of Castel Volturno," addresses hydrogeological risks in the Lower Volturno Valley, proposing strategies for coexistence and mitigation. Currently holds an ICAR12 research grant, contributing to the HORIZON EUROPE Knowing project on climate change. She has collaborated with architectural firms, participating in the design of public works and renovations. She took part in international conferences such as "Climate Change and Cultural Heritage IFAU23" at the Vanvitelli University in Caserta and the "Seminar on Architecture and Urban Culture" in Camerino, where his thesis work was awarded. She has attended advanced courses such as Villard23 where she received an honorable mention, showing a strong commitment to sustainable architecture and urban regeneration.

TOWARDS A HISTORY OF INTERNATIONAL TRANSFERS IN LARGE-CONCRETE PANEL SYSTEMS

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#09

ABSTRACT

This paper explores how, during the twentieth-century, novel technologies for the prefabrication of modernist housing became powerful tools for the construction of a new society. After the Second World War, in particular, the development of prefabricated concrete panels drastically transformed the techniques used to build the modern world. Manual labour was replaced by automated mass production, and new concrete elements were used in billions of square metres of housing around the planet. Before turning into what many consider a dull face of our cities today, the stunning image of a concrete panel soaring through the sky appeared in all forms of popular culture, reshaping our cities. One of the most relevant features of these systems relates to the manner in which they were created in countries such as France, Denmark, Sweden, the Soviet Union et al., to be then transferred to many different contexts in the Americas, Africa, Asia, and Oceania, contesting the highly rational and standardised nature of the systems with their reception in the various local political, technological and climatic conditions where they were received and readapted. The paper discusses the way in which concrete panel systems spread across the world, reflecting on their influence from the second half of the twentieth century to the present.

Almost a Piranesian scene, wild grass is growing around a 2.6-ton large-concrete panel we found in 2009. Ruined and abandoned, it had fallen to the ground at a former industrial site in Quilpué, Chile. Upon close examination, this was a facade panel, with joining features that could be identified as belonging to the French Camus panel system for the prefabrication of housing, patented by Raymond Camus in 1948 and thereafter exported to many countries **(Figure 1)**.

But in this Chilean case, the jointing rim was also heavily indented, a telling mark of an adaptation made in the Soviet Union to reinforce the buildings' structure against earthquakes, like the one that hit Tashkent in 1966, providing the USSR with the opportunity to test the adaptation of Camus into the I-464 series. But the panel in Quilpué had another particular feature rather unknown to both French and Soviet systems: it was carved on one side, in order to save concrete while adjusting the wall's thickness to the economic and climatic conditions of Cuba, the country that received the system as a donation from Nikita Khrushchev to Fidel Castro's early revolutionary years[1]. This ruined panel, however, was not found in Cuba, Russia, or France. It rather belongs to the long-dismantled KPD plant, a factory provided by the USSR in support of Salvador Allende's *Unidad Popular* government (1971-1973). Once discarded as rubble of socialist modernism, and half-consumed by vegetation, this piece of concrete became a kind of archaeological find and almost a fossil, holding material evidence of a global history that well summarises a geopolitical line of gradual transformation that, in the span of nearly 30 years, drew political, economic and social threads connecting architecture and building technology in France, the Soviet Union, Cuba, and Chile.

This was neither an isolated case, nor it was exclusive of the Soviet Bloc. Dating from the 1950's, the Danish Jesperson & Søn system was extensively used in Denmark (Høje Gladsaxe, Rødrove, Vildtbanegaard, etc.), before being exported to the United Kingdom, Canada and the United States. In 1964, it was brought to Sweden by the A-Betong company, transforming it into the A-system Byggelement *AB*, which was used to produce projects such as the Helsinborg compound (1965). Through A-Betong, the A-system's adaptations resurfaced in Shoaiba (Abu Dhabi) and in Saudi Arabia through the Alrashid A-Betong Company (1976). Also in Sweden, the Ohlsson & Skarne's S66 system (1960's), was reportedly transferred to West Germany, Canary Island, Kuwait, and Venezuela; as well as the British BRECAST system, which was developed during the 1970's and was seen in Indonesia and extensively applied in the Middle East until the mid-1980's, albeit transformed into BREKIT, with a lower cost and greater adaptability, reportedly implemented in Southeast Asia and former British colonies in Africa.

Another case is P2, a system from the GDR that, having absorbed elements from the Soviet II-35 system, became the East German WBS-70. Later transformed into the W-70 series, it was sent to Poland, where it arrived as the WK-70 system. And while it was not further exported

1. Pedro Ignacio Alonso and Hugo Palmarola, "Tropical Assemblage: The Soviet Large Panel in Cuba." In *STS in Latin America: Beyond Imported Magic*, ed. Eden Medina, Ivan da Costa Marques, and Christina Holmes. (Cambridge, Massachusetts: MIT Press, 2014), 157-177

to other countries, it eventually evolved within Poland into the SBO and SBM series. And Tracoba, a system patented in 1961 by British engineers Jack Rodin and James Lowe for the French company Omnium Technique (OTH), that was active in Europe, Africa and North America. Several projects were built in France, such as the Cité Massy-Opera (Massy-Antony, 1963); La Castellane (Marseilles, 1966); and the Cité Croix Blanche (Vigneux sur Seine, 1967). It also arrived in Italy to produce the Mirafiori Sud compound (Turin, 1966); in Scotland, the Hutchesontown project (Glasgow, 1968); in Spain, projects in Alcalá de Henares (1969); and Ciudad Badía (Barcelona, 1969); and in the United States -turned into Tracoba V- with the Yorkers project (New York, c1970). During the 1970's, the Danish Højgaard & Schultz company, in collaboration with the Italian Recchi Ingegneria, transformed Tracoba to build a large housing compound in Tripoli (Libya) (Amtered El-Abidi, Ghazali and Nor Azhari Azman 2014), incorporating perforated panels, balconies, arches and motifs in an attempt to engage with the local cultures **(Figure 2)**.

As with the fallen panel in Chile, the arabesque motifs added to Tripoli's facade components are physical traces of international processes of typological resignification that could only be fully grasped when looking at the way British engineers (Rodin and Lowe), and a French company (OTH), would be taken by a Danish and Italian consortium (Højgaard & Schultz and Recchi Ingegneria) to make a new urban development in Libya. During the post-war period, similar practices could be observed in many different contexts, including manifold journeys of concrete panel systems from Eastern and Western countries to Asia (Mongolia, Vietnam, Nepal, China, Japan, Taiwan and North Korea); to Africa (Morocco, Egypt, Zaire, Gabon and Zanzibar); to the Middle East (Iraq, Kuwait, Syria, and Bahrain), and to America (the U.S., Canada, Cuba, Colombia, Venezuela and Chile), to name just a few. The study of these buildings must be accounted from within the genealogy of systems they belong to. This is a history of movement and exchange in the formation of a global network, where not even the smallest possible panel should be studied in isolation.

Stretching the world in all directions, we thus observe how panel systems have moved along routes trespassing national boundaries and connecting continents. Sometimes, these operations consisted in selling out a system's patent (i.e., Camus to the Soviet Union). Other times, an entire factory was either sold or donated to another nation (i.e., I-464 sent to Cuba or Chile), or they were the result of technical missions sent to leading countries to learn from their experiences (i.e., the Swedish D4 group touring Denmark and France in the 1950's, or the U.S. Delegation to the USSR in 1970)[2], or belonged to technical expertise shared by travelling experts to developing countries (i.e., GDR architects and engineers in North Korea or Zanzibar). At the same time, these journeys were often the outcome of purely economic ventures (i.e., Tracoba expanding its market to the US), or a mixture of economic policies with political influence (the USSR in Eastern Europe and Asia), post-colonial impulses

2. James Wright, "Industrialized Buildings in the Soviet Union: A Report of the U.S. Delegation to the U.S.S.R. National Bureau of Standards Special Publication 334." In *U.S. Department of Commerce*. (Washington D.C.: U.S. Government Printing Office, 1971)

(i.e., the Italian Recchi taking Tracoba to Libya), or the wishful attempt at solving the problem of social housing in the Third-World under the banner of technical assistance (i.e., the Ford Foundation sponsoring Canadian based research to implement the UCOPAN system in Egypt, India, Nepal and Bangladesh)[3]. We could follow these routes, accounting for the connecting points that, having some similar economic or political conditions, would set the ground for the transnational movement and the transformation of manifold architectural species, within the making of a range of mechanisms that allowed systems to trespass national borders and customs areas in commercial or diplomatic missions, often under the banner of cooperation, or to assist for recovery after natural disasters.

Thinking about a truly international architecture, and about regionalisms, what matters is to see how specific cultural, political and technological contexts challenged, distorted or even contaminated the often-considered stiff typologies of closed systems of prefabrication, allowing us to observe the various processes of hybridisation as they actually happened. Only by following this path we could truly see the regional and the idiosyncratic becoming acting forces in shaping supposedly generic systems. Not an easy task, as it means to look for literature that would give traces on the system's various paths or, in absence of such literature, to survey the actual buildings, learning to recognise, for example, Camus in KPD or Jesperson in Alrashid A-Betong. For instance, created in 1958, the Chinese 9014 system seems to be a rare combination of the Soviet K-7, I-335, I-464 and I-464A series (an unthinkable mix only possible given their similar joining systems). By 1963, the system started to be used in Beijing's Tuanjiehu district, developing a rather unique panel type consisting of a rigid outer frame that, should there not be enough concrete to complete the building, would enable manual labour to fill the panels with alternative materials. In another case, the Hungarian reception of I-464 in the Tulipános system (1963) was developed as a way to fight the rigidity of the housing block typology by adding a floral motif in special panels. Described by Virág Molnár as the *Tulip Debate*, such new features are telling on the quest for combining the highly industrial with the local labour, by means of organic imageries. The Romanian 770 system of 1975 (yet another version to the soviet I-464 system), also sought to absorb the foreign technology, transforming the isolated building into one that could turn around the octagonal corner of the city block, forming a continuous facade within the traditional city. This rotation is allowed by a number of special panels and floor slabs, enabling the system to incorporate a rather unique urban concern for these kinds of technologies. Likewise, in 1958, the Swiss IGÉCO system had explored the possibility of having special panels to allow building blocks to slightly bend, as in La Gradelle complex in Genève. Initially an adaptation of Danish Larsen & Nielsen system (1950s), IGÉCO evolved into a technical and typological refinement that is not usually associated to the architecture of prefabricated concrete panels, to the extent that Franz

3. Zenon Zielinski and Czeslawa Zielinska "Proposed Ribbed Panel System for Precast Concrete Housing." *PCI Journal* 27, no. 3 (June 1982), 92-115.





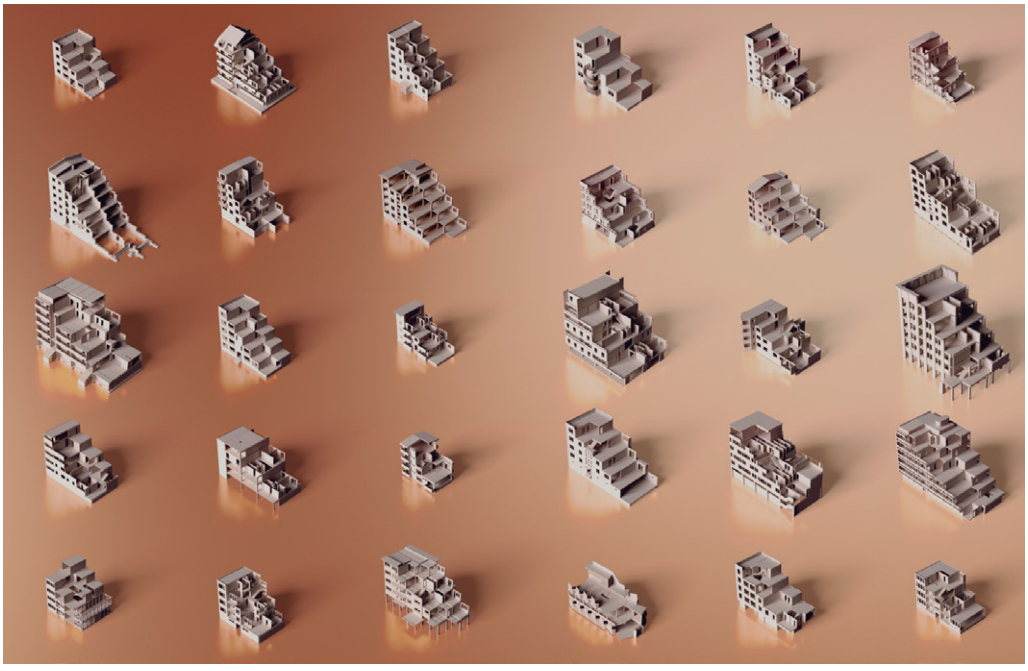


Figure 1. KPD panel as found. Quipué, June 3, 2009 (detail). Credits: Hugo Palmarola Rodríguez.

Figure 2. Still from *Edilizia industrializzata a Tripoli*, a film by the National Film Production Company, Recchi Fund. Tripoli-Torino, c. 1980. Højaard & Schultz and Recchi in Tripoli, Libya, 1976-78.

Figure 3. Staggered axonometric models of 30 large-concrete panel systems. Credits: José Hernández and Pedro Ignacio Alonso.

Graf has compared it with *haute couture*. This is telling of the capacity of systems to introduce variation, for Larsen & Nielsen is the same system that in the United Kingdom produced the Morris Walk Estate in South-East London, and the infamously collapsed Canning Town in Newham, East London (1968), and that by 1975 had expanded to 15 countries, including the Netherlands, Norway, Hungary, Sweden, and Turkey

The success of large-concrete panel systems, at least in terms of both adaptability and the number of square meters built (with some estimations considering no less than 5 billion m^2 worldwide)[4], would lead us to believe that such achievements are not despite of the systems' elementary closed kit of standardised panels, but rather because of it. Freed from having to comply with the multiple externalities of the long-standing search for open systems of prefabrication (with their whimsical look for a universal modular coordination), they could change and adapt by gradually adjusting their inner component arrangements. **(Figure 3).**

During the twentieth century, in fact, hundreds of systems were conceived, patented and set in operation, creating virtually infinite numbers of variations, series and transformations. This session aims at portraying this history, and the logics underpinning the production and the differentiated global provision of panel systems within architectural geopolitics. Beyond the systems, the work would reveal the interacting elements at play in the manifold global journeys (and political and commercial controversies) undertaken by concrete panels. ■

4. Hans Wolfgang Hoffmann "Aus Fehlern lernen. Erbe des komplexen Wohnungsbaus: Wie Berlin seinen Nachbarn bei der Sanierung der Platte hilft." In *Stadtforum* (October 1999).

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BIOGRAPHIES

Pedro Ignacio Alonso holds a Ph.D. in architecture from the Architectural Association and heads the Ph.D. program in Architecture and Urban Studies at Pontificia Universidad Católica de Chile. He was a Resident Architect at the Rockefeller Foundation Bellagio Centre in Bellagio in 2019. With Hugo Palmarola, he was awarded the 2014 Silver Lion for the Chilean Pavilion Monolith Controversies at the Venice Architecture Biennale. Alonso and Palmarola also published the book *Panel* (AA 2014); and *Flying Panels: How Concrete Panels Changed the World* (Dom, 2019) from the exhibition curated at the Swedish Centre for Architecture and Design in 2019–2020.

THE BIRTH OF STAVOPROJEKT, A SOCIALIST ATTEMPT TO COLLECTIVISE DESIGN PRACTICE AND STANDARDISE BUILDINGS AND TECHNOLOGY

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#09

ABSTRACT

After the Second World War, Czechoslovakia became part of the Eastern Bloc of Europe and subject to the political influence of the Soviet Union. This change accelerated and was confirmed when the Communist Party seized power in 1948. Left-leaning architects were prepared for the situation and started to collectivise the work of design. In 1948, Stavoprojekt was founded as the state design organisation, which brought together architects, engineers, and other related professions. Its activities were mainly focused on the post-war economic revival, traffic and industrial infrastructure, centralised spatial planning, and solving the housing shortage. Typification (of buildings and elements) and later also prefabrication were significant tools widely applied in the field of housing. In order to efficiently achieve its goals, Stavoprojekt was affiliated to Czechoslovak Construction Works, which collectivised the production of building components. At the same time, the Research and Typification Institute was established, and its task was to prepare the basic manuals for typification. In the circumstances of postwar scarcity, however, reality lagged far behind the plans, and prefabrication in the late 1940s and early 1950s focused mainly on subcomponents of a building's structure that did not require demanding technological solutions or the use of large amounts of scarce steel. The typification of whole buildings (especially buildings used to house smaller amenities) also developed slowly and was only promoted in a few cases. It was not until the 1960s and 1970s that prefabrication and typification were fully implemented. Nevertheless, the early search for universal concepts in the conditions of the collectivised economy of 1948–1953 is a remarkable example of the possibilities and limits of this modernist idea. The impact of the attempts to centralise design practice and attach it to construction production was far-reaching and continued to be felt in the ensuing decades.

1. COLLECTIVISATION

In February 1948, the Communist Party in Czechoslovakia took advantage of the government crisis and seized power. A new socialist society was to be built through nationalisation and collectivisation, the first wave of which impacted mainly agriculture and industry. The straightforwardly totalitarian process also affected the construction industry. Nationalised construction companies became concentrated within one centrally controlled company – Czechoslovak Construction Works. The arguments used for these imposed decisions and processes were the needs of postwar economic recovery, the idea of increasing the efficiency of central planning and direct rule by politically motivated workers' professions in the place of a profit-oriented market economy, and, last but not least, the move towards an egalitarian socialist society and general prosperity.

The design organisation Stavoprojekt was established as a part of Czechoslovak Construction Works in 1948 in order to ensure that there was a fully integrated process in place between investment planning, the design process, the production of building materials and components, and project implementation. Not surprisingly, a similar idea for a central design institution, collectivisation, and the rationalised organisation of the construction industry was being considered by domestic radical left-wing architects with links to CIAM and the Soviet Union – in particular the Block of Architectural Progressive Societies (BAPS) and the Working Architectural Group (PAS). Alongside them, however, other (not just left-wing) architects found a place for themselves in Stavoprojekt's structures, which enabled them to have access to large-scale state projects.

2. THE STRUCTURE OF STAVOPROJEKT

Stavoprojekt was structured along the lines of a meticulously thought-out and strict hierarchy that was formulated in the initial directives. This hierarchical arrangement, supposedly inspired by the Soviet Gosplane, was intended to support the rational planning, allocation, and management of work. The highest authority was the directorate. The first director of Stavoprojekt was Jiří Voženílek, a renowned architect from the Bat'a construction office in Zlín and, therefore, someone who had extensive experience with 'American' Taylorist methods of design work and construction. Jiří Voženílek was also a member of the above-mentioned PAS group, which based its socially oriented visions on a rational scientific approach – graphs, tables, organograms – inspired by Neue Sachlichkeit and Soviet constructivism (e.g. in urbanism especially by Miljutin). His group colleague Karel Janů became director of the Czechoslovak Construction Works and directed his efforts to put mass prefabrication into practice.

The 'research centre', based in Prague, became a key part of the institution and it was soon given the name the Research and Typification Institute (STÚ). Its remit was to collate and analyse information from Stavoprojekt's regional departments and specialised ministerial departments and to work on the rapid preparation of national typification documents.

Another central creative department of importance was the Institute for Urban Planning based in Brno, the existence of which is an illustration of how important large-scale regional planning and zoning was for the postwar recovery and for the socialist reform of the economy.

The preparatory, conceptual phases of (mainly investment and urban) projects were to take place in the directorate, while the subsequent elaboration and implementation of the projects would be transferred into the hands of regional design departments. In the regions, projects were developed in the Regional Architectural Studios, and in the Regional Engineering Offices. The Regional Architectural Studios (the word 'studios' eloquently illustrates how, despite the prevailing technocratic rhetoric, artistic ambitions that were unwilling to give up their interest in form survived) focused on addressing the housing shortage and increasing production. The Regional Engineering Offices were mainly devoted to the reconstruction of transport infrastructure and large-scale interventions in the landscape, especially rail and road networks, water management works, and operations connected to the collectivisation of agriculture.

The predictability of processes and planning was to be achieved through the standardisation of the work and roles. The aim then was to establish a standard of performance for each type of work or employee, and how a design office should be staffed, and on that basis to create an effectively functioning and collaborative workplace that could fulfil the role required of it within the larger frame of socialist planning.

The coordination of work at Stavoprojekt proceeded through mass communication – directives, instructions, bulletins, and correspondence (in 1951, among other things, a directive on issuing directives was issued). A substantial role was to be played by meetings between managers and specialists across Stavoprojekt's units, by meetings with representatives of building materials and components production, and, last but not least, by committees that in the beginning were euphemistically called production boards.

3. TYPIFICATION

Stavoprojekt's introductory documents had already indicated that all departments were required to use the standardised designs and construction technologies prescribed by the directorate. Therefore, typification specialists played a key role as members of the work teams at the regional design institutes. Their role involved collecting data from ongoing projects and sending them to the directorate and the STÚ, where the results were evaluated, and the most successful (i.e. usually the most cost-effective) designs and implementations were declared to be models or 'types'. And the regional centres also assisted with testing trial projects and prefabricated modules created at the STÚ.

Regular meetings were also held among the central and regional typification specialists to discuss the limits and potential of existing and emerging typified projects. Broad discussions took place not just on efficiency and technical difficulties but on issues relating to the application

of the socialist-realist style, which, according to the participants in these discussions, was in no way at odds with the unification of projects and building components. On the contrary, it was believed that to flesh out this style with atypical parts and details would give rise to distinctive, original, and, at the same time, local variations with Slavic undertones. The first comprehensive prefabricated products for residential construction were, unsurprisingly, thus elements of decoration – cornices, ornamental mouldings, insignia plates (similar to elements for 19th century tenement houses, but different in material and symbolism).

The Research and Typification Institute published a number of manuals and instructional materials that were to varying degrees binding. Their value as a resource lay mainly in the summary and analysis of successful projects (including foreign ones) and linking them to real products in the construction industry. As early as 1949, the STÚ produced a Survey of Works, which focused mainly on the issue of modules and building sections with predefined dimensions and thereby set the stage for the planned massive unification.

An important step in the direction of the successful planning and implementation of buildings, as of 1 January 1951, was the use of 'standard costing', i.e. detailed tables of standard products in use and the associated costs as well as instructions for production. For these purposes, at the end of each year the individual branches of Czechoslovak Construction Works issued catalogues for the following year, and the prices throughout that year had to remain fixed. The aim was not only to plan the production of building components in a coordinated way and in relation to planned investments, but also to provide an overview of the costs of construction and to be able to apply a rationalised approach to managing cooperation between production and design.

In 1951, the STÚ published the first Typification Handbook; 16 more volumes followed in 1952. The Typification Handbook offered tested, standardised solutions – a) the selection of whole standardised building types, b) the standardisation of functionally complementary and interchangeable parts of buildings, and c) the standardisation of building components. Soviet examples and standards were expected to become the official source for these compendia and projects. However, the real content was more likely to be local tried and tested models and, for the less tested, at least basic description of examples from Western Europe (e.g. garages). Every standardised building was presented using reference examples and in the form of a recommended standardised design. This included basic plan documentation, details, and the geometry of the more complicated elements, drawings on technical infrastructure, statics calculations, budgets, and additional tables or descriptions.

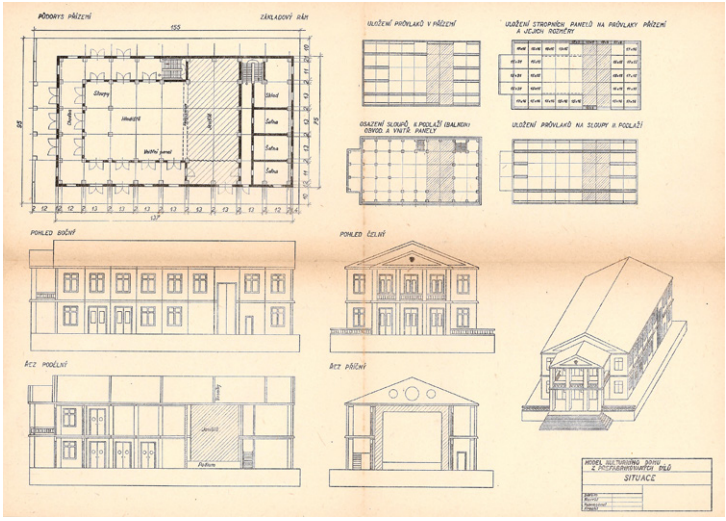
From 1953, the STÚ also published catalogues of family houses for self-build construction, the aim of which was to remedy the insufficient amount of central state construction of apartment buildings. In later years, a number of detailed manuals and even the production drawings for entire systems were published.

In 1951, Stavoprojekt set up a Special Department for Heavy Assembly, i.e. for the extensive use of large prefabricated reinforced-concrete components, and from 1952 there was a research group at STÚ as well that focused on flow construction and creating network diagrams of the construction process. To accelerate and increase the volume of construction there was also an idea to eliminate the seasonality of production by extending construction activities into the winter season. This had little effect, however, on the housing stock in the 1950s. In the early postwar years typification was premised mainly on searching for spatial and operational designs that could be universally and recurringly applied, and less on the actual composability of buildings made of prefabricated components (except in the case of industrial buildings and engineering structures). Prefabrication was concentrated more on the reduction of costs, on sophistication, and on the production of only the most efficient building components. As a result of the postwar shortages and the earmarking of strategic materials (especially steel) for selected buildings and products, designers, despite their past interwar avant-garde experience and declarations of progressiveness, were left with the only technologies available to them, which were the traditional technologies (bricks and blocks, plaster, wood). In 1958, moreover, the costs of constructing typified buildings that made more use of prefabricated materials was 18 % higher than the costs of constructing buildings using traditional technologies.

4. INDUSTRIALISATION

During the first postwar years as part of what was called the two-year plan there was surprisingly little use of prefabricated materials. Instead, there was a continuation of the interwar model of the construction industry, and central planning was unable to offer any more comprehensive alternative in the given conditions of material scarcity. The most extensive use of prefabricated components was seen in the construction of the Solidarita cooperative housing estate in Prague (1946–1961), designed by František Jech and Karel Storch (both of whom had worked in the residential department at BAPS) and Hanuš Majer, where a separate company called Montstav was even established to produce prefabricated components on site; and in housing construction in Zlín, which continued the work of the Baťa company's interwar construction office. Other, alternative inspirations were sought in Scandinavia and, unsurprisingly, this involved building wooden family houses, generically called Finnish houses, modified in Czech conditions for prefabrication. Journals also frequently quoted examples from Germany and the Netherlands in connection with prefabrication.

Nevertheless, the 'block' system was the most common form of prefabrication in the housing estates of the 1950s. This involved laying out bricks or blocks of masonry in factory and then transporting them to be fitted on site. The ceilings on the block walling were formed from reinforced-concrete panels or monolithic reinforced concrete with lost formwork made of ceramic blocks. The surfaces of the walls were coated with plaster, while the windows, doors, and roof trusses of the pitched roofs were made of



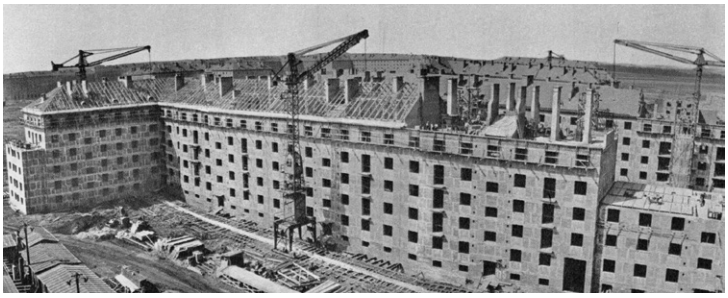




Figure 1. Plan for a child's model of a prefabricated house of culture (Source: Čestmír Bárta – Ladislav Zástěra, *Modely panelových staveb*, Praha 1957).

Figure 2. Residential building in Ostrava, constructed using 'block' system technology (Source: Karel Storch (ed.), *Nová technika a architektura v Československu*, Praha 1961).

Figure 3. Residential building within G55 system (Source: Karel Storch (ed.), *Nová technika a architektura v Československu*, Praha 1961).

wood. The rationality and the large modules used in the block system were naturally reflected also in the simple, robust, and rhythmic composition of the façade. This system was applied on an enormous scale in the construction of housing estates located in the country's new hubs of heavy industry – in Ostrava, Havířov, Příbram, Ostrov, and Plzeň.

At the same time, however, experimentation began in 1953 with the 'Type G' (after the city of Gottwaldov, renamed for the first socialist president of Czechoslovakia, which is now again called Zlín), which involved the complete deployment of prefabricated reinforced-concrete components. Its basic structure consisted of the flat panels of the load-bearing façade, transverse walls, and ceilings with modular spans of 3.6 metres. Initially, sturdy reinforced-concrete panel strips were inserted into the joints of the wall panels, which allowed the gaps to be filled with concrete, thereby effectively strengthening the joints, while at the same time characteristic vertical lines formed along the façade, resembling pilasters, topped with a similar attic or crown cornice design. The structurally less significant joints between panels could be left visually exposed on the façade and in this way the building no longer concealed its compositional form. Flat roofs became standard as well. Over the years, there were experiments with getting rid of the aforementioned panel strips, and features of Socialist Realism as well. Experiments continued with installing steel columns in the place of load-bearing walls in the interior, or with the use of various panel surfaces or varieties of panels. Separate and less numerous variations were also built in Hradec Králové (Type HK) and Bratislava (Type BA). There was always high praise in the contemporary architectural press and in discussions for the logical manner in which the systems' structure and tectonics were reflected on the buildings' façade.

The first attempts at the prefabrication of apartment buildings in housing estates did not last long, but they were a foreshadowing of how things would develop in the ensuing decades. From 1957 they were followed by the development of systems T-01-B, T-02-B, etc., and these gradually evolved into the extremely successful T-06-B and T-08-B, which then sprang up in multitudes across Czechoslovakia in the 1960s and 1970s. They were followed by the more developed VVU-ETA, the Type OP, which offered a variety of façade panels and claddings, and the Type P, which was developed at the end of the normalisation period but was not used very much in practice and which allowed for various ways to work with the plasticity of the façades and corners and create diverse roof landscapes. Similarly, there was no shortage of advances in the development of prefabricated reinforced-concrete frames, which culminated in the MS-71, MS-OB, and Konstruktiva types that in the 1970s and 1980s could be found in almost all the buildings that housed common civic amenities. It should be added that the successes achieved in the mass production of complete reinforced-concrete systems gradually resulted in the triumph of quantity over quality (in an effort to fulfil the socialist five-year plans) and the extensive architectural 'homogenisation' of the environment of Czechoslovak housing estates.

5. APPENDIX

Stavoprojekt grew quickly from a small group of enthusiastic supporters of the idea of collectivism and the technocratic management of a socialist country to become a giant institution. During the very first months of its existence it attracted more than 1,200 employees, and by 1952 it had more

than 11,000. As a result of the restrictions on free enterprise it continued to grow until it was one of the largest architectural design organisations in the world. Stavoprojekt retained its original structure and functions until 1951, when it ceased to be subordinate to Czechoslovak Construction Works, and in 1953 it was established as a separate 'national enterprise'. Numerous changes ensued between then and the change in regime in 1989, the effects of the initial decisions and the huge institution's technocratic management nevertheless continued to be felt. While the rigidity of the central office and subordination to Czechoslovak Construction Works were no longer there, the division of Stavoprojekt into regional branches or specialised branches relating to the work of individual ministries continued, as did the extreme dependency on the rigid socialist construction industry, on the demand to prefabrication, and on political or economic priorities. Architects remained locked in the role of 'mere' employees of a state institution. However, many architects who were witnesses to that time look back today and with hindsight extol the very close collaboration they enjoyed with engineers and various specialists in a focused design organisation. If we look at the architecture that the design institutes created and that managed to break free from the reins of a simple, purely mechanical, quantitative application of prefabrication, we see that even behind the Iron Curtain it very dexterously managed to capture the general transformation that was occurring on the international scene. ■

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BIOGRAPHY

Petr Vorlík is an architect and historian of modern architecture. In 2019 he was appointed a professor at FA CTU, where he heads the Department for the Theory and History of Architecture. He is also vice-dean for Science and Research and chair of Docomomo Czech. He is the author of several publications, including *Interwar Garages*, *The Czech Skyscraper*, *Beton Břasy Boletice*. As part of a project focused on the architecture of the 1980s, he edited the books *(A)typ*, *Unbuilt*, *Interviews*, *Improvisation*, and *Ambitions*. He has also developed the concepts for a number of databases, including industrialnitopografie.cz and architektura80.cz.

TRANSPOSING THE DISCOURSE OF INDUSTRIALISED CONSTRUCTION IN HOUSING BETWEEN LISBON AND LUANDA DURING THE 1970S

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#09

ABSTRACT

This paper focuses on the prefabrication process and typification applied in building mass housing neighbourhoods on the outskirts of Lisbon, Portugal, and Luanda, Angola. It explores the transfer of these systems and know-how from Europe to Africa, mapping housing neighbourhoods built at the end of Portuguese colonialism and the transition from dictatorship in Portugal (25 April 1974) to the independence of Angola (1975). The push for widespread housing led to developing large estates on peripheral land, utilising industrialised materials and processes to meet production demands. Large construction firms spearheaded innovation, with prefabrication vital in ensuring economic feasibility and rapid construction times. Portugal initiated its first prefabricated projects during the 1960s. At the same time, the Portuguese state invested in Angola, elevating the importance of housing development in both regions. This article proposes a comparative analysis of housing estates, focusing on the role of large construction companies and the influence of specific prefabricated systems on constructing residential estates in Lisbon and Luanda. It seeks to answer how the introduction of prefabricated design elements led to functional and aesthetic innovations and whether they benefited from foreign expertise. It also investigates the transfer and utilisation of these systems in the Global South, emphasising their profound impact on architectural design and urban planning during the colonial transition. These neighbourhoods drew inspiration from various international models, including Swedish, French, and Soviet systems, and influences from Non-Aligned Movement countries like Yugoslavia and Cuba. Following Angola's independence, additional prefabricated technologies were introduced, facilitating the transition from colonial to postcolonial structures and addressing housing demand while adapting to tropical climates. The comparative analysis underscores how prefabrication influenced architectural design and urban planning during the colonial transition, with construction companies playing a pivotal role in shaping urban landscapes and promoting modern living standards.

1. INTRODUCTION[1]

In recent decades, scholarly focus on the architectural heritage of late colonial and early post-independence periods in sub-Saharan Africa has grown significantly.[2] Within former Portuguese territories, diverse approaches have emerged, investigating the distinctiveness of particular buildings[3], collective housing endeavours[4], or the influence of the Public Works Department's rational design principles.[5] A recent shift in perspective emphasises the global exchange of expertise, materials, and processes, moving away from singular narratives.[6] However, a gap exists in understanding the prevalence and impact of prefabricated techniques in mass housing construction. This paper addresses this gap by examining archival records from specific neighbourhoods and their construction contractors in Portugal and Angola. It aims to elucidate the transnational exchange of expertise and materials, going beyond technical aspects to analyse how prefabricated systems have shaped housing development. Furthermore, it offers critical insights into globalisation's political and economic dimensions.

During the late 1960s and 1970s, Portuguese colonial cities experienced significant transformations in their urban peripheries, primarily driven by housing shortages. To address this, industrialised construction processes were deemed necessary to meet the demand quickly and affordably. The expansion into peripheral areas aimed not only to alleviate housing shortages but also to attract a burgeoning middle class seeking suburban comforts. Adopting prefabrication techniques was instrumental in providing solutions for environmental comfort and sustainability, influenced by geopolitical realities in Portugal and Angola. Through examining housing estates in Lisbon and Luanda, this paper underscores the pivotal role of large construction companies and their adoption of innovative prefabrication methods.

In Portugal, collaborations with foreign companies, such as the manufacture of French "Fiorio" prefabricated panels by the Portuguese factory ICESA and applied by Reaes Pinto or by the Luso-Swedish partnership with MERCATOR-S.A.R.L., led to the introduction of functional and aesthetic innovations in prefabricated developed by Fernando Silva, setting architectural standards for future developments in different locations of Lisbon's outskirts. In Luanda, projects like Prenda and Rangel neighbourhoods, undertaken by Predial Económica SARL (PRECOL) with government backing, exemplified pre-stressed concrete and Le Corbusier's Modulor system, reflecting international design influences. Concrete played a central role in both projects, evident in the beam-pillar system's structural module, the balconies' panels, and the prefabricated elements of the brise-soleils adorning the facades. These architectural choices were both aesthetic and functional, as they facilitated cross-ventilation, optimised form and orientation according to climatic conditions, and minimise exposure to harsh sunlight angles, enhancing interior comfort.[7]

Following Angola's independence in 1975, urban development opened to international collaborations, introducing prefabricated systems from countries like Yugoslavia via NAM countries.[8] The widespread adoption of these systems, known locally as "Blocos dos Cubanos" (Cuban Blocks),

1. This research was developed in the scope of IL Rodrigues' grant, "Beyond Modern Housing…" (https://doi.org/10.54499/2022.00268.CEECIND/CP1750/CT0007) funded by FCT, and was also funded by the European Union (ERC, ArchLabour, 1101096606). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Council. Neither the European Union nor the granting authority can be held responsible for them. ArchLabour, chaired by Milheiro and funded by the FCT through the "ArchWar" project (https://doi.org/10.54499/PTDC/ART-DAQ/0592/2020), chaired by Milheiro&Fiúza.

2. On the subject can be emphasised Udo Kultermann's exemplary work from the pioneering on Africa *Neues Bauen in Afrika* (1963); *New Directions in African Architecture* (1969) to a *Critical Mosaic 1900-2000*, Vol. 6 (2000).

3. On the subject can be referred Ana Tostões (ed), *Modern Architecure in Africa: Angola and Mozambique* (Lisbon: ICIST, Técnico, 2013).

4. For more information, see the PhD theses by Inês Lima Rodrigues "Cuando la Vivienda colectiva era moderna. Desde Portugal a otros territorios de expressión portuguesa" (ESTAB, 2014) or by Patricia Noormahomed "(Re)habitando la ciudad dejada. Apropriación y resignificación del Proyecto moderno em Mozamique"" (UNM, 2023).

5. For more information see Ana Milheiro, *African Colonial Architectures at the end of the Portuguese Empire* (Lisbon: Relógio D'Água, 2017).

6. For more information, see the studies by: Jelica Jovanović, "From Yugoslavia to Angola: Housing as Postcolonial Technical Assistance City Building through

represents a vital housing development for housed foreign helpers and "internationalists" mainly from the COMECON countries, as well as Portugal, Brazil, Sweden, and Italy. It will undoubtedly be interesting to explore the transfer of prefabricated systems developed and popularised in the former Yugoslavia during the 1960s, known as "IMS Žeželj," highlighting the strong influence of tropical architecture launched in the experimental construction site of the "Lixeira-Luanda."[9]

Through archival research, case studies of housing estates, and analysis of urban planning policies, this study offers insights into the complex intersections of architecture, colonialism, and postcolonial urbanism. Contextualising the adoption of prefabrication within broader historical and geopolitical dynamics aims to contribute to a deeper understanding of the legacies of colonial and post-colonial architecture and the ongoing challenges of housing provision in former Portuguese colonial contexts.

2. THE TRANSFER OF THE MODULE, THE PANEL, AND THE PREFABRICATED ELEMENTS IN HOUSING CONSTRUCTION IN PORTUGAL AND THEIR TRANSPOSITION IN ANGOLA

Prefabrication in Portugal started with Ruy José Gomes publishing the first text on the subject in 1952 at the National Civil Engineering Laboratory (LNEC)[10], emphasising design flexibility and efficient construction processes. Despite early experiences in Alvalade, industrial constructions did not initially gain popularity. In 1954, ICESA - *Indústria de Construção e Empreendimentos Turísticos*, partnered with a French company "Société Entreprises de Licence des procédés Fiorio", to establish a factory for prefabricated elements in Póvoa de Santa Iria. This led to rigorous testing and the adoption of prefabrication techniques, as seen in reports from LNEC, including a 1969 report on the ICESA facilities"[11], presenting the various phases of the Fiorio system.

The French Fiorio system was successfully applied by architect Alberto Reaes Pinto in housing developments such as Santo António dos Cavaleiros (1966-1969) and Quinta do Morgado (1969-1970). These developments featured slab blocks and towers constructed using reinforced concrete elements, with Fiorio panels for exterior walls. The integration of prefabricated elements facilitated rapid construction and ensured consistent quality, with tailored finishes in interior spaces.

Architect Fernando Silva played a key role in introducing innovative prefabrication techniques in urban developments such as Alto da Barra urbanisation (1962-1975), collaborating with Luso-Swedish companies to enhance housing projects aesthetically and functionally. Silva, as an architect and founding partner of MERCATOR SARL, maintained high control over the construction process, introducing novel prefabrication systems like the "tunnel-forming" construction system. The establishment of the Portuguese-Swedish construction firm LUSECA facilitated meticulous construction processes, including replacing traditional beam-pillar plate systems with reinforced concrete load-bearing walls, aligning with international construction standards.[12] Despite limitations in internal space flexibility[13], Silva set a

IMS Žeželj Housing Technology," *Vedecká Štúdia Scientific Study, A&U*, volume 53, no. 3 – 4 (2019): 170-181 and "Prefabricating non-alignment: The IMS Žeželj system across the decolonized world, *History of Construction Cultures* – Mascarenhas-Mateus & Paula Pires (eds) (2021): 311– 320; Nina Berre, Paul Wenzel, Johan Lagae, *African Modernism and Its Afterlives* (Minnesota: Intellect, 2022); Inês Rodrigues, Francesca Vita, "Large construction companies in the widespread of modern housing. A comparative analysis between Lisbon and Luanda," *Proceedings of the 8th International Congress on Construction History – Zurich* (June 2024): 439-446.

7. Rodrigues, "The Role of Construction Companies in Modern Housing. Precol's Footprint in Late Colonial Angola," *17th International Docomomo* Internacional – Valencia (September 2022): 276–285.

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11. Manuel Rocha, Ferry Borges, Ruy Gomes, "Relatório da Visita de Oservação às Instalações de Fabrico de Elementos Pré-fabricados da "ICESA" (Lisbon: LNEC, July 1969) [Archive: 4487].

12. Silva, *Descriptive report Project Bloc* A2. Oeiras Municipal Archive, Lisbon, Portugal, Process, No. 1711 (Oct 13, 1970): 2.

benchmark architectural standard by defining construction elements that provided exceptional comfort in residential complexes. Weekly design meetings from October 1969 enabled knowledge transfer, particularly from Sweden, leading to significant advancements in construction techniques and quality.

The transfer of prefabricated systems and techniques extended beyond Portugal to its African colonies, including Angola. The Portuguese government promoted industrialised construction methods to address housing shortages in colonial cities like Luanda, which were driven by rapid urbanisation and economic growth.

Simões de Carvalho, after his stay in Paris where he specialised in urban planning at the prestigious *Institute of Urban Planning* (University of Paris) and collaborated with André Wogenscky and Le Corbusier (1956-1959), returned to Luanda became head of the Luanda Planning Office.[14] He was crucial in promoting prefabrication in the type-projects for housing, such as the concrete constructions for *rural houses in Quilunda*, encouraged by the *Junta Provisional de Povovamento de Angola* (JPPA), showing architectural elements close to the *Maison du Péon*[15], as the detail of the concrete's gargoyles; also with the *Quinta Palatino neighbourhood*, designed by Weiner, Sert and Schulz in Havana, Cuba.[16]

The Unit Neighbourhood nº1 in *Prenda Musseque*, designed by Simões de Carvalho, Augusto Pereira, and Pinto da Cunha and Rangel neighbourhood, designed by Simões de Carvalho with Lopo Carvalho (1968-1974), were developed with the support of the government and private contractors notably *Predial Económica Ultramarina* (PRECOL), utilised pre-stressed concrete and modular systems to create efficient, aesthetically pleasing housing. Le Corbusier's Modulor system, integrated into these projects, demonstrated the influence of international design principles in shaping the city's modern architecture. Prefabricated elements, such as brise-soleils, balconies, and panels, enhanced the functionality and appearance of the buildings, optimising them for the tropical climate.

3. PORTUGUESE AND ANGOLAN HOUSING STOCK IN DEMOCRATIC AND INDEPENDENCE TIMES

On April 25, 1974, the Carnation Revolution in Portugal led to the overthrow of the Estado Novo regime, significantly impacting housing policy. Interestingly, one of the critical moments of the fall of Fascimo took place in the Quinta do Morgado neighbourhood on 11 March 1975. Post-revolution, the SAAL (*Serviço de Apoio Ambulatório Local*) program was initiated in Portugal to provide housing for marginalised populations through collaboration among various parties. However, the program ended prematurely in 1976, halting housing development progress.

Following Angola's independence in 1975, international cooperation, particularly from Yugoslavia, Cuba, and Sweden, significantly influenced the post-colonial housing development. Yugoslavia's prefabrication technology, the IMS Žeželj system, was adopted by Angola, leading to the development of sustainable housing complexes in Luanda, such as the *Urbanisation*

13. Monteiro, *A obra do arquitecto Fernando Silva (1914-1983): um arquitecto da geração esquecida* (Lisboa: author's edition, 2011), 97.

14. Ana Milheiro and Inês Rodrigues, ""Neighbourhood Units" in colonial Africa: controlling the musseque through an urban model from the Global North," *Middle-Class Mass Housing: European Stories*, Vol. 3: Social recompositions of Mass Housing (2024): in press.

15. Milherio and Rodrigues, "Neighbourhood Units" in colonial Africa: controlling the musseque through an urban model from the Global North."

16. Maxwell Fry and Jane Drew, Drew. *Tropical Architecture in Dry and Humid zones*. (London: Batsford, 1964), 120-121.





Figure 1. A succession of photographs of the manufacture of "Fiorio" panels at the ICESA factory. Reinforced resistant exterior walls, resistant interior panels and storage areas © Credits LNEC, Lisbon, July 1969 [Archive: 4487].



Figure 2. Fernão Simões de Carvalho et al., Neighbourhood Unit n°1, Luanda, Angola, 1963-1968. Variety of prefabricated elements on the façade of Block D2, Luanda, Angola. © Inês Lima Rodrigues, 2010.

Figure 3. View from Luanda over the "Cuban Blocks" in the Cazenda neighbourhood (in the background, the three buildings constructed as part of the unfinished urban plan for Neighbourhood Unit No.3). © Credits Inês Lima Rodrigues, 2010.

of Lixeira, designed by Ivan Petrović leveraging existing prefabrication IMS Žeželj factories in Luanda.[17] This project featured European-style prefabricated buildings with climate-adaptive elements like loggias and balconies, contrasting sharply with the surrounding areas and showcasing the success of international cooperation in post-colonial Angola.

Cuba's international cooperation also heavily influenced Angola's housing development, creating "Cuban Blocks" in Luanda to address housing needs for civil servants. Drawing from the "Great Soviet Panel" factory experience in Cuba, the "Sandino" System emerged in Luanda like the construction systems in Havana, such as in the *Camilo Cienfuegos* and *Alamar neighbourhoods*, implemented with the same constructive system and similar architectural approaches. The transfer of the "tropical panel" spread in Cuba, as identified by Alonso and Palmarola[18], was adopted in Luanda to achieve more sustainable façades, quickly becoming a model solution to housing problems throughout the country. The first attempt was made to use lightweight, prefabricated construction elements to apply a system previously adopted by Cuba, which, when applied in Luanda without any modifications, initially resulted in a fiasco. The extremely simple modular system, of the "Sandino" type, which could be assembled without special equipment, consisting of un-insulated prefabricated concrete slabs inserted into the vertical grooves of equally pre-fabricated concrete posts spaced 1.04 metres apart, did not take into account the special socio-cultural patterns of the Angolan

17. One fabric was donated, the other two were bought by the Cuban government. Cf.: Jovanović, 2019, 17.

18. Pedro Ignacio Alonso and Hugo Palmarola, *Panel* (London: Architectural Association, 2014),118-147.

people[19],This system was neither designed nor adapted to cultural or climatic requirements, but simply technically adjusted, and failed to gain acceptance in Angola. However, the introduction of technological approaches in terms of partial prefabrication became a reality with the aim of simplifying housing construction and developing production methods for heavy prefabricated parts.

By the late 1970s, Angola had adapted these prefabricated technologies to its socio-cultural and climatic context through public high-rise constructions of Cuban 5-storey buildings made of light, partially prefabricated elements. From this model, called E-14, and its successor E-15, several housing complexes, known as "Cuban Blocks", were constructed with Cuban assistance in cities like Luanda, Sumbe, and Benguela, particularly in peripheral zones. The " Cuban Blocks" in Luanda's Caputo neighbourhood consisted of 96 blocks of flats arranged in an orthogonal grid pattern. In the Cazenda neighbourhood, two smaller blocks stand adjacent to the airport, where the "Cuban Blocks" prominently feature in the urban landscape, contrasting with the only three modern blocks constructed according to Simões de Carvalho's Housing Unit No. 3. This juxtaposition highlights the shift from Luso-Angolan prefabrication at the end of colonialism to the systematisation of the Soviet System in the late 1970s and onwards.

The buildings followed the Soviet models, featured two symmetrical dwellings per floor with standard amenities like living rooms, bedrooms, bathrooms, and utility rooms. The construction of these Cuban blocks showcased a shift from Luso-Angolan to Soviet-inspired prefabrication methods, marking a new era of urban transformation in Angola post-colonialism. These projects aimed to address the housing challenges in Angola and led to the standardisation of construction practices and innovative urban forms in the country. Various architectural styles were implemented, but all shared the common goal of providing adequate housing solutions in Angola's evolving urban landscape.

4. CONCLUSIONS

The research conducted in this paper sheds light on the significant role of prefabrication in shaping housing development in Portugal and Angola during critical periods of colonial transition and post-independence. Through a comparative analysis of housing estates in Lisbon and Luanda, we've explored how the introduction of prefabricated design elements has led to functional and aesthetic innovations. In both contexts, prefabrication emerged as a response to pressing housing shortages and the imperative to provide affordable housing quickly. Large construction companies were pivotal in driving innovation, collaborating with foreign partners to introduce advanced prefabrication methods. In Portugal, partnerships with French and Swedish companies led to the adoption of innovative techniques, while in Angola, collaboration with Yugoslavia and Cuba brought in prefabricated systems tailored to local climatic conditions.

Transferring knowledge and know-how from foreign sources was crucial in these developments. Portuguese architects and engineers collaborated

19. O. Greger, "Shelter Policies and Strategies for Housing and Human Settlements in the People's republic of Angola – the first decade", 1986, DW De-velopment Workshop, https://dw.angonet.org/?s=Greger.

closely with their international counterparts, adapting prefabrication techniques to suit local contexts. This transfer of expertise facilitated the adoption of functional and aesthetic innovations and promoted cross-cultural exchange and collaboration. Furthermore, the utilization of prefabricated systems in the Global South, particularly in Angola, highlights the adaptability of these techniques to diverse socio-political and climatic conditions. From the introduction of the Fiorio system in Portugal to the widespread adoption of Cuban and Yugoslavian prefabrication methods in Angola through the variation of the "Sandino" system. These systems have transformed architectural design and urban planning, contributing to the modernization of housing stock in both regions.

The developments in Lisbon and Luanda showcased the versatility and adaptability of prefabricated systems in diverse urban contexts, undergoing numerous adaptations and upgrades to meet site-specific demands. Through partnerships between local and foreign companies, technical expertise was leveraged to shape new lifestyles amidst chaotic urban contexts. These innovations exemplify the transposition of technology during the colonial transition period, reflecting a broader trend of international exchange and innovation in architectural practices.

In conclusion, the study underscores the enduring legacy of prefabrication in shaping architectural narratives and urban landscapes during periods of colonial transition and post-independence. By exploring the interplay between prefabrication, foreign expertise, and local adaptation, this research offers critical insights into the dynamics of architectural innovation and globalization in mass housing construction.

While this study sheds light on prefabrication's role in housing development in Portugal and Angola, future research could explore its long-term impacts on housing quality, durability, and sustainability. Longitudinal studies tracking prefabricated buildings' performance over time could provide valuable insights into their effectiveness and areas for improvement. Additionally, investigating the social and cultural dimensions of prefabricated housing could uncover how these systems influence community formation, social cohesion, and cultural identity. Comparative studies across other regions of the Global South could offer insights into prefabrication's transferability across different contexts and climates.

Overall, by building on the findings of this study and addressing these research gaps, scholars can continue to advance our understanding of the role of prefabrication in shaping the built environment and addressing the challenges of housing provision in diverse socio-cultural contexts. ■

BIOGRAPHY

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THE ROLE OF PREFABRICATION IN HOUSING CONSTRUCTION IN THE 1970S IN CHINA: THE CASE OF DIPLOMATIC RESIDENTIAL COMPOUNDS IN BEIJING

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ABSTRACT.

Collective housing built after the founding of the People's Republic in 1949 and prior to the commercialisation of the housing market in 1998 is an emerging research field in China. However, existing scholarly attention is paid to housing projects from the 50s, which were built under Soviet influence and are now officially recognised as heritage. The technology of prefabrication in housing construction in China remains underexplored.

The paper argues the 70s was a crucial period in the research of prefabrication in China, and the case of Diplomatic Residential Compounds (DRC) in Beijing provides important clues. Constructed in 1973, DRC was the first high-rise residential building in the capital city, and also one of the first to fully use prefabricated components in high-rise residential buildings.

The paper illustrates the development of prefabrication technology in housing construction in China, examines how this technology was tailored to accommodate the needs and available resources, and concludes that despite the consistent effort, the prefabricated panel system was not as widely applied in China as in other countries due to the limited capacity of industrial production.

1. INTRODUCTION

In the early 1970s, though internally still deeply entrenched in the Cultural Revolution, China achieved great diplomatic breakthroughs on the global stage. Between 1970 and 1972, diplomatic ties with 36 nations were established, marking China's integration into the international community. This momentum was catalysed by its admission to the United Nations in 1971, and landmark visits by then-US President Richard Nixon and Japanese Prime Minister Kakuei Tanaka the subsequent year.

Several buildings assigned for diplomatic purposes were built to accommodate the growing demand of foreign embassies and visitors. Most of these constructions were situated in the designated "diplomatic district," which was established in 1957 on the east side of Chang'an Road, in an area measuring 60 hectares. One such building was the Diplomatic Residential Compound (DRC), constructed in 1973 to house diplomats. The compound is comprised of two sixteen-storey, two six-storey and one four-storey residential buildings in an area of 20,300 square metres. It was the first high-rise residential building in the capital city, and also one of the first to use prefabrication methods in high-rise housing.[1]

The two high-rises in the compound were undoubtedly an architectural marvel in the 1970s in the capital city. The two sixteen-storey towers on the central east-west axis of Beijing showcased the construction achievement of the young nation. After their completion, they quickly became a modern landmark appearing on postcards and calendars. Their architectural experiment also made the cover of the *Architectural Journal* in 1974, one of the oldest and still the most influential academic journal in the field in China.

However, the DRC appears to have somewhat faded from the spotlight of architectural history. While it receives brief mentions in various publications, a comprehensive exploration of its design and construction within a historical context is lacking. In the list of China's 20th Century Architectural Heritage, published since 2014 which has included 900 sites, the DRC was absent, despite the fact that another diplomatic residence next to it and built 3 years later was included in 2019.[2] The oversight of the DRC raises questions about the significance of prefabricated concrete panel systems in China's housing development history and why their contribution remains overlooked. This discrepancy underscores the need for further investigation into the role of prefabrication in shaping China's architectural landscape.

2. DESIGN

At first glance, there is a parallel in housing development between China and countries under the Soviet influence after the Second World War. Following its independence in 1949, China adopted the Soviet model in various aspects of society, including housing construction and design. Inspired by Nikita Khrushev's speech in 1954 on the industrialisation of housing construction, China's State Council issued the Decision on Strengthening and Developing the Construction Industry two years later. This document emphasised the standardisation of design, industrial production of construction material and

1. "Design of Sixteen-storey Assembled Apartments," *Architecture Technology*, Z1 (1974): 4-16.

2. The list is published under the guidance of the Chinese Society of Cultural Heritage and the Architectural Society of China. It is an advocacy and awareness-raising list, not an official designation of heritage, though some sites on the list are already designated.

the mechanisation of the construction process.[3] Following the Soviet model, in 1956, the Institute of Standardised Design was established, and a year later, a catalogue of standardised design for housing was published. The designs considered seven different regions and four levels.[4]

In 1956, the first standardised housing design in Beijing was developed with the help of a Soviet expert, known as Type II design. The floor plan adopts the Soviet standard of 9 square metres per capita living area, and bears resemblance to the K-7 Series in the Soviet Union. In an effort to achieve maximum standardisation, only one room size —3.2 metres by 6 metres— was used. However, the Type II Design was not yet built with a high level of prefabrication. On-site casting of concrete floor panels, brick load-bearing walls and wooden roof trusses were typical in the 1950s as the major construction method.[5]

The parallel development with the Soviet system only lasted for a short period in the 1950s, not only due to the divergence of politics which finally led to the Sino-Soviet split in 1958, but more importantly, due to the lack of required industrial infrastructure and technology. Although the system adapted from the Soviet Union largely remained until the commercialisation of the housing market in the 1990s, it did not result in the dominance of one or several standardised designs. In fact, China had been struggling between standardised design and local reality throughout the decades. Despite being well-informed about global housing developments through translated literature and delegations sent overseas, China faced challenges of adapting designs and technologies to its own circumstances.[6] During the late 1950s and the 1960s, ideologically-driven policies led to a continuous downward adjustment of design and construction standards. For instance, in 1957, the Type II floor plan was deemed excessive for China, prompting the National Commission of Planned Economy to issue regulations limiting the maximum living area per household to 18 square metres and an average of 4 square metres per capita living area.[7]

The DRC appears to be one of the first carefully designed residential buildings in a decade. Eighteen plans were made for the site, out of which a plan that combines towers and low-rises was chosen.[8] The two six-storey and one four-storey low-rises were built using a conventional brick and concrete structure, which utilises brick for vertical load-bearing walls and reinforced concrete for structural columns, beams, and floor slabs. The design of the tower was also chosen among a handful of drafts, including a Y-shape plan, resembling the P2 Type in Dessau, developed in 1971 in the German Democratic Republic. However, the plan was eventually abandoned due to its complexity and the difficulty in standardising building components. The final double-rectangle plan struck a balance between a varied streetscape and ensuring the feasibility of construction.

A lot of the design considerations in the DRC[9] were reflected in the standardised design in the 1970s in Beijing, which signals a departure from the previous policy which emphasised solely cost-effectiveness and minimal standards. A pivotal moment was the issue of the Revision of Residential

3. Junhua Lyu, and Peter Rowe, *Modern Urban Housing in China 1840-2000* (Beijing: Tsinghua University Press, 2003), 176.

4. Lyu and Rowe, *Modern Urban Housing in China 1840-2000*, 125.

5. "Design of Sixteen-storey Assembled Apartments," 4-16.

6. An example of such international exchange is the exhibition of standardised designs in Socialist countries, held in 1961 in Beijing.

7. Lyu and Rowe, *Modern Urban Housing in China 1840-2000*, 155.

8. "Design of Sixteen-storey Assembled Apartments," 4-16.

9. "Assembled Large Panel Experimental Residential Building," *Architectural Journal*, 11 (1959): 34-36.

Building Standards by the State Construction Committee in 1973, which allowed for the average residential floor area per household to be 34 to 37 square metres, doubling the standard in the 1960s, and permitted more spacious and comfortable housing designs. A prominent feature is the enlargement of the narrow entrance corridor into a small lobby area, which is not only a notable feature in the DRC, but also in the 1974 standardised design. Beginning in 1970, the task of standardised design was also decentralised to local levels, giving rise to more diverse floor plans in different regions.

The DRC's distinction from other residential buildings is also notable. Unlike the prevalent scale of 2.7, 3.0 and 3.3 metres in standardised floor plans since the 1950s, the DRC adopted larger 4 and 5-metre scales, with designated spaces for reading, dining, and service rooms. The same scale was also used in another diplomatic residence building constructed three years later. This departure from the norm reflects the effort to align with international standards of living.

3. TECHNOLOGY

Constructing DRC with fully prefabricated component was a deliberate choice. The prefabricated concrete panel system was not a new concept in China during the 1970s. It had already introduced in the 1950s during the first Five-Year Plan Era (1953-1958), when Soviet experts provided essential technical support for the so-called "156 major projects" of industrial development. Low-rise housing complexes using prefabricated concrete panel systems were first built in the Northeast region, using the technology developed by Soviet engineer, Vitaly Lagutenko. The panel was very thin, with ribs on all four sides to bear weight. In 1959, the first experimental building using Lagutenko panels was built in Beijing, in the neighbourhood of Muxiyuan.[10] Despite the political standstill after 1958, Soviet experts continued to provide key instructions in the experiment building.[11] The panel used was 3.6 metres wide and 5.4 metres long, 5 centimetres thick, with ribs on the edges to bear load from all four directions. Concrete blocks of 13 centimetres thick mixed with ground granulated blast-furnace slag were used as insulation layers of the panel.[12]

From the late 1950s through to the 1970s, prefabricated panels changed very little. In the experimental housing built in 1963 in Beijing Shuizhuizi, variations of Lagutenko panels continued to be used. The concrete panels were 4 centimetres thick, filled with 16-20 centimetres of slag mix insulation.[13] The experimental building was quite successful, but the construction cost was allegedly 1/4 higher than traditional construction, which led to doubts about the wider application of this technology.[14] Efforts to lower construction costs also led to experimenting various mix materials to reduce concrete consumption. Ground granulated blast-furnace slag and expanded perlite emerged as a popular material for concrete mix.[15]

In the 1970s, the panel system had not significantly advanced beyond the Lagutenko prototype. When constructing the sixteen-storey DRC tower, several technological solutions were considered. Cast-in-place concrete

10. "Assembled Large Panel Experimental Residential Building," 34-36.

11. "Assembled Large Panel Experimental Residential Building," 34-36.

12. Construction Technology Research Institute, *Beijing Architectural Construction Bureau, Beijing Suizhuizi Residential Compound, Pilot Project of Prefabricated Concrete Panel System* (Beijing: Beijing Architectural Construction Bureau, 1964), 4.

13. *Beijing Architectural Construction Bureau, Beijing Suizhuizi Residential Compound, Pilot Project of Prefabricated Concrete Panel System*, 1.

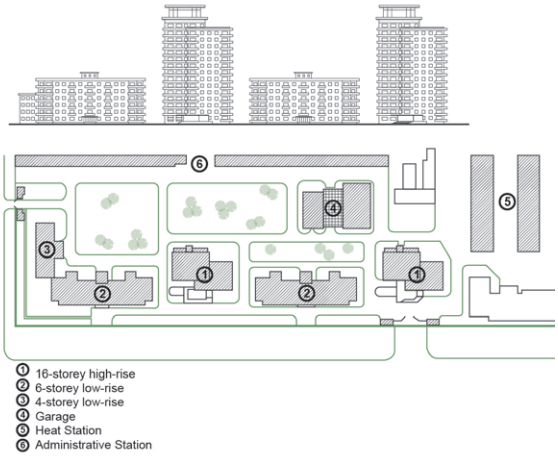
14. Beijing Architecture Assembly Company, "Using Industrial Waste Materials in the Construction of Large Panel Residential Buildings," *Architectural Journal*, no. 01(1973):32-35.

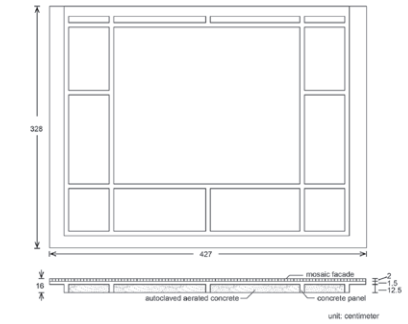
15. "Design of Sixteen-storey Assembled Apartments," 4-16.

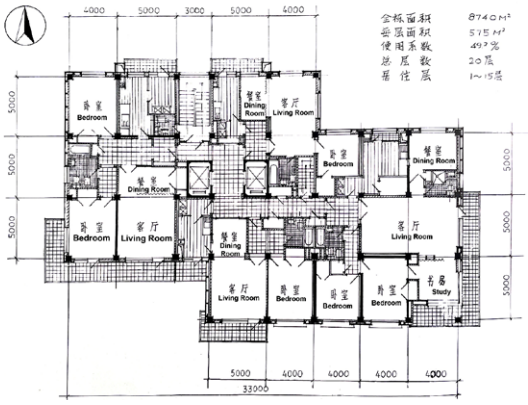
16. "Design of Sixteen-storey Assembled Apartments," 4-16.

17. Beijing Machine Construction Company, "Assembly of the Frame Structure of Sixteen-storey Apartment," *Architecture Technology*, Z1 (1974): 27-39.

18. Beijing Housing Administration, "Design of High-rise Residential Building Using Prefabricated Concrete Panel System," *Architectural Structure*, 01(1980): 1-8.







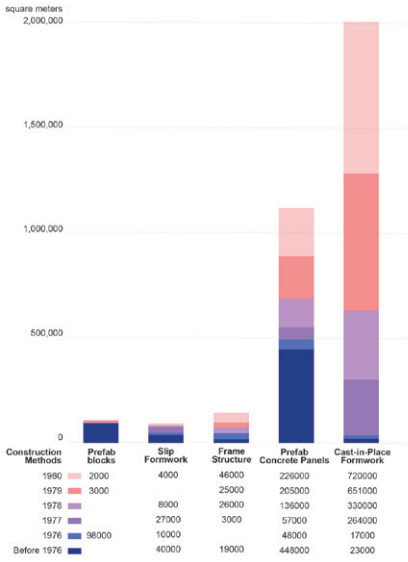


Figure 1. Site Plan of DRC

Figure 2. Floor Plan of DRC. "Construction of Sixteen-Storey Diplomatic Residential Complex," *Architectural Technology*, Z1.

Figure 3. Prefabricated Concrete Panels Used in DRC. Redrawn by the author of "Design of Sixteen-storey Assembled Apartments."

Figure 4. Total floor area of residential buildings using different construction methods by 1980. Drawn by the author based on the data "On the industrialisation of residential construction in Beijing," Shide Hu.

and steel frame structures, although prevalent in many high-rise buildings at the time, were deemed too costly for residential construction and were consequently ruled out. The load-bearing prefabricated concrete panel system, widely employed in the Soviet Union, East Germany, and other countries during that era, had not been experimented with in China. As a result, the final solution is a combination of reinforced concrete frame as the load-bearing system and thin concrete wall panels. The panels were 1.5-centimetre-thick with two sets of ribs on all four sides and a prestressed steel frame embedded. A layer of 12.5-centimetre autoclaved aerated concrete was added for insulation. All the components were prefabricated in factories and assembled on-site.[16]

Due to a decade of technological stagnation, the construction method for the tower block had to be developed from the ground up. The structural integrity and seismic performance were first tested with a three-storey experimental building.[17] The Beijing First Architecture Construction Company, tasked with manufacturing the panels, established two new production lines specifically for this project with no prior experience. Despite the challenges, prefabrication was proved to be an efficient industrialised construction method. The record speed of assembling one storey was 4.39 days.[18]

4. COMPETING SYSTEMS

Following the successful completion of the DRC, the prefabricated concrete panel system gained momentum in housing construction. In 1974, two eleven-storey residential buildings using load-bearing prefabricated panel system were built in Beijing on Tiantannan Road. The concrete panel is 13 centimetre thick with a layer of 12.5-centimetre autoclaved aerated concrete insulation.[19] While the technology may not have been considered groundbreaking by international standards, it nonetheless represented a significant breakthrough in housing development in China, and was awarded the National Science Award in 1978.[20] In the same year, the National Architecture Committee published the Interim Provisions for Structural Design and Construction of Assembled Large Panel Residential Buildings.

The cast-in-place concrete system was developed in the early 1970s and has become a major competitor with the prefabricated panel system. It was also awarded the National Science Award in 1978.[21] By 1980, the total area using the cast-in-place concrete system was double the area of prefabricated concrete panels, despite the application of prefabricated panel system was also growing quickly.

Several factors have contributed to the wider application of the cast-in-place concrete system. However, the production, transportation and assembly of concrete panels still posed technological challenges. By the end of 1980, only 28% of residential buildings were using industrialized construction methods, out of which only 6.35% used the prefabricated panel system.[22] The concern for seismic performance also loomed large as the 1976 Tangshan earthquake, one of the most tragic natural disasters in contemporary history in China, led to a higher requirement for earthquake resistance. Structural stability was a recurring discussion for prefabricated panel systems in the late 1970s and the 1980s. The constant variation of standardised design was also mentioned as a major impediment to the large panel system. The decentralisation of standardised design in the 1970s and the growing need for better, larger and more diverse living spaces gave rise to systems that were more adaptable to local needs.

5. CONCLUSION

The technology of prefabrication was introduced to China in the 1950s with Soviet technological support and did not advance much in the following decades. The 1970s witnessed a breakthrough of prefabrication in housing construction in China. Despite being valued for its high level of industrialization and construction efficiency, this technology was not widely applied in China compared to other countries due to technological restraints. ■

19. Beijing Chronicles Compilation Committee, *Beijing Chronicles: Architectural Engineering and Design* (Beijing: Beijing chu ban she, 2007), 497.

20. *Beijing Chronicles: Architectural Engineering and Design*, 476.

21. Shide Hu, "On the industrialisation of residential construction in Beijing," *Construction Economics Research*, no.01(1981): 17-20.

22. Hu, "On the industrialisation of residential construction in Beijing," 17-20.

BIOGRAPHY

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EXPORTING SOVIET MONUMENTAL ART FROM SOVIET TASHKENT TO EUROPE AND SIBERIA: THE WORKS OF ALEXANDER, NIKOLAI AND PYOTR JARSKY BETWEEN 1969 AND 1999

PHILIPP MEUSER
MEUSER ARCHITEKTEN GMBH/DOM PUBLISHERS

ABSTRACT

This paper aims to shed light on the remarkable oeuvre of the Jarsky brothers, showcasing the best examples of their projects. The facades they designed serve as a bridge between art and architecture, as the brothers developed a method to integrate mosaics and reliefs into precast concrete panels. Despite the industrial and highly standardised construction methods and political control, they managed to preserve their individual artistic freedom and evolve creatively. Their work combines floral ornaments and programmatic motifs, linking the heritage of Islamic architecture with the functionalism of Soviet construction. The initial phase of their work features traditional Uzbek ornaments found on historical buildings, while the motifs from the mid-1970s increasingly incorporate political content. Many facades depict representations from space exploration, mathematics, and natural sciences, combined with idealisations of the Soviet citizen. Only in the 1980s did the trio embrace a more abstract and artistically free vocabulary of forms.

The Tashkent Modernism movement has recently brought renewed attention to Soviet architecture in the capital of Uzbekistan. Within this context, the Jarsky brothers' mosaic facades on panel buildings stand out as exceptional examples of artistic expression amidst the often-perceived monotony of Soviet Union typology. Pyotr, Nikolai, and Alexander Jarsky designed colourful mosaic images and expressive reliefs for over 200 buildings in Uzbekistan, primarily in the capital city of Tashkent. Among other cities, the Jarsky had worked in Dushanbe/Tajikistan, Tbilisi/Georgia **(Fig. 01)**, Chisinau/Moldova **(Fig. 02)**, Vladikavkaz/North Ossetia, and Nyagan/Siberia. Despite being the most extraordinary examples of Soviet mass housing, part of the world's most extensive housing program since the early 1970s, the Jarsky brothers' work remains relatively unknown internationally. However, that will change shortly. On 25 March 2024, the Uzbek government placed 157 façade mosaics under special protection. Since then, property owners have only been able to hang a billboard over the façades or carry out modernisation or renovation measures following an approval process.[1] The extent to which individual mosaics were selected on residential buildings from the Soviet modernist period will also be included on the UNESCO World Heritage List and will remain to be seen shortly.

#09

Industrially prefabricated standardised buildings have always triggered controversial discussions in architecture. Especially during the reconstruction of destroyed cities in Europe after 1945, architects and engineers debated the lack of design standards on the one hand and the potential for structural optimisation on the other – spurred on by a housing policy that wanted to build "faster, better and cheaper". This applied to both the Western world and the socialist world. Three generations of architects later, we are once again discussing the possibilities of meeting the housing shortage by planning standardised buildings and saving costs in the process.

The debate on typified architecture has received new impetus in recent years. The academic reappraisal of late modernism, also known as Eastern modernism ("Ostmoderne") or Soviet modernism in the former socialist context, has enriched the circles of architects, art historians and critics with aspects of the monumental value of industrially prefabricated buildings. This raises the question of what value an individual building has if the construction industry has erected it dozens or even hundreds of times in a similar form. We discuss whether, for example, the prototype, its variant, or the significant urban location of such a building are reasons for its preservation.

These questions are understandable in the context of the German housing debate. We live in a state of abundance and unequal distribution. We are still building back empty residential buildings in shrinking regions while living space in urban centres has become a scarce commodity. However, how is such a discussion perceived in economically less prosperous regions? Is it not presumptuous to point the finger from a Western perspective and call for a different or even absent understanding of monument protection?

Anyone who has seen the mosaic art on the more than 200 prefabricated building façades in Tashkent may not immediately consider the question

1. "O 'ZBEKISTON RESPUBLIKASI QONUNCHILIK MA'LUMOTLARI MILLIY BAZASI," Lex.uz, accessed April 28, 2024, https://lex.uz/uz/pdfs/6847780.

of monuments. However, this question must be asked! While authoritarian states such as Uzbekistan presume to allow only one valid historiography and merely use pre-modern architecture as a backdrop for official identification, external impulses are needed. Such a sharpening of awareness can contribute to recognising one's architectural values and utilising these not only academically and politically but also for tourism and economic purposes. Three approaches can be pursued in the case of mass housing construction in Tashkent after the 1966 earthquake. These points are incomplete and should be critically scrutinised and completed by young academics in Uzbekistan.[2]

1. THE MONUMENTAL VALUE OF INDUSTRIALISED TYPE BUILDINGS

Industrialised type buildings represent an innovative and standardised approach to architecture. While some argue that standardisation reduces the individual value of the buildings, the possibility of shaping an architectural style through the repeatability of the buildings is also emphasised. This is particularly true of Soviet housing construction. The significance of the first realised house in a type series can be seen as the starting point for developing a typological design language. Identifying these prototypes or pilot projects is a first step.

2. URBAN CONSERVATION

Another aspect of the monumental value lies in the urban significance of the type buildings. If a specific type of building characterises the cityscape and significantly contributes to the urban environment, monument protection on an urban planning scale can be considered. This approach requires a more detailed analysis of the impact and significance of the buildings in the context of the social life of their inhabitants. In the case of Tashkent, the conversion to a model Soviet city can be traced through the residential areas, which had to make way for neighbourhoods of single-storey mud houses.

3. THE MONUMENTAL VALUE OF THE JARSKY BROTHERS' FAÇADE ART

The unique case emphasised in this paper is the monumental value of the façade mosaics by the Jarsky brothers in Uzbekistan and other former republics of the USSR. Over the past twenty years, a new academic discourse has developed that identifies and documents the qualities of Soviet modernism – including architectural art – and stimulates discussion about its preservation. This example illustrates the need to consider and evaluate the monumental value of such forms of expression in different cultural contexts.

Prefabricated housing was a global and cross-cultural phenomenon that defined the architecture of the twentieth century. No other architectural endeavour has significantly influenced people's daily lives – their sense of freedom within their four walls. It is still too early to assess whether this struggle for affordable homes and social equality was a failure or a success. When the reconstruction of Europe's war-torn cities began in the 1950s,

2. Philipp Meuser, *Fassadenkunst im Plattenbau. Das Werk der Brüder Jarsky im sowjetischen Taschkent* (Berlin: DOM publishers, 2023).

planning and construction quickly became part of a political agenda that promised hope, happiness, and progress. Broad government support, both in the East and the West, enabled mass housing to flourish, providing many families with an affordable home in a short period. The ideological conflict during the Cold War inspired a flurry of capitalist and socialist strategies for solving the housing problem.

The success story of standardised mass housing in the Soviet Union begins in the mid-1950s. Nikita Khrushchev, introduced a radical change in planning and construction. Millions of prisoners, released from labour camps by decree of Khrushchev, were flocking to the cities and searching for a home, which placed even greater pressure on the already strained housing market. The form of standardised mass housing, bearing the name Khrushchyovka, changed the face of Soviet cities. For the first time, these new buildings introduced an urban – albeit monotonous – quality to many settlements in Siberia, the Eurasian Steppe, and the Far East.

By its dissolution in 1991, prefabricated housing accounted for up to 75 per cent of all homes in the Soviet Union.[3] The rest of the homes comprised conventional brick buildings built mainly according to standard designs. In Tashkent, the capital of the Uzbek Soviet Socialist Republic (SSR), the share of prefabricated housing rose to 75 per cent by the early 1990s, with a total floor area of between 3.1 and 3.5 million square metres. These numbers also typified other socialist states, such as the GDR, where prefabricated buildings accounted for 75% of all housing. The construction of new homes dropped by almost 50 per cent in terms of floor area between 1991 and 1995.

4. ARCHITECTURAL LABORATORY ON THE SILK ROAD

Tashkent exemplifies Soviet architecture while boasting distinctly regional features. After the earthquake of 1966 destroyed most of its historic centre, it became the site of an all-union reconstruction effort. Republics across the Soviet Union sent workers to rebuild the city following a pre-approved master plan **(Fig. 03)**. Soviet propaganda organs seized on the event as a demonstration of the so-called friendship of the peoples, which shows the importance of architecture, space travel, and military technology in the Soviet people's imagination. However, while the city of Tashkent was built in accordance with a markedly Soviet architectural style, it contains a wealth of regional ornamentation unmatched by any other republic of the USSR.

The brothers Pyotr Jarsky (1929–1993), Nikolai Jarsky (1931–2014), and Alexander Jarsky (1936–2015) created an array of remarkable artworks for buildings in Tashkent. Thanks to them, the city boasts over 200 façades with colourful mosaics and filigree reliefs. The floral patterns and programmatic motifs combine the heritage of Islamic architecture with Soviet modernism's euphoric anticipation of the future. The Jarsky brothers arrived in Tashkent shortly after the earthquake of 1966, seeking to introduce their ideas on façade design. 'The best place to create something new, beautiful, and useful is where much is being built. At the time, Tashkent was such a city.'[4]

3. V. A. Kossakovsky and V. A. Chistova, *Architectural Compositions of Residential Buildings* (Moscow, 1990).

4. Quote of Nikolai Jarsky in *Vecherny Tashkent*, February 12, 1972.

The Jarsky brothers' first building-height decorative mural adorned a nine-storey residential building on Mukimi ko'chasi in the district of Chilonzor. Many years later, the architect Jury Miroshnichenko made the following comment on this design, created by the eldest brother Pyotr: 'This design bewildered the architects. Its composition, colour, and subject matter did not reflect the Uzbek people's popular ideas on ornamentation. The red, brown, and golden hues, the sheer size, the composition's boldness, and the creators' imaginative power did not immediately speak to us. Only the unmistakable talent of the painters made it clear that the design needed to be realised. An analysis of the first mural revealed that it drew on many elements of Uzbekistan's cultural heritage. The work was closer to the ancient art of Afrasiyab and Panjakent than to creations from later periods, which typically display a more intricate ornamental style. The use of ancient, forgotten stylistic and compositional traditions conferred on this work a special value and made it stand out among modernist artworks.'[5]

Although the author's comments refer to the artwork rather than the architecture, such high praise is rare for a standardised, prefabricated residential building in the literature on Soviet housing. As such, the works of the Jarsky brothers can be seen as unique, both quantitatively and qualitatively, in the history of Soviet architecture. It becomes clear that Tashkent attempted to introduce variety to the monotonous panel-building façades through ornamentation, reliefs, and varying arrangements of façade elements.

Nikolai Jarsky, who was the head architect of the DSK-2 housing combine from 1972 to 1991, not only designed mosaics but also reliefs for balcony parapets and sun-protection elements in front of loggias. These elements had an enormous influence on the cityscape, which prompted Jarsky's employee Miroshnichenko to claim euphorically: 'A group led by head architect Jarsky and head engineer Prassolov has been working for several years on a new kind of relief that can be used for multi-storey façades. Unlike smaller ones developed in previous years, this relief has been met with great approval. Since then, a design team at the housing combine has been tirelessly planning the prefabrication of the relief. It has already brought greater variety to the city's buildings, and each district has taken on its architectural appearance. Today, we can speak of a unique Tashkent style!'[6]

5. BETWEEN INDUSTRIAL PRODUCTION AND ARCHITECTURAL CRAFTSMANSHIP

A builders' newspaper based in Tashkent published several articles praising the works of the Jarsky brothers. An article in 1973 reported that in the past, only artists had created mosaics as part of a costly process. Now, three architects, the Jarsky brothers, were designing all mosaic murals directly at the DSK-1 housing combine, taking care of all tasks, from selecting the motifs to the moulding. 'The techniques for producing mosaic panels have been improved and simplified. Pyotr, Alexander, and Nikolai Jarsky draw a full-size pattern on paper. Mosaic setters then paint colourful tiles onto the drawing, and the finished template is laid into a mould. After the concrete

5. Yuri G. Miroshnichenko, "Monumental Art and Architecture in the Residential Buildings by Pyotr, Nikolai, and Alexander Jarsky," in *Stroitelstva i arkhitektura Uzbekistana (Construction and Architecture in Uzbekistan)*, issue 7 (1987).

6. Miroshnichenko, "Monumental Art and Architecture in the Residential Buildings by Pyotr, Nikolai, and Alexander Jarsky."

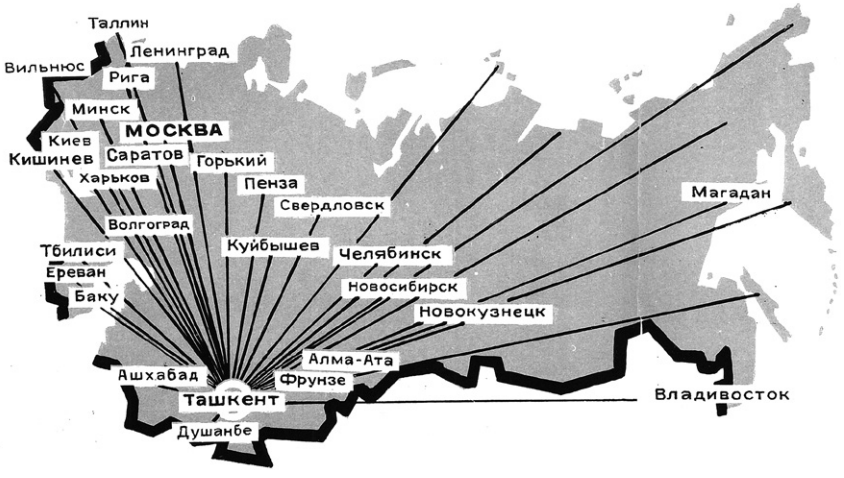




Figure 01. Residential building of 1-TSP series in Tbilisi (left) and Tashkent (right), façade design by Pyotr Jarsky 1972/1973, © Philipp Meuser (left), Armin Linke, Courtesy ACDF (right).

Figure 02. Residential building of 1-TSP series in Chisinau (left) and Tashkent (right), façade design by Nikolai Jarsky 1977/1978, © Stefan Rusu (left), Philipp Meuser (right).

Figure 03. Map of USSR featuring the places where architects, engineers, and workers were sent from to Tashkent, © Arkhangelskiy, V. A.: Tashkent – gorod bratstva. Tashkent 1969.



is poured into the mould, the paper is removed, and the tile pattern remains fixed on the panel. The completed panels are delivered to the construction site and assembled. The Jarsky brothers constantly seek new ways of improving production techniques and reducing costs while searching for unique images and patterns. The architects have also introduced the use of broken tile fragments, which were previously thrown away but are now used to create finer decorative patterns. This way, the housing combine has saved on costs without affecting the quality or beauty of the ornamentation.'[7]

The fact that a daily newspaper published an article praising a detailed building process highlights the significance of housing in the USSR. In Tashkent, where the Jarsky brothers created most of their work, art for architecture also drew particular attention because the reconstruction of the city after the earthquake of 1966 had become a defining feature of the Uzbek SSR capital. So, it was only natural that a news report should cover the construction of the first experimental prefabricated residential buildings. In 1970, the Tashkent evening newspaper published a feature on a new job in the construction industry: 'Two of the Jarsky brothers, Alexander and Nikolai, left their positions at a planning institute ... in order to produce their monumental art at an urban scale and create a more beautiful cityscape. A new profession has also emerged in the building industry, with the opening of a new office at the DSK-2: that of the mosaic tile setter.' The article continues with a description of the work process: 'A large piece of paper hangs on the wall with a black-and-white drawing: a figure of the Madonna, between exotic flowers and plants, holding the sun in her hands. It is the sketch of a future mosaic mural that will adorn a residential building in Tashkent. There are many such sketches at the workshop. Some can already be seen and admired on façades in the city; others are still being prepared. We spoke to three tile mosaic tile setters on the day of our visit: Lyuda Byelichenko, Nina Kuzmina, and Natasha Paramonova. They were busy putting together a pattern for a gable façade. They glued small, colourful tiles onto a piece of paper lying on the floor, one tile after the other. We could already recognise a green leaf or a beautiful flower. One thousand five hundred tiles and fragments were laid on a surface measuring two square metres. The women told us the three require around 20 work days for a 150 square-meter mural.[8]

The Jarsky brothers' success could not have been foreseen in the Soviet building industry. However, neither the factory management nor the party leadership objected to the decorations since the work of the predominantly female tile setters was incorporated into the production process for the large panels, and the motifs could be created directly at the factory. The Jarsky method was exceptional because the mosaics and the load-bearing panels were cast together as a single unit at the factory. Although the approval authority GlavAPU had the final say in the choice of images, the Jarsky brothers at least had the right to make suggestions. The influence of politics on the design of the façades and the construction process as a whole sometimes came from the highest level. 'Sharof Rashidovich Rashidov, at the time the First Secretary of the Communist Party of Uzbekistan, examined

7. 'Rivals of the Old Masters', in *Stroitel Tashkenta*, February 7, 1973.

8. 'Where Beauty Is Created', in *Vecherny Tashkent*, October 31, 1970.

the decorated panels at the housing combine and approved their assembly on the construction site.'[9]

6. THE JARSKY METHOD: TO GIVE ANONYMOUS BUILDINGS AN INDIVIDUAL FACE

Although secular buildings in other parts of the USSR have remained anonymous, in Tashkent, the expressive mosaics and reliefs on the gable façades of nine-storey residential buildings are linked to Alexander, Pyotr, and Nikolai Jarsky. Within three decades, the artist trio created over 200 façade designs that define the cityscape and testify to a search for a national style. Remarkably, the individually designed façade decorations were used not only to adorn prestigious residential buildings for the Nomenklatura and public buildings strategically placed at prominent locations in the city but also prefabricated mass housing series. The motifs range from oriental patterns to figurative representations through to geometric forms. Most of the façade mosaics hang on the front side of nine-storey residential buildings of Series 1-TSP, which were produced at the DSK-2 housing combine. Nikolai Jarsky said the challenge was to 'break the monotony of the prefabricated mass housing series, each time with a new image.'[10]

Four experimental housing projects realised shortly after the earthquake show that architecture in the Soviet Orient increasingly took on a national character. The projects include large-scale ensembles and several smaller individual buildings, some of which feature mosaic façades by the Jarsky brothers. For the housing development along Ulitsa Bogdana Khmelnitskogo (today Babur ko'chasi), Pyotr Jarsky created a building-height mosaic relief depicting a portrait of the Uzbek national hero Zahir ud-din Muhammad Babur. The building, which contains 500 apartments, also features a natural ventilation system that functions like a heat exchanger.

While Nikolai and Pyotr Jarsky worked in Tashkent from 1969 into the 1990s, the youngest brother, Alexander, left the city to travel extensively for almost ten years. He worked in various places in the Caucasus and Udmurtia, where he and his family settled after emigrating from France in 1947. In 1980, he created a façade mosaic in Izhevsk using the technique developed in Tashkent – by casting the mosaic tiles and the concrete for the wall panels together as a single unit. However, the two brothers who remained in Tashkent also worked outside Uzbekistan, designing façades for Kulob in Tajikistan and Tbilisi in Georgia. However, Tashkent remains the city with the most incredible variety of colourful façades in Soviet mass housing. It remains the city with the world's most beautifully decorated panel buildings. ■

9. 'Where Beauty Is Created', in *Vecherny Tashkent*, October 31, 1970.

10. Interview with Nikolai Jarsky in *Tashkent* on April 2, 2004.

BIOGRAPHY

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RESHUFFLING URBAN LAND: MODERN IDEAS FOR NEW URBAN MORPHOLOGIES

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ABSTRACT

Well-known for their utopian character, many modern urban proposals never found a fertile ground. Criticized for breaking the city fabric and sometimes even considered antiurban, the city projects developed by the first wave of modern architects were treated as the unpleasant other of well-received architectural designs.

However, one aspect of these projects is usually overlooked: replacing the old urban fabric implies a total reorganization of land property schemes. In fact, if we look at the urban morphology in terms of property, we will see that the city fabric is nothing but a stubborn crystallization in time of land property regimes. Thus, the continuity of the urban fabric is, in fact, a continuity of land property schemes that, in the end, are an endless source of surplus value—and hence, one of the main reasons for economic inequality.

World War II and the rise of Urban Renewal schemes gave a new boost to these modern ideas. Within this scenario, a second wave of modern city projects was developed, one which aimed at overcoming the shortcomings of the first wave. In the few cases in which these ideas touched the ground, they dealt with preexisting property regimes, reshuffling them to generate a new urban fabric and, thus, a different way of designing the city.

Through a discussion of the nature of the public and private debate on the city, "Reshuffling urban land" aims to see how the ideas of modern architecture went into the core of economic inequalities by reshuffling land property regimes to generate a different city. In the end, we want to know whether we can still think of a new form of city—one where land property is no longer the main defining factor.

1. INTRODUCTION

Widely quoted as an example of contempt for the past and the awful urban ideas of modern architects, 1925 Le Corbusier's Plan Voisin found a new interpretation in Víctor Velásquez's research. Analyzing in depth a colored general plan of the project published in 1926, the Colombian scholar realizes that "The use of color in the floor plan helps to distinguish the new buildings (in black) from the large green zones gained by the city. Additionally, the red indicates the patrimonial buildings that the Voisin Plan maintains" (Velásquez, 2016:234). By redrawing the plan and geolocating its elements, he discovered that the red buildings were historical landmarks of Paris that Corbusier chose to keep. Thus, it was not true that the Swiss-French architect wanted to destroy Paris completely. He only wanted to eliminate the urban fabric that Caniggia (2018) would have called "basic buildings" while keeping the remarkable ones. Although this selective removal of the urban fabric could be understood as a reaction to Camillo Sitte's proposals, it was not a novel idea. By preserving those buildings we would now consider as heritage, Le Corbusier was not breaking with history but only choosing one tradition over another. This could lead us to think Le Corbusier was not as progressive as many would have thought. However, since tabula rasa was to be applied over the unremarkable constructions and narrow, medieval streets, the real change would happen in the urban fabric and, hence, in the relationship between buildings and urban land.

Although the apparent radicality of tearing down a significant part of Paris' city center may have seemed utopian, or a theoretical construct, the need to rebuild large urban areas destroyed during WWII opened the chance to test modern urban models like those that Le Corbusier proposed twenty years before. Yet, by then, a new generation of architects had taken the baton and the Swiss-French architect was not called to work on these redevelopments. In 1951, the VIII CIAM held in Hoddedson, England, under the direction of Josep Lluis Sert, worked around the idea of "The Heart of the City", and the need to rebuild those blasted city centers could have brought Plan Voisin back to the discussion. However, the discourse was already shifting, and the question was no longer for radical tabula rasa schemes but rather for more conservative approaches that could help recover the sense of community lost during the war (Mumford, 2000). The so-called "Corbusians" (Mumford, 2018:227) lost the conceptual battle, and more nuanced approaches to the reconstruction of city centers began to be promoted.

In order to offer a new lens to read this well-known historical debate, a question needs to be answered: What is 'the heart' of the city? And why would the city need a heart in the first place? In animal bodies, the heart is the organ that propels blood to the arteries, carrying nutrients and oxygen. The heart is the engine of vitality. In the biological analogy of the city, a heart that pumps vitality to the 'arteries' (a term widely used as a synonym for 'streets') is that which renews the flow of what makes the city alive. The movement of people through the streets becomes analogous to blood running through the veins. However, since the city's arteries are not tubular pipes but open and

visible public spaces—streets—the flows must be publicly visible. Since in the urban realm vitality equals public life, then "the heart of the city" is that which pumps public life.

2. SOME DEBATES ON THE PUBLIC AND PRIVATE

Insofar as tabula rasa schemes turned corridor streets into roads, effectively denaturalizing the arteries that could channel public life, urban schemes like the Plan Voisin would threaten the vitality of the city. If streets were only routes for transportation, public life would be in danger. Perhaps that's why the recovery of life on the street became a central issue for architects like Allison and Peter Smithson and many of their comrades within the Team X (Smithson, 1968). And back then, this concern was not reserved only for architectural discussions. In 1958, Hannah Arendt published her seminal book The Human Condition, reopening the question of the public sphere and retracing it back to the Greek polis (Arendt, 1958). Perhaps inadvertently, this work reinforced the connection between public life and historical urban models.

In 1974, Richard Sennett's book *The Fall of the Public Man* [*sic*] continued this path. For the North American sociologist, the increase in close contact in the streets brought by bourgeois efficiency led to a decrease in sociability, turning public space into a mere place for transit between interiors (Sennett, 2002 [1974]:15). Looking at the ancient regime's cosmopolis, he observed that 'public' was the life outside the house and the family: a life lived in the streets and public spaces. In his theatrical view, people were like actors, with the city as their stage and strangers acting as the audience. This realization gives room to Sennett's idea that "a city is a human settlement in which strangers are likely to meet" (Sennett, 2002 [1974]:39). The encounter with what is strange seems a condition for public life. This is why Sennet argues that small communities cannot be the antidote against capitalist cities. On the contrary, they could become even more conservative because "the community exists only by a continual hyping-up of emotions" (Sennett, 2002 [1974]:309). For him, the only way to escape this trap would be to recover the complexity of the ancient regime's cosmopolitan city, whose public domain is full of people who don't know each other. This encounter with those who are different could help enrich the understanding of the world and make people less provincial and more open to diversity. This complexity would be the opposite of the schematism of the first CIAM's urbanism, that of the functional city and the Charter of Athens.

This idea that the public can only appear in the ancient regime has undoubtedly been confronted. Urban political scientist Alan DiGaetano argues that "The confluence of urbanization, rapid industrialization and commercialization, democratization, and nation-state consolidation in the nineteenth century provided the historical context for the creation and expansion of the public domain" (DiGaetano, 2006:456). It was the convergence of these forces that led political leaders to seek for "pragmatic ways to manage the resultant social, economic, and political dislocations by creating and expanding the local public domain" (DiGaetano, 2006:459).

In other words, the public domain—a conflation between the public sphere and modes of governance—would be the unintentional consequence of a pragmatic resolution to conflicts. Here, 'the public' is an outcome of the authorities' reaction to a demand (from the public) and not a realm of its own. It would then be a specific invention of liberal, enlightened States instead of an entity that precedes those States and gives them legitimacy. Thus, the public would be linked to the modern city rather than to an ancient or historical urban formation. But we must not conflate modern with modernist since DiGaetano's 'modern city' is the one generated by modern production conditions and not the one envisioned by modern architects.

By establishing this public/private relationship on several levels and explaining the meanings of the tandem in each one, political theorist Jeff Weintraub made a more profound and precise assessment of the dichotomies between public and private. To begin, he uses the analogy of the 'two cities:' in one, the public would be based on political participation—the 'polis'—while in the other, it would be related to the enjoyment of difference—the 'cosmopolis,' exemplified by Babylon. In both cases, the private realm would be the realm of personal life: work, discipline, and the inner world of the family. However, Weintraub sees contradictions and grey zones within each of these levels. For instance, the notion of the public as political may come either from Greece or from Rome; in the former, the model was the polis, and the public means decision-making, whereas, in the latter, it meant administration since the framework was the 'republic'—res publica. In the same vein, Weintraub argues that many times, "the distinction public/private corresponds […] to the distinction political/nonpolitical" (Weintraub, 1997:36), as if the private realm—for instance, the market—wouldn't entail political choices. The reductionist logic of this view is evident because "just as the 'public' realm (and politics) cannot be reduced to the State, the realm of social life outside the State (and its control) cannot simply be identified as 'private.'" (Weintraub, 1997:15).

From architecture, thinking with Weintraub allows us to see some territories of inquiry. For instance, he criticizes Sennett's understanding of the lost sociability as "a threatening dialectic between 'dead public space' and a pathological overinvestment in intimate life." (Weintraub, 1997:24). Since to declare a public space as dead you need a corpse—a piece of material evidence—Sennett seems to refer to the facades of the corridor street, the theatrical space of the city which was, for him, the main stage for sociability. Like a vein without blood, a dead public space would be a corridor street without vitality, a city where the intimate, private life would happen behind those facades, in the black areas of a Nolli map. But perhaps, just like the dual palette of that famous map of Rome, Sennett may have been working with a binary scheme. Thus, the grey areas are territories waiting to be explored.

Weintraub also claims that "the separation of space into work areas and living areas corresponds to the division of life into a public sector and private sector." (Weintraub, 1997:25). Here it is easy to see a reference

to the modern, functional city of the first CIAMs. Yet, as seen earlier, architectural discourses not only left that schematic view of urban functions behind long ago, but also have recently been exploring new models or recovering older ones that merge life and work, thus blurring the distinction between public and private.

Furthermore, if "the city is both an object of theoretical analysis and, simultaneously, the metaphorical source of many of the key concepts of Western social and political theory" (Weintraub, 1997:26), it seems clear that architecture has something to say in this discussion. Although architects don't design the city (at least alone), architecture's tools, methodologies of analysis, lexicon, and overall, its specific position with the structure of urban production could be helpful to a better understanding of the complex nature of the public/private relationship. While for Weintraub, the city is a privileged object to look at and a metaphor to speak about the public, in architecture, the city is much more than just a metaphor, and our tools can help understand that object better. In fact, most of the different perspectives he presents speak of spaces that include, exclude, and have convoluted relations between them—and that is precisely the territory in which architecture feels at ease.

For example, architecture can help surpass the obstacle of being too close to the object of analysis. Because if we live in cities and belong to some form of public, how can we analyze something we are part of? How can we define the contours of a space we are immersed in? In architecture, we know how to detach ourselves and take critical distance from the objects we work with. That's what Ungers - with Kollhoff, Koolhaas, Ovaska, and Riemann - did in 1977 when writing the incomplete manifesto, "The City Within the City: Berlin as Green Archipelago" (Ungers, 2013[1977]). Focusing on post-war Berlin, they reflect on its shrinking population and rethink abandoned neighborhoods as possible protagonists of a large green area. Each neighborhood is considered a separate city, reduced in scale but highly complex. Possibly a counterpoint to the Plan Voisin, the Green Archipelago deliberately works on the fragmentation of the city, is interested in anonymous architecture, considers the instability of the program as a value, and, in so doing, proposes a novel urban form.

As this case shows, we are trained not only to have an abstract view of the space and its characteristics but also to overlap it with the concrete materials and laws constituting such space. And this capacity helps us see the blind spots. For instance, the previously mentioned perspectives usually take the legal status of the places for granted. That is, although they may refer to private and public spaces, they say nothing about who owns them. This omission seems critical, as it would help better clarify the concrete effects of the distinction between public and private. In fact, land ownership establishes clear boundaries between both forms of space. In terms of property, there are no grey areas.

Furthermore, since Public-owned usually equals State-owned, the urban question becomes political again because the possible uses of

those spaces claimed as public are defined through deliberation between different (political) options. In fact, if the vitality of the city is given by the movement of living people through a politically defined space, public life could also be seen as a biopolitical phenomenon. But even without deepening into those aspects, the very fact that the public/private distinction can be reworked through the lens of land property opens a series of new questions. What would the concept of 'the public' look like if we analyzed it from the issue of land ownership? How many of these spaces described as public require the primary condition of being State-owned? If we want to expand the notion of the public, does that mean we need to increase State-owned spaces? And who would own the public if the State didn't exist?

3. RESHUFFLING THE CONVERSATION

The question of land property also provides a new lens to see modern urbanism. It is well known that the urban proposals of the first modernity were usually deemed so utopian that many of them never found fertile ground. They were also criticized for breaking the city fabric and sometimes even considered antiurban. In some cases—most notably in that of Le Corbusier—the city projects by these first modern architects were treated as the unpleasant reverse of well-received architectural designs. These critiques, however, overlook that the replacement of the old urban fabric implied a total reorganization of land property schemes. What would we think of these critiques if we consider this aspect?

In recent years, a renewed concern regarding the question of property has arisen, leaving a wide body of literature on the subject from several fields[1]. However, in architecture, not so much has been published in this regard. "Reshuffling Urban Land" is an effort to start bridging that gap by opening the conversation of land property within architecture. Considering we have privileged tools to analyze this question, we want to use the lens of property to look at the urban morphologies of modern urbanism. In the end, the traditional city fabric is nothing else than a stubborn crystallization in time of land property regimes. Since land ownership is an endless source of surplus value and, hence, one of the main reasons for economic inequality, the persistence of these regimes implies the exacerbation of inequalities. Therefore, the tabula rasa of modern urbanism seems a genuine possibility to rearrange and equalize the urban.

By recovering these examples, we want to see how the ideas of modern architecture went into the core of economic inequalities by reshuffling land property regimes to generate a different city. Unlike a century ago, we can't be naïve regarding the effects of urban models. Now, about a hundred years later, we know the impact of modern urban proposals, but also that the lack of that impact may not be so desirable. While we may still have the corridor street that Sennett craved, housing is becoming unaffordable, and economic inequalities are constantly increasing. In this scenario, we have the duty to ask: How would we assess the Plan Voisin if we analyze its proposed property regimes? Or who would own the Green Archipelago? ■

1. After the seminal *A Theory of Property* by Stephen Munzer (1990), the topic has been retaken in the last ten years. In 2013 Andro Linklater published the huge *Owning the Earth, The Transforming History of Land Ownership*, reopening this field of inquiry. In 2018, Brenna Bhandar linked the question of property to the colonial project in her brilliant book *Colonial Lives of Property*. Robert Lamb wrote in 2021 a thorough review of this concept and, only recently in 2023, architecture critic Rowan Moore published a critique of how this idea built the contemporary world.

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BIOGRAPHIES

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THE DRIVERS AND OUTCOMES OF THE URBAN RENEWAL IN OKLAHOMA CITY: LOOKING BACK, LOOKING FORWARD

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#10

ABSTRACT

During the Post-War era, Oklahoma City was the stage of the implementation of the I. M. Pei Plan, a top-down urban development initiative having both production and consumption orientations. It was a by-product of the necessity to converge institutional functions, trade services, as well as entertainment and leisure activities, in a very dense area.

Criticized and never completed due to drastic cuts in federal funding, a depressed economy, and lack of public support, the 1965 Pei Plan encompassed the alteration and demolition of numerous significant historic properties, and perpetuated a series of racial inequities and injustices, causing misplacement of minorities; hence, the gentrification of entire neighbourhoods. Although in ambivalent and exclusionary ways, the plan embodied values, which interpreted the needs and visions of local communities through the lenses of the Modern Movement.

As the history of the urban renewal is closely related to the history of the United States of America's Administrative Law, the public-managed bureaucracy and the redevelopment agencies; this contribution aims at outlining the drivers and outcomes of the Pei Plan for Oklahoma City by investigating how this planning tool and its stakeholders dealt with the regime of property rights, the eminent domain practices, and the type of conflicts arising over regulatory takings; and, in doing so, re-shaped the urban landscape and the identities of entire communities.

In conclusion, the phenomenon of the urban renewal in Oklahoma City can be analysed under differing points of view, encompassing its possible sustainable future within the spheres of justice, equity, diversity, and inclusion. Furthermore, it can be evaluated not simply in terms of real estate interests and mobility of communities; but also in terms of envision and creation of spaces during the transition from an era of utopian design thinking to the first postmodern experiments.

1. INTRODUCTION

During the Post-War era (1946-1989), Oklahoma City was the epicentre of an extensive modernization effort, characterized by new interdisciplinary design thinking, as well as by the development and materialization of unconventional solutions.

The urban issues were considered particularly pressing due to the post-war surging in housing demand, the relocation of new economic and leisure activities in urban areas, the unresolved regime of property rights, and the imperative necessity to clear blighted areas.

The above-listed scenarios were accompanied by the expansive reinterpretation of the concepts of public use and takings to encompass the controversial use of eminent domain procedures, which singled out and forced minorities to bear public burdens. These circumstances were the final outcomes of the Great Depression, which saw institutional investors and city governments becoming the major players in the real estate market.[1]

The overall crisis secured the opportunity to foster a movement for the urban renewal of Oklahoma and its capital city. With the concept of "clearing" being the paradigm of the time against preservation initiatives to promote a "city of the future", the strategy embraced in 1965 with the adoption of the Pei Plan required the demolition of hundreds of historic buildings to accommodate large-scale projects. Originally privately sponsored to foster a modern approach to retail for the downtown core, which was expected to become the driving force of the urban renewal efforts; the Pei Plan failed to maintain the promises of the early days of the statehood in ensuring opportunities and allowances for minorities; hence, it led to socio-economic disjunction.

Nevertheless, it is the author's opinion that this model of urban development ensured the manifestation of pioneering solutions in architecture, fostering new forms of organization of life as a "response to the demands of modernization."[2]

2. THE DRIVERS OF THE URBAN RENEWAL IN OKLAHOMA CITY

2.1. THE HOUSING CRISIS AND THE REGIME OF PROPERTY RIGHTS

Following the housing crisis of the Great Depression in the 1930s, property owners welcomed new government regulations, as well as the creation of the Homeowner's Loan Corporation (HOLC), the Federal Housing Administration (FHA), and special federal programs,[3] which increased the chances for government intervention in the overall real estate market. At the same time, urban renewal advocates — *in primis*, business leaders —, promoted the reinvigoration of public-private partnerships through programmatic rhetoric, the media, and futuristic exhibitions. Furthermore, they advocated for the adoption by city planners of specific "master plans" generated by internationally acclaimed consultants of their choice.

2.2. THE PRACTICE OF REDLINING IN OKLAHOMA CITY

Created in 1933 by the Roosevelt Administration to rescue working- and middle-class families from the housing crisis of the Great Depression, the

1. Wendell E. Pritchett, "The 'Public Menace' of Blight: Urban Renewal and the Private Uses of Eminent Domain," *Yale Law and Policy Review* 21, no.1 (2003): 22.

2. Kenneth Frampton, *The Other Modern Movement: Architecture, 1920-1970* (Yale, CT: Yale University Press, 2021), XXI.

3. Federal programs, such as the National Housing Acts of 1949 and 1954, helped financing the construction of military housing and dwellings for returning soldiers. They influenced the planning of many cities by introducing the concept of "urban redevelopment."

HOLC had the mission of supporting existing homeowners undergoing foreclosure by issuing amortized mortgages.[4] To avoid excess risk, the HOLC created maps of every metropolitan area in the nation: they were colour-coded with reference to the level of risk, which was represented by the type of community residing in the neighbourhood, specifically by its ethnicity and national origin. Oklahoma City was surveyed and mapped following the aforementioned method (**Fig. 1**). As such, a hazardous district was demarcated with a red colour (redlined neighbourhood)[5] if African Americans or other minorities lived in it; hence, yielding to discriminatory regulations and planning.

The forced "urban removal" had far-reaching and long-term consequences on communities of colour, causing disruption of both social cohesion and sense of place.[6] It interrupted the natural transition process, causing severe distress and generational trauma, which compounded with the sufferings caused to Native Americans by the historic "Trail of Tears."[7] Taking into consideration that for Native Americans human and civil rights are intrinsically dependent upon the availability of land; their stance to achieve self-determination and tribal sovereignty were affected by both the deprivation of reasonable resource allocation and the subsequent relocation in degraded areas.[8]

3. PLANNING A MODERN CITY

As Oklahoma City had experienced the phenomenon of the urban sprawl between the 1940s and the 1950s, the exhaustion of parking availability downtown, and the consolidation of new traffic patterns and needs; the original small lots and public areas were deemed inappropriate for modern business and leisure activities, pushing the local retailers outside the capital city.[9] Additionally, there was a great demand for public projects, such as convention centres, theatres, and gardens.

The city leaders were determined to carry out a program that would transform Oklahoma into one of the most pulsating urban centres of the nation. In the midst of the Civil Rights Movement, these urban initiatives did not comprehensively address the sustainability of the envisioned futures in terms of human, social, environmental, and economic prosperity.

3.1. THE OKLAHOMA CITY URBAN RENEWAL AUTHORITY

To establish an efficient spatial governance system, business leaders, media owners, and philanthropists ensured local and state laws authorized and facilitated land acquisitions for redevelopment to the extent that eminent domain practices, for example, were widely accomplished by offering minimum compensations.

In this context, the City Council authorized the creation of the Oklahoma City Urban Renewal Authority (OCURA) in 1961. It was established as an independent board consisting of five members that would secure federal funding to acquire and develop the areas of blight designated by the City Council, and empowered through state laws with financial resources and legal apparatuses.

4. Richard Rothstein, *The Color of Law: A Forgotten History of How Our Government Segregated America* (New York, London: Liveright Publishing Corporation, 2017), 63-64.

5. Price Fishback, Jonathan Rose, Kenneth A. Snowden, and Thomas Storrs, "New Evidence on Redlining by Federal Housing Programs in the 1930s," *Journal of Urban Economics,* 141 (May, 2024).

6. Mindy Thompson Fullilove, *Root Shock* (New York: New Village Press, 2016), 27-33.

7. L. K. Northwood, "The Impact of Urban Removal from a Child's Point of View," *The Journal of Sociology and Social Welfare* 3, no. 2 (1975): Article 13.

8. Gregory James, "Better Dead than Red: The Treatment of Native Americans in the Southwest during the Cold War," *Armstrong Undergraduate Journal of History* 7, no. 2 (2017): Article 7.

9. Steve Lackmeyer, and Jack Money, *OKC: Second Time Around* (Oklahoma City, OK: Full Circle Press, 2006), 6-13.

Simultaneously, a group of business leaders organized as Urban Action Foundation (UAF)[10] hired a project delivery team led by international architect Ieoh Ming Pei, and provided significant monetary support to OCURA during the 1960s.

At the time, Mr. Pei, a 1946 Harvard graduate, was a promising professional, who had already "advised several urban-renewal plans for areas of Washington D.C., Boston, and Philadelphia."[11] The architect was designated to bring the city to its centennial celebration of 1989 by developing a General Neighbourhood Renewal Plan for the downtown business district with a focus on the shopping centre "Galleria" and apartment's space. It was the so called No. 1-A Project covering a 140-acre area, which would become the public face of the urban renewal in Oklahoma City, representing the entirety of the city's redevelopment for over two decades.[12]

In the 1960s, there were other two key projects undertaken by OCURA and located in the 1-B area: the University Medical Center Project and the John F. Kennedy Housing Project. Both were located on the Eastside District, the African American section of the city (**Fig. 2**).

3.2. THE CONCEPTS OF BLIGHT AND SLUM CLEARANCE

To build the new Oklahoma City's skyline and complete the desired civic and leisure projects, such as the Convention Center, the Myriad Botanical Gardens, or the Mummers Theatre;[13] the Pei Plan commenced the demolition of a multitude of downtown structures — mostly, African American neighbourhoods —, and the destruction of significant historic properties, stirring public resentment and remonstration. Although the local chapter of the Congress of Racial Equality asked for a repeal of the urban renewal plans,[14] the City Council was reluctant to direct other agencies to find alternative areas for minorities. The concerns of the African American residents were focused on the concept of "blight" and "slum clearance" under the guise of which their communities had been relocated.[15] According to the local newspapers of the time, African Americans denounced the violation of their personal rights and the unfair transactions of homes purchased on the Oklahoma City's Eastside by OCURA.[16]

It is to note that at the beginning of the 1960s, the segregationist policies and practices influenced by Jim Crow laws were still radicated, including segregation in schools; and the African American Civil Rights Movement in Oklahoma was still on the path to the advancing of anti-discrimination legislation.[17]

3.3. THE HOUSING INEQUITABLE POLICIES

The FHA, created by Congress and President Roosevelt in 1934, fostered and reinforced the previous malpractices by institutionalising racial discrimination in the housing market, extensively using biased information developed by the FHA itself and the HOLC.

The school desegregation fostered by the *Brown v. Board of Education* ruling[18] became of particular concern of the FHA, which established inequitable policies in its 1952 *Underwriting Manual*[19] meant to discourage banks from issuing government-backed mortgages or financing entire

10. Kay Dyer, "Multi-Million City Revamping Urged. Big Changes are Needed, Planners Say," *Oklahoma City Times* (Oklahoma City, Okla.), 75, no. 99 (June 10, 1964).

11. See "Who Was I.M. Pei?," Biography, accessed April 19, 2024, https://www.biography.com/artist/im-pei.

12. Lackmeyer and Money, 5-9.

13. "A Report on the Central Business District (December 10, 1964)," Urban Renewal Authority, Oklahoma Historical Society Research Division, accessed April 15, 2024, https://www.okhistory.org/research/findingaid?id=001g29.

14. Kay Dyer, "City OK's Renewal Plan Amid Outcry: Good Housing Doomed, Says Negro Leader," *Oklahoma City Times* (Oklahoma City, Okla.) 77, no. 88 (May 31, 1966).

15. Wendell E. Pritchett: 1-52.

16. Tom Boone, "City Renewal, Prices Unfair, Council Told." *Oklahoma City Times* (Oklahoma City, Okla.) 78, no. 182 (September 19, 1967).

17. See "African American Civil Rights Movement in Oklahoma," The Encyclopedia of Oklahoma History and Culture, accessed April 20, 2024, https://www.okhistory.org/learn/civilrights.

18. See "History – Brown v. Board of Education Re-enactment," United States Courts, accessed April 26, 2024, https://www.uscourts.gov/educational-resources/educational-activities/history-brown-v-board-education-re-enactment.

19. United States. Federal Housing Administration, *Underwriting Manual* (US Government Printing Office, 1952).

subdivisions to minorities. It coined concepts such as "inharmonious racial or nationality groups," and called for "compatibility among the neighbourhood occupants" to obstacolate integration. It also encouraged the use of restrictive covenants to enforce "homogeneity."

4. THE PEI PLAN

The Pei Plan was based on several interlocking systems, which included the wish-list items promoted by the city government for years: an arts district centred on a theatre (Mummers Theatre), a park (Myriad Gardens), and a convention centre (Myriad Convention & Civic Center). These "items" were complemented by a retail shopping core, a business and an office district, a major residential area; as well as by spaces for hotel development with new parking garages.[20]

Due to the lack of funding and public support, and as a consequence of the economic crisis of 1982,[21] any redevelopment projects associated with the Pei Plan entered into a sunset phase in the 1980s, leaving the program half-finished and revealing a shapeless, fragmentary downtown. Whilst the new workplaces had materialized, the recreation projects were only partially completed, and the new living areas still to emerge. In 1993, Oklahoma City's residents funded the MAPS program to "turn around their struggling city through an approach designed around the feedback received by the communities."[22]

4.1. PLANNING FOR MONUMENTALITY

Notwithstanding its undeniable flaws and shortcomings, the Pei Plan had the distinction of planning for monumentality. By opening up a path to renaissance for the city, it encompassed the transition from the Post-War's multidisciplinary and programmatic approach (*Think Tank*)[23] epitomised by Brutalism-style architecture as cultural expression of the collective crave for progress and stability; to the heterogeneous postmodern experiments of the Poststructuralism era with its epistemological legacies associated with the displacement of the modern attitude towards knowledge.

During a time of fluid experimentations, the most striking example of postmodern architecture in Oklahoma City was the first completed project of the Pei Plan: Mummers Theatre (1969-2014), designed by the Harvard-trained architect, John M. Johansen, who was inspired by the machine and its functionality, and changed the dominant "all concrete" vocabulary through the application of the concept of adhocism (**Fig. 3**).

Originally conceived by the Pei Plan as a 1960s typical two-story auditorium, the new city theatre was the result of the vision of the local performance group and his director, Mack Scism, who had a progressive approach and gained the attention of the Ford Foundation with its nationwide grants system; hence, moving the community theatre to the professional level through the commencement of a revolutionary building, which broke the established canons to embrace variety and communication.[24]

The transformative cultural shift represented and endorsed by the postmodern efforts, which coincided with the rejection of the grand narratives, allowed in this instance the co-creation of spaces shaped by the

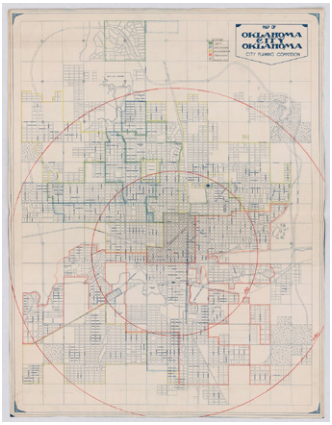
20. See transcript of presentation by I. M. Pei: "Redevelopment Plan for the Central Business District, Oklahoma City, Oklahoma (December 11, 1964)", Urban Renewal Authority, Oklahoma Historical Society Research Division, accessed April 19, 2024, https://www.okhistory.org/research/findingaid?id=001g29.

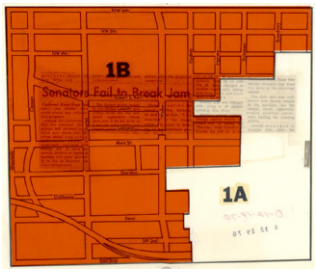
21. See "Penn Square Bank," The Encyclopedia of Oklahoma History and Culture, accessed April 24, 2024, https://www.okhistory.org/publications/enc/entry?entry=PE009.

22. See "MAPS history," The City of Oklahoma City, accessed April 27, 2024, https://www.okc.gov/government/maps-3/maps-history.

23. Pamela Lee, *Think Tank Aesthetics: Midcentury Modernism, the Cold War, and the Neoliberal Present* (Cambridge, MA: The MIT Press, 2020).

24. Matthew Bellomy, "Mummers Theatre (The Stage Center)," *Hidden Architecture*, accessed April 11, 2024, https://hiddenarchitecture.net/mummers-theater-the-stage-center-theater/.







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Figure 1. Redlining Map of Oklahoma City, Oklahoma; ca. 1933-1939 © Residential Security Maps, 1933-1939; Records of the Federal Home Loan Bank Board, Record Group 195; Identifier: 85713735. National Archives at College Park, MD.

Figure 2. Phases 1-A & 1-B of Oklahoma City's urban renewal. © Photograph used for a story in the Daily Oklahoman newspaper: 2012.201.OVZ001.10683. The Gateway to Oklahoma History and Culture, unknown, 1970.

Figure 3. Mummers Theatre, 400 West Sheridan Avenue, Oklahoma City, Oklahoma. Exterior with walkway. © Photograph used for a story in the Daily Oklahoman newspaper: 2012.201.B1280.0482. The Gateway to Oklahoma History and Culture, Korab, Balthazar, photographer, April 20, 1972.

needs and desires of forward-looking groups, who combined forces with public and private stakeholders to support and serve the local communities.

5. CONCLUSIONS

The Pei Plan utilized land-use planning concepts on a broad level to establish zoning requirements for specific purposes. It was not conceived and implemented by utilising planning tools that actively involved all stakeholders to ensure extensive participation, transparent decision-making, and the incorporation of a wide variety of interests and needs.

Despite the cutting edge vision for the city that led to the modernization and the inauguration of celebratory landscapes and transformative architecture, the Pei Plan was a product of its time. The plan did not fulfil the needs and desires of all the impacted communities, and did not draw from a comprehensive and unbiased study of the built environment with its sociological and historical aspects. Originally conceived for retail purposes and lately adopted to encompass the vision for the whole city, the Pei Plan failed to consider and represent Oklahoma City as a complex, intricate ecosystem.[25] Regardless its focus on innovation and entrepreneurship, which allowed the materialization of one of the first anti-compositional projects in the country; it worked within traditional frameworks of power. It remained intrinsically unconcerned and unreceptive to the development of progressive initiatives pertaining to race relations and the attempts to open the dialogue to those communities who had been historically excluded from urban planning; thus downplaying the postmodern forces, perpetuating segregation, and missing the opportunity to prepare the city for the future. ■

25. Jane Jacobs, *The Death and Life of Great American Cities* (New York: Modern Library, Random House Publishing Group, 1961/1993), XXVI.

BIOGRAPHY

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BUILDING THE MODEL CITY OF SOCIALISM: POST-WWII RECONSTRUCTION OF NEMIGA STREET IN MINSK, BELARUS

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ABSTRACT

This paper traces the post-WWII reconstruction of Nemiga street in Minsk, Belarus. It shows that urban fabric, land property regime, and economic value of urban space are mutually constitutive. The redevelopment of Nemiga was enabled by the communalisation of urban land after the Russian Revolution of 1917. The project, developed in 1972 by a Soviet-Russian architect S. Musinsky and his team, was supposed to become the most ambitious modernist urban development in Minsk. However, for economic and political reasons, its construction spanned more than forty years and was finished only in 2014. During that period, several political shifts caused multiple transformations to the project, eventually resulting in its failure in both urbanistic and architectural terms. To make way for the project, almost all pre-WWII historic substance on Nemiga was razed to the ground during the late 1960s. In this way, all memories of this traditional Jewish district that had existed in the area for several centuries and the underground resistance of the Minsk ghetto were erased. The image of Minsk as a Jewish shtetl on the western periphery of the Russian Empire preserved by Nemiga did not fit the identity of the booming post-WWII industrial capital and the "model city of Socialism." This paper traces the development of Nemiga from the 1920s to the 2010s. While the abolishment of private land ownership enabled ambitious urban development projects in Minsk, it did not leave the city immune to the emergence of new inequalities. The massive privatisation of state housing throughout the 1990s resulted in an unequal redistribution of economic value created during the Soviet period. Moreover, state monopoly on urban land, coupled with the lack of democratic control in today's Belarus, left urban development in the hands of the government-affiliated elites.

1. FROM A JEWISH SHTETL TO THE MODEL CITY OF SOCIALISM

The 1917 Decree on Land, issued shortly after the October Revolution, abolished private land ownership on the territory of the former Russian Empire.[1] Nowhere did the consequences of this decree for urban development turn out to be more profound than in Minsk, a city that over the next few decades would be transformed from a provincial Jewish shtetl[2] to the booming industrial capital and the "model city of Socialism."[3] However, this transformation concerned not only the constructed fabric, but also the population of the city. From 1917 to 1991, the population of Minsk increased more than tenfold, from 154,000 to 1,658,400 people. Simultaneously, the composition of the population according to the nationality reversed. While in 1897, Jews constituted 51.2% of the city's population, in 1989, their proportion reduced to just 2.4%. Over the same period, the proportion of the Belarusian population increased from 9% to 71.8%.[4] While the reduction of the Jewish population in absolute terms was due to emigration and, especially, the Holocaust (between 1939 and 1959, the Jewish population reduced by 48%)[5], rapid post-WWII industrialisation caused the massive influx of Belarussian population from rural areas, leading to the "ruralisation" of the city.[6] Despite its almost thousand-year history, post-WWII Minsk was supposed to become an entirely new city. In this context, the reconstruction of Nemiga posed a clear challenge to the Soviet authorities. The narrow, crooked street, built-up mostly with two-to-three-storey masonry buildings and log huts, had to be made fit for its new role in the centre of a Soviet capital.

2. NEMIGA AFTER WWII: NOT QUITE A *TABULA RASA*

Soviet publications on the post-WWII reconstruction of Minsk mostly refer to the post-war city as a *tabula rasa*.[7] Although at least 80% of the built volume of the city was indeed destroyed during the war, some districts remained intact. The area surrounding Nemiga street, with its built fabric dating back to the 18th century and its morphology back to the 12th century, was one such district. The northern side of Nemiga was historically inhabited by the Jewish population. During the German occupation of Minsk between 1941 to 1944, this area became the Minsk ghetto.[8] It is important to note that the history of the Minsk ghetto was different to that of other Eastern European ghettos, since there were no attempts to initiate a military revolt or uprising as, for instance, in the Warsaw ghetto. Instead, Minsk Jews decided to flee into the woods and join the partisan movement.[9] The absence of military resistance inside the ghetto was also one of the reasons why the territory of Nemiga escaped full destruction during the war.

To understand why the Minsk ghetto was different, it is essential to briefly review Jewish history in the region. The roots of the Minsk Jewish community can be traced back to the early 16th century.[10] Throughout the 15th-16th centuries, the increasing anti-Semitism in Western Europe caused a large-scale Jewish exodus to Eastern Europe. While Russian, Polish, and, especially, Ukrainian Jews already suffered from pogroms in the 17th century and especially in the late 19th century, the Belarusian territory

1. Vladimir Ilyich Lenin, "Dekret O Zemle S'Yezda Sovetov Rabochikh I Soldatskikh Deputatov [Decree on Land of the Congress of Soviets of Workers' and Soldiers' Deputies]," *Pravda*, 26 October (9 November) 1917.

2. *Shtetl* is a small town with a significant Ashkenazi Jewish population that existed in Central and Eastern Europe before the Holocaust.

3. Thomas M. Bohn, *Minsk - Musterstadt Des Sozialismus* (Köln [u.a.]: Böhlau, 2008).

4. Bohn, *Minsk – Musterstadt Des Sozialismus*, 321.

5. Bohn, *Minsk – Musterstadt Des Sozialismus*, 321.

6. Bohn, *Minsk - Musterstadt Des Sozialismus*, VII.

7. See for example, Mihail Stepanovič Osmolovskij, *Minsk*, Arhitektura Gorodov Sssr (Moscow: Gosudarstvennoe Izdatel'stvo Arhitektury i Gradostroitel'stva, 1950); Vladimir Adamovich Korol', Aleksandr Petrovich Voinov, and Evgeniy L'vovich Zaslavskiy, *Minsk: Poslevoyennyy Opyt Rekonstruktsii I Razvitiya* [Minsk: post-war experience of reconstruction and development] (Moscow: Izdatel'stvo literatury po stroitel'stvu, 1966).

8. Barbara Epstein, *The Minsk Ghetto 1941-1943. Jewish Resistance and Soviet Internationalism*, 1 ed. (University of California Press, 2008), 83.

9. Epstein, *The Minsk Ghetto 1941-1943, Jewish Resistance and Soviet Internationalism*, 83.

10. Elissa Bemporad, *Becoming Soviet Jews: The Bolshevik Experiment in Minsk* (Indiana University Press, 2013), 14.

remained relatively free of anti-Semitism.[11] This comparatively peaceful ethnic coexistence was mainly due to the absence of nationalist movements and economic backwardness of the region resulting in low levels of economic inequality.[12] This determined Jewish-Belarusian solidarity and the underground movement in WWII Minsk, focused on saving lives by bringing Jews out of the ghetto rather than organising a military revolt.[13] However, after the war, the Minsk underground movement was accused of collaborationism. Many of its members were arrested and rehabilitated only in 1962. Although the memory of the Great Patriotic War[14] was ingrained in the built fabric of post-war Minsk in countless war monuments, the Holocaust and the Minsk underground movement were ignored in the official version of this memory.[15] This led to a peculiar paradox, while Nemiga primarily preserved its pre-war fabric, it had no value to the Soviet government. This situation was further exacerbated by the absence of a dedicated monument preservation department that was only established in Minsk in the late 1960s.[16] The combination of these factors led to Nemiga's planned demolition in the early post-WWII reconstruction plans developed in the late 1940s. However, mostly as a result of economic reasons, the demolition of Nemiga was delayed by almost two decades.

3. FAILED UTOPIA: 40 YEARS OF THE REDEVELOPMENT OF NEMIGA

Despite the protests of the Jewish population and the experts concerned with the preservation of historic heritage, the old Nemiga was razed to the ground in the late 1960s. The first closed competition for the redevelopment of Nemiga took place in 1972, and was organised by the planning institute, Minskproject. The winning project (Figures 1-2) by S. Musinsky, L. Kajar, D. Kudryavtsev, with the participation of V. Dukhanina, A. Kozlenko, A. Volk, P. Geller and G. Koloskova was selected for realisation by the Minsk City Executive Committee. Inspired by the brutalist World's End Estate in London and reminiscent of Ludwig Hilberseimer's Highrise City, the 350m-long complex was due to become the largest commercial centre in the country. However, according to Resolution 274 of the Central Committee of the Communist Party of Belarus and the Council of Ministers of the BSSR "On Further Increasing the Level of Architecture and Urban Planning, Improvement of Housing, Civil and Cultural Construction in Minsk" of August 1973, the State Construction Committee of the BSSR and the Union of the Architects of BSSR organised another open competition.[17] This competition was held in 1975; however, no winner was selected. In 1979, the planning Institute Belgiprotorg, directly commissioned by the Ministry of Chemical Industry of the USSR, began designing an alternative proposal for the eastern side of Nemiga. This was set to be just the beginning of a long series of projects developed for the area. The main architect of the 1972 winning proposal, S. Musinsky, would alone develop at least five versions of the project over the next 30 years.[18]

In 1987, 15 years after the construction began, the western side of the project was not yet finished, and the eastern side not even started. In

11. Epstein, *The Minsk Ghetto 1941-1943, Jewish Resistance and Soviet Internationalism*, 60-65.

12. Belarusian territory was the poorest region in Eastern Europe, see also, Bohn, *Minsk - Musterstadt Des Sozialismus*, 70.

13. Epstein, *The Minsk Ghetto 1941-1943, Jewish Resistance and Soviet Internationalism*, 11.

14. The official name for the conflict fought during the period from June 22, 1941, to May 9, 1945 on the Eastern Front of the WWII.

15. Epstein, *The Minsk Ghetto 1941-1943, Jewish Resistance and Soviet Internationalism*, 83.

16. Rostislav Borovoj, "Poslevoennaâ Rekonstrukciâ I Vosstanovlenie Minska [Postwar Reconstruction of Minsk]," *Arhitektura i Stroitel'stvo* no. 2 (2004): 7-10.

17. Documents on holding the competition for the development of the project of a shopping centre in Nemiga Street in Minsk (resolution, program, minutes of the jury meeting, etc.). 1975. BGANDT (Belarusian National Archive of Scientific and Technical Documentation), fond 68, volume 1, folder 317, p. 1-18.

18. Documents and drawings documenting the design of Nemiga from the personal archive of architect S. Musinsky 1974–2001. BGANDT, fond 290, volume 1, folders 15-17.

the 1987 volume of the architectural magazine *Stroitel'stvo i Arhitektura BSSR* (Construction and Architecture of the BSSR), the 4th issue published a series of opinion pieces, all of which severely criticised the project under construction for destroying the historic fabric of the old Nemiga. Public protest had led to yet another architectural competition for the development of the eastern side of the project, held in 1988. Two years later, shortly before the dissolution of the Soviet Union, the western side of the project was finished. However, the economic crisis of the 1990s, put the construction of the eastern side on hold for yet another decade.

In the early 2000s, the construction of the northern section of the eastern side of the project finally started. This project was constructed by Triple Ltd., a private developer owned by a government-affiliated oligarch named Y. Chizh, was finished in 2012. The architects of the project, S. Baglasov and S. Kozlov, adapted some of the concepts developed during the 1988 competition, including the placement of replicas of the historic facades above a scaled-down version of a raised pedestrian platform. In a way, the façade imitated the historic parcellation of Nemiga (Figure 3). The construction of the southern section started in 2008 and was finished in 2014. This project, which was developed by the architectural office of G. Dulevich, was declared by the authors as an "architectural fantasy" of the old Nemiga. However, its spires, columns, and mansards resemble a poor copy of Stalinist architecture and have nothing to do with the historic architecture of the area. All in all, from the first design by Musinsky and his team in 1972 to the completion of the eastern side in 2014, it took over forty years to finish the redevelopment of Nemiga.

The original project by Musinsky and his team should have been the most ambitious modernist project in the history of Minsk. While the debate surrounding the post-WWII reconstruction of Minsk was concerned with the construction of a glorious socialist future, the 1980s debate was increasingly oriented towards the past. The preservation of the historic heritage became the highest priority in Minsk. This shift doomed the realisation of the eastern side of Nemiga. The project became a postmodern assemblage of historic elements, developed to reconcile the modernist idea with the pre-revolutionary past that was destroyed to make place for it. Unable to bring back lost historic structures, this approach prevented the realisation of the project that could have become future heritage of the "model city of socialism." Instead, Nemiga became a mockery of itself, a monument of the failed Soviet utopia that dismantled the past but failed to construct an alternative future.

The debate surrounding the reconstruction of Nemiga illustrates a much wider opposition between the Soviet and national Belarussian identities. This opposition is represented by two actors involved in the debate around Nemiga: on the one hand, Z. Pozniak, one of the fiercest opponents of the project, and on the other, S. Musinsky, its architect. Pozniak, who was then an art historian, and had protested against the demolition of Nemiga in the 1960s.[19] Later, Pozniak would go on to become a political activist

19. Zenon Stanislavovič Pozniak and Leonid Timofeevič Borozna, "Zabotâs' O Budušem [Taking Care of the Future]," *Pravda*, April 4, 1969.

and the leader of the Belarusian ultra-conservative nationalist movement *Belaruski Narodny Front* (Belarusian Popular Front, BPF). During the 1994 presidential elections, he was one of the main opponents of the winner A. Lukashenko. However, Belarusian society, hit hard by the economic reforms of the post-socialist transition, was nostalgic for Soviet times and failed to respond to Pozniak's nationalist ideology.

Musinsky was born close to the northern Russian city Ustyug, trained as an architect in St. Petersburg (then Leningrad), and came to Minsk in 1952. In his writings about architecture, Musinsky referenced almost exclusively Russian and sometimes Western European examples.[20] Musinsky used decorative elements reminiscent of Old-Russian rook boats and traditional Russian woodcarvings.[21] Although none of them were realised, the appropriateness of such elements for the redevelopment of the oldest street in Minsk is questionable. In an article published in 1987, Musinsky summarises his position towards the historical value of Nemiga:

> *[…] even without being [an architectural historian], I can judge with a certain degree of objectivity the real and imagined values. In my opinion, it is clear to every open-minded person that it is simply not serious to elevate old barns, one- and two-story houses […] to the rank of historical monuments. It is difficult even to imagine how these ruins […] can harmonise with the modern complex of the western side. Of course, it is possible to scrape up enough "convincing" arguments in favor of protecting the "old environment" in the archives, but the strongest argument is life, which dictates its strict conditions for the development of the ancient street. Yes, earlier, when the question of existence of the old Nemiga was still on the table, one could understand the defenders of the architectural heritage. At that time, the whole street had a unique atmosphere and really represented a characteristic historical environment. But now this environment is gone, the main part of the building has been demolished […].*[22]

Bad timing was one of the main reasons for Nemiga's failure. Its historic substance was demolished before the national consciousness for pre-revolutionary heritage could develop. The construction delay of several decades made the original modernist design obsolete. And yet, while the historical value of Nemiga was lost and the symbolic value of Musinsky's project was compromised, the economic value of the area increased significantly due to redevelopment and post-war urbanisation. However, in Soviet Minsk, this economic value was locked due to the decommodification of land and housing. This changed with the dissolution of the Soviet Union.

4. URBAN FABRIC, ECONOMIC VALUE, AND SHIFTING PROPERTY REGIMES

Urban fabric, property regime, and economic value of urban space are mutually constitutive. The abolition of private land ownership in 1917

20. "Thoughts about Architecture," "Memoirs"—documents from the personal archive of architect S. Musinsky 1980s. BGANDT, fond 290, volume 1, folder 24, p. 1-6.

21. Sketches for the design of Nemiga from the personal archive of architect S. Musinsky 1980s. BGANDT, fond 290, volume 1, folder 15, p. 7.

22. Sergei Musinsky, "Šestnadcat' Let Na Tormozah [Sixteen Years on Hold]," *Stroitel'stvo i Arhitektura BSSR* 3 (1987).

enabled the realisation of large-scale urban development projects with the disregard for the historic urban fabric across the Soviet Union. In Minsk, the realisation of these plans could truly unfold only during the post-WWII decades. After the dissolution of the Soviet Union in 1991, the property regime changed again. However, the privatisation policies were now determined by the socialist urban fabric. While the Belarusian state continued to exercise control over urban land, individual housing units (mostly apartments) were privatised throughout the 1990s and became the source of increasing economic inequality.

After the construction of the western side of Nemiga was completed, the apartments were distributed according to the waiting list for improvement of housing conditions in the administration of the central district of Minsk. This was standard procedure for most state housing projects. However, while many of the apartments in the complex were indeed distributed according to this list, the proportion of the Soviet nomenklatura living in the complex on Nemiga was higher than in standardised residential complexes. By 1992, it had already become possible to privatise the apartments. While the government aimed to ensure the equal distribution of privatised housing by introducing housing coupons, privatisation was the starting point of increasing housing inequality. Since all urban land remained the property of the state, the privatisation prices of the apartments were calculated taking into account only the age and the construction costs of the building, regardless of its location. This approach ignored valuation dynamics in the housing market, where location and the architectural quality of the building played an important role. Today, apartment prices on Nemiga are one of the highest in the city. In this way, privatisation allowed the first generation of Nemiga residents to capture the economic value produced collectively during the post-war decades.

As for the land on Nemiga, it remains predominantly state-owned. However, to enable private real estate development, the land must be leased or sold in state auctions and thus requires parcellation. However, the Soviet city was planned without any consideration for land parcellation, and its fabric resisted a subsequent parcellation. As a result, the present parcellation around Nemiga and in Minsk in general is a haphazard assemblage of plots mingled with grey zones of no-man's land (Figure 4). In some cases, plots simply outline the contours of existing buildings to define corresponding land areas for the purposes of maintenance and taxation. In other cases, plots seem to be created only to enable the densification of the existing areas. However, even in the city centre, the considerable amount of land lacks any parcellation.

The development of Nemiga over the past century illustrates the profound role of land in urban development and economic inequality. However, despite the abolition of private land ownership in 1917 to address economic inequality in Minsk and lay the foundation for the construction of the "model city of socialism," this did not make the city immune from producing future inequality. ■

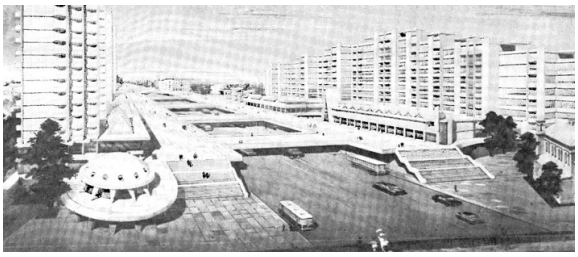


Figure 1. Winning proposal for the redevelopment of the west side of Nemiga, designed in 1972 by S. Musinsky, L. Kajar, D. Kudryavtsev, with the participation of V. Dukhanina, A. Kozlenko, A. Volk, P. Geller and G. Koloskova Source: *Stroitel'stvo i Arhitektura* BSSR, 1972, issue 2, 23.

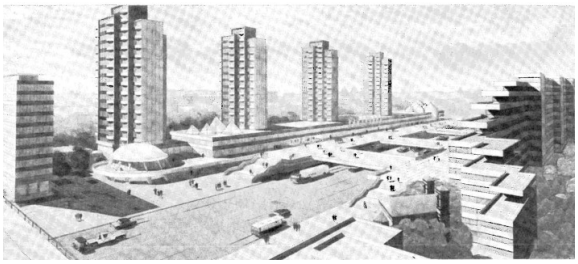


Figure 2. Winning proposal for the redevelopment of the east side of Nemiga, designed in 1972 by S. Musinsky and his team. Source: *Stroitel'stvo i Arhitektura* BSSR 3 (1987).



Figure 3. Nemiga street, eastern side, as realised in 2010s, photo by the author

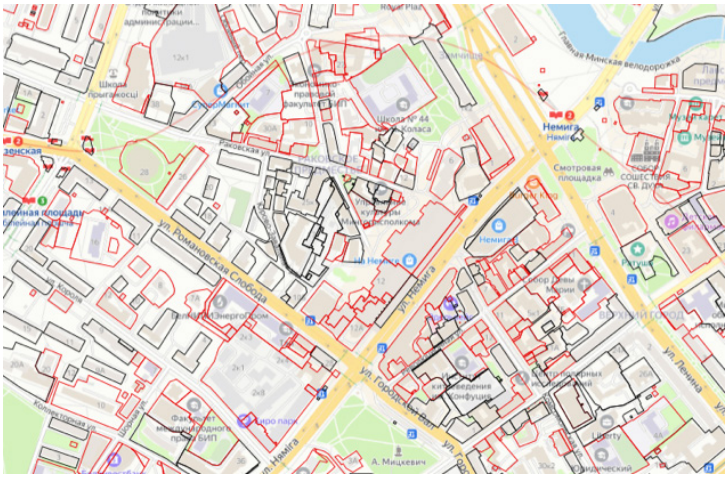


Figure 4. Current parcellation on Nemiga. Source: National Cadastral Agency of the Republic of Belarus.

BIOGRAPHY

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CIAM'S YOUNG GENERATION'S IDEAS OF THE STREET AS A TOOL TO QUESTION CONVENTIONAL HIERARCHIES OF POSTWAR SPATIAL STRUCTURING

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ABSTRACT

In the twenty years following the Second World War, in a liminal period shifting from the effort for reconstruction to the compelling problem of housing a mass society, many young participants in the CIAM's architectural discourse advanced projects and reflections claiming the urge to rethink the role of the street as a crucial *locus* to reconnect to ordinary people and their relational needs, overcoming the abstract and alienating approach of routine functionalism.

The paper argues that, in that context, the idea of the street significantly emerged as a physical and social device capable of questioning the spatialization of social and economic inequalities, proposing alternative conceptions of urban space aiming at rebalancing the organization of preexisting property regimes.

The research analyzes in parallel the Smithsons' socially committed urban exploration in the working-class neighborhood of Bethnal Green (1951-52), their idea for a street-in-the-air applied in the Golden Lane competition's project and informed by the 1930s ethnographers' studies on the longhouses in Borneo, as well as George Candilis' and Shadrach Woods' concept of *Stem* and its application in the projects for the Ruhr University of Bochum (Germany) and Fort-Lamy (Chad) in the 1960s. By positioning those emblematic cases in a much broader constellation of contemporary reflections, the paper insists on the street as the ultimate embodiment of authentic public space and a type-form having a critical generative potential for the future city.

In a period characterized by the speculation of the welfare state machinery and the commodification of architecture, those architects' idea(s) of street witnessed the faith in a more equal redistribution of urban resources that assigned a privileged value to collectivity and relations, resisting both a standardizing functionalist approach and a growing capitalistic system endangering the very existence of public, participated urban places.

1. THE STREET AS DEVICE TO HEAL FROM THE TRAUMA OF WAR

For the new generation of architects starting their career in the late 1940s, the twenty years following the Second World War constituted a liminal period characterized by the hope in the possibility of building a better, more equal society as well as a radical criticism towards the alienating effects of both the rigidities of the CIAM functionalist approach and the increasing bureaucratization of the welfare state's machinery.

Among the young architects entering the CIAM discourse in those years, the British Alison and Peter Smithson and the French-based trio composed by George Candilis, Alexis Josic, and Shadrach Woods, together with the Dutch architects Aldo van Eyck and Jacob Bakema, undoubtedly played a crucial role in bringing to the audience a new set of themes that would have profoundly challenged the orthodoxy of the modern movement. Among the ideas they promoted, the reevaluation of the street as a crucial public space of encounter and exchange and as a starting point to reimagine and reorganize the private and public dimensions of a new society certainly had a central role.

Having experienced, during the conflict, the precariousness of everything that was supposed to be self-evident once peace was restored, they claimed attention to the psychological and relational needs of people, participating in that feeling of nostalgia for the neighborhood scale of living and a world of ordinary, authentic connections with both the landscape and among communities of kinships. In their eyes, those were places demonstrating the value of ordinariness per se, as something that had been unfairly often overlooked, and of ordinary urban forms still capable of accommodating spontaneous human inhabiting practices.

In that perspective, the radical reconsideration of the street as a privileged place of discovery and a crucial element of social morphology constituted a profound shift from the previous two decades of the twentieth century. Far from the monofunctional, univocal conception of a well-defined space relegated to circulation, the streets were meant to comprehend all those extensions of the private house merging into the places of society.[1]

Therefore, during the 1950s, many of the CIAM's new generation of architects started to explore how those spaces between the buildings could foster human everyday life, organizing the unfolding of public and private inhabiting activity.

2. SMITHSONS' INVESTIGATION OF BETHNAL GREEN'S ROUGH, LIVELY WORKING-CLASS NEIGHBORHOOD. THE STREET AS A HUMAN THRESHOLD AND THE ARENA OF COLLECTIVE LIFE

During the early 1950s, Alison and Peter Smithson, together with the British photographer Nigel Henderson, started a series of socially committed ethnographical and aesthetic explorations of the working-class streets of Bethnal Green's neighborhood in the East End of London, persuaded of those ordinary, rough places' potential to reveal something crucial about human being's modes of inhabiting the urban space. Nigel Henderson had moved into the neighborhood some years before with his wife and sociologist Judith

1. Alison Smithson, *Urban Structuring Studies* (London: Studio Vista, 1967).

Stephen, who was enlisted on a study project to gather information about the specific habits and behavior of the local community. The research was part of the Mass Observation Movement, an organization operating in Britain from 1937 until the mid-1960s to record everyday life in the nation.

Smithson's gaze and complex interpretation of the street realm had their roots in those ethnographically inspired explorations and were significantly mediated by Henderson's photographic technique. On the one hand, being precisely situated in Bethnal Green's socio-spatial conditions, their research aimed at building a well-contextualized social documentation of a specific urban reality and a type-form, i.e., the traditional pedestrian street associated with the Byelaw Terraced houses.

On the other hand, as places where the most spontaneous patterns of communitarian everyday life can be grasped, the working-class streets of Bethnal Green also acquired a highly symbolic meaning. As places of the unfolding of collective incidental performances or consolidated habits and traditions, those streets achieved the status of *threshold*, laying in-between the private and the public, the individual and the society, and allowing people to discover themselves through their relationship with the *other* **(Fig. 1)**.

If Henderson's artistic practice significantly influenced the Smithsons' approach to the street study, their interpretation of the street realm also had roots more distant in time, linking their reflections to Tom Harrison's fascination for the longhouses in Borneo.

Harrison was a British ornithologist and explorer who, in the early 1930s, had embarked on a series of expeditions to Sarawak (Malaysia) to study the Dayak's local communities. There, he had been impressed by the reality of the longhouses, large architectural structures that organized the life of many families, connecting separated private apartments through a backbone of shared common areas for cooking, ceremonies, and socialization.

Once in Britain again, Harrison turned his attention "from the rainforest into the street" of his people, thus prefiguring the connection made by the Smithsons between the longhouse, the streets of Bethnal Green neighborhood and their idea of street-in-the-air.[2]

Indeed, Harrison was among the founders of the social survey group Mass-Observation and thanks to the Hendersons' connection and involvement in it, his way of approaching the British industrial towns "as a Sarawak at home" and the typical Victorian byelaws street as another type of longhouse veranda reached and profoundly informed Smithsons' 1950s theoretical and design productions.

Similarly to the Dayak longhouse veranda, the streets of Bethnal Green were observed as direct extensions of the house, capable of balancing family and communitarian needs while remaining permeable by outside visitors. Within those spaces, the boundaries between the private and the public blurred and lost their prescriptive functions toward people's behavior, ultimately undermining the idea of private property.[3]

However, to "take to the street" was only the first step of a process that challenged the very epistemology of the discipline. The term "street" was not used to reassert the value of traditional architectural elements but rather to mobilize collective imagery that was well-circumstantial and in-the-changing at the same time.

2. Mark Crinson, "From the Rainforest to the Streets," in *Colonial Modern: aesthetics of the past-rebellions for the future*, ed. Sehrat Karakayali et al. (London: Black Dog, 2010), 107.

3. Crinson, "From the Rainforest to the Streets," 105.

The idea of the "street" has been forgotten.
It is the idea of the street, not the reality of the street that is important - the creation of affective group-spaces fulfilling the vital function of identification and enclosure, making the socially vital life of the street possible.[4]

Experienced in the byelaws street of Bethnal Green, the new street idea found its most vivid architectural counterpart in the Smithsons' non-realized project for the Golden Lane competition in 1952, whose challenge was to create a design for almost one thousand residents.[5] Located in an area of the city destroyed by the bombs, the projects aimed to demonstrate that high density and tight restrictions on budget do not necessarily result in a low standard of living.

To obtain the greatest possible number of apartments while fostering a heterogeneous and rich neighborhood life, the Smithsons started from the idea that the street would have been the spatial device not only organizing the articulation of the private apartments but also constituting the social space of physical, emotional, and symbolical connections among the hosted families. In Golden Lane, the street realm was translated into a network of "streets in the air" organized on three levels, each constituting a "deck" that welcomed different modes and degrees of human interactions.

Each deck was thought of as a self-contained social entity, a place with its own identity that provided inviting places to linger and communicate with the other inhabitants. Since all the apartments had front doors on the decks and many had a visible yard or garden, many private activities of people's everyday lives became part of the street realm outside. That compenetrating of the house and the street allowed the diverse families to express their own identity and participate in shaping a collective one **(Fig. 2)**.

3. CANDILIS, JOSIC, AND WOODS' CONCEPT OF STEM: THE STREET AS THE PUBLIC BACKBONE STRUCTURING THE NEW URBAN FABRIC

The other idea of the street that this paper discusses was developed by the French-based architectural trio of Candilis, Josic, and Woods (CJW). Compared to the Smithsons', the considered reflections emerged at a later time, mainly from the early-1960s. Almost ten years after their return to France from the North African experience as part of the ATBAT-Afrique group (early 1950s), they started to focus on a different kind of international competition compared to the initial attention on housing, mainly engaging into projects for the reconstruction of urban centers, university poles, and territorial plans. Those constituted challenging spheres of the architectural realm to deal with the emergence of mass society and its dynamic plurality of individuals.

Combining the conviction about the need to approach the problem of density as something intrinsically flexible with a peculiar attention to the street realm as a type-form capable of structuring open, adaptable spatial organizations, CJW developed the concept of "stem," firstly presented on *Architectural Desing* in May 1960, and then implemented in many design projects.[6]

4. Alison and Peter Smithson, *Ordinariness and Light Urban Theories 1952-1960 and Their Application in a Building Project 1963-1970* (London: Faber and Faber, 1970), 45.

5. Bruno Krucker, "Complex Ordinariness", in *Architecture is Not Made with the Brain: The Labour of Alison and Peter Smithson*, eds. Alison and Peter Smithson (London: Architectural association, 2005), 87.

6. Shadrach Woods, "Stem," *Architectural Design 5* (May 1960): 181.

The stem was a linear spatial organization defining a direction for cities' gradual expansion. As for the Smithsons, the idea of the street and not the street was crucial in providing a new ordering and interpretative system to both the city and the design process. By keeping the new parts strictly connected to a central backbone, the stem could accommodate changes, allowing future generations to readapt their spaces while simultaneously expanding through comprehensible patterns of growth.

More importantly, the stem constituted the built frame (the material substrate) hosting people's way of moving and shaping relationships, and, simultaneously, the content and product (the spatial practices and expressions) emerging from human inhabiting activity. Instead of applying rules imposing functions a priori, residents themselves, with their everyday living habits, participated in the design process as actual sources of architectural knowledge.

Among the many projects developed at the time, the University of Bochum in Germany and the plan for Fort-Lamy in Chad are observed as emblematic of CJW's new idea of the street as both the formal materialization and the operative urban device to deal and mediate the apparent dichotomies between permanence and change, individual and collective, internal and external, parts and whole.[7]

Both projects reveal the need to preserve and nurture the public space as anything but static, homogeneous, and flat rather adaptable, permeable, and preserving a certain indefiniteness. That ambiguity provokes people's perception and imagination, raising awareness of public space as something not to be taken for granted but rather as the result of an active act of care against the threat of privatization and urban speculation.

The competition for the new university of Bochum, in the Ruhr area of Germany, was opened in 1962 to establish a new university model for a mass society.

The project proposed by the three partners (that was never realized) exemplifies their strategy to deal simultaneously with the preexistence of the context and the new large scale of a mass university complex[8], by making evident the "reconnecting" value of the street on a physical and a perceptive level.

The proposal was based on the idea of the open space of the "street" as a fundamental educational type-form in the city, alternative to the campus model, regarded as a closed university ghetto.

The large public street was the dominant element defining the relation of the new architecture towards its natural surroundings, while students' accommodations and facilities were implanted alongside it into "clusters".

The idea of scattering around the places for collective activities allowed the growth and change of the whole structure based on the evolving needs of the students' community, ultimately preserving them as active public spaces.[9] Moreover, it constituted an invitation to walk around in smaller or larger groups and encounter other human and non-human presences while wandering in the city-university, thus activating the stem system as the veritable *locus* of learning.

During the early 1960s, the stem was also used as a linear core of public activities structuring an urban extension of Fort-Lamy, the capital of the new Republic of Chad. At the time, Fort-Lamy's administration and urban

7. Tom Avermaete, "From Knoxville to Bidonville: ATBAT and the Architecture of the French Welfare State," *Architecture and the Welfare State,* eds. Mark Swenarton, Tom Avermaete, and Dirk van den Heuvel (London: Routledge, 2015), 227.

8. Tom Avermaete, "University of Bochum competition, 1962", in *Team 10: In Search of a Utopia of the Present 1953-1981*, eds. Dirk van den Heuvel and Max Risselada (Rotterdam: NAi publisher, 2005), 110.

9. Avermaete, "University of Bochum competition, 1962", 110.

morphology were divided into an African and a European quarter, separated by a vast empty area. The latter was the object of the 1961 competition, which demanded the design of four districts to organize and reconnect the city's two parts. Differently from the case of Bochum University, in Fort-Lamy, the stem structured the space on more than one level, penetrating the buildings at varying heights and prolonging the public domain of the street as "street in the air."

In an article published in 1965 on *Le Carré Bleu*, CJW described the project, explaining their choice to preserve the traditional architectural character of the single cell, while not exaggerating its importance for the whole habitat.[10]

The dwellings were disposed side by side on two levels, the upper floor spanning the street so that it becomes an inner element of the house, a public place protected from the sun and the rain. In turn, the cells' number and disposition defined and constituted the street, affirming the value of all architecture, including private architecture, as a public affair.[11]

Aiming to emphasize the relationship between the private house and the public street as mutual-defining elements, CJW introduced the French term of "mitoyenneté."[12]

> Expressing themselves in French, they stated that
> *Ici la notion de voisinage se résume à la notion de mitoyenneté. C'est la continuité de l'assemblage des maisons qui crée l'espace commun public: la RUE.*[13]

The term "mitoyenneté" refers to "une sorte d'indivision s'appliquant à un mur commun séparant deux propriétés contigüs."[14] From the point of view of law, therefore, that threshold belongs to (at least two) diverse owners, each having equal rights over it.

The idea of mitoyenneté was thus introduced to describe something indivisible both on a conceptual level and in its physical spatialization, communicating the value of the "new" street as a fundamentally indivisible threshold of contact between people living side by side and having its proper thickness. The peculiarity of that concept's use is also witnessed by the fact that, in the English version, the idea lost its connotation of direct human contact and impossibility of single ownership, as the term mitoyenneté is translated into "intermediate space."

In the Fort-Lamy project, the street was conceived, once again, as the material substrate and the physical and symbolic product of an idea (i.e. mityenneté), functioning as a structuring element of the new urban fabric and as a public place for citizenship. Indeed, the pedestrian grid penetrating the built environment and organizing the movement of the inhabitants from the car to the house contained a series of heterogeneous covered spaces representing the veritable public core of the new city **(Fig. 3)**.

4. CONCLUSIONS

The examples discussed so far represent only a partial perspective on a multivoiced panorama of architects who, in the postwar period, addressed

10. Georges Candilis, Lucien Hervé, Philippe Mallier, Yonel Schein, and André Schimmerling, "Fort Lamy," *Le Carré Bleu 1* (1965): 2-3.

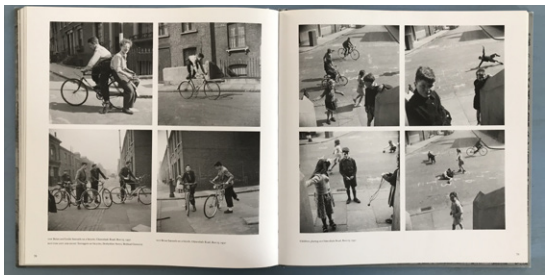
11. Avermaete, "Stem and Web", 261.

12. Avermaete, "Stem and Web", 260.

13. *Le Carré Bleu 1* (1965): 3.

14. "Définition de Mitoyenneté," *Dictionnaire Judirique*, accessed June 7, https://www.dictionnaire-juridique.com/definition/mitoyennete.php.

15. Ben Highmore, "Rescuing optimism from Oblivion," in *Heuvel*, Risselada, *op. cit.*, 273.



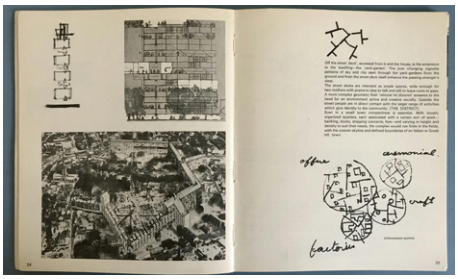


Fig. 1. Clive Coward, *Nigel Henderson's Streets: Photographs of London's East End* 1949-53. (London: Tate Publishing, 2017), 78-79. Photographs by Nigel Henderson.

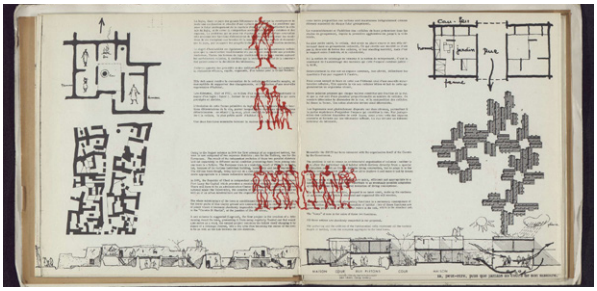


Fig. 2. Alison Smithson & Peter Smithson, Urban Structuring: Studies of Alison & Peter Smithson (London: Studio Vista, 1967), 24-25. Schemes and collages for Golden Lane competition.

Fig. 3. Georges Candilis, Lucien Hervé, Philippe Mallier, Yonel Schein, André Schimmerling, "Fort Lamy," Le Carré Bleu 1 (1965): 3-4, online, accessed June 5, http://www.lecarrebleu.it/it/category/catalogue/19601969/

the street realm as a central theme to be discussed in dealing with the modern city, undermining any stereotyped distinction between public and private space and predetermined idea about how their design.

Beyond the questionable success of the realized project of the architects whom that paper deals with, their direct engagement with the materiality of the everyday in the street and their associated *new* ideas for modern streets is observed as significantly reshuffling the modes of conceiving and organizing public, private, and collectively spaces.

The new ideas of "street" presented so far appear significant in reaffirming the street space as a place where collective social entities organize their needs together, negotiating a variety of individual desires and expectations and transforming them into shared collective concerns.

Their authors advocate for a still very actual idea of the street as a place capable of raising awareness about emotional and relational people's needs and claiming spontaneous yet stable forms of care and community. Observing the street space as a space of mitoyenneté makes one aware of the risk of withdrawing from participation in the urban public life, delegating, for negligence or disillusion, its ownership and control to single privates and profit-oriented design approaches.

In this perspective, "taking the street," considering it a quintessential democratic space of ordinary public life was (and still is) a practice of resisting the commodification of public space and asserting the rich diversity and specificity of human associations against an overarching generalization in urban planning.[15] ■

BIOGRAPHY

Elena Giaccone (1995) is an architect and Ph.D. candidate at the Department of Architecture History and Project at Politecnico di Torino. She studied between Italy, Belgium (UCL Brussels), and France (Paris La Villette), graduating from an interdisciplinary program held by Politecnico di Milano and Torino. Currently, her thesis investigates the emerging definitions, shifting imageries, and ambiguous interpretations of the concept of Common Man of the Street, as part of the broader postwar CIAM discourse, within the field of urban design. Deeply interested in the pedagogical aspects of architecture, she is a teaching assistant both in Turin and Milan.

ALTERNATIVE CITIES. THE PEVE PROGRAMME, MASS HOUSING PROPOSALS, AND URBAN FORM TRANSITIONS IN 1970S ARGENTINA

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#10

ABSTRACT

In Latin America, the "Leyes de Indias" that regulated the political, social, and economic life of the Spanish colonies strongly affected the shape of the territory (of its organisation, development, and structuring), determined its property structure, how the land was exploited and worked, and also, influenced its societies, the forms, and hierarchies by which they organised themselves.

In the city of Buenos Aires, the topographical conformation, the characteristics of the soils, and the economic, social, and cultural dynamics have been articulated, consolidating, over time, patterns of occupation, control, and production of urban space in which the grid constitutes basically the only device of articulation between domestic (private) and collective (public) space, acting, simultaneously, as an integrating mechanism and as a materialisation of inequalities. Indeed, the hegemony, strength and pervasiveness of the urban chessboard have survived the reformist instances and modernist formulations of the 20th century, absorbing, and resisting them, consolidating itself as a reference model, parameter, and instrument of comparison and validation of any urban design practice.

Nevertheless, in the 1970s, a substantial series of projects that attempted to completely rethink and reformulate the urban form was implemented, thanks to the impetus given by the *Plan de Erradicación de Villas de Emergencia* (PEVE), (or Slum Eradication Scheme, as it would be known in English). The initiative possesses characteristics which are absolutely exceptional in terms of the quantity, quality, and variety of design solutions built and the multiplicity of designers involved.

Aware of the complex entanglement of reasons that have excluded these experiences from the theoretical and operational study of urban morphology, the paper proposes an investigation of the concrete material outcomes, redeeming the value of an experience that seems to be able to provide indications for designing the contemporary city within a logic of hybridisation and socio-spatial articulation that overcomes the dualities that characterise (not only) the Latin American reality.

1. THE PEVE INITIATIVE. AN UNEXPECTED EXPERIENCE

The housing policies in which the high-density social housing complexes of the PEVE were framed began to be implemented, in broader terms, starting from the years immediately following the fall of President Perón after the *coup d'état* of 1955. From this point, and throughout the period that ended with the advent of the military government known as *Proceso de Reorganizacion Nacional (or the National Reorganisation Process, as it would be known in English)*, the problem of slums dominates the housing debate in Argentina.[1]

The public housing intervention programmes, which involved direct construction, financing of construction companies or the granting of credits to citizens, were a significant translation of the allegedly efficient government model and the relations between the state, the business sectors and large national and international capital, showing how pressure from the latter influenced state policy programmes for housing production.[2]

Planning became a fundamental tool for the promotion of a process of continuous development, and professionals, the bearers of "modern architectural ideas," were welcomed into public offices and called upon to propose a new image of the country that aligned with the dominant ideology, involved in the construction of a "modern" State.[3]

Plans were developed in urban planning following on from the project drawn up in the 1950s by the EPBA based on Le Corbusier's *Plan para Buenos Aires (*or Buenos Aires Plan, as it would be known in English)*4*. These applied the principles of the Athens Charter and introduced elements that went beyond the urban planning model of the first CIAMs which were based on the formulations of Team X.

These town-planning principles, systematised in large-scale plans that never found true application, took concrete form in one-off situations in the state initiatives for the construction of large, high-density social housing complexes, which sprang up as new urban cores within the disintegrated fabric of the suburbs.

The first significant departure from the CIAM principles occurred in the Lugano I y II complex[5], which was a transposition of the British new towns models. The project, supported by the IDB and produced by the technicians of the Comisión Municipal de la Vivienda (or the Municipal Housing Commission, as it would be known in English), was characterised by the ambitious size of the investments, the number of inhabitants, and the demand for industrial production capacity.[6] The reference to European models, with the application of "the most modern techniques of planning"[7], was hoisted as a progressive flag. This formed part of a plan that was showcased in propaganda as a world-class example of addressing large cities' building and social problems.

Starting from these precedents, the research into articulation and reconfiguration of the urban fabric and the effort to achieve formal variety and identifiability found application on a very large scale in the projects for the *Núcleos Habitacionales Definitivos* (Definitive Housing Units) of the

1. CNV, Comisión Nacional de la Vivienda, Plan de Emergencia. Informe elevado al Poder Ejecutivo Nacional, Ministerio de Trabajo y Previsión (Buenos Aires: Depto. de Publicaciones, April 1956).

2. Anahí Ballent, Jorge F. Liernur, *La casa y la multitud* (Buenos Aires: Fondo de Cultura Económica de Argentina, 2014).

3. Jorge F. Liernur, *Arquitectura en la Argentina del siglo XX. La construcción de la modernidad* (Buenos Aires: Fondo Nacional de las Artes, 2001).

4. Juan Molina y Vedia, *Mi Buenos Aires Herido, Planes de desarrollo territorial y urbano (1535-2000)* (Buenos Aires: Ediciones Colihue, 1999).

5. Municipalidad de la Ciudad de Buenos Aires, Comisión Municipal de Vivienda, "Lugano I-II", *Summa 18* (September 1969): 53-58.

6. CMV, "Conjunto Lugano I y II," *Construcciones 227* (1971): 361-366.

7. MCBA, Municipalidad de la Ciudad de Buenos Aires, Centro Urbano Integrado Parque Almte. Brown. Solicitud de préstamo al Banco Interamericano de desarrollo, Buenos Aires, December 1965.

PEVE Plan. Here, disciplinary demands were articulated with the strong constraints arising from the context of action, influenced by the limited economic budget, low levels of dimensional and construction standards, tight timeframes for design and construction, and the interaction with companies and the at-times unclear organisation of administrative bodies.

These experiments, aimed at creating new and complex urban realities, reached their peak at least in Buenos Aires, with the design of two unrealised projects for the construction of two 'cities' of 60,000 and 100,000 inhabitants, in which the configuration of neighbourhood units or uninterrupted urban plots was taken to the extreme and translated onto a vast scale.

2. NEW URBAN FORMS. THE MASSIVE HOUSING COMPLEXES OF THE PEVE PROGRAMME

The 'Elión' project[8] designed by Teresa Bielus, Jorge Goldemberg and Olga Wainstein-Krasuk (Estudio STAFF) in 1969 for a PEVE programme competition, and, above all, the analysis of the project report is very interesting as they introduce new concepts that, when developed into subsequent projects, would contribute fundamentally to the creation of an urban model that characterised the entire period. In fact, even though this is an unrealised initiative, it constitutes a significant contribution to the construction of the framework.

The project was submitted to one of the first PEVE competitions, which was characterised by the introduction of an innovative concept compared to previous competitions for the same operation. In this case, in fact, the tender left the urban design and the choice of the general layout of the complex to the tenderers, without giving any indications on the layout of the buildings or the organisation of the road system.

In the project report, Estudio STAFF stresses how this condition requires the jury to evaluate "not only the price and design of the housing but also the choice and application of an appropriate urban theory."[9] The designers emphasise the importance of addressing the problem of housing starting from urban and sociological premises. They stress the need to take into account the configuration of relational and circulation plots within the complex and then, in close correlation with these, seek to resolve the design of the housing units since "as it is obvious, without an urban approach, any other posterior elaboration is invalid".

The project report goes on to point out the shortcomings of the system of isolated blocks that, while offering a better economic return for the high-density solution, increase the "economic and social cost", creating discontinuity and resulting in disjointed situations due to the loss of the spaces that foster connection and relationship, in other words, of the "small area that in succession unites everything".

Like many others, the Morón complex[10] designed by Estudio STAFF in 1970 is also organised according to an orthogonal plot oriented diagonally to the boundaries of the plot, along north-south and east-west axes.

The buildings are arranged perpendicular to each other, configuring large courtyards enclosed on three or four sides. These courtyards have green

8. Staff, "PEVE en Capital Federal 'Elión', Memoria" *Summa 64/65, Estudio STAFF. Bielus, Goldemberg, Wainstein-Krasuk, Arqs* (July 1973).

9. Staff, *Summa 64/65* (July 1973).

10. Staff, "Conjunto Morón, Haedo, Provincia de Buenos Aires, Síntesis de la memoria descriptiva", *Summa 36, Concurso Summa 70, La Vivienda de Interés Social* (April 1970).

areas and are connected by pedestrian paths bordered by pairs of blocks that, running parallel to each other, connect orthogonally with those bordering the immediately adjacent area. In addition, the connection between all the elements is reinforced by the vertical circulation system that connects the accesses to the apartments by footbridges suspended over the pedestrian streets.

Community facilities, treated independently, are located at the complex's entrances at either end of the main road.

In La Matanza complex[11], designed by Manteola, Sánchez Gómez, Santos, Solsona, Petchersky, and Viñoly (MSGSSPV), the circulation system is generated by a long diagonal axis that crosses the lot and two shorter axes that cross it perpendicularly. The blocks are positioned at forty-five-degree angles to the circulation routes and are connected by external stairs and elevated walkways. In the centre of the complex, there is a long line of apartments that spans the entire lot, and in the space generated between this and the diagonal circulation routes is a public square and a community centre hosting the shopping centre, school, and kindergarten as envisioned in the competition. All social features are arranged within terraced buildings that slope toward the pedestrian plaza or public green areas.

In the project description, the designers claim their intention is to propose 'an urban system that configures a total architectural landscape'. The urban model of isolated blocks "which has failed, in the experiments carried out, to configure an interesting urbanistic proposal" is replaced by the idea of an urban plot made up of the combination of flats, vertical circulation nodes, pavements and vehicular paths. These would configure an urban scheme characterised as "an organic overall proposal,"[12] in which a concentrated density around circulation routes is contrasted with an open fabric in relation to green spaces.

Consistently, the San Isidro complex, also designed by MSGSSPV (**Fig. 3**), is organised around a 'spine' in which community activities are concentrated by linking meeting spaces and commercial and neighbourhood squares (**Fig. 3**, scheme A). The main artery, overlooked by shops and schools, forms a continuous circuit, a 'ring' linked to the street network by three points of contact: two of which are located on Figueroa Alcorta street and another main one providing access from the road, Morón-San Fernando (**Fig. 3**, scheme B).

Along the 'spine' are the *barrios*, made up of 200 housing units each, distributed in blocks of parallel buildings organised around green spaces closed on all sides except one, which opens out towards the surrounding neighbourhood (**Fig. 3**, scheme C). The *barrios* are divided by a pedestrian path that connects the entrances from the perimeter streets, next to which are the main parking areas and bus stops, and the central 'spine' (**Fig. 3**, scheme D). The commercial area is developed along a path on the ground floor (**Fig. 3**, scheme E), which overlooks the public squares of the complex. These are intersected and interconnected by the main lane, which is integrated using the same paving. This creates a continuous perception of the space, which is thus "transformed into a multifunctional area for meeting and different community activities".

11. MSGSSPV, "Conjunto habitacional 'Joaquin', Memoria descriptiva", *Summa 36, Concurso Summa 70, La Vivienda de Interés Social* (April 1970).

12. MSGSSPV, *Summa 36* (April 1970).

The larger Piedrabuena complex[13] is organised into seven cores, each consisting of two concentric semicircles of high and low buildings; the high buildings, with seven to thirteen floors, are arranged along the outer perimeter of the hemicycle, enclosing the low buildings, with three or four floors; these, in turn, define a partially open octagonal green area, housing common spaces or collective facilities.

The cores are arranged along the main circulation axis, with the tallest buildings facing the street and the green area facing the spaces surrounding the complex; the high blocks house, at ground floor level, commercial activities and open passageways that allow vehicles to access the internal area of each core and to the pedestrian routes, which are included between the concentric half-cycles of the buildings.

In Chacras de Saavedra project[14], the experiences of the MSGSSPV group's previous works, especially the Puerto Madryn[15] and Piedrabuena complexes, were taken up. The project envisaged the subdivision of the complex into seven large units, each consisting of an octagonal ring of housing complexes enclosing within it several buildings intended for community functions. The units were configured as barrios, or neighbourhoods, with an autonomous social life, with the presence of 'schools, squares, bars and meeting places', and a clear distinction between 'inside' and 'outside'. The ribbon of housing formed a boundary, resembling a 'wall' of varying height that, while it sloped with terraces towards the inside, presented a homogenous profile on the opposite side, 'giving an almost medieval city-like image towards the outside.'[16]

Each octagon was connected to the others by a double circulation network, one for pedestrians and one for vehicles, which penetrated the units at various points. The circulation system was inserted inside a building platform that also housed the spaces destined for commerce and other collective service elements.

3. A NEW URBAN MORPHOLOGY. ARTICULATION AND SOCIAL RELATIONSHIPS

As reported, the introduction of an urban design that echoed the demands of Team X simultaneously contrasted with the configuration of isolated blocks used until then in public housing construction and the morphology of the urban fabric based on the colonial-derived grid. This was realised for the first time in a project, on an extraordinary scale, in the construction of Lugano I and II. However, the PEVE projects reworked this demand, emphasising the particular importance assigned to the pedestrian circulation system, which was configured as a continuous and three-dimensional plot projected at height through the connecting walkways between the blocks. Nevertheless, compared to the Lugano complex, in the PEVE projects, the pathways only connect the flats.

In the PEVE competitions, in fact, the location of shops and services, when present, was planned within shopping centres, separate from the residential buildings. The traditional city's social life, characterised by the street as a place of gathering and exchange, has thus been deprived of its essential mixed-use character, which the planners have tried to compensate

13. Ricardo Novais, "Proyecto y realidad. Conjunto Piedrabuena," *Trama 9* (September 1984): 14-23.

14. MSGSSPV, "Abitazioni per 60.000," *Domus 558* (May 1976): 24-27.

15. Flora Manteola, Javier Sánchez Gómez, and Fina Santos, Justo Solsona, Rafael Viñoly, *Manteola, Sánchez Gómez, Santos, Solsona, Viñoly* (Barcelona: Presse Internationale, 1980).

16. Justo Solsona, *Entrevistas, apuntes para una autobiografía* (Buenos Aires: Ediciones Infinito, 1997).

for through a complex formal articulation. The characteristic 'chaos' of the urban street in general, particularly accentuated in Mediterranean and Latin American realities, and determined by the extreme variety of functions, forms, colours and the imposing presence of multicoloured signs of all types and sizes, has been emulated and re-proposed through the use of the only tools in the designers' possession, namely the elements of architecture. Variety was therefore pursued through the introduction of coloured plasters and cantilevering elements, the design of complex circulation systems, the use of macro-graphs indicating house numbers, and the identification of collective facilities. The latter, designed with formal and constructional characteristics is different to residential buildings, reflecting the international mainstream and giving the buildings a strong and clearly recognisable image.

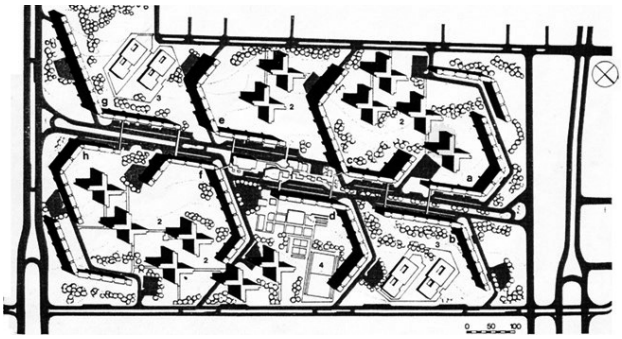
A shared characteristic of all the PEVE complexes, set up as genuine experiments in "alternative cities", was the pursuit of a pattern that articulated spaces and buildings maintaining the pedestrian scale as a continuous reference. The pedestrian plot is a complex system of open-air or semi-covered walkways, sidewalks, common courtyards, and public squares that connect all the residential accesses to each other, to the roads, and to the parking areas. This pathway is defined and delimited by the buildings.

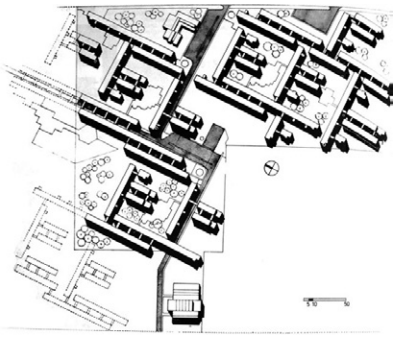
The organisational principle that determined the layout of the buildings was aimed at achieving a progression of spaces, drawing the variety of different places from traditional city elements understood as scenarios for the unfolding of different situations. Recognising different levels of relationships, the projects adhered to configuration criteria at different scales in an attempt to materialise three different areas of relations. Therefore, the pedestrian circulation system had to 'physically' translate individual relationships, recovering the value of the streets, green areas and 'internal' courtyards as places for promoting community relationships (barrio, neighbourhood unit. Additionally, the civic and commercial squares, located in the centre or at the limits of the complexes, were intended to host urban-type gatherings and interactions, attracting the inhabitants - when present - of the surrounding area, due to their functional density.

The pedestrian plot was enhanced by vertical circulation blocks, typically placed outside the buildings, permitting a greater surface area inside the dwellings, allowing for double exposure and contributing to the creation of a 'characterised' outdoor space. In the work of Estudio STAFF, they constituted spaces for gathering and forging relationships, bringing 'richness' and 'variety', while for MSGSSPV, the outdoor location provided a possibility to create a patio-terrace, a nexus between the public and private spheres, for the individual dwellings.

Marina Waisman, presenting the work of Estudio STAFF in 1973[17], underlined how in the projects of the large residential complexes, paradoxically, the attempt to recover contact with the interpretative codes of the users declared by the designers did not pass from the recovery of traditional forms or elements, but rather from the proposal to construct a new urban fabric, which, contrasting with the chessboard conformation typical

17. Marina Waisman,"Hacer es la consigna," *Summa 64/65* (July 1973): 24-28.





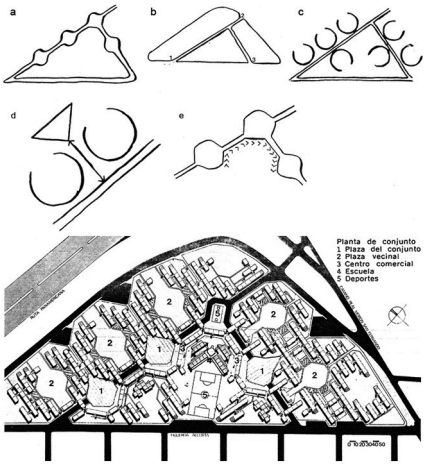


Figure 1. Housing complex Lugano I y II, CMV, Buenos Aires, 1969-1972, General Plan. Source: Municipalidad de la Ciudad de Buenos Aires, Comisión Municipal de Vivienda, Lugano I-II, in *Summa* 18, Buenos Aires, September 1969, pp. 53-58).

Figure 2. Housing complex Morón "Trio", Staff, Haedo, Morón, Provincia di Buenos Aires, 1970-1971. General Plan. Source: *Summa* 64/65, Estudio STAFF. Bielus, Goldemberg, Wainstein-Krasuk, Arqs, Buenos Aires, July 1973.

Figure 3. Housing complex San Isidro "MAR", MSGSSPV, San Isidro, Provincia di Buenos Aires, 1974, Schemes (above), and General Plan (below). Source: Summa 78, Concurso Nacional de Anteproyectos: 1500 viviendas en San Isidro, Buenos Aires, July 1974, pp. 25-36.

of Buenos Aires, was to be configured as the expression of a reformed society, rejecting the settlement principle that was believed to result from the impositions of Spanish domination and that had consolidated as a device for the uncontrolled growth of the city on the basis of speculation.

In this sense, the experiences briefly outlined, regardless of the complex issues they have raised in terms of policies, plans, and the ways in which the state can and must respond to the housing problem, have the merit of having questioned the models of construction of the city's physical space, focusing attention on not only the formal but also the social and symbolic relationships established through living. This indicates more a method (a set of conditions to which the project must respond) or an approach to housing as an urban issue that, with different results and material outcomes, has informed the most recent and interesting proposals for the articulation of fabrics and popular settlements with the urban fabric. ■

BIOGRAPHY

Santiago Gomes is an architect, PhD and associate professor of Architectural and Urban Design at Politecnico di Torino. In 2010, he co-founded Follow the Architect, an award-winning office active in restoration, housing and urban regeneration projects. His professional and research practice has been articulated with social engagement, influencing his interests, positions and work in support of communities and non-profit organisations, contributing through the project to the implementation of inclusive, solidary and sustainable processes. He is currently a member of the Transitional Morphologies Research Centre of Politecnico di Torino and the Instituto de la Espacialidad Humana of the University of Buenos Aires.

THE LOT IN MODERN ARCHITECTURE URBAN PLANNING: THE CASE OF BRASÍLIA PILOT PLAN'S CENTRAL SECTORS, 1957-

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ABSTRACT

History of modern architecture has acknowledged the Brasília Pilot Plan as the epitome of static and unitary planning. Such an interpretation stems from Lucio Costa's 1957 solution, publicised by politicians, architects, and critics as the finished project of a successful political enterprise - a city to be built and inaugurated within President Juscelino Kubitschek's four-year term, summarising Brazil's thriving development. But more than sixty years after the inauguration, the area occupied by sectors for banks, commerce, and services (located around the city bus station) displays tall and disarranged buildings, informal plazas, crowded streets, and construction sites. How can these sectors be so different from the images of Costa's former Pilot Plan? This paper examines such a question by investigating the existence of the lot in the Brasília Pilot Plan's central sectors. Though the lot is a formative structure of colonial cities across America, architects involved in the Brasília Pilot Plan development also utilised it. They experimented with it in different forms and arrangements, organising a complex central area. There, the use of the lot allowed for intense pedestrian transit and commerce, but it also favoured the persistence of empty areas and propriety speculation, raising discussions about preservation and the right to the city. Contrary to the common understanding of urban projects made by modern architecture, the existence of the lot in the middle of the Brasília Pilot Plan partitioned an otherwise indivisible area by bringing the idea of the urban fabric to the very centre of a city usually thought of as a total work of art.

1. INTRODUCTION

In September 1959, the International Association of Art Critics (AICA) celebrated its congress's first sessions in Brasília. The establishment of a congress amidst the early construction sites in the city, combined with a broader effort supported by the Brazilian Embassy to promote Brasília domestically and internationally.[1]

The initiative included the production and dissemination of a magazine (homonymously called *Brasília*), a permanent display at the Ministry of Education and Health in Rio de Janeiro, and the organisation of itinerant exhibitions across Europe, America, Africa, and Asia. In every situation, Lucio Costa's Pilot Plan was presented alongside Oscar Niemeyer's models for palaces and monuments.

Such political propaganda soon created an image which would portray the Brasília Pilot Plan as a significant example of modern architecture's static and unitary planning.[2] What we see today, however, does not align with this idea. Much of the Monumental Axis received additional buildings and monuments,[3] and many different arrangements can be seen across the *superquadras*.[4] This is particularly evident in the central areas, where the vicinity surrounding the city bus station and occupied by banks, commerce, and services, displays tall and disarranged buildings, informal plazas, crowded streets, and construction sites. How could these sectors be so different from the images of Costa's former Pilot Plan? This paper examines such a question by investigating the existence of the lot in the Brasília Pilot Plan's central sectors. Although some recent research has begun to explore the area and its components,[5] there is still a lack of comprehensive studies considering the significance of traditional city structures, like the lot, in its development.[6] Therefore, this text argues that the architects involved in the development of the Brasília Pilot Plan used the lot in different forms and arrangements. Through the lot, they favoured the organisation of a complex central area, much aligned with the idea of urban fabric.

2. BRASÍLIA PILOT PLAN

Despite the use of the lot since colonial times in Brazilian cities, it is not a planning tool that comes to mind when addressing Costa's Brasília Pilot Plan. Even though the architect had cited the lot in the Pilot Plan Report to address a scheme of individual houses,[7] it does not appear and does not seem to fit in the city's main scheme of two axes intersecting at right angles. In the Monumental Axis, for example, the architect strategically distributed buildings in specific sectors, incorporating civic activities to support the capital's functioning. In the Residential Axis, he organised a series of *superquadras*, each of which had 240-metre sides, to accommodate housing built above *pilotis*. In the first, the city would not change or grow. In the second, Costa designed an intellectual system in which the city would grow through each block or building located on the block. In both arrangements, however, despite dividing the land into large areas, the lot seems to have been excluded, reproducing the idea of a city made in an indivisible site commonly addressed to the city of modern architecture.

1. Rossetti, "Brasília, 1959."

2. This criticism can be seen in canonical histories about modern architecture, for example: Benevolo, *História da arquitetura moderna*, 718; Frampton, *Modern Architecture*, 256; Cohen, *The Future of Architecture*, 334-335.

3. See Comas, "Brasilia Lucio Costa."

4. See Ferreira and Gorovitz, *A invenção da superquadra*.

5. See Quintans, "Habitar o centro de Brasília;" Rezende, "Centro de Brasília."

6. Some of this argument can be seen in my PhD dissertation "Crônica sobre o fracionamento dos setores centrais do Plano Piloto de Brasília, 1957-1974" (2020), but it is being further developed in the research project "Tecido urbano controverso: um atlas para os setores centrais do Plano Piloto de Brasília, 1957-," at the Department of Architecture, Universidade Federal do Rio Grande do Sul.

7. Costa, "Plano Piloto de Brasília," 14.

In the central sectors, however, the Pilot Plan seems to have deviated from these defined logics. Costa explained that these sectors would be part of the Monumental Axis in terms of composition but similar to the Residential Axis concerning change, growth, and the availability of areas for private enterprises.[8] There were plans to build high-rise buildings that would house financial and commercial institutions, creating the bustling atmosphere of city centres. For this concept to succeed, it should include the participation of different actors in the city-making. Therefore, despite being submitted to previously made master plans, Costa suggested these sectors should be divided into smaller portions and autonomous units and sold in parcels on the real estate market.[9]

3. THE LOT IN THE PILOT PLAN'S CENTRAL SECTORS

Costa did not add any drawings or explanations to the Pilot Plan Report about how the central sectors would be parcelled and sold. Such a procedure was only addressed during the development phase of the Pilot Plan.

3.1. THE LOT AS VOLUME (1957-1960)

One of the earliest documents regarding the development of the central sectors includes photos of a model for the South Banking Sector.[10] These images show the sector as a collection of slab-like volumes placed over a platform. Though some critics noted the images suggested a unified design,[11] leaving no room for the inclusion of different actors, these same images were, at that time, used to promote the sale of residential and commercial areas in the Pilot Plan. They appeared on the back covers of *Brasília* magazine alongside headlines encouraging such purchases.[12] As per Costa's instructions, the central areas were divided and sold in the following years. The construction company Novacap reported sales of "lots," in line with a "purchase and sale commitment of urban lots in Brasília."[13] At other times, the sale being made was of "pieces of land."[14]

However, it was unclear what these "lots" or "pieces of land" corresponded to or how the parcelling of the banking sector was taking place. Even so, the issue can be inferred when one analyses a sequence of articles Niemeyer, author of the design, had published in *Módulo* magazine. In the first one, the architect advocated for a "city planning unity", using the banking sector photo to illustrate his point.[15] In the second, the sector images were followed by three projects, which would fulfil the slab-like volumes prescribed in the model.[16] Using the images of the banking sector, Niemeyer hoped that Brasília would have a healthy influence over Brazilian architects by promoting discipline in the use of forms, masses and open spaces.[17] The following sequence of buildings designed by different architects, for different clients, and with different technical solutions reinforced the idea of the master plan and a set of volumes as tools to control the built form. Each volume would then be a fraction or a parcel of the sector, resembling the recommended approach for the Residential Axis.

Novacap's architects also applied the same strategy to the design of the South Commercial Sector in 1960. They adapted Costa's Pilot Plan scheme into 12 slab-like volumes placed next to the Residential Axis, filling the

8. Costa, "Plano Piloto de Brasília," 9; 16.

9. Costa, "Plano Piloto de Brasília," 16.

10. See Bender, "Setor Bancário."

11. See Moholy-Nagy, "Brasilia," 88-89.

12. See 1958 June-November editions of *Brasília*.

13. "Boletim," *Brasília*, 24 (my translation).

14. "Sumário dos assuntos," *Brasília*, 19 (my translation).

15. Oscar Niemeyer, "Unidade urbana."

16. See *Módulo*, 8-15.

17. Oscar Niemeyer, "Unidade urbana."

remaining area with larger and lower volumes. In the drawings for the sector, the architects established a numerical sequence to identify each volume (**Fig. 1**). Each of those placed next to the Residential Axis is assigned a number, following the logic used in the South Banking Sector. However, in the rectangular volumes that make up the rest of the sector, the numbering is doubled: one number identifies the volume, and another the smaller portions. Novacap's architects divided these volumes into parts of four, eight, twenty, and forty metres wide. Instead of creating large, unified buildings, the design replicated the logic of city blocks and lots. The scheme suggests different combinations and possibilities regarding property, such as the merging and unmerging of lots,[18] usually practised in traditional cities.

3.2. THE LOT AS REGULATION (1960-1967)

After Brasília was inaugurated, architects of the newly created prefecture organised a set of regulations to guide new constructions in the Pilot Plan. These regulations established a building height range from two to 12 floors for shops and offices and up to 25 floors for banks in the central sectors. They also described what was understood as "lot": a geometry defined by a combination of height and projections on the soil.[19] Niemeyer justified the measure as a form of controlling and preserving the city's formal and visual unity, which included, besides the regulations, a special service within the prefecture for approving designs.[20]

These regulations were expanded and enhanced in 1967. A new code set and ratified the definition of uses in the central sectors, as the occupation of banks and commerce would also allow offices for tourism and public services, clubs, teaching facilities, and supporting amenities such as cafes, restaurants, and newspaper stands.[21] The code also offered a set of 14 drawing plates, displaying sections and, in some cases, schematic plans of lot division, in terms of a guideline.[22] Furthermore, an additional regulation was established for the building limits for each lot with regard to public areas. In the banking sector, for example, the construction and enhancement of these areas (including platforms and marquees) would also be the responsibility of lot owners, being the prefecture only in charge of enclosing the missing parts (**Fig. 2**). The opposite would occur in the South Commercial Sector, where private intervention was not allowed in spaces outside the lot.[23] With the regulations, the division of the sectors through volumes and fractions, as suggested in photos and drawings up to 1960, was effectively documented as law, and the word "lot" became formally used to identify portions to be constructed by private enterprises in the central sectors.

3.3. THE LOT AS A BI-DIMENSIONAL STRUCTURE

However, the idea of the lot as a bi-dimensional structure, virtually established over the land, appeared solely in the extension plans for the South Banking Sector in 1972. These drawings expanded such a sector towards the south, over an area initially considered as a *superquadra* (**Fig. 3**). The *superquadra* scheme was roughly maintained, including dimensions and the characteristic

18. One example is the merging of lots for the Serra Dourada building. See Serra Dourada.

19. Prefeitura do Distrito Federal, "Normas para Construções."

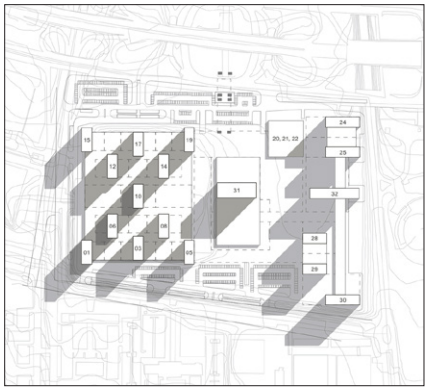
20. Oscar Niemeyer, "Minha experiência de Brasília," 12.

21. Coordenação de Obras e Serviços, *Código de Edificações*, 10.

22. These plates can be consulted under the acronym "CE" at Secretaria de Estado de Desenvolvimento Urbano e Habitação in Brasília. See CE set of drawings.

23. Coordenação de Obras e Serviços, *Código de Edificações*, 19.





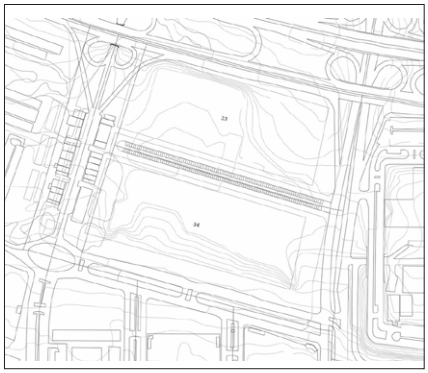


Figure 1. South Commercial Sector, 1960. Drawing overlaid on the current city map and made based on the plans SCS-2 2.8 and SCS 2 3.10 available at SEDUH-GDF. © Helena Bender

Figure 2. South Banking Sector, 1970. Dashed lines represent lot building limits over public areas. Drawing overlaid on the current city map and made based on the plans SBS PR-5/1 and SBS PR-6/1 available at SEDUH-GDF. © Helena Bender

Figure 3. Banking Sector Extension Plan, 1972. Drawing overlaid on the current city map and made based on the plan SBS PR-14/1 available at SEDUH-GDF. © Helena Bender.

strip of neighbouring vegetation. However, instead of keeping the area as one piece of land, they divided it in half with the design of an access road and two parking lanes. The resulting rectangles were named "Lot 33" and "Lot 34", continuing the numerical sequence of the banking sector volumes. In these lots, though, the prefecture's architects did not determine volumes as they did in the 1960 scheme. Instead, they wrote occupancy guidelines in the plan itself, such as the need to provide vehicle parking areas and the maximum height of 21 floors or 75 metres from the ground floor level.[24]

It was also specified that these lots be directly allocated to the National Housing Bank and the Caixa Econômica Federal. These institutions should present a project for approval and urbanise the unbuilt area. As written on the plan: "the allocation of the area to Caixa Econômica Federal is subject to the prior presentation of the program of occupation thereof;" and "the National Housing Bank and Caixa Econômica Federal will have the obligation to urbanise and preserve the unbuilt parts of the areas allocated to them."[25] As confirmed by the subsequent project for the Caixa Econômica Federal, the occupation of these areas began to depend more on the particularities of each project, rather than on the form of a prescribed volume.[26]

4. CONCLUSION

The use of a volume as equivalent to the lot was the first answer architects involved in the Pilot Plan development found to the problem of how to

24. SBS PR-14/1.

25. SBS PR-14/1.

26. See "O Brasil em Manchete," *Manchete*, 116.

parcel out the central area and offer it to private enterprises. Subsequently, the introduction of building codes established the usage of the word "lot". The codes also regulated the form and arrangement of structures considered fractional, such as the "lots" of the lower and larger volumes of the South Commercial Sector, while sanctioning the division of ideally unified structures, like the public areas of platforms and marquees of the banking sectors.

The control of the built form, previously managed through volumes, then became intertwined with the bi-dimensional organisation of the lot. Guidelines written in plans and codes made it more difficult to anticipate the building form outcomes. As a result, the indivisible area of the Pilot Plan, and the idea of a total work of art commonly addressed to the city of modern architecture, transitioned to more traditional ways of dealing with private property and building typologies. The combination of different approaches to land division has led to a complex central area, with a mixture of pedestrian and vehicular traffic, diversified commerce, and buildings of varying densities.

However, the lot, combined with non-centred propriety rights, also allowed for the existence of empty and underutilised areas. A recent discussion on the renovation of the South Commercial Sector raised concerns about real estate speculation, the right to the city, and the preservation of the Brasília Pilot Plan by introducing a residential use to boost the area's economy.[27] The idea was not followed through with, but it was a reminder that the area resembles an urban fabric commonly found in Brazilian cities, revealing complexities in the Brasília Pilot Plan and the city of modern architecture that usually go unnoticed. ■

27. Garonce, "Setor Comercial Sul."

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BIOGRAPHY

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‘INFORMAL MODERNISMS’: URBAN DESIGN, PLANNING NARRATIVES, AND NEW CITIES

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#11

ABSTRACT

The emergence of modernist urban planning and architecture was an inflection point in the history of spatial organisation around the world. One of the most profound manifestations of the zeitgeist of this period was the birth of large-scale urban projects, such as new cities, envisioned as panaceas to urban social ills. These interventions provided opportunities for modernist ideas to be displayed and tested with relatively limited constraints, especially in the Global South. Purported to be built from scratch, cities such as Chandigarh, Brasília, and Tema became symbols of desirable modernist futures, promising urban existences free from grime and crime. However, the production of these grand modern new cities also led to the creation of what were thought of as ‘informal’, ‘squatter’, or ‘slum’ settlements. These were often designed and built by the people who provided the labour for constructing the modernist cities but could not afford to live in them.

Initially overlooked by many historians of modernism, these ‘informal’ settlements have recently been re-examined, and some have asserted that, given the striking commonality (some might even say universality) of their material and spatial strategies, these should be included in the ‘international style’.[1] This essay explores these built instances as *informal modernisms* and suggests an expanded approach to understanding modernism which includes not only previously overlooked and under-theorised projects by indigenous architects and planners, but also the built environments created by the many whose labour created and continues to sustain modernist cities.

1. INTRODUCTION

The emergence of modernist urban planning and architecture marked a transformative juncture in the history of architecture and planning. Coinciding fortuitously with the end of the second world war, the necessity for reconstruction, the persistence of colonial relations, the rise of new independent states open to grand architectural gestures, and heightened aspirations for human welfare and development, this era fostered an environment conducive to novel ideas.[2] It is therefore understandable that European modernism transcended the confines of that continent, where they originated, extending their reach across continents on a massive scale.

One of the most profound expressions of the zeitgeist was the aspiration to reshape the world through ambitious modernist urban planning and architecture, envisioned as remedies for various social ills endemic to pre-existing urban landscapes. Historical cities – many characterised by dense built forms, labyrinthine streets, organic evolution, and steeped in history, vested political interests, and spontaneity – came under vigorous scrutiny from advocates of modernist ideology. These cities and ways of making cities were perceived as obstacles to progress, and there was a great push for contemporaneous urban fabric better suited to the times.[3]

Proponents of modernism lauded the virtues of rationality epitomised by the grid, citing ideas by Descartes, who said of the historical city: 'one is disposed to allege that chance rather than any human will guided by reason must have led to such an arrangement'.[4] Motivated by such thinking Le Corbusier wrote: 'curved lines constitute paralysis, and the winding path is the path of [the] donkey'.[5] These ideas left very little room for working with and within the constraints of organically-evolved ancient cities or those enclaves created by the majority of city dwellers for themselves.

These grand narratives of modernism propelled the modus operandi of its advocates, which included attempts to rectify perceived deficiencies of old cities through urban renewal projects or the conception and construction of entirely new cities.[6] The former often involved the demolition of existing structures to make way for modernist designs, while the latter involved the creation of new towns, on supposedly empty land that adhered to core modernist principles or variations thereof.

Modernism faced significant criticism for its underlying assumptions, built outcomes, and ways of perception and non-perception. Though several proponents of modernist urban planning approaches tended to couch their aspirations in languages of social justice, there were problematic ideas, assumptions, and oversights.[7] They were seemingly concerned about the squalid conditions endured by urban populations and proposed to ameliorate them in often naïve, sometimes simplistic, and other times ridiculously complicated ways.

Certain cities in this era, especially the so-called 'native quarters' spawned by colonial urbanism in regions in Africa and Asia and even lower-classed sections of industrialized metropolises of Europe and America were often described as in dire straits. Numerous observers of the time, including Jacob Riis in his seminal work on New York, Friedrich Engels' examination of cities like Manchester and London, offered compelling accounts of deplorable urban

1. Nnamdi Elleh, "Perspectives on the Architecture of Africa's Underprivileged Urban Dwellers", *Social Dynamics* 37, no. 1 (1 March 2011): 59; Nnamdi Elleh, ed., *Reading the Architecture of the Underprivileged Classes* (Routledge, 2016).

2. Ola Uduku, *Learning Spaces in Africa: Critical Histories to 21st Century Challenges and Change* (London: Routledge, 2018).

3. James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (Yale University Press, 1998).

4. René Descartes, *A Discourse on the Method* (Oxford University Press, UK, 2006), 12–13.

5. Jean-Louis Cohen, *Le Corbusier and the Mystique of the USSR: Theories and Projects for Moscow, 1928-1936*, First Thus edition (Princeton University Press, 1992), 199.

6. John R. Gold, *The Experience of Modernism: Modern Architects and the Future City, 1928-53* (London: Taylor & Francis, 2013), 2.

7. Janell Hobson, "New Towns, the Modernist Planning Project and Social Justice: The Cases of Milton Keynes, UK and 6th October, Egypt" *Working paper*, n° 108 (1999).

living conditions. Yet these accounts should not always be treated as factual and devoid of political intention.[8] As Yeboah argues concerning colonised Ghana (then Gold Coast), such depictions and actions aimed at correcting them were often 'informed by administrative needs and racist assumptions'.[9]

What some modernists failed to grasp was the multidimensional nature of urban environments which encapsulated more than the filth and disorder they perceived. As Jacobs pointed out, many of these were precisely the places that should have served as instructive case studies.[10] Rather, perhaps devoid of diligent observation and driven by an untested vision of utopia, these predominantly male professionals and academics opted to raze many such communities to the ground. In their place, they endeavoured to erect textbook examples of ideal cities, which, in many cases, failed to function as intended.[11] Fuelled by authority and wealth, these 'high modernist' projects represented a pursuit of 'legibility' — the quest by state institutions to oversimplify social dynamics as a means of bolstering social control.[12] In practice, they conflated 'geometric order with working order', thereby administering solutions that sometimes exacerbated rather than alleviated the ills they were intended to remedy in the first place.[13]

Yet while modernist ideas encountered significant opposition in the West and were arguably less able to thrive, it was in states of the Global South, some newly independent and others close to independence, that some modernist architects and planners realized their most significant commissions. Of particular interest here were 'new cities', ostensibly built from scratch. These ranged from new capital cities, industrial towns, or large-scale housing projects, and even to new rural settlements. In these contexts, modernist master plans not only facilitated the provision of necessary infrastructure, but also contributed to the construction of new, modern national identities and served to forge new citizenry that would fit into the mould of the new world.[14] Moreover, liberated from the constraints of the West, and backed by charismatic political leaders, designers found themselves with freedom to test their ideas on scales hitherto unseen.

Despite this, the quest for immaculate cities remained elusive and the grand modernist visions also spawned what we conceptualise in this essay as *informal modernisms*. Informal modernisms refer to those built environments which were typically built by marginalized populations excluded from or neglected by modernist master plans. Often generalised as 'informal', 'squatter', or 'slum' settlements, many of them persist and continue to grow till date as part of town- and cityscapes. In many instances the builders and inhabitants were migrants or locals who had contributed to the construction of modernist cities or provided essential services to migrant workers during construction and several years afterwards.

2. MODERNISM IN THE STRANGEST PLACES?

In his introduction to 'Reading the Architecture of the Underprivileged Classes', Elleh opens with: "How far have we come from the historical architectural avant-gardes' projects of the early twentieth century, those pioneers who wanted to use the medium of architecture to reform urban living and societies around the world?".[15] The book's contributors explore the

8. Jacob A. Riis, *How the Other Half Lives* (Penguin Publishing Group, 1997); Frederick Engels, *The Housing Question* (International Publishers, 2021).

9. Tony Yeboah, "Architecting a 'New Normal'? Past Pandemics and the Medicine of Urban Planning", Nursing Clio, 18 August 2020, https://nursingclio.org/2020/08/18/architecting-a-new-normal-past-pandemics-and-the-medicine-of-urban-planning/.

10. Jane Jacobs, *The Death and Life of Great American Cities* (Knopf Doubleday Publishing Group, 1992).

11. Jacobs, *The Death and Life of Great American Cities*.

12. Scott, *Seeing Like a State*.

13. James C. Scott, "Further Reflections on Seeing Like a State", *Polity* 53, no. 3 (July 2021): 512.

14. Michelle Provoost, "Exporting New Towns: The Welfare City in Africa", in *Architecture and the Welfare State* (Routledge, 2014); H. Fuller, *Building the Ghanaian Nation-State: Kwame Nkrumah's Symbolic Nationalism* (New York, NY: Palgrave Macmillan, 2014).

15. Nnamdi Elleh, "Reading the Architecture of the Underprivileged Classes", in *Reading the Architecture of the Underprivileged Classes* (Routledge, 2014), 1.

aftermath of modernist master planning projects in the Global South, discussing the role of modernist visions in fostering the emergence of 'informal' urbanism.

As has been shown, new master planned cities did not only produce the abstract aesthetics of gridded layouts and white box houses. They also produced so-called 'informal', 'squatter', or 'slum' settlements, often designed and built by people who were not considered or provided for in modernist master plans as well as others who could not afford to live in them (Sarin, 1982). In many instances, these were the migrants or locals who had provided the labour for constructing the modernist cities or who had provided various services such as selling food, and other necessities to migrant workers. They represented, and still represent, a forceful claim – the right to the city – by those who, in many cases, are needed if the urban environments created by architects are to work properly. Many dwellers in these master planned settlements would not be able to survive without the support and services provided by the residents of these enclaves.

Many examples of this abound. In Chandigarh, explosive population growth resulted in the creation of several unplanned satellite enclaves, existing alongside the planned settlement. In 1976, D'Souza reported that in the decade spanning 1961-71 the population living in these 'unplanned' settlements grew by 230%.[16] In Brasilia, three-quarters of its population lived in these informal enclaves by 1980, whilst the planned city struggled to reach the halfway mark of its anticipated population.[17] The story was not much different in Tema. In a paper presented at a UN training workshop for settlement managers at the Kwame Nkrumah University of Science and Technology in 1976, Glover-Akpey asserted that, between 1960 and 70, whilst planned Tema increased by 150% the population of Ashaiman, built by the labourers who built the city, increased by 900%.[18] These claims to new cities represented a defiance of the political, economic, and architectural elites who would prefer their meticulously planned cities remain untouched by marginalised communities and their built environments. As articulated by de Certeau, they embody 'the dispersed, tactical and makeshift creativity' of communities navigating structures of power.[19] Rather than acquiescing to the dictates of the powerful, their creations underscore 'the ingenious ways in which the weak make use of the strong… [lending] a political dimension to everyday practices'.[20] In Brasilia one of these communities fought for and won (legal) rights to live in the city, creating an unexpected addition to the Brasilia dreamed up by its more elite co-creators.[21]

Many scholars and practitioners have defined modernism and modernist urbanism so narrowly as to "deliberately exclude [the] types of architecture built by folks in our urban centres despite the fact that they were, and they remain the products of continued industrialization, expansion of capitalism or corruption, as was the case with the emergence of the celebrated types of architecture…".[22] The reason for this exclusion has often been in the socio-economic circumstances and class of their creators – which means that their aesthetics do not meet middle and upper classes aesthetic aspirations, tastes, and preferences. Another underexplored aspect of this phenomena, as our own research has revealed, are the numerous constructions carried out by otherwise wealthy people but without the influence of formal built environment professionals or their regimes of taste and class.[23]

16. Victor Salvadore D'Souza, *Social Structure of a Planned City, Chandigarh* (Orient Longmans, 1968).

17. Scott, *Seeing Like a State*.

18. Glover-Akpey, "Problems of Industrial Development in Tema" (United Nations International Workshop on the Training of Human Settlement Managers, University of Science and Technology, Kumasi, Ghana., 1976) cited in Madhu Sarin, *Urban Planning in the Third World: The Chandigarh Experience* (London: Routledge, 1982).

19. Michel de Certeau, *The Practice of Everyday Life* (University of California Press, 1984), xiv.

20. Glover-Akpey, "Problems of Industrial Development in Tema", xvii.

21. Scott, *Seeing Like a State*.

22. Nnamdi Elleh, "Introduction: Keeping the Mission of Modern Architecture in Focus", in *Reading the Architecture of the Underprivileged Classes* (Routledge, 2014), 7.

23. Kuukuwa Manful, "Afterword: Theorising the Politics of Unformal(Ised) Architectures", in *Architecture and Politics in Africa: Making, Living and Imagining Identities through Buildings*, ed. Joanne Tomkinson, Daniel Mulugeta, and Julia Gallagher (Woodbridge, Suffolk: James Currey, an imprint of Boydell & Brewer Ltd, 2022).

Considering this, it is useful to consider what we term informal modernisms, inasmuch as they are unexpected and unintended additions to master planned cities, not as the "dark side" of modernism, but as modernist in their own right.[24] This modernism is evidenced in the materiality - by the use of predominantly modern and industrialized materials — plywood, zinc-coated aluminium sheets or panels, recycled oil barrels and repurposed parts of other technologies such as refrigerators visible in some of the constructions. These both represent pragmatic responses to the demands of industrial society and represent aesthetic sensibilities of their creators. Indeed, we suggest that it is perhaps within these under-acknowledged communities that the modernist movement's social justice agenda, aimed at providing universal housing solutions for the urban poor using contemporary materials and technologies, finds its true fulfilment.

3. THE PERSISTENCE OF MASTERPLANNING

In the past five decades or so, modernist master planning has been pronounced obsolete on two fronts: the demise of modernist philosophy and the demise of master planning itself. In his famous 1972 assertion, Jencks proclaimed the death of modernism as coinciding with the demolition of housing blocks in Pruitt-Igoe designed by Minoru Yamasaki.[25] However, this contention, steeped in the assumption of a singular form of modernism and its dependence on Western developments—an assertion challenged by postcolonial historians and proponents of Global Modernism—fails to capture the nuanced reality. Modernist ideas in various guises persisted well into the 1980s, 90s and 2000s. Relatedly, since the 1980s, with neoliberalist roll back of the state and of centralised planning (Baeten, 2017), many declared master planning dead (Verebes, 2013).[26] At the height of these critiques, master planning was increasingly seen as ineffective, divisive and a colonial instrument of domination (Banyikwa, 1989; Njoh, 2009).[27]

These claims notwithstanding, master planning with modernist overtones has persisted in several parts of the Global South (Harrison and Croese, 2022). For instance, over 40 countries in the developing world (excluding China) have initiated over 150 new city projects since the late 1990s.[28] Several reasons underlie the trend in urban development, with variations across states, but common themes persist. As highlighted by Moser and Cote-Roy in their recent review, these projects are often driven by one or a combination of the following factors. Firstly, new urban initiatives provide an opportunity to address challenges in older cities, such as overcrowding, without facing the same levels of entrenched interests and conflicts. They offer a platform for experimenting with governance models that could be difficult to implement in more established urban environments. Additionally, they are motivated by economic incentives to attract investment to stimulate the local economy through the creation of essential infrastructure absent in older cities. Finally, such developments cater to the need for new housing opportunities for expanding populations, especially targeting the urban middle class.[29]

Unfortunately, the lessons of history largely have either been ignored or poorly learned. Many projects continue to privilege the needs and

24. Elleh, "Introduction: Keeping the Mission of Modern Architecture in Focus", 49.

25. Charles Jencks, *The Language of Post-Modern Architecture* (Academy Editions, 1984).

26. Guy Baeten, "Neoliberal Planning", in *The Routledge Handbook of Planning Theory* (Routledge, 2017); Tom Verebes, "The Death of Masterplanning in the Age of Indeterminacy", in *Masterplanning the Adaptive City* (Routledge, 2013).

27. W.F. Banyikwa, "Effects of Insensitivity in Planning Land for Urban Development in Tanzania: The Case of Dar Es Salaam", *Journal of Eastern African Research & Development* 19 (1989): 83–94; Ambe Njoh, "Urban Planning as a Tool of Power and Social Control in Colonial Africa", *Planning Perspectives* 24, no. 3 (1 July 2009): 301–17.

28. Sarah Moser and Laurence Côté-Roy, "New Cities: Power, Profit, and Prestige", *Geography Compass* n/a, no. n/a (1 October 2020): 1–15.

29. Moser and Côté-Roy, "New Cities: Power, Profit, and Prestige".

tastes of the affluent, whilst failing to meet the needs of the marginalised, who invariably support the wealthy lifestyles. Unintended and unexpected additions to master planned cities continue to come up, leading to conflicts and removals by authorities. This leads to questions about how urbanism and architecture might be better deployed to uplift those who need its services the most. Or how can old cities be improved, or new cities be constructed, avoiding the pitfalls of the past and placing human dignity at the centre?

4. CONCLUSION

The need to expand our knowledge concerning modernism and to complicate hegemonic narratives of modernism requires, among other things, that scholars broaden frames of reference to include previously overlooked or excluded places. While efforts have been made, notably by Docomomo towards inclusion of modernism outside Europe, the dominant histories of architecture and construction in Africa for example has meant many of these included examples tend to be the work of European architects. We propose this expanded approach which includes not only previously overlooked and under-theorised grand modernist projects by indigenous architects and planners, but also the 'informal' modernist built environments created by those whose labour created and continues to sustain modernist cities. These merit serious consideration for inclusion in modernist historiography for many reasons, but most glaringly by virtue of their striking parallels with the ideals of modernism touted by the more celebrated and acknowledged stakeholders. As we have demonstrated in this essay, such a perspective not only offers fresh insights, but also enables a better understanding of the early modernist agenda of universal access to the city and the realities of realising this agenda.

Moreover, there are myriad lessons to be gleaned from the architecture of described as 'informal' regarding the creation of cities rooted in principles commonly associated with 'sustainability': the use of recycled materials being one such example. This approach necessitates a profound interrogation of what it means to preserve informal modernisms, given their perpetual state of flux. It invites us to re-evaluate notions of originality, authenticity, and permanence in architectural heritage. Finally, such a move also underscores the need for serious dialogue that engages with the dynamic realities of urban planning and architecture outside architect-planned new cities and metropolises located in the Global North, with theory based on and emerging from the Global South. ■

BIOGRAPHIES

Emmanuel Ofori-Sarpong is an architect with over a decade of experience spanning practice and academia. Since 2018, he has been a faculty member at the School of Architecture and Design at Central University in Accra, where his research-led studios have explored new cities, design for emergency response, and non-pedigreed architecture in marginalised communities. He is currently a doctoral researcher at the School of Oriental and African Studies (SOAS), University of London. His research focuses on the politics of urban design and implementation in post-independence new city projects in East and West Africa, focusing on Ghana and Kenya.

Kuukuwa O Manful is a trained architect and researcher who creates, studies, teaches, and documents the history, theories, and politics of architecture in Africa. She is an Assistant Professor of Architecture at the Taubman College of Architecture and Urban Planning, University of Michigan. She curates adansis£m - a Ghanaian architecture documentation collective; co-runs sociarchi - an architecture non-profit; and is president of Docomomo Accra. Her current projects include a book about 'The Architecture of Education in Ghana' and a study on the 'History of the Formalisation and Unformalisation of the Architecture Profession in Ghana'.

PALMAS (TO): CONTRADICTIONS AMONG THE WAYS OF LIVING IN A NEW CITY'S BLOCK

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#11

ABSTRACT

Palmas is a new city in Brazil's northern region, planned in 1989 to be the capital of the state of Tocantins. The city was conceived with an implementation project carried out by specialized professionals. Palmas is structured through a macro-road grid that delimits the boundaries of the blocks and divides it into zones of use and expansion. The project, however, did not include a design for the interior of these blocks. In this way, it is possible to find certain disparities in the occupation process of the residential blocks. Most of them were built by private real estate companies that bought the land from the government in the early years of the city's formation. These blocks were occupied by those that were able to buy the plots sold by the companies. Due to strong real estate speculation, several irregular settlements were built in the areas of expansion and environmental preservation since the beginning of Palmas' construction, inhabited by lower-income families who couldn't afford to buy land in the central areas of the city. At the early 1990s, the government donated plots in three residential blocks near to the civic center so that these families could build their homes; the site is now known as Vila União. The aim of this study is to examine the different morphological and social characteristics resulting from each of these occupations. This will be done by analyzing aspects of urban configuration, such as the distribution of uses and the design of the street network, of two residential blocks in Palmas dating from the same year of construction, 605 South and 305 North. It was possible to verify that the 305 North block, which is part of Vila União, has a configuration that is more propitious to the existence of urban life in public spaces.

1. INTRODUCTION

In Brazil, the 20th century was marked by a strong movement of colonization and urbanization of the north-central territory. As Carlos Santos has explained "the new cities, eager for progress and modernization, are legitimately the materialization of the utopia created by modern capitalist culture"[1]. Palmas, in the state of Tocantins, is one of the most recent examples of a planned city in Brazil, founded in 1989. By studying its process of development and occupation, which has taken place at an accelerated pace and with a strong influence from governmental action, it is possible to see what consequences the rationalization of urban planning has had on the social relations that take place in public spaces.

The city of Palmas was divided, in its urban project, into phases of occupation, in which the city was to be expanded from its civic center. The first governments, even at the beginning of the city's construction, sold a large part of the plots in the expansion areas to private companies. Soon, the more central blocks were occupied by the part of the population that could afford to buy property and, due to the lack of more economical housing alternatives, irregular occupations took over part of the environmental preservation areas. At the beginning of the 1990s, by means of governmental actions aimed at eradicating these irregular occupations and maintaining the preservation of the river valleys, land equivalent to three residential blocks close to the city center was donated to low-income families.

Is it possible to see differences in the morphology of the blocks that came about because of government land donations and those that were occupied through the sale of plots? Aiming to find an answer to the question, this paper will compare two residential blocks, one occupied through the donation of plots (305N) and the other through the purchase of land (605S). Before this, a historical review of Palmas' urban development will be carried out, with a more in-depth analysis of its urban planning, to understand the influence of both the city's design project and government actions on its urban configuration.

2. PALMAS' DEVELOPMENT: A BRIEF HISTORY

Palmas is the capital of Tocantins, a Brazilian state dismembered from Goiás that had its autonomy recognized by law in 1988. The governor at the time, Eduardo Siqueira Campos, saw the opportunity to build a new city to be its capital. A team made up by geology professionals identified the most favorable area for the capital's construction, located on the banks of the Tocantins River, a politically strategic site, in the state's geographical center, with a unique landscape.

Once the site had been chosen, a team was hired to draw up the master plan of Palmas[2]. The proposal defined occupation phases for the city and sought to densify the urban areas. However, due to political mismanagement, the formation of Palmas did not go according to plan and reached parameters of territorial expansion that had not been imagined. In response to this, in the early 1990s, populist governments created measures to control urban sprawl.

1. Carlos Santos, *A cidade como jogo de cartas* (São Paulo: Projeto Editores, 1988), 17.

2. In charge of the team were two architects, Luis Teixeira and Walfredo Antunes.

In the first part of this article the urban project will be presented – how the city was conceived and what was envisioned for its conformation. Then, will be provided data that explains how this occupation took place and the measures adopted to reverse the expansion situation.

2.1. THE MASTERPLAN

The city of Palmas was planned on some levels, according to the principles of modern urbanism. The project was conceived based on the definition of a macro grid of roads that would outline the neighborhoods and guarantee the connection between them, providing continuity in the corridors of streets and public spaces.

The idea was to build the city in ribbons of blocks to avoid urban voids and to set a total density of 300 inhabitants per hectare. However, the project did not foresee urban planning for the block's interiors; they would have a flexibility of implantation within a quadrilateral base of approximately 50ha.

According to Luís Teixeira "Palmas Master Plan defined five phases for urban development, determining areas that should be occupied as the density reached desired levels"[3] (**Fig. 1**). In addition, the proposal aimed to demarcate environmental preservation areas to create limits for urban expansion. Thus, river valleys that cross the urban area were transformed into linear parks.

The aim was for the city to grow along particular directions, starting from the center and spreading towards the determined urban limits, to reduce the costs of setting up urban infrastructure. However, as we will see in the following section, the distribution of the city in oversized blocks, associated with real estate speculation, resulted in a scattered, low-dense city filled with urban voids.

2.2. THE CITY'S OCCUPATION

In his book, João Bazzoli says that "the greed of governments to benefit financially from the sale of allotments to private capital companies has contributed significantly to Palmas becoming a major urban planning blunder"[4]. In addition, according to Elizeu Lira "Palmas represents the greatest example of urban disorganization and chaos, sponsored by a savage capitalism that never measures the consequences of its savagery"[5].

Between 1990 and 1993, less than five years after Palmas' foundation, there were already occupations taking place in the southern expansion zone, scheduled in the master plan to be allotted only in the fifth expansion phase (**Fig. 2**). The result was the concentration of a large part of the low-income population living in neighborhoods very far from the city's administrative center. This results in the disorderly occupation of Palmas, based on the economic interests of public and private initiative, and is responsible for the socio-spatial segregation of the urban expansion.

During this same period, the state government[6] created new settlements close to the urban center in which plots were to be donated to low-income families, as a solution to the growing *favelazation* and peripheralization that was taking place. Corresponding to the area of three residential blocks

3. Luís Teixeira, "A formação de Palmas," *Revista UFG 11*, no. 6 (June 2009): 91-99.

4. 4. João Bazzoli. *Palmas em foco: contradições de uma cidade planejada*. (Palmas: EDUFT, 2019), 77.

5. Elizeu Lira, *A gênese de Palmas-Tocantins: a geopolítica de (re)ocupação territorial na Amazônia Legal* (Goiânia: 2011), 78.

6. Headed by the state governor, Moisés Avelino. Elected in 1990, his term lasted until January 1995.

(303, 305 and 307 North), the land today, already fully occupied, is one of the most vital places in the city. It is one of the only locations in Palmas' master plan that can be called as a neighborhood, and is named Vila União[7].

It is possible to see that there is a difference in the urban configuration of the blocks that were built to accommodate the higher-income population and those occupied through an "informal" urbanism as in Vila União. In the next item, this contradiction will be explored by the analysis of two blocks in Palmas: one built according to the city's traditional parameters in residential areas and another that is part of the Vila União complex.

3. LIFE ON THE BLOCK

When you walk through a residential block in Palmas you can see that the streets are surrounded by the houses' fences and the public squares are empty of users and equipment. The impression one gets is that the blocks operate as gated communities, where the inhabitants exclude themselves from social life and avoid the use of public spaces.

In Vila União, on the other hand, the experience is somehow different. There are several neighborhood shops along the way and idle public spaces are almost inexistent compared to a traditional block. As a result, this is one of the only places in the urban center of Palmas where it is possible to experience a neighborhood unity.

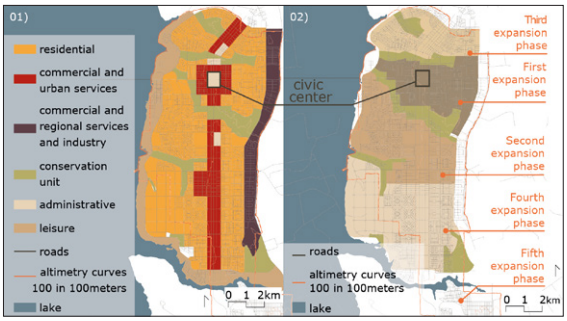
The following sections will analyze the urban configuration of a traditional block in Palmas (605 South) and a block belonging to the Vila União neighborhood (305 North). The selection of these cases was based on their period of occupation, both occupied in 1994, seeking the same time frame for both cases' analysis. By investigating the block' morphological aspects, such as the street network, distribution of uses, density and arrangement of public areas, the aim is to explain the disparity in social relations that occur in these spaces.

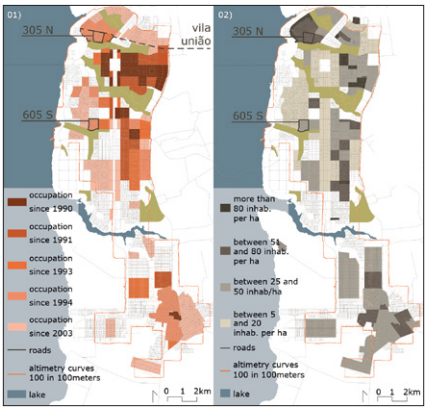
3.1. TRADITIONAL BLOCK: 605 SOUTH

The residential blocks in Palmas have an area of around 45 hectares and are on average 600 m long in the east-west direction and 700 m long in the north-south direction. When calculating the public and private areas in the 605 South block, the ratio between them is approximately 1/1. This is because this block, like others in the city, has more than one public square - there are four secondary squares and one main square. These squares, in turn, lack urban facilities, with few, if any, elements that encourage people to stay in these spaces.

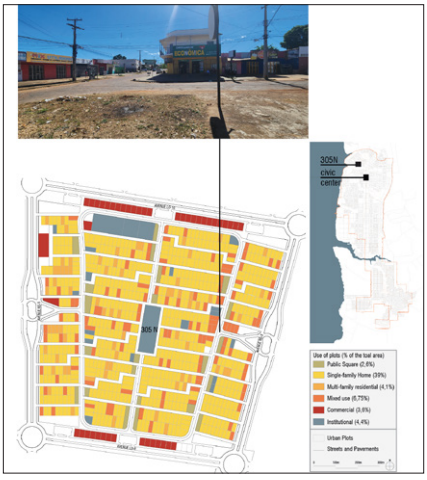
The design of the block divides it into two zones, one more internal, with plots approximately 12x30 m in extension, intended for single-family residential use (28.5% of the block's total area). The second zone is composed by plots that surround the boundaries of the quarter, measuring 36x48 m and suitable for multi-family residential use (5.6% of the block's total area). The predominance of plots for single-family residential use is responsible for the block's low population density. The density of the 605S block is around 37 inhabitants per hectare. When comparing 605S's density with other blocks occupied in the same period (**Fig. 1**), except for Vila

7. In literal translation: village of union.









União, it is apparent that this is one of the blocks with the highest density, suggesting that these characteristics have a broader applicability.

Furthermore, when the distribution of uses is analyzed (**Fig. 3**), it is noticed that this block has few commercial and institutional facilities (0.4% and 1% of the block's total area, respectively). There are only some small businesses within the square and two institutional plots, occupied by a church and a leisure club. This means that to reach school and healthcare buildings, residents must look somewhere else.

Frederico Holanda and Rodrigo Vasconcelos describes that "the block has two entrances, east and west, connected to each other by a discontinuous road network, configured by means of a labyrinthine scheme that is difficult to understand, with frequent route inflections and at excessively varied angles"[8]. This makes it difficult for external users (non-residents) to find their way around and contributes to the feeling of not belonging to the place, just like in gated communities. In addition, according to Valéria Silva "when you enter the block, you have the perception of entering a 'different world' in terms of how life is organized in the urban space"[9].

The buildings within the plots that locate along the periphery of the block open out into the neighborhood, while the areas bordering the

8. Frederico Holanda and Rodrigo Vasconcelos. "Tanto Cemitério!" *In 7° Seminário Docomomo Brasil*. Porto Alegre, Brazil: 2007, 10.

9. Valéria Silva. *Palmas, a última capital projetada do século XX: uma cidade em busca do tempo* (São Paulo: Cultura Acadêmica, 2010), 152.

Figure 1. Comparative panel of Palmas' maps, (01) use zones and (02) expansion phases defined in the project. © Elaborated by author with data from GeoPalmas and Oliveira & Menezes, 2019.

Figure 2. Comparative panel of Palmas' maps, (01) blocks' occupation until the year 2003, (05) blocks' density in inhabitants per hectare. © Elaborated by author, with data from GeoPalmas and Oliveira & Menezes, 2019.

Figure 3. Map of uses of the 605 South block, with location in the city compared to the civic center and photos taken on the streets indicated. © Elaborated by author, with data from. GeoPalmas, 2023.

Figure 4. Map of uses of the 305 North block, with location in the city compared to the civic center and photos taken on the streets indicated. © Elaborated by author, with data from GeoPalmas, 2023.

roads are mostly empty, exhibiting only the fences enclosing the plots. The transition between the urban scale and the residential scale is not very permeable and public spaces become an extension of private property, as something that belongs only to the residents of that neighborhood.

3.2. A VILA UNIÃO BLOCK: 305 NORTH

Vila União corresponds to the area of the city that encompasses blocks 303, 305 and 307 North, which in turn were planned in the Palmas' original project. The Vila's blocks are very similar in size to a traditional block in Palmas, 47 hectares in extension. However, to Glauco Cocozza "Vila União is a fragment that goes against the guidelines of the urban project, giving it another qualitative condition"[10].

The families who received the plots had to occupy them immediately and stay there. As a result, the first buildings on the block were sub-standard and it was only with the encouragement of subsequent governments that improvements were made to the infrastructure. Glauco Cocozza explains that "little by little, thanks to state incentives and community work, the Vila's image was transformed from a place of invasion to one of the city's richest places in terms of urban life"[11].

In Palmas, municipal legislation allows a flexibility in the occupation and use of urban land: plots for single-family residential use can also be occupied by small businesses and multi-family residential buildings. Thus, in the 305N block, it is possible to find a wide variety of uses within and on the boundaries of the block (**Fig. 4**), which according to Jane Jacobs "is a key factor in producing urban diversity"[12] - local businesses represents 3.6% of the block's total area, while mixed use occupies 6.75%.

What's more, the fact that multi-family residential use is allowed even on small plots like those in block 305N, approximately 11x25 m in size, has led to landowners opting to subdivide the plots and make an extra income by renting out housing units. As a result, the population density of this block is twice that of the 605S block, reaching approximately 65 inhabitants per hectare.

Although the percentage of land allocated to single-family use is higher in the 305N (39% of the block's total area) compared to 605S, the difference in population density is significant. In the process of occupying the block, it was necessary to create a rapid construction strategy so that the families could guarantee their ownership rights over the donated land, which is why the first buildings were small, self-constructed single-family houses. This also explains why there are fewer unoccupied plots in 305N compared to 605S, even though their occupation process began in the same year. While in 305N there was a need to secure land by building rapidly, in 605N the occupation process suffered and still suffers from real estate speculation over plot sales.

The block has a total of 19 accesses to its interior, 17 more than the 605S, which demonstrates its distinctive character in being inviting to external users. Its permeability allows the use of the block to extend outwards. The regular layout of the streets, together with the fewer vacant spaces – instead of big public squares the green places in 305N take place on small plots

10. Glauco Cocozza, *Paisagem e Urbanidade: os limites do projeto urbano na conformação de lugares em Palmas* (São Paulo: Faculdade de Arquitetura e Urbanismo, Universidade de São Paulo, 2007), 11.

11. Glauco Cocozza, *Paisagem e Urbanidade: os limites do projeto urbano na conformação de lugares em Palmas* (São Paulo: Faculdade de Arquitetura e Urbanismo, Universidade de São Paulo, 2007), 136.

12. Jane Jacobs. *Morte e vida das grandes cidades*. (São Paulo, Brazil: Martins, 2007), 165.

allocated on the edges of the internal blocks - and the varied and well-distributed use were factors that gave the Vila a character of neighborhood.

4. CONCLUSIONS

Palmas was one of the last new cities to be built in Brazil. Its recent project (1989) had strong influences from modern urbanism. However, due to flaws both in the city's design and occupation, it did not sprawl as planned. The gaps left by the city's urban design, especially in residential areas, allowed it to develop in a dispersed, sparse, and discontinuous way in urban agglomerations, configured by a linear urbanism of long-distance commuting.

The morphological analysis of the blocks shows that, depending on the configurational aspects and process of occupation, different neighborhood relationships have emerged in the urban space. An area of the same size as that of a block occupied through plot sales, in which relationships are very similar to those of a gated community scheme, may involve other qualities if occupied by social housing programs. An integrated neighborhood, based on community life and the use of public spaces, may emerge and become one of the richest places in urban life in the city. ■

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BIOGRAPHY

Mariana Verdolin is an architect and urban planner with a bachelor's degree from the University of Brasilia. During her undergraduate studies, she was part of the research group Atlas das Cidades Novas - UnB/CNPq, participating in scientific initiation research programs focused on the historiographical study of the new cities that emerged in Brazil. She is currently studying for a master's degree in project and planning at the same university's Department of Architecture and Urbanism, under the supervision of Professor Frederico de Holanda, and is focusing her studies on understanding the urban morphology of residential areas in Palmas (TO).

THE WORK ENCAMPMENT: A UTOPIA BY RODRIGO LEFÈVRE

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ABSTRACT

Esteemed authors like Arantes, Koury, and Buzzar have highlighted collaboration among architects within Grupo Arquitetura Nova, and its impact on Brazilian modern architecture. Yet, gaps in literature on this group have led to misconceptions, particularly concerning Rodrigo Lefèvre, Sérgio Ferro and Flávio Império. Recent attention has focused on Lefèvre's distinct contributions, notably his 1981 dissertation 'The Work Encampment: A Utopia,' previously unpublished until 2019. This paper aims to elucidate Lefèvre's critical and dialectical approaches, differentiating him from Império and Ferro.

Lefèvre's 'Work Encampment' proposed a transition society in São Paulo, moving from capitalism to socialism. It advocated taxing large construction firms to fund collaborative housing projects with workers and technicians. Lefèvre drew from Urban Anthropology, Eunice R. Durham, Michel Jules Thiéblot, and Claudia Menezes, integrating Paulo Freire's pedagogy to empower workers in defining their urban identity.

His vision rejected oppressive academic approaches, focusing on horizontal education and construction, respecting workers' cultures. Lefèvre's research fostered a new pedagogy and a radical utopia, shifting from rural exclusion to urban inclusivity and political empowerment.

This analysis reveals overlooked aspects of Lefèvre's work, challenging misconceptions and highlighting his innovative contributions to Brazilian modern architecture and social theory.

1. INTRODUCTION

In the 1960s, during the period when Rodrigo Brotero Lefèvre and his colleagues were training as architects, Brazil was deeply immersed in intense debates on its development. In this context, the construction of Brasília became a crucial point of analysis. While some viewed the construction of the new capital as a milestone in Brazilian architecture, others criticised it for not fully leveraging the opportunities for industrialisation and modernisation of production methods.

For Lefèvre, Sérgio Ferro, and Flávio Império, young architects at that time, the critique was not limited to the way the works were carried out but also extended to the political and social aspects involved. They questioned not only the structure of the construction sites but also the working conditions of the laborers and the lack of innovation in civil construction.

Sérgio Ferro, in his text "The Construction Site and the Design," delved into the analysis of the laborers' working conditions and the alienation present in architectural production. In turn, Rodrigo Brotero Lefèvre developed his research in his master's thesis entitled "A Project for a Construction Camp: A Utopia." This work evolved over two decades, reflecting his professional growth as an architect and teacher. He proposed a system that would empower workers to build their own homes, aiming not only to improve living conditions but also to create new social and cultural awareness among construction workers.

These distinct approaches, one focused on economic and production issues and the other on anthropological and pedagogical dimensions, significantly contributed to rethinking not only the architecture of the time but also Brazilian society as a whole.

2. THE WORK ENCAMPMENT

The Work Encampment stands as one of Lefèvre's final formal publications during his lifetime, offering solutions for São Paulo's urban challenges. In this text, we delve into the themes explored in his dissertation, particularly focusing on rural-urban migration and the intricate flowchart devised by the architect for the Work Encampment. Additionally, we highlight the significant influences that shaped his theoretical and critical approach to migration dynamics in São Paulo.

In the "Introduction," Lefèvre tackles the issue of migration into São Paulo, delineating the hurdles faced by migrants as they assimilate into urban life. He underscores issues concerning democracy, culture, housing standards, and employment in the São Paulo Metropolitan Region (referred to as "RMSP"), aiming to grasp, through dialogue with various intellectuals on this subject, the motives and challenges encountered, especially concerning housing, labour unions, and the autonomy of this populace.

In the subsequent chapter, "Why Utopia?" Lefèvre introduces concepts related to utopian ideals, the role of the state, and fundamental rights. He delves into Marxist concepts regarding surplus value, worker exploitation, and presents his envisioned societal model where the State acts as a facilitator of collective will.

Lefèvre rationalises the shift in the State's role within the envisioned societal model. He articulates that, in his model, workers would be provided with the means to fully recover their labour capacity through adequate rest and fair compensation, culminating in their access to a fundamental need: housing.

In this societal model, it becomes the State's responsibility to provide and subsidise the establishment of a temporary encampment, funded through taxes tied to construction activities. This initiative, essentially an investment of surplus value derived from construction workers, aims to address their social and economic integration challenges as a social class. Consequently, the State assumes its redistributive role.

In Chapter II, the architect presents a comprehensive flowchart illustrating the functioning of the Work Encampment during societal transition phases, from migrant arrivals in the RMSP to their integration into social dynamics, fostering exchanges with technicians, engineers, and architects.

It is noteworthy that Lefèvre strategically organises the topics in his work, showcasing the "product" of his reflections early in Chapter II through a flowchart describing the operation of the proposed utopian construction encampment. Subsequent chapters delve into characterising the users and concluding with diagrams of vaulted houses, reflecting his professional journey.

In Chapter III, titled "Processes of substitution, absorption, and preservation of the people's culture by mass culture and erudite culture," Rodrigo Lefèvre revisits the works of author Eunice R. Durham, placing significant emphasis on her influence over other authors mentioned in this chapter. His critique extends to how erudite culture supersedes grassroots culture, suppressing it until it is obscured or obliterated in favour of urban norms.

In the chapter "The Culture of the Work Encampment," Rodrigo Lefèvre analyses studies on rural-to-urban migration and its socio-political-economic dynamics. He draws from numerous authors in Urban Anthropology and Sociology from the 1970s, as well as intellectuals associated with Cebrap (Brazilian Centre for Analysis and Planning) and later Cedec (Centre for Studies of Contemporary Culture) from 1976.

Chapter IV, titled "Some cultural characteristics of migrants," focuses on identifying the emerging working class in São Paulo through Urban Anthropological studies, referencing research by Eunice R. Durham (1978), Michel Jules Thiéblot (1977), and Claudia Menezes (1976) on rural-urban migration.

In chapters V and VI, titled "Some characteristics of the technicians' attitudes" and "Some transformations in pedagogy," Lefèvre revisits his previous works, discussing the evolving roles of higher-level technicians in transitional society. He critiques existing practices while presenting pedagogical methods capable of transforming social relations in the Work Encampment.

Chapter VII, titled "The project of a Work Encampment," unveils Lefèvre's drawings of prefabricated structures, developed based on his prior constructions and utilised as a construction system suitable for the

Work Encampment. These drawings, often regarded as the focal point of the dissertation, have been extensively cited in publications on the architect. Additionally, an annexe to this chapter features comprehensive photographic documentation of the residences constructed by Lefèvre in the seventies, providing a conclusive narrative to the dissertation.

3. URBAN ANTHROPOLOGY

In the late 20th century, as Brazilian urban centres experienced an unprecedented influx of rural migrants, scholars like Eunice Ribeiro Durham and Claudia Menezes sought to understand and document this significant cultural transition. Eunice Durham, in her work "On the Way to the City," explored the process of integrating rural workers into urban-industrial systems, detailing their adaptation from traditional social structures to the complex societal frameworks of city life. Her research highlighted the migrants' shift from a rural existence to urban roles, often constrained by their lack of qualifications for better-paying jobs, which disproportionately placed them at the margins of urban societies.

Durham's analysis revealed not only the physical migration but also a deep cultural shift, examining how these individuals redefined their identities amidst new urban realities. Her work portrayed the migrant's struggle to assimilate into a more segmented and impersonal urban culture, challenging the simplistic dichotomy of "developed" versus "underdeveloped" Brazil.

On the other hand, Claudia Menezes focused on the concept of "change" in her study "The Change: Analysis of the Ideology of a Group of Migrants." She examined the personal transformations migrants underwent during their transition from rural to urban settings. Menezes characterised this migration as driven by a pursuit of improved living conditions, which often occurred without strict planning and relied on informal advice and perceptions of success from others who had moved before them.

Her research pointed out that migrants, upon arriving in the city, faced profound challenges adapting to an environment that is starkly different from the rural settings they had left behind. The urban landscape, while bustling and filled with opportunities, also presented obstacles such as isolation and the daunting pace of city life, which could lead to a sense of failure and disillusionment among the migrants.

Both Durham and Menezes' insights provided critical foundations for Rodrigo Lefèvre in his master's dissertation, where he constructed a model of a migrant neighbourhood. Lefèvre's approach highlighted the political and social dimensions of migrant experiences, aiming to empower them as active participants in an evolving urban society. His work not only recognised the hardships faced by these migrants but also emphasised their agency in shaping a new cultural identity in their adopted urban environments. This research collectively underscores the intricate interplay of migration, cultural adaptation, and urban development in shaping the modern Brazilian social landscape.

By incorporating Claudia Menezes' insights into the religious and ideological formulation of "success" and Marcel Jules Thiéblot's studies

on the folkloric life in Rondônia, we gain a deeper understanding of the cultural and social dynamics influencing Brazilian migrants. Menezes' work highlights the migrants' perception that success is intertwined with personal virtue and divine will, suggesting that upward mobility is often seen as a consequence of individual effort and, to a lesser extent, formal education. This notion shapes the migrants' aspirations and the way they interpret their experiences in urban settings.

Thiéblot's in-depth exploration of Rondônia's folkloric professionals offers a contrasting perspective on work and cultural identity, emphasising a community-driven, traditional approach that resists the alienating effects of industrial society. His focus on "folkloric professionals" who are rooted in community traditions and values showcases a form of cultural preservation and resistance to the homogenising forces of modernisation and consumption.

Rodrigo Lefèvre, drawing from both Durham and Menezes as well as Thiéblot, uses these insights to craft a nuanced portrayal of the migrant experience in his dissertation. He sees potential in the unique cultural attributes of migrants, which can contribute to a richer, more inclusive urban culture. By emphasising the value of folkloric professionalism and community-based knowledge, Lefèvre challenges the technocratic and capitalist frameworks that often marginalise migrants, proposing instead a model of development that leverages the migrants' cultural strengths for better integration and empowerment.

4. THE PEDAGOGY OF THE WORK ENCAMPMENT — THE INFLUENCE OF PAULO FREIRE AND HIS PEDAGOGY IN RODRIGO LEFÈVRE'S DISSERTATION

The architects of the Arquitetura Nova Group (Lefèvre, Ferro, and Império) discussed the concern that workers were being treated as merely tools on construction sites, used and then discarded when no longer needed, making them an object rather than a subject. Eunice R. Durham's contribution allowed Lefèvre to rescue a cultural and subjective dimension of the construction site worker, which became strategic for the next step towards the pedagogy of the construction site. This approach also incorporated the pedagogical contribution of Paulo Freire, along with Durham, Menezes, and Thiéblot, who were the main references cited in the text "Project of a Work Encampment: A Utopia."

In chapters III and IV, Rodrigo Lefèvre mentions Paulo Freire's works "Education as the Practice of Freedom" (1976), "Cultural Action for Freedom and Other Writings" (1976), and "Conscientization" (1979). The concepts of liberation and conscientization underpin his methodology and enable the new "society" that the architect sets out to describe in his dissertation. With the inclusion of more cited works, the pedagogue becomes one of his main references.

The "freedom" mentioned by Freire is attained when the individual recognises themselves as part of the society they are in, becoming capable of making conscious decisions free from the influence of an "oppressor." The "oppressed" stops imitating the oppressor, thus avoiding the the cycle

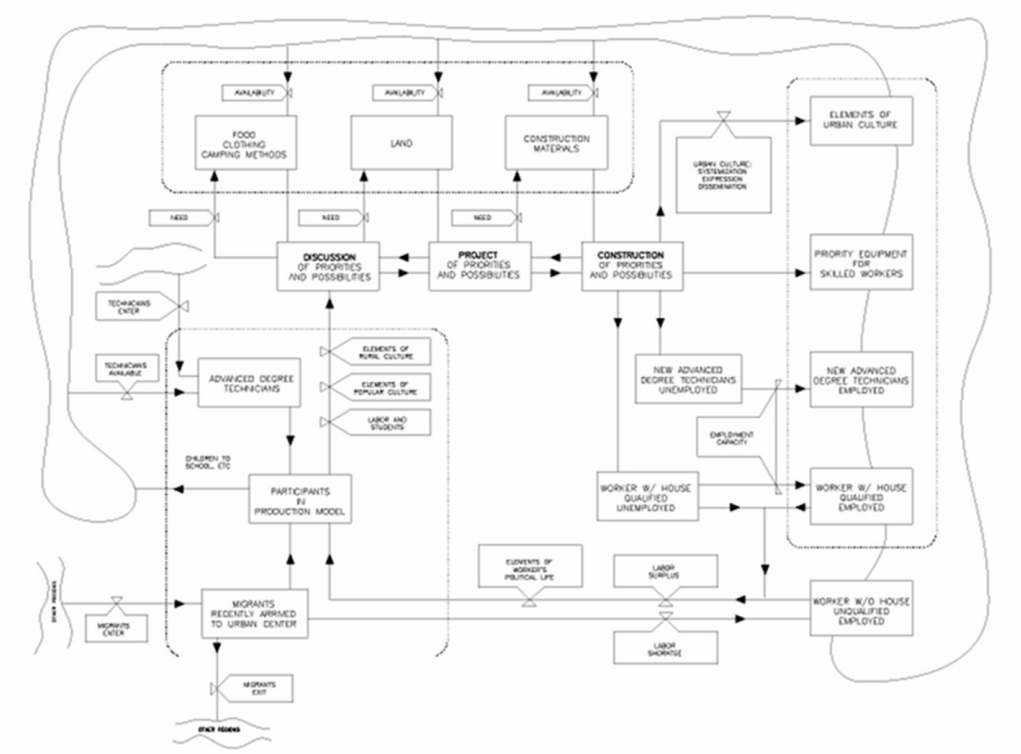


Figure 1. Model of a production during the transition period. © Rodrigo Lefèvre, 1981.

of oppression and building a liberated society. By ceasing to be neutralised by the process of oppression, the "oppressed" has their culture recognised and integrated into a new social dynamic in the Work Encampment. The dialogue between the migrant and the technologist must be horizontal, with an exchange built by two equivalent sides, transforming both the practice of civil construction and the urban reality of São Paulo. Eunice Durham conveys this same idea that the migrant plays an active role in society, as investigated in "On the Way to the City", regarding the political place of the individuals studied.

Due to their physical strength, low formal education, and willingness to accept any opportunity, the worker is often exploited and used as mere tools. Their knowledge and intellect are devalued as they are not seen as "formal" or "academic," resulting in alienated work, limited to receiving and obeying orders without question. Additionally, they are excluded from any involvement in the design processes.

However, these workers learn from what they build and begin to produce their own homes with available resources. These constructions are spontaneous and of no interest to urban technicians, considered useless and consequently disposable by the cultured system of architecture, even though they are the most common forms of housing for these workers establishing themselves on the periphery.

Lefèvre identifies the oppressed within the construction site as equivalent to Durham's migrants. By assigning a role to the migrant's culture in the encampment, Lefèvre proposes, in a practical manner, to

break the cycle of oppression in the construction site and establish work in this environment as an expression of freedom, following the patterns of Paulo Freire's pedagogy. ■

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SOCIALIST PRACTICE OF MODERN PLANNING IN THE 1950S'CHINA: THE CASE STUDY OF MINHANG SATELLITE TOWN AND THE ASSOCIATED RURAL PLANNING PROJECT

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#11

ABSTRACT

As the first satellite town constructed in Shanghai and China in the 1950s, Minhang Satellite Town has been extensively mentioned in research on urban history[1], in sociological studies on urban-rural relations of the Mao era[2], or in mass media reports on the construction of the No.1 Road buildings there, which was once a known socialist boulevard. However, less attention has been paid to the design process and design features of this grid-like satellite town. This study explores the planning of Minhang Satellite Town through analysis of archival and oral history materials. In doing so, it uncovers how its design integrated modern urban planning concepts with local conditions, while also considering the social and political goals of decentralising population and industry from Shanghai city. The planning of Minhang Satellite Town and the surrounding areas was part of the national economic plan and a practical realisation of Mao Zedong's ideals of urban-rural co-modernisation. This study intends to explain the richness and complexity of socialist practices of modern planning ideas in the 1950s, offering insight into the integrity of the 20th-century heritage and the urban-rural relationship in our era.

1. THE IDEA TO DEVELOP SATELLITE TOWNS IN THE GREATER SHANGHAI PLAN (1946-1949)

The concept of developing satellite towns for Shanghai began to take shape between 1946 and 1949. During this time, a group of foreign and western-trained Chinese architects and engineers was assembled to work for the preparation of the *Greater Shanghai Plan,* which was the first masterplan ever designed for Shanghai. Throughout this process, there were three draft versions of the *Greater Shanghai Plan* in total. It has been established that the design of the Greater Shanghai Plan had a close connection to the latest development of planning theories, ideas, and practices of the Western world. For instance, Prof. Li Dehua (1924-2022), who had worked as a technician in the preparation of the *Greater Shanghai Plan*, recalled that some concepts and design ideas applied in the *Greater London Plan* of 1944 such as the regional plan, neighbourhood unit, differentiation in housing typology, decentralisation of people and industry, and so on, had been introduced in the preparation of the *Greater Shanghai Plan* from the beginning[3]. The second draft incorporated the theory of "organic decentralisation" advocated by by Eliel Saarinen, and the principles of "Garden City" promoted by Ebenezer Howard were introduced and applied in the design. The education and professional experience of architects and engineers in the design team also had a significant impact on the design, particularly one of the main architects, Richard Paulick (1903-1979), who had once worked in the architecture studio of Walter Gropius from 1927 and 1930, and it was said that the calculation formula for the minimum building distance for sunlight used in the Greater Shanghai Plan was one of the research achievements from Gropius' studio during Paulick's time there[4].

The Greater Shanghai Plan aimed to decentralise the industries and population from the city centre to satellite towns, so as to improve the living conditions of the urban area. Influenced by Patrick Abercrombie's *Greater London Plan* of 1944, the design team of *Shanghai Greater Plan* also proposed a regional plan for Shanghai and recommended that urban planning be carried out in conjunction with national and regional plans so that the planning and design of satellite towns could be rationally organised from the outset[5]. As a result, the planning area extended beyond the jurisdiction of Shanghai Municipal Government at that time, including Minhang town, which was under the jurisdiction of Shanghai-Hsin (meaning County, in English) in Jiangsu Province at that time, and it was the first time that Minhang town being studied and considered in the planning of Shanghai city.

As per the design principles of satellite towns in the Greater Shanghai Plan, the industrial and residential areas should form a complete urban unit, where the relatively comprehensive urban function should be provided and of which the design standards, such as the population density, the traffic system, and so on, should be the same as in the city centre. This would aid in decentralising both industry and population from the city centre to the outskirts. In the first two drafts, architects and planners had certain

1. Such as the study of K. Fung, "Satellite Town Development in the Shanghai City Region", *Town Planning Review* 52, no. 1 (January 1981): 26; and Q. Zhu, "Shanghai's Socialist Suburbanization 1953–1962", *Journal of Planning History* 17, no. 3 (June, 2017): 226–47.

2. S. Bao, "An Investigation of Urban-Rural Relations from 1958 to 1978: Centering on the Interaction between Enterprises and Communities in Shanghai Satellite City." *CPC History Research and Teaching* 55, no.4 (August 2019): 65-72.

3. D. Li, "An Interview to Prof. LI Dehua about the Metropolitan Plan of Great Shanghai." *Urban Planning Forum*, no.3 (2007): 1-4.

4. Hou Li and Wang Yibing, *Richard Paulick in Shanghai: Post-war Planning and Reconstruction in Modern China's Metropolises (*Shanghai, China: Tongji University Press, 2016).

5. Shanghai Urban Planning & Design Research Institute. *Greater Shanghai Plan (Original Edition)* (Shanghai, China: Tongji University Press, 2014).

expectations for the improvement of social structure and urban life by means of planning, and they proposed that the Baojia System used in Chinese urban management could be adapted to become a neighbourhood unit system in modern planning. During the preparation of the third draft, they showed a strong desire to reform society, which might have been influenced by the social and political conditions at the time where

the Communist Party of China was winning the civil war by an unstoppable margin. In the report, it was suggested that the development of Shanghai's economy and society was abnormal. The report stated that the *Greater Shanghai Plan* cannot be achieved through improvements in municipal construction alone but requires a thorough reform of the entire society. It was also recommended that Shanghai should be developed into a city focusing on production rather than consumption. The report proposed limiting the growth of the city centre to a certain extent, and intentionally relocating industry and the population to the newly planned districts, such as the satellite towns.

With the establishment of the People's Republic of China (P.R. China) in 1949, the design work of the *Greater Shanghai Plan* was halted and Soviet urban planning specialists began to gain increasingly more influence on the governments. Their negative comments on the Greater Shanghai Plan, along with reduced investment by the Central Government in the construction of coastal cities in the early 1950s, and critiques of modernist architectural and planning ideas, made it impossible to continue with the *Greater Shanghai Plan*. The idea of developing some satellite towns for Shanghai was therefore abandoned. Instead, the continued expansion of urban areas and the use of urban resources to build industrial zones surrounding the urban centre became the main pattern of urban development in Shanghai in the first half of the 1950s.

2. PLANNING OF MINHANG SATELLITE TOWN IN 1958

It was not until 1956 that satellite town proposals gained traction within the authorities with the publication of Chairman Mao's speech *On The Ten Major Relationships*. In this publication, he discussed the issues concerning the development of coastal regions, urban-rural relationships, and so on. In response to the rapid growth of large cities, China shifted its urban development policy to focus on building more small and medium-sized cities. In this context, the Shanghai Municipal Government once again invited once again Soviet experts to Shanghai to discuss the urban development proposals of this city. In the symposium organised for this event, three types of development modes for Shanghai were proposed, including the compact mode, the decentralised mode, and the mode to develop a ribbon city along the Huangpu River. Some architects and engineers who had participated in the preparation of the *Greater Shanghai Plan* years earlier also attended this symposium. Notably, Yaohua Zhong, Huiquan Hu, and Dingzeng Wang seemed particularly concerned about the decentralised mode of developing some satellite towns for Shanghai. While

the Soviet experts did not approve or disapprove any of the proposals in this symposium, an alternative plan involving the planning of satellite towns was studied and discussed among Chinese architects and planners in multiple cities. The idea to build Minhang as the first satellite town for Shanghai has been mentioned on numerous occasions.

The plan to build satellite towns for Shanghai was officially approved by the Municipal Government on January 17th, 1958. This came after the State Council issued a decision to include three counties of Jiangsu Province, Jiading-Hsin, Shanghai-Hsin, and Baoshan-Hsin, in the jurisdiction of Shanghai City. Following this decision, the Shanghai Urban Planning, Survey and Design Institute (SUPSDI) proposed a list of potential sites for satellite towns and the preliminary plans for five of them, including Wujing, Minhang, Nanxiang, Huangdu and Anting[6]. Each satellite town was assigned a major industry and Minhang was planned to be developed into an industrial town manufacturing power generation equipment for the whole nation. Due to its strong industrial and municipal construction base, it was selected as the first satellite town.

The planning was supervised by Zhisheng Qian (1907-1968), the Director of SUPSDI, and the Chief Engineer Huiquan Hu (1913-1968). Both had participated in the preparation and research work of the Greater Shanghai Plan since 1946. Additionally, another key figure in the preparation of the Greater Shanghai Plan was Chief Engineer of SUPSDI, Yaohua Zhong. Perhaps it is for this reason that there are connections between the two plans. For instance, the 1958 plan, similarly to the emphasis in the Greater Shanghai Urban Plan aimed to decentralise both industries and population from the city centre to the satellite towns, rather than building dormitory towns. Furthermore, the living standards set for these satellite towns were even higher than those of the city centre. The ideas, such as classifying roads according to their functions, separating different urban units with different levels of roads, and avoiding arterial roads crossing through residential areas, which were initially proposed in the Greater Shanghai Plan, had also been applied in the 1958 plan.

The 1958 plan for the Minhang Satellite Town differed from axisymmetric layout and large-scale road networks or squares that were common in Soviet planning, instead, planners incorporated a functional zoning and grid layout based on local traffic and geographical conditions. The functional zoning of the 1958 plan demonstrates that the urban area of Minhang Satellite Town is mainly defined by the Huangpu River and three arterial roads. There are industrial L-shaped areas on each side of the Sha Creek, both of which have convenient water and land transportation and are close to the planned power station. The estimated population of Minhang Satellite Town in the 1958 Plan was calculated according to the needs of the factories to be relocated there and the average size of workers' families. The urban grid was determined by the industrial production needs of each factory. Considering that the areas where factories were planned to be relocated in Minhang typically demanded 40 to 60 hectares, the east-west roads in the 1958 planning (the No.I, III, V, and

6. S. Qian, 'A Discussion on Satellite-Town-Planning in Shanghai', *Architectural Journal*, 1958(08):30-33.

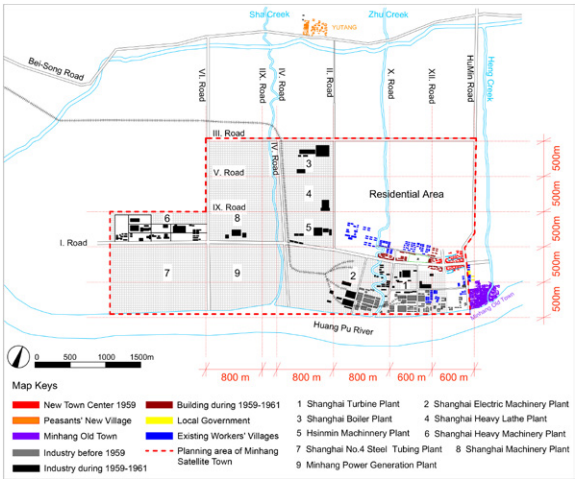




Figure 1. Urban structure of the 1958 Planning of Minhang Satellite Town and the construction condition of the urban centre and rural settlements. © Elaborated by the author



Left: Plan of Yutang Peasants' new village.

Right: Pulblic buildings in the new center of Minhang Satellite Town.

Figure 2. The new rural settlements for resettling peasants in the 1960s.
© Elaborated by the author. The map is downloaded from USGS, a satellite photo taken on December 21st, 1964, Entity ID of the map: DS1015-1021DF069.

Figure 3. Left, Planning of Yutang Peasants' Village in 1959. © Copy and edited by the author. Right, Public buildings in the new town centre of Minhang Satellite Town, diagram by the author.

IX roads) were spaced between 500 to 600 metres apart, and the north-south roads were generally spaced between 800 to 1000 metres[7] (**Fig. 1**). This plan integrated modern urban planning concepts with local conditions, as well as the social and economic development goals of that era, and served as a practical implementation of the national economic plan.

3. AN ACCOMPANYING RURAL PLANNING PROJECT IN THE CONSTRUCTION OF MINHANG SATELLITE TOWN

The planning of Minhang Satellite Town was approved in August 1958, after which the construction projects began rapidly. In order to accommodate peasants whose homes had been demolished to make way for the satellite town construction, several new settlements were constructed outside Minhang Satellite Town. In 1958, the common practice in Shanghai for handling land acquisition and resettlement of peasants in urban development was to directly compensate them and rebuild their houses with the materials obtained from demolishing the old ones in surrounding rural settlements.

7. SUPDRI. "Some Experiences on the Planning of Industrial Development and the Construction of Satellite Towns in Shanghai (Second Draft)." *Shanghai, Shanghai Archives*, January 1960, reference Item no. A54-2-756-.

However, given that the living conditions of the farmers under this policy did not significantly improve, they were not highly motivated to cooperate with urban development. In the construction of Minhang Satellite Town, efforts were made to integrate land acquisition and the demolition of farmers' houses with the resettlement of farmers and the planning of rural settlements. The aim was to reuse the building materials from their existing houses and use a small amount of new materials to build the new settlements. This approach was finally accepted by the peasants, and the issue of land acquisition for factories to be relocated to Minhang Satellite Town was solved within a few weeks. During this period, among the new farmers' settlements constructed was the Yutang Farmers' New Village, which was the largest. It was located east of Maqiao Old Town, west of the No.II Road, adjacent to the Beisong Road, with convenient land and water transportation (**Fig. 2**).

The construction of five three-story peasants' housing units took place in this settlement between November 1958 and June 1959. On July 21st 1959, the Shanghai Municipal Government decided to build this site into a "new type of Garden Village", and listed it, along with the new town centre, as tribute projects for the 10th anniversary of the founding of the P.R. China. Both projects were designed by the First Design Office of the Shanghai Designing Institute of Civic Architecture (DICAS). Yutang Village was built in just 45 days and received positive feedback from society. At the time, it was considered a model that successfully combined urban and rural construction, representing a practical realisation of Mao Zedong's vision for improved urban-rural and industrial-agricultural relations.

The planning of Yutang Village was influenced by both the People's Commune Movement and the planning of workers' settlements in urban areas. The People's Commune emerged from the collectivisation movement of agricultural production, in which the public canteen was designed as a spatial vehicle and symbol of the collective life style. The concept of establishing public canteens in the rural villages originated from the collective canteens spontaneously organised by peasants in the 1940s, and was adopted by some people's communes in 1958. Since then, this concept has become quite popular and functional. Architects now consciously consider this in the planning of rural settlements. For instance, in the planning of Yutang People's new village, the public canteen, which best represented the collective living styles of People's Commune, was placed on the central square of the settlement, with peasants' dwellings surrounding it. Public canteens also became an element of spatial organisation in the planning of the new town centre in Minhang Satellite Town. This shift signifies a move from spontaneous experimentation to formalisation in the planning of urban and rural residential areas (**Fig. 3**).

The design of peasants' housing also went through a similar process. For instance, the three-story peasants' housing units designed by the DICAS in 1958, lacked kitchens for family use and auxiliary areas for storing farming tools and raising poultry, considering that peasants would dine in public canteens. This led to significant dissatisfaction among the peasants,

who spontaneously built their own structures to meet these needs in the surrounding open spaces. Later, the architects revised the housing designs in 1959, adding kitchen spaces to the peasants' dwellings and single-story auxiliary areas on the north side of each dwelling. These spontaneous modifications by the peasants were subsequently recognised and formalised through improved design plans. These cases illustrate how public practices in the 1950s, influenced by the mass line and political movements, were incorporated into spatial elements of urban and rural planning through design.

4. CURRENT SITUATION AND SOME PRELIMINARY REFLECTIONS

In this case, the planning of the satellite town and the farmers' settlement should have been considered as different parts of a complete project. However, as they were under the jurisdiction of different departments after completion, they had never been considered as a whole since the 1960s. As a result, the Yutang Village was demolished without any previous evaluation during the urban expansion in the 1990s. A similar situation also occurred with the new town centre project of Minhang Satellite Town. The project included two residential areas for workers on both sides of the No.I Road and commercial and public buildings along the street. On completion, it received great praise and attention and was recommended to be included in the list of excellent modern and contemporary architecture in Shanghai (1949-2000). However, due to the fact that the buildings on both sides of the No.I Road were under the jurisdiction of different residents' committees, they have been treated differently. During the recent beautification project, the buildings on the south side of the road were transformed into a completely different style, making it seem like the buildings on either of the road do not belong to the same project. Insufficient knowledge and disregard for the characteristics and values of this post-war urban planning and architectural design project have left them extremely vulnerable in the face of complex administrative management and economic development conditions. As a result, the integrity of this type of heritage is therefore highly susceptible to destruction. ■

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NARRATIVES-WITHIN A NARRATION: BRIDGING MODERNISM AND CULTURAL IDENTITY IN AFRICAN LITERATURE AND ARCHITECTURE

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#11

ABSTRACT

This paper delves into the intricate interplay between modernism and cultural identity in African literature and architecture, taking Johannesburg, South Africa, as a microcosm. Drawing on Ngũgĩ wa Thiong'o's insights from "Decolonising the Mind,"[1] it explores how narratives within African novels effectively articulate diverse experiences and reassess colonial legacies. The paper extends this notion to the modernist movement in Johannesburg, revealing how colonial mentality and apartheid's spatial segregation continue to shape urban landscapes. Braamfontein's "shop within a shop"[2] phenomenon highlights how African cities adapt modernist structures to create vibrant, culturally rich spaces. Through the lens of Homi Bhabha's "third space"[3] theory, the paper argues for a fusion of modernism and cultural diversity, advocating for a narrative approach in literature and architecture. This approach captures cultural hybridity and reshapes colonial legacies, promoting sustainable urban development and repurposing modernist buildings. The exploration of African literature, mainly through the works of Chinua Achebe and Ngũgĩ wa Thiong'o, underscores the potential of narratives to bridge the gap between African identities and modernity, offering a dynamic blend rather than a mere replication of Western modernism. By integrating multiple cultural narratives into modernist practices, the paper emphasises the importance of contextualising architecture and urbanism within African cultural frameworks, fostering inclusive and representative urban spaces.

1. INTRODUCTION

In the renowned book *"Decolonising the Mind,"*[4] Ngũgĩ wa Thiong'o explores different narratives in the art of novel writing, emphasising their effectiveness in exploring various experiences. He argues that

> *It was imperialism that supplied him with the setting and subject matter of his novels... However, the fluctuating perspectives in time and space, the variety of narrative voices, the narrative within a narration, and the withheld information aid in the reassessment of a prior conclusion, enabling the reader to form a comprehensive conclusion only at the end, once they have gathered all the evidence, information, and viewpoints.*[5]

The above notion goes beyond literature and can be crucial in examining the modernist movement in Johannesburg, South Africa, as well as the broader context of Africa's encounter with modernism. Lindsay Bremner[6] also argues that the portrayal of colonial mentality and the continuation of apartheid's spatial design and segregation not only ignore the hopes of South Africans and other Africans living in Johannesburg but also clearly define racial divisions, pushing non-white South Africans to the peripheries of the city and immigrant Africans to embody narratives within narration in modernist buildings seen in inner cities. This layered interaction between city dwellers and modernist planning has dramatically influenced the spatial dynamics observed in Johannesburg, creating a fascinating contrast with the original principles of the modernist movement and apartheid ideology while simultaneously embodying cultural existences. Specifically, the observations made in Braamfontein, Johannesburg, as discussed in earlier research on the *"shop within a shop"*[7] concept, lead us to contemplate the potential outcomes of exploring identity narratives in architecture and urbanism. Thus, this exploration reveals the need for a fusion of modernism and what Homi Bhabha refers to as the *"third space"*[8]—a means to embody cultural variety, particularly on the African continent, with Johannesburg serving as a microcosm. The paper then delves into the methodology for investigating how modernist African literature uses narrative to reshape the legacies of colonialism and apartheid. It argues that a narrative approach can capture cultural hybridity, allowing for a proper contextualisation of modernist practices in architecture and urbanism. This paper will explore a notable example, the *"shop within a shop."*[9] To discuss this, Stephanie and Lindsay Bremner's works highlight the importance of narrative in Western practices and forms on the African continent. They also establish connections between African literature and narrative, spatially embodying culture and its diversity through the coexistence of Africans of multiple origins in one space. To promote sustainable urban development and the repurposing of modernist buildings or any other architectural style introduced to Africa without considering precolonial practices or spatial traditions, this paper explores South Africa's broader and specific contexts. Language and narrative in African novels often serve as powerful tools for capturing the essence of location, geography, and architecture, thus beautifully encapsulating the rich cultural

1. Ngugi wa Thiong'o, *Decolonising the mind* (Harare, Zimbabwe: Zimbabwe Publishing House, 1987).

2. A phenomenon discovered upon unpublished research in the Author's honours around hybridity in Braamfontein in which spatial hybridity is encountered.

3. Homi K. Bhabha, *The Location of Culture* (London: Routledge, 1994), 53-56.

4. wa Thiong'o, *Decolonising the mind*.

5. wa Thiong'o, *Decolonising the mind*, 76.

6. Lindsay Bremner, *Writing the City into Being: Essays on Johannesburg 1998-2008* (Johannesburg, South Africa: Fourthwall Books, 2010).

7. A phenomenon discovered upon unpublished research in the Author's honours around hybridity in Braamfontein in which spatial hybridity is encountered.

8. Bhabha, *The Location of Culture*, 53-56.

9. A phenomenon discovered upon unpublished research in the Author's honours around hybridity in Braamfontein in which spatial hybridity is encountered.

tapestry. Exploring the relationship between African cultures and identities and African literature enhances our understanding of their manifestation. In her chapter entitled *"Listening to the City,"*[10] Lindsay Bremner explores the use of narrative to understand and improve the development of African cities. She suggests that introducing modernist architectural practices to the continent overlooks or disregards Africans' deeply ingrained cultural uses of space.

2. MICROCOSM: MODERNISM IN JOHANNESBURG, SOUTH AFRICA, AS THE EMBODIMENT IF COLONIAL LEGACIES

The late 19th century heralded the arrival of modernism, a movement that profoundly influenced South Africa's architectural and urban landscapes[11]. However, in this context, modernism found itself intertwined with the harsh realities of apartheid, revealing the deep-seated racial and cultural segregation entrenched in the country's urban planning. After gaining independence in 1910, South Africa clung to a colonial mindset, a sentiment starkly embodied in the Group Areas Act of 1950[12]. This legislation imposed rigid spatial boundaries, systematically segregating communities by race and perpetuating the colonial legacy of division. Rather than fostering inclusivity or innovation, modernist principles entrenched exclusion and inequality, explicitly targeting non-white South Africans. Jean and Jean's analysis of colonialism accurately describes how colonised nations frequently served as experimental grounds for colonial powers, resulting in urban centres teeming with a rich cultural tapestry. They argue,

> *Today, the inner cities serve as the ground on which the spatial and temporal coordinates of the past converge and where the metropole and empire's margins fold into one another. Former colonial subjects-turned-immigrants reside here, usually on the outskirts of a political economy that increasingly provides them with little formal employment, recognition, or rights.*[13]

The arguments above are palpably evident in Johannesburg, where the 'Shop within a Shop' phenomenon in areas like Braamfontein showcases this blend of diversity and economic adaptation. See **Fig. 1** below.

Braamfontein was initially envisioned as a white suburban area under the Group Areas Act, but it now stands as a testament to resilience and cultural hybridity. The area has transformed into a bustling enclave of African communities from across the continent, creating a vibrant mosaic of cultures and practices. Homi Bhabha's concept of the third space is crucial here. The third space forms hybrid identities outside the binary oppositions of colonial discourse. It is a cultural exchange and transformation site where marginalised voices can articulate their experiences and identities[14]. In earlier research, drawing on the works of Tsitsi Dangarembga[15] and Frantz Fanon[16], the notion of a nervous condition was explored—a psychological state born out of cultural displacement and hybridity. Such a condition is evident in Johannesburg's architectural styles and movements, where the facade materiality and structural design reflect a confluence of African ingenuity and

10. Bremner, *Writing the City into Being: Essays on Johannesburg 1998-2008*, 29.

11. Simon Gikandi, "Modernity," in *Critical Terms for the Study of Africa*, ed. Gaurav Desai and Adeline Masquelier (Chicago: The University of Chicago Press, 2018).

12. Bremner, *Writing the City into Being: Essays on Johannesburg 1998-2008*,160.

13. John L. Comaroff and Jean Comaroff, "Colonialism," in *Critical Terms for the Study of Africa*, ed. Gaurav Desai and Adeline Masquelier (Chicago: The University of Chicago Press, 2018), 71.

14. Bhabha, *The Location of Culture*, 53-56.

15. Tsitsi Dangaremba, *Nervous Conditions* (London: Womens Press Limited, 1988).

16. Frantz Fanon, *The Wrethced of The Earth* (Paris: Francois Maspero, 1961).

modernist principles. Africans, particularly in Braamfontein, navigate these modern spaces, subtly challenging the rationality and austerity that characterise modernist architecture. The 98 De Korte Street building exemplifies this intricate dance between modernism and African spatial practices. Designed as a sleek, minimalist structure, it houses diverse retail spaces on its ground floor, where traders from Congo, Nigeria, and other Sub-Saharan African countries engage in commerce. This 'Shop within a Shop' phenomenon disrupts the original intentions of the building, infusing it with a vibrant, multifaceted life that mirrors its occupants' economic realities and aspirations. The demographic landscape of Braamfontein has evolved significantly since the enforcement of the Group Areas Act. Initially intended for white residents, the area now reflects a rich demographic mix.[17] See **Fig. 2** below.

The coexistence of various narrative voices within its spatial complexities is reflected. The influx of African immigrants and internal migrants has transformed Braamfontein into a microcosm of pan-African diversity. This shift challenges the economic marginalisation often imposed on these communities as they carve out spaces for economic activity and cultural expression within the urban fabric. Under the guidance of the late Gerald Chungu, we explored this phenomenon in 2017, observing the repurposing of these modernist structures to cater to the economic needs of marginalised communities. The coexistence of various African traders within a single retail space underscores the adaptability and resilience of these communities as they navigate and subvert the spatial limitations imposed by apartheid-era urban planning. Modernist planning in the context of the Group Areas Act of 1950[18] and cultural hybridity weaves a narrative into the continuance of modernism in South Africa. Johannesburg's Braamfontein serves as a living testament to this complex history, reclaiming and repurposing modernist buildings originally intended for exclusion to promote economic development and cultural integration through adapting African ingenuity and spatial practices. This phenomenon challenges the rigid canons of modernity and enriches our understanding of African modernities in a broader context.

3. ABSTRACTION: FROM AFRICAN LITERATURE TO HYBRID MODERNISM

The historical impact of colonialism in South Africa and across the continent has often distorted the concept of modernity, tying it exclusively to European influences[19]. This marginalised African existence placed it outside the scope of modernity. In "Critical Terms for the Study of Africa," Simon Gikandi[20] stresses the need for multiple viewpoints and cultural ideas when studying African modernities. He suggests rethinking modernity outside the European context, acknowledging its ties to the European Enlightenment, and recognising the tensions that arise when adapting modern principles in African art, teaching, architecture, and urbanism. Through analysing African literature, Gikandi examines the interplay between embracing modernity and preserving Africa's rich cultural legacy. In **Fig. 3** Uche Okeke's visualisations depict scenes from the novel Things Fall Apart. They provide

17. Bremner, *Writing the City into Being: Essays on Johannesburg 1998-2008*, 160.

18. Bremner, *Writing the City into Being: Essays on Johannesburg 1998-2008*, 160.

19. Gikandi, "Modernity".

20. Gikandi, "Modernity".

an initial understanding spatially speaking, of how Africa, and Nigerian modernity can be expressed through African literature below:

Thus, modernist architecture, focusing on efficiency and rationality, often clashes with the social and cultural realities of African cities. Lindsay Bremner highlights this conflict by noting that modernist planning, synonymous with the modern state, coexists with

> *insurgent citizenship practices. These practices parody, empower or subvert state agendas, embodying struggles over modern society membership. Bremner's analysis shows two modes of planning—modern and insurgent—as antagonistic yet complementary paradigms. Both authors advocate for a nuanced view of African modernism.*[21]

Gikandi, more assertively, suggests these paradigms should coexist, akin to a shop within a shop, capturing narratives of lived experiences. He argues that modernist African writers like Chinua Achebe use storytelling (ethnographic and anthropological tools) to bridge the gap between African identities and modernity. Achebe's "Things Fall Apart"[22] and "No Longer at Ease"[23] explore societal transformation under colonialism and the pursuit of modernity, showing the effects on Igbo culture and the balance between traditional values and modern influences. Gikandi claims that Achebe's approach offers a dynamic blend of modernity rather than a mere replica of Western modernity. Ngugi wa Thiong'o supports this, emphasising that language transmits cultural values.[24] This paper argues that spatial manifestation through language carries cultural belief systems from precolonial times, and when these cultures coexist, they insert variety into modernist architectural practices. Bremner describes these as *"insurgent practices"*[25] that introduce new identities and practices, creating a dynamic ethnographic rather than utopian city. Gikandi's exploration of African literature posits that these narratives offer insights into African modernity, demonstrating a blend of Modernist ideals and what constitutes a particular African identity. The interplay of Modernist ideals and what constitutes a particular African identity embody Homi Bhabha's Third Space Theory, where cultural identity is produced in the "*in-between*"[26] regions created by cultural interplay, resulting in a new hybrid identity. This Third Space challenges colonial dominance by deconstructing essentialist identities and binaries, allowing new concepts to emerge from cultural contacts. In conclusion, modernist African literature bridges the divide between modernity and cultural identities by emphasising real-life experiences and cultural legacies captured and written by Africans. This perspective underscores the need to integrate multiple cultural narratives into our understanding of modernity, especially in African architecture and urbanism. The following section on narrativity will provide tools for researchers to contextualise and write hybrid modernist practices into being.

21. Bremner, *Writing the City into Being: Essays on Johannesburg 1998-2008*, 40.

22. Chinua Achebe, *Things Fall Apart* (London: William Heinemann Ltd., 1958).

23. Chinua Achebe, *No longer at ease* (London: Penguin, 1994).

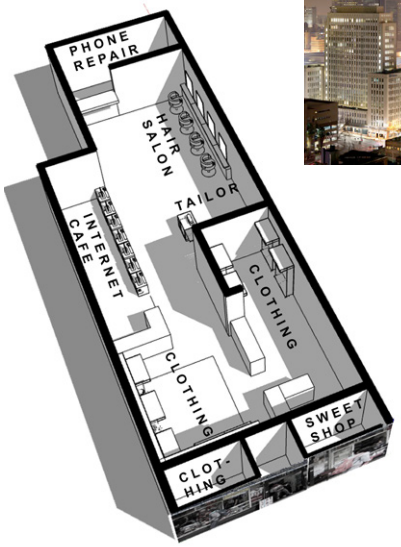
24. wa Thiong'o, *Decolonising the mind*, 76.

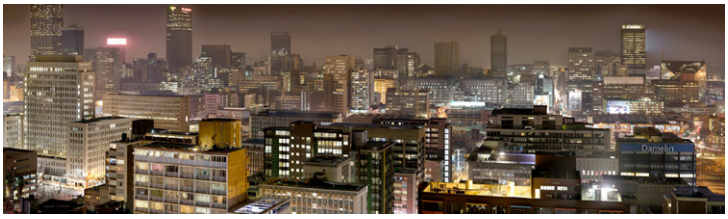
25. Bremner, *Writing the City into Being: Essays on Johannesburg 1998-2008*, 40.

26. Bhabha, *The Location of Culture*, 53-56.

4. NARRATIVITY: TOWARDS BETTER AFRICAN CITIES

Narrativity, essential to literature and discourse, also plays a crucial role in architecture and urbanism. It involves considering the story elements that









shape cities and their identities. Lindsay Bremner and Stephanie Newell provide insights into using narrativity to reimagine urban spaces. Bremner highlights writing and representation's significant role in shaping cities, particularly in Johannesburg, South Africa, emphasising the power of language in bringing a city into being and speaking to its future[27]. This approach underlines the impact of narrative in shaping urban realities, focusing on the transformative potential of narrativity in city planning and architecture. Stephanie Newell explores storytelling's power in addressing the remnants of colonialism and shaping African identity, pointing out that narratives can challenge dominant historical perspectives and celebrate African perspectives through a blend of realism, mythology, and history[28]. Works by Chinua Achebe, for example, challenge colonial narratives, by asserting precolonial African subjectivity and redefining cultural identities. In architecture, African modernist architecture reflects postcolonial identity, mirroring the narrative efforts to reshape cultural perceptions. The intersection of narrative and architecture serves as a medium of cultural expression, questioning established power dynamics and authentically expressing African identities. Bremner's focus on Johannesburg reflects on how residents, through their personal experiences, shape the city's evolving narrative, challenging traditional architectural notions. This approach emphasises observing and interpreting urban spaces to enhance understanding and reimagining of urban and architectural designs, recognising the importance of diverse narratives in discussing African urban research. Modernist architecture, often detached from specific cultural contexts, contrasts with narrative-driven approaches that prioritise lived experiences and identities. This narrative method acknowledges African urbanism's diversity and complexity, promoting a more inclusive and representative architectural practice. Listening to city inhabitants and their stories allows for a deeper understanding of urban dynamics and the potential for integrating modern architecture with African identities.

27. Bremner, *Writing the City into Being: Essays on Johannesburg 1998-2008*, 49.

28. Stephanie Newall, "Newall," in *Critical Terms for the Study of Africa*, ed. Gaurav Desai and Adeline Masquelier (Chicago: The University of Chicago Press, 2018), 256.

Figure 1. Three-dimensional depiction of shop within a shop phenomenon at 98 De Korte street, Braamfontein Johannesburg, 2017. © Ntetleng Orepa Mosidi.

Figure 2. Thumbnail_8460-Broadway-Braam-dusk , 98 De Korte street in the background of similar modernist buildings, Braamfontein Johannesburg, © Leon Krige.

Figure 3. Drawings by Uche Okeke. In Achebe, Things Fall Apart, Illustration,1963, ©Uche Okeke artist and illustrator.

5. CONCLUSIONS:

Finally, the paper examines how modernist African literature uses numerous narratives to investigate diverse experiences. It examines how modernism in Johannesburg, South Africa, reflected colonial legacies and maintained racial spatiality. The study proposes that narrative in literature and understanding African cultural practices can change colonial legacies and contextualise modernist architecture in African towns. It uses Johannesburg's "shop within a shop" to demonstrate how identity narratives may lead to hybrid modernity and cultural diversity. The study also highlighted the role of African literature in examining African modernities and narratives and how stories can bridge African identities and modernities. The author claims that "Narratives-within-a-narration" in literature and architecture can resist abstract modernity and highlight African societies' lived experiences and cultural continuity. ■

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BIOGRAPHY

Ntetleng Orepa Mosidi is a registered professional architect and lecturer at the University of Johannesburg's Department of Architecture, and possesses degrees from the University of Witwatersrand. With experience at Boogertman and Partners and the University of Free State, she mentors students and supervises dissertations. Enthusiastic about integrating 4IR technologies into architectural education, her research explores connections between African architecture, literature, and art, focusing on African identities in architectural representation. She presented on Black women's narratives in architecture at the 2023 ICAG VI International Conference on Architecture and Gender in Spain, using African literature as a lens.

BETWEEN THE MUSSEQUE AND THE NEIGHBOURHOOD UNIT: SPOTTING "*COMPAGNONS DE ROUTE*" ARCHITECTURES IN LUANDA (1961-1975)

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ABSTRACT

Taking full advantage of Nnamdi Elleh's proposal, by seeking to "keep the focus on the modern" (2014), this article explores how during the late colonial period in the city of Luanda, Angola, conditions arose to link the future of architectures with unequal roots. On the one hand, an architecture strongly qualified and praised by the historiography of modern architecture, which would result in the Prenda Neighbourhood Unit No. 1, and on the other hand, the musseque (Angolan slum) of the same name, which already occupied that territory in the suburbs of the colonial city. Placed in the core of the musseque, the Neighbourhood Unit (NU) was used strategically by the colonial state to control African population. Through the embodying of "brutalist imaginaries", it would be permanently linked to a new landscape, strongly supported by self-produced architecture.

As a case study, the Prenda musseque not only preceded the new NU, but coexisted with its realisation and appropriation, surviving to this day. It thus provides multiple lenses for analysing how architecture promoted by the "underprivileged classes" can today contribute to broadening the architectural lexicon of production catalogued as modern. Drawing on multiple skills, the knowledge of the musseque communities was neglected by the late-modern colonisers who inhabited the new Prenda units. This article evokes the concept of "omnicompetence", explored by Glenn Adamson (2020) in the broader context of American crafts shaped by pre-colonial societies. Also in Luanda's musseques, a long formal and constructive genealogy has emerged as pluri-competences. Its long coexistence with modern culture during the colonial period and beyond was reinforced by its contemporary resilience reflected in the transfer of technical and formal knowledge creating a vernacular architecture with a strong modern tone. The article ends by highlighting how these architectures have mutually legitimised each other as "compagnons de route".

1. INTRODUCTION[1]

Architecture produced in Angola during the late colonial period (1961-1975) has been the subject of two different historiographical views. The first established the primacy of exceptional buildings, which set out the theses of the "tropical modern" as an offshoot of the canonical Modern Movement that dealt with climate.[2] The second, critically enunciated by the Social Sciences, has been questioning how these enterprises reinforced racial segregation, using tools such as zoning, associated with the Athens Charter.[3] Luanda and its 1961 Masterplan, based on Neighbourhood Units (NU), is today an example of this dual treatment.[4] The plan was launched in the beginning of the country's war of liberation,[5] by the Luanda City Council's Urbanisation Office, then headed by the architect Fernão Lopes Simões de Carvalho (Luanda, 1929). Outside the colonial history, Nnamdi Elleh proposed, in 2014, a new lens by describing the "architecture of the underprivileged classes" as an "architecture of modern affiliation".[6] Elleh's analysis allowed the focus to remain on modern culture, drawing attention to the fact that the contemporary city had emerged in parallel with the "shantytowns". Confirming the crucial value of studying these urban structures, Elleh adds that this architecture participated in concepts "we now call sustainable design".[7] Such a hypothesis would bring these self-built buildings closer to the idea of a "vernacular architecture" – particularly when following authors such as Linda Asquith and Marcel Vellinga[8] –, and thus contributing to a debate that reinforces the links between a historically defined production (the modern) and an ongoing practice with repercussions in contemporary times (the self-built).

1.1. MODERN EQUIVALENTS?

This paper contents for a narrative that links the two realities. Without disqualifying the modern heritage, it aims to explain how conditions were created in colonial Luanda to link the future of architectures with unequal backgrounds, observed from the musseque perspective. These conditions resulted from using the NU as an urban planning strategy. Placed in the core of large musseques, mainly to neutralise their structural logic and monumental scale, these NU embodied "brutalist imageries"[9] while becoming lastingly linked to a new landscape, heavily supported by self-produced architecture. As a case study, the Prenda musseque, not only preceded the new NU, but coexisted with their realisation and appropriation, surviving to this day (**Fig. 1**). It thus provides multiple lenses for analysing how the architecture self-promoted by the said "underprivileged classes" can today contribute to broadening the architectural lexicon of production catalogued as modern.

To move forward in this narrative, the idea of "omnicompetence," explored by historian Glenn Adamson offers a highly useful conceptual framework.[10] In the musseques, an extensive formal and constructive genealogy arguably emerged as a complex set of pluri-competences.[11] The long coexistence of this know-how with modern culture during the colonial period and beyond was reinforced by its contemporary resilience, to be seen in the transfer of technical and formal knowledge that created a vernacular

1. This research was funded by the European Union (ERC, ArchLabour, 1101096606). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Council. Neither the European Union nor the granting authority can be held responsible for them. ArchLabour, chaired by Milheiro. Also funded by the FCT – Fundação para a Ciência e Tecnologia (Portugal) through the "WomArchStruggle" project (DOI: 10.54499/2022.01720.PTDC), coordinated by A.V.Milheiro/L. Matos Silva.We wish to thank Beatriz Serrazina for her careful revision.

2. See, among others, Portuguese and Angolan authors: José Manuel Fernandes, *African Generation; Architecture and Cities in Angola and Mozambique, 1925-1975* (Lisbon: Livros Horizonte, 2002); Ana Tostões, *Modern Architecture in Africa: Angola and Mozambique* (Casal de Cambra: Caleidoscópio, 2014); Maria Alice Correia. "The model of urbanism and architecture of the modern movement - Luanda 1950/1975", PhD Thesis (FAU, University of São Paulo, 2018).

3. See, among others, Nuno Domingos and Elsa Peralta (ed.), *The City and the Colonial* (Lisbon: Edições 70, 2013); Bernardo Pinto da Cruz, "As origens institucionais da modereração da violência: regedorias e políticas de concentração em Angola (1914-1974)", PhD Thesis in Globalisation Studies (Universidade Nova, 2022).

4. Cf. Ana Vaz Milheiro and Inês Lima Rodrigues, "Neighbourhood Units' in colonial Africa: controlling the musseque through an urban model from the Global North", in *Middle-Class Mass Housing: European Stories, Vol. 3: Social recompositions of Mass Housing*, ed. Ahmed Benbernou, Nicole De Togni and Aurore Reynaud (Paris: Éditions L'Harmattan, 2024).

5. The Colonial/Liberation War in Angola lasted until the so-called April Revolution (25 April 1974),

architecture with a strong modern tone. Like true "compagnons de route," the architecture of the Angolan musseque echoes how late modern architecture survives, taking advantage of resources ignored in Western societies.

2. MUSSEQUE PRENDA

The Prenda musseque endures today as an urban structure that survived the colonial period and went through the Angolan civil war, which ended in 2002. The monograph published in 1968 by the geographer Ilídio do Amaral (Luanda 1926- Lisbon 2017) described the advance of the "planned" city over the self-built musseque. Amaral estimated that 180 000 inhabitants were precariously housed here.[12] Accommodating this population in formal housing seemed an impossible goal. The heterogeneity perceived by Amaral among inhabitants was manifested, in his opinion, in disruptive ways of inhabiting the urban territory, including syncretic religious practices, polygamy and marginalisation. This anathema stemmed from the process of "detribalisation" that worried the colonial authorities.[13] Amaral lamented that there had been no "spatial organisation in communities, in which the evolution of family life [could] be respected"[14]. Meantime, a large residential experiment was underway, planned for "about 4 500 inhabitants, encompassing three economic housing areas (collective, single-family and independent single-family)".[15] Amaral was describing one of the projects later most celebrated by the historiography: Unidade de Vizinhança Nº 1 do Bairro Prenda, by Carvalho with Luiz Taquelim da Cruz (1928-). The architecture was designed by Carvalho with José Pinto da Cunha (1921-1985) and Fernando Alfredo Pereira (1927-).[16] A new territory in transition simultaneously welcomed two architectures in a preview of the future: one considered qualified within the framework of the dominant culture and the other that exposed "the custom of clandestine construction, in transgression".[17]

2.1. PRENDA NEIGHBOURHOOD

The new NU[18] stood over the Prenda musseque, which in 1964 had a population of up to 13 000 inhabitants:[19] 3 368 African families cohabited with 215 settler families.[20] When outlining the housing strategy, the colonial services envisaged three different types of NU, combining ethnic origins with economic income.[21] Only the first type – of which there were ten – envisioned the presence of "white" population.[22] Four out of the six NU in the Prenda musseque belonged to this group.[23] The remaining two, aimed at the most disadvantaged population, were part of type III – overall the most numerous, with 17 proposals.[24] The new plan offered a diversity of residential occupations, from two-storey flats to high-rise blocks, designed by trained architects and placed on the property and rental market; to single-family housing under assisted self-building, partly financed by the authorities. In order to minimise public investment, some plots within Type I Units provided for the installation of prefabricated houses for the "economically weak" population.[25] One of these models had a very simple plan with a living room, two bedrooms and a bathroom, using wooden

which put an end to the dictatorial regime in Portugal and began the process of independence.

6. Nnamdi Elleh, *Reading the Architecture of the Underprivileged Classes* (London: Routledge, 2014), 4.

7. Elleh, "*Reading the Architecture of the Underprivileged Classes"*, 4.

8. Lindsay Asquith and Marcel Vellinga (eds.), *Vernacular Architecture in the Twenty-First Century. Theory, education and practice* (London & New York: Taylor & Francis, 2006), 18.

9. Ana Vaz Milheiro, "Modernity and Colonisation in an African Megacity: The Case of Luanda", in *The Routledge handbook of planning megacities in the Global South*, ed. D. Rukmana (London/New York: Routledge/ Taylor & Francis, 2020), 407.

10. Cf. Glenn Adamson, "Craft, an American History," published by Bloomsbury in 2020, accessed 19/01/2024 https://www.glennadamson.com/craft-an american-history

11. José Redinha, *A habitação Tradicional Angolana- aspectos da sua evolução* (Luanda: Angola Tourism Centre, 1964), 7-50.

12. Data for 1962. Ilídio Amaral, *Luanda (Estudo de Geografia Urbana)*, Vol. 53 (Memórias da Junta de Investigações do Ultramar, 1968), 117.

13. Cf. Diogo Ramada Curto and Bernardo Pinto da Cruz, "Cidades coloniais: fomento ou controlo?", in *A Cidade e o Colonial*, ed. Nuno Domingos and Elsa Peralta (Lisbon: Edições 70, 2013), 133 et seq.

14. Amaral, *Luanda (Estudo de Geografia Urbana),* 120-121.

15. Amaral, *Luanda (Estudo de Geografia Urbana),* 121.

16. Ana Vaz Milheiro et al. "Radieuse peripheries: A comparative 10 study of middle-class housing in Luanda, Lisbon and Macau," in *Middle-Class Housing in Perspective from Post-War construction to Post-*

millennial Urban Landscape, ed. Gaia Caramellino and Frederico Zanfi (Bern: Peter Lang Publishers, 2015), 211-240.

17. Amaral, *Luanda (Estudo de Geografia Urbana),* 118.

18. Milheiro, "Modernity and Colonisation in an African Megacity: The Case of Luanda", 401-404.

19. Ilídio Amaral, "Luanda and its muceques, problems of urban geography," *Finisterra*, 18, 36 (1983): 308

20. Amaral, "Luanda and its muceques, problems of urban geography," 309-310

21. See LEA, 1962, Bol. no. 3459, 27-30.

22. Milheiro and Rodrigues, "Neighbourhood Units' in colonial Africa: controlling the musseque through an urban model from the Global North".

23. It was the type I Neighbourhood Units that attracted the attention of architectural historians because they had buildings that were later described as typical of "Tropical Modern".

24. LEA, 1962, Bol. no. 3459, 37-39.

25. There was also a lower income bracket without access to Type I units.

26. The plan for Neighbourhood Unit No. 2 has not been located, but its design is reported by the Preliminary Study commission (1962) as "under study". LEA, 1962, Bol. nº 3459: 37.

27. Elleh, "*Reading the Architecture of the Underprivileged Classes*", 8.

28. Redinha, "*A habitação Tradicional Angolana- aspectos da sua evolução"*, 23.

29. Amaral, "Luanda and its muceques, problems of urban geography," 318.

30. Redinha, "*A habitação Tradicional Angolana- aspectos da sua evolução"*, 42.

panelling, standardised windows and doors, and a gable roof (apparently) made of zinc. Amaral himself recorded some of these examples in 1964, probably in NU 2 of the Prenda neighbourhood (**Fig. 2**).[26] These houses were still part of an architecture designed for the underprivileged classes, incorporating "materials and tectonics that were derived from the location in response to the vernacular methods of construction".[27] The quality was technically and aesthetically inferior when compared to ancestral typologies such as the traditional axiluanda house on Luanda Island.[28] The fact that these prefabricated houses were open to self-produced improvements showed confidence in the local entrepreneurship.

These built endeavours were one step ahead of an even more "marginalised" population, who, according to the geographer, built "poor housing on the urban periphery, without the minimum of sanitary conditions and amenities, scattered chaotically over the terrain and forming relatively dense agglomerations".[29]

3. SUBURBAN VERNACULAR HOUSE

The ethnographer José Redinha (1905-1983) also considered "suburban housing" to be one of the "biggest problems on the fringes of Angola's large cities".[30] In 1964, he summarized the traditional housing in Angola by describing the musseque as the place of the "last cycle of the native house," both detribalised and suburban.[31] In Luanda, such dwellings were generally a "plastered wattle and daub (pau-a-pique) house, with galvanised iron sheeting on the roof".[32] The publication also covered the so-called "modern phase," presented as an alternative to the decline of "ethnic building types". The rectangular and slightly raised floor plan, the increased number of openings and the defined courtyard emerged as the result of new modes of "acculturation".[33] The sense of permanence and the presence of the backyard figured as an introduction to urban life that broke with tribal tradition, both in terms of nomadic experiences and the sense of ownership. His study established a standard form of housing for the musseque, which he called a "backyard house (casa-quintal)", functional and in a single-storey, without being completely closed off from the outside. Finally, the "associated use of definitive materials and still valid native resources would mark…the limit of the evolution of the suburban house".[34] The process was thought to naturally lead to the assimilation of the traditional house by the modern one. Meantime, the building skills of African populations had to be harnessed to lighten the housing shortage. The building capacity revealed by the musseque populations was interpreted as a transitory resource and an economic measure, since the "future evolution of the 'habitat' to higher levels" was believed in.[35]

3.1. MRS E. AND MR B.'S WOODEN HOUSE

The introduction of prefabricated wooden units during the late colonial period has yet to be studied. These houses spread to different areas of Luanda (Ilha de Luanda, Praça da Madeira and Bairro Operário[36]). On 17

November 2014, a couple living in one of these houses was interviewed to trace the history of the transformation of the accommodation.[37] Their testimony confirmed much of the information contained in Amaral's monograph. E., aged 58 at the time, and B. came from the Gabela region, about 400 kilometres from Luanda, having met in the capital, where they arrived in the 1960s. They belonged to the 60% of the city's non-native population living in the musseques mapped by Amaral.[38] Before settling in Prenda, they had independent life paths, having lived in different areas of the city, depending on their professional situation.[39] Settling in the latter neighbourhood was due to family ties. The accommodation that E. lived in between 1967 and 1970, in the context of an extended family, was part of the group of "houses made of wattle and daub" that were rented out. In 1971, after marrying B., they rented a wooden house. Three years later they moved into their (then) current home. The original house, referred as the "motherhouse (casa-mãe)," was built in a rectangle measuring around 10,50 x 3,00 metres, with an interior ceiling height of 2,56 metres and a gable roof. The doors were 1,86 metres high, and the original windows measured 0,62 x 0,82 metres. At the time of the interview, the household gathered 16 people linked by various kinship ties. The family growth had required successive extensions to the configuration of the house, totalling nine bedrooms and six bathrooms, in addition to the living room and kitchen. Two thirds of the wooden house survived and only one of the bedrooms was extended. The original building material was replaced with cement blocks. The "new" house was given an L-shaped layout. The initial backyard-house was gradually replaced by a courtyard-house. This transformation boosted a feeling of "greater security" according to the testimony collected. The biggest problems were still sanitary, namely difficulties in accessing piped water and interruptions to the electricity supply. Photographs reinforced these shortcomings while underlining the presence of a very strong outdoor experience (**Fig. 3**).

Figure 1. Prenda neighbourhood, a view of the musseque. Luanda, 2014. © Guerra/Milheiro; PTDC/ATP-AQI/3707/2012.

Figure 2. Ilídio do Amaral, Houses of an indigenous neighbourhood in Luanda, Luanda, Angola, 1964 © Phototheque of the Centre for Geographical Studies - IGOT-ULisboa - S5581.

Figure 3. Mrs E. and Mr B.'s wooden house and interior courtyard. Luanda, 2014. © Issac & Júlio, UTANGA; Guerra/Milheiro; PTDC/ATP-AQI/3707/2012.

4. CONCLUSIONS: COMPAGNONS DE ROUTE

The article shows that the Prenda NU No. 1, the prefabricated wooden houses, and the self-built houses of the musseque Prenda, in Luanda, are part of different lineages within the architectural culture of the 1960s, with repercussions in the present. It can be argued that the first derives from a modern erudite effort; the second crosses local functionalities with industrial systems, and finally the third stems directly from vernacular culture. Some experts within the colonial apparatus, such as José Redinha, mentioned in the article, suggested that the vernacular settings were condemned to being replaced by more "qualified" buildings through the Western lens. However, their resistance to the different typological, constructive and aesthetic solutions introduced at the time, and even further promoted after the independence of Angola, showed how hasty the verdict of its disappearance had been. The buildings' ability to adapt through climate-proofing and construction techniques from modern architecture demonstrated how the

31. Redinha, "*A habitação Tradicional Angolana- aspectos da sua evolução"*, 36.

32. Redinha, "*A habitação Tradicional Angolana- aspectos da sua evolução"*, 21.

33. Redinha, "*A habitação Tradicional Angolana- aspectos da sua evolução"*, 47.

34. Redinha, "*A habitação Tradicional Angolana- aspectos da sua evolução"*, 43.

35. Eugénio Sanches da Gama, "Alguns aspectos do Urbanismo no Ultramar" in *Colóquio sobre Urbanismo* (Lisbon: LNEC, 1961): 218.

36. Testimony of researcher Maria Alice Correia, March 2024, IPGUL, Luanda.

37. Interviewed by Isabel Guerra as part of the research project "Luanda, Lisbon, Macao: Homes for the biggest number...", funded by the Foundation for Science and Technology, [Musseque Prenda, Luanda, 17/11/2014], 2013-2015, ATP-AQI/3707/2012 (PI: Milheiro; Guerra, head of the sociology team).

38. Cf. Amaral, *Luanda (Estudo de Geografia Urbana)*, 74.









boundaries between erudite and vernacular principles had been blurred over decades of architectural appropriation. The wooden house inhabited by Mrs E. and Mr B., pictured as a case study, was built at the end of Portuguese colonialism as an economic solution for the underprivileged classes. Its growing appropriation has since revealed an openness to transformations using local technical know-how, which means that it persists today in the Luandan landscape as a self production work. It is due to the consolidation of these different architectural models throughout the history of the Prenda musseque that they can be approached as "compagnons de route". The current musseque is thus a collection of housing experiences that evoke the history of recent architecture while also displaying work-in progress examples. ■

39. In 1970, it had 150 195 inhabitants and was one of the preferred neighbourhoods for European immigration. See Amaral, "Luanda and its muceques, problems of urban geography," 312-314.

BIOGRAPHY

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THE NATURAL HOUSE IN THE MODERN CITY: IDEOLOGICAL PRINCIPLES, TECHNICAL DEVICES AND URBAN PROJECTS

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#12

ABSTRACT

The natural house ideas return to the primordial notion of shelter, from its material, technical, and energetic conditions to its social conditions, as well as phenomenological, existentialist, and even ecological conditions. Indeed, it is essential to contextualise the "natural house" within the framework of "urban designs" for a modern city historically committed to re-establishing a balance between the countryside and the urban environment[1].

Some current reconsiderations of modern architecture and urbanism, especially from an environmental point of view, often criticise the limited sustainability inherent in its guiding principles. Nevertheless, modern architecture was prolific in urban projects related to nature and technical devices for its management, both in form and in relation to the land. Typological research to establish this relationship was also extensive and diverse. When it comes to exploring and developing new ideas for the future of a sustainable built environment based on the past experiences of the Modern Movement, the critical points lie in the relationship between building and nature in a more realistic and practical term and on a theoretical effort to work on the distance between the idea of the natural house and the environmental design - as a cultural sphere - to face the artificial condition of the generation of the city.

1. THE NATURAL HOUSE

At the end of his long career as an architectural historian, Christian Norberg-Schulz (1926-2000) summarised what he considered the fundamental paradigms of modernism in his book Principles of Modern Architecture.[2] Among these paradigms, he notably included the concept of the "natural house," a proposition that may evoke surprise in contemporary discourse. Indeed, present-day reconsiderations of modernist architecture and urbanism, particularly from an environmental standpoint, often cast a critical eye upon the limited sustainability inherent in its guiding principles. Such reassessments frequently manifest as overtly anachronistic value judgments. This is attested to by the analysis of the origins of the principle of the "natural house," a notion that is certainly complex in the reading postulated by Norberg-Schulz, particularly in its interplay with the precepts of modern urbanism. Understanding the cultural significance of models such as the garden cities or early twentieth-century social housing districts requires an appreciation of their explicit aspiration to harmonise biological imperatives with social practices—bridging the realms of natural environment and modern culture.

Norberg-Schulz adopted the term "The Natural House" from Frank Lloyd Wright's book of the same title, published in 1954[3]. It elucidated the meaning of his "organic architecture" as applied to the design of individual homes, in which a return to the primordial notion of shelter, from its material, technical and energetic conditions to its social conditions, was intended. In short, the house was considered a totality that constitutes an order of things and thus establishes and represents a world (both a tangible microcosm and an *imago mundi*). For instance, Wright's houses often featured elements like fireplaces and hearths, symbolising the forces of nature, centrally positioned within the architectural design. Additionally, Norberg-Schulz observed parallels between Wright's organic Prairie and Usonian Houses and the cottages of the Arts & Crafts and the Jugendstil-houses, or Central European and Nordic modernist houses, since they all expressed a common desire for a new "natural life." This modern condition is rooted in their promise of plenitude.

To understand correctly the scope of the "natural house" principle postulated by Norberg-Schulz, it is worth bearing in mind that, contrary to what his Norwegian origin and the fact that most of his academic activity took place in Oslo might suggest, his was not a peripheral protagonist, nor were his interpretations of modern architecture conceptually marginal. On the contrary, his concept is rooted in the central traditions of modernity. He studied architecture at the ETH Zurich, where he was a student of art historian Sigfried Giedion, responsible for several modern architecture canonical histories. He had already participated in the first CIAM in La Sarraz (1928) and was, for a long time, the secretary of this somewhat sectarian lobby of modern architects. As early as 1949, Giedion urged Norberg-Schulz to establish a Norwegian CIAM group. As Eric Mumford has studied, he went further and assumed the leadership of the "youth members" when, in 1952, the "CIAM Council Meeting" was held in Sigtuna (Sweden).[4] There, the generational renewal of CIAM began, with young protagonists who would

1. This paper is part of the research project Fondecyt Nº 1221316 "Modern architecture and the city: the urban design facing the challenge of development." The authors thanks Fondecyt, for the financial support.

2. Christian Norberg-Schulz, *Principles of Modern Architecture*, London 2000.

3. Frank Lloyd Wright, *The Natural House*. New York: Horizon Press, 1954.

4. Eric Mumford, *The CIAM Discourse on Urbanism, 1928-1960*, Cambridge Mass., 2000, 219-225.

later constitute Team 10. The debate on the concepts of "habitat" *versus* "dwelling" as the guiding principle of modernity is an example of the thematic renewal that the arrival of this new generation implied. This turn marked a departure from the debates developed at CIAM 8 (Hoddesdon 1951) around the concept of "The Heart of the City."[5] On that occasion, Josep Lluís Sert had opened the congress with a lecture in which he quoted a famous passage from the book *The Revolt of the Masses* (1929) by the philosopher José Ortega y Gasset[6], who had interpreted the origin of the civic space of the *agora* in the Greek polis as a radical opposition to nature.[7] This revolutionary public sphere seemed to be radically different from the geo-botanical cosmos that had characterised the life of humans in their cohabitation with plants and animals. In Ortega's view, the vegetative space of nature did, however, endure in the familiar sphere of the home.

The book *Can Our Cities Survive?* (1942), which until then had been Sert's main theoretical contribution to the CIAM debates, disproves that Ortega's radical opposition to civic space and natural space was a central concept of modern architecture and urbanism. For example, he was evident when he advocated reconsidering the importance of "urban biology": "In its academic and traditional sense, city planning has become obsolete. In its place must be substituted urban biology, or the study of the life of cities and the living conditions within them."[8] Other recurring concepts in the book, such as "environmental control", "healthful environment", the inalienable "exposure to the sun and the natural surroundings", or the question "how can the week-end exodus be organised?" make it clear that the forms of social life in the modern city advocated by Sert were posing a renewed relationship with the urban environment and nature. Hence, Sert's relevance to the new regional plans is in his "total view of the city."[9]

It is striking that two decades later, Norberg-Schulz still referred to Sert's book in the introduction to his *Intentions in Architecture*[10], in which he attempted to offer a comprehensive theory of architecture. He was accompanied by other notable names of the time, such as Giedion or Lewis Mumford, with his *The Culture of Cities*.[11] However, among the sources cited, Norberg-Schulz included other names that gave an account of a conceptual renewal of the relationship between nature and modern architecture. For example, he included Tomás Maldonado in the list of acknowledgements: he had met him during Norberg-Schulz's teaching activity at the Hochschule für Gestaltung in Ulm, where Maldonado introduced systemic approaches such as those of cybernetics and semiotics into teaching and research. These, too, shared an integral scope that would culminate in the notion of an "environmental design," with which Maldonado was extraordinarily influential around 1970 among architects who were early involved in environmentalism.[12] However, Maldonado's notions focused on the "human environment" considered as the cultural sphere of the set of artefacts that make up an artificial system, an idea certainly far removed from a primordial nature.

In this sense, we can see that in Norberg-Schulz's principle of the "natural house", elements are entirely alien to the technical culture of

5. Rogers, E. N, José Luis Sert, and Jacqueline Tyrwhitt. *The Heart of the City: Towards the Humanisation of Urban Life*. London: Lund Humphries, 1952.

6. Jose Ortega y Gasset, *The Revolt of the Masses*. London/ New York: George Allen & Unwin/ Norton, 1932.

7. Josep Lluís Sert, „The Theme of the Congress: The Core (1951)", in: Eric Mumford (ed.), *The Writings of Josep Lluís Sert*, New Haven/Cambridge Mass., 2015, 9-10.

8. José Luis Sert, *Can Our Cities Survive? An ABC of Urban Problems, Their Analysis, Their Solutions*, Cambridge Mass., 1942, 2-3.

9. Sert, *Can Our Cities Survive?* p. 36, 51, 58, 96, 195.

10. Norberg-Schulz, Christian. *Intentions in Architecture*. London: Allen & Unwin; First Edition, 1963.

11. Lewis Mumford. *The Culture of Cities*. New York: Harcourt, Brace & Co., I938.

12. Tomás Maldonado, *La speranza progettuale. Ambiente e società, Torino 1970 (Design, Nature & Revolution. Toward a Critical Ecology*, New York 1972); Joaquín Medina Warmburg, "El mundo como artefacto: Tomás Maldonado en el foco del diseño ambiental, 1966-72", in: *Ra - Revista de Arquitectura*, no. 19, 2017, p. 25-38.

Maldonado's systemic "environmental design" postulated. The difference concerning Norberg-Schulz's theories' phenomenological, existentialist and even ecological elements is notorious. These are the focus of his two best-known books: *Existence, Space & Architecture* and *Genius Loci. Towards a Phenomenology of Architecture Towards a Phenomenology of Architecture*. In this existential consideration of the "good place," the notion of nature put forward by Norberg-Schulz drew on sources such as the writings of the philosopher Martin Heidegger, in particular his famous lecture "Bauen Wohnen Denken" (Building Dwelling Thinking).[13] Without this reference, it would be difficult to understand the capacity that Norberg-Schulz attributes to the domestic sphere to constitute a world or a microcosm, which in the case of the modern "natural house" would be evident in the way in which it opposes the experience of uprootedness characteristic of the modern world.

2. URBAN DESIGN AND NATURE IN THE MODERN CITY

One of the keys to the notion of the natural house was - in addition to its homely self-absorption - its direct and open relationship with nature. The microcosm of the domestic sphere was to leave behind representational forms and become natural again, with direct contact between inside and outside and with natural materials.

Both dimensions are underdebate. One, in the face of establishing not only an individual world of one's own but with others on a communal level. The other is the increasing absence of nature in the urban world. There is no shortage of city designs in modern architecture that sought to give nature a role. The 1930s were prolific in proposals from very different sides. **(Fig. 1)**

On the one hand, one can review the low-density proposals, from the initial recognition of the garden cities, which nourished the experience of housing in Frankfurt[14], to the more radical and individualistic vision of Broadacre,[15] which, although based on the idea of the natural house, proposed an infinite expansion of the urban phenomenon on the condition of the natural territory. The exercises of the Bauhaus students in the workshop developed by Hilberseimer[16], whose central motif was the study of L-shaped houses in the framework of a possible expansion of the natural territory, can also be noted here.

On the other hand, the proposals sought greater density, and nature appeared as a theoretical mantle on which to arrange the pure forms of rational aggregation. The reference to Le Corbusier's Ville Radieuse is evident, in which the buildings *à redents* were oriented according to helio-thermal axes and were displaced, leaving green spaces to incorporate public facilities.[17] Wladimiro Acosta's City Block[18] not only assumed the urban form of the traditional city but was conceived in direct relation to the green void. Richard Neutra's proposal, Rush City Reformed, where the population was distributed in residential neighbourhoods by age regarding primary education requirements, assigning community value to the smaller portions and green space a dominant value.[19] **(Fig. 2)**

A superlative advance had the notion in the debates of the APAO (Associazione per una architectura organica), in Metron and Comunittá[20],

13. Martin Heidegger, "Bauen Wohnen Denken", in: Otto Bartning (ed.), *Darmstädter Gespräch Mensch und Raum* [1951], Darmstadt 1952, p. 72-84.

14. Jean Castex, Depaule J.Ch., Panerai Ph. *Formes urbaines: De l'îlot à la barre*. Paris: Dunod, 1977

15. Wright, *The Disappearing City*. New York: William Farquahar Payson;, 1932

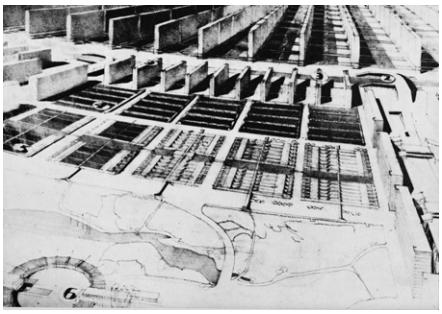
16. Puis Pahl "Einfamilienhaus Typ L" Seminar mit Ludwig Hilberseimer, 1931-1932. Bauhaus Archiv; and Ludwig Hilberseimer, "L haus" in *Bauhaus zeitschrift für gestaltung* N1. Januar 1931.

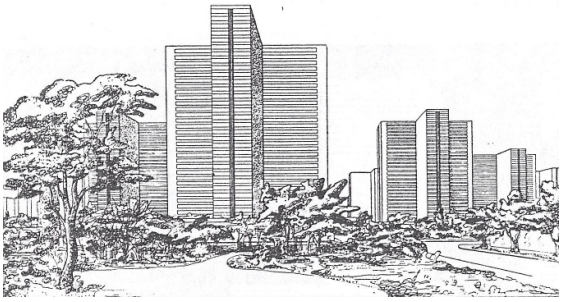
17. Le Corbusier. *La ville radieuse : éléments d'une doctrine d'urbanisme pour l'equipement de la civilisation machiniste*. Boulogne, Seine: Éditions de L'architecture d'aujord'hui, 1935.

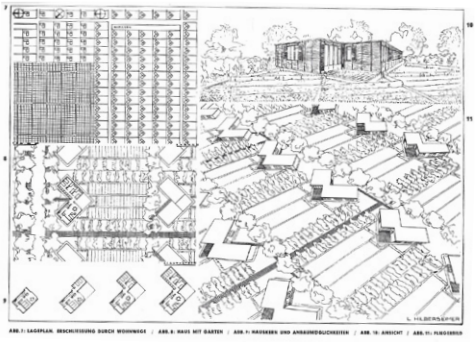
18. Wladimiro Acosta, *Vivienda y Ciudad. Problemas de Arquitectura contemporánea*. Buenos Aires: Editorial Aresti, 1936

19. Richard Neutra "Rush City Reformed" *LA CITÉ*, XIIe Année. N°5. Mai, 1934, 69-82

20. Cino Calcaprina, "Urbanística Orgánica", in *Comunitá* 1, 1-2. Archivio Storico Olivetti, Ivrea.









placing itself on another more humanist ideological plane in the full intention of overcoming the individualistic restrictions of the notion of the natural house and the necessary community setting.

3. TECHNICAL DEVICES AND URBAN DESIGN

Modern architecture has developed many technical devices that relate to nature. Some were directly associated with the climate, such as the Helios-system, the brise-soleil, and ventilated walls with openwork bricks. The terrace, the roof garden, or the recovery of the central courtyard advanced the spatial and typological conformation of the units.

However, a more structural dimension at the level of urban design was necessary. The relationship between density and land use became clear early on. Several technical devices emerged from the rational ways of defining the relationship with nature, based mainly on the climatic suitability of the position of the architectural work on the ground and the relationship with the orchard or garden.

The rational spacing diagrams of the housing blocks according to the solar exposure of the façades offered free land for cultivation. The urban fabric forms generally assumed typological mixtures between blocks and houses, and later towers, in larger complexes. The *'a redant'* building or the *L-shaped house*[21] constituted typological possibilities concerning nature. Still, none of them assumed a more definitive status, both in theory and in urban design practice. **(Fig. 3)**

Sustainability proposes some essential modern technical devices worth reviewing for urban design. A myriad of environmental problems, such as rising urban temperatures, the inability to absorb water in urban territories, and the inability to maintain the green in the city due to the progressive disappearance of natural soil for planting, among others, puts the city's design at a crossroads.

Figure 1. Richard Neutra, Rush City Reformed, Central regional distribution area and foreigners' hotels (3) opposite the main avenue. In (1), end of radial avenues with superimposed intersections (2). In (4) and (5), respective dwellings in the 1st and 2nd decades. In (6), the school on the circular plan of the area. In: *LA CITÉ*, XIIe Année. N°5. Mai, 1934, page 73.

Figure 2. Wladimiro Acosta "City Blocks neighbourhood. minimum building zone, alternating city blocks and parks". In: Wladimiro Acosta, *Vivienda y Ciudad. Problemas de Arquitectura contemporánea.* Buenos Aires: Editorial Aresti, 1936 Page 146.

Figure 3. Ludwig Hilberseimer. "L type house". In: Martin Wagner, *Das wachsende Haus. Ein Beitrag zur Lösung der städtischen Wohnungsfrage.* Berlin u. Leipzig, Deutsches Verlagshaus Bong & Co. 1932. Page 74.

Figure 4. Frei Otto, "Adaptable Buildings in a natural urban environment," from: **Mitteilungen der Entwicklungsstätte für den Leichtbau** (Berlin), nr. 6, 1959. Cover

Part of the problem seems to lie in aspects on which modern architecture and urbanism took a stand. On the one hand, the overall density of the city and its neighbourhoods and the occupation of land are concerning the voids. On the other hand, the problem of the size of the formal architectural aggregation to establish communities.

The first establishes a direct relationship with the proportion of nature in the urban environment, and the second refers to the possibilities of constituting communities beyond the individual domestic sphere. It seems necessary to bring back to the fore the notions of the density of the built-on natural ground and the urban community. Just as Frei Otto could have imagined it in 1959. **(Fig. 4)**

In 2001, Duncan Lewis - in a text that has taken on unusual validity - predicted that "the city of the future will be denser, and nature will be more present". [22] He proposed, in the face of the excessive urbanisation of the territory, "another type of natural contract" and the replacement of the architecture-city binomial with that of architecture and nature.

Lewis argued that *"It is necessary to create a new culture where natural areas and human density can be developed together to respond to real needs and values. In this framework, architecture could reduce its artificiality and finally consider a relationship approximating its environment. But it is necessary that by environment, we understand its meaning in the broadest sense, i.e. essentially urban and social, and despite everything technical. It is not just a question of building huts in the forest, of adopting an anachronistic and marginal attitude, but of responding to a constant and legitimate desire and aspirations by participating in an omnipresent reality."* [23]

The urban project can no longer assume the escape into the individualistic microcosm of the suburban house; it is essential to shape another city. When it comes to exploring and developing new ideas for the future of a sustainable built environment based on the past experiences of the Modern Movement, it is not only about revisiting the experience of neighbourhood construction. One of the keys lies in that relationship between building and nature in a more realistic and practical term, and on the other hand, a theoretical effort to work the distance between the idea of the natural house and the environmental design - as a cultural sphere - to face the artificial condition of the generation of the city itself. ■

21. See: "Entwurf: Architekt Ludwig Hilberseimer, Berlin" In: Martin Wagner, *Das wachsende Haus. Ein Beitrag zur Lösung der städtischen Wohnungsfrage*. Berlin u. Leipzig, Deutsches Verlagshaus Bong & Co. 1932. 72,75.

22. Duncan Lewis. "Otro Tipo de Contrato Natural." In Actar Arquitectura et al. *Otras "naturalezas" Urbanas: Arquitectura Es (Ahora) Geografía*. Valencia: Generalitat Valenciana. 2001, 124-133.

23. Lewis, "Otro Tipo de Contrato Natural.", 125

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THE GROWING CITY. THE HYBRID CHARACTER OF NATURE IN SCHWAGENSCHEIDT'S *RAUMSTADT* CONCEPT

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ABSTRACT

The paper emphasizes the importance of generating a new approach toward analysing and conceptually understanding post-war modernist housing within the discussion of *hybridity*. The main argument of the paper is that by discussing *hybridity* as an action with its dynamic qualities (rather than its static, permanent ones), we are revealing one of the term's core intentions, namely, the ability to change and allow the users of the space to act and react as an essential part of continuous development. To do that, Norberg-Schultz´s modern architecture principle of the *Natural House* is being used as a benchmark to discuss the urban design approach of the Nordweststadt, one of Frankfurt/Main's most ambitious post-war modernist housing projects. Reflecting on Walter Schwagenscheidt´s *Raumstadt* concept, corresponding approaches are explored to discover the social-spatial anchors of *hybridity* embodied in the envisioned and lived spaces characteristic of the post-war housing projects. Schwagenscheidt´s perception of nature as a form of unity between private life, social infrastructure, and the public realm strengthens the argument that nature plays a significant role in the open-system layout of the Nordweststadt, providing a platform for the possible expansion of the project and enhancing the participation of the residents in that process. Through a critical reflection on the potential embodied in becoming natural again, the paper aspires to expand the understanding of the term *hybridity* in the context of modernist housing projects to the social and the in-between one, seeking eventually to show the uniqueness and adequateness of post-war modernist housing as a social-spatial and cultural source. The aspired insights of the research could help position similar housing projects as additional experimental fields for the realization of new interpretations of the concept of hybridity as a development process.

1. INTRODUCTION

"What then is the point of forcing the layout into a rigid, inflexible system? Instead of constantly reshaping it!" (Schwagenscheidt 1964, 39)

The *Raumstadt*[1] concept that the German architect Walter Schwagenscheidt (1886-1968) started working on during the third decade of the last century went through several development stages before being finely manifested in form with the building of the Nordweststadt in Frankfurt/Main, a project he and his office's partner, the architect Tasillo Sittmann (1928-2022), were commissioned with between 1959 and 1968. Although some aspects of the concept underwent spatial changes throughout the years, its core ideas stayed untouched: The *Raumstadt* offers an open-plan system for a new kind of residents—a new urbanity of possibilities tailored to the "open, democratic, and pluralistic society" that would inhabit it (Preusler 1985, 17). The first ideas at the core of the concept were aimed at achieving simple and intelligent solutions for men's lives in cities after the First World War, and nature played such a significant role in the first evolutionary steps of the vision that the houses and people were barely seen in the first concept sketches made by Schwagenscheidt.

The reason that architecture plays just a minor role in this idea as opposed to nature also served Schwagenscheidt´s understanding that the green spaces in the quarter ought to offer both openness and a sense of security for the residents. This vision directly corresponds with Christian Norberg-Schulz's (1926-2000) definition of the *Natural House* as "[…] a new kind of informal living, in contact with natural materials, simple straightforward artefacts, and, if possible, a natural environment". In his book *Principles of Modern Architecture*, published shortly before his death, Norberg Schulz emphasizes the role of the house within its relation to the green and open spaces surrounding it as a place able to provide its inhabitants with the intimate feeling of "belonging and protection". And to Schwagenscheidt and Norberg-Schulz, a sense of belonging is much needed as we depart our house again and again (Norberg-Schulz 2000, 49). Furthermore, Norberg-Schulz's reflections on the houses' ability to provide their residents with a sense of rootedness echoes Schwagenscheidt´s idea of participation and loyalty that the residents of the city should be feeling through the use of nature as it spreads between the buildings of the city.

By creating a dialogue between Norberg-Schulz´s modern principles definitions and Schwagenscheidt's planning concepts, the paper wishes to discuss interpretations and understandings of the term Hybridity as an urban agenda, one that understands that the urban assignment must seek to create a synthesis between the different being's manifestations, their spatial requirements, and their cultural and societal needs, allowing the built environment to develop according to changing human and societal demands.

Reading the *Natural House* and nature as places of "open interaction and simultaneous events," (Norberg-Schulz 2000, 50) shows that *hybridity*

1. The word Raumstadt in German combines two words: Raum = Space, room stadt = city. Therefore, the term can be translated into English as "Spatial City" (not to be mistaken for Yona Friedman´s Spatial City project from 1958).

can be read as a process that depends on the interpretation of the changing users and not just the functional or architectural setting. Furthermore, such readings can help us create a new understanding of *hybridity* as an action and reaction being adaptive and fault-tolerant urban agenda that can contribute enormously to the discourse regarding both the future of post-war modernist housing and the ability to reshape the public´s image of those projects; as while their cultural value is well appreciated, their current widespread image is one of "monotonous, grey, and impersonal" relics of the past (Harnack, Brunner, and Heger 2020, 4).

2. HUMANITY, URBANITY, COMMUNITY: FROM THE NATURE CITY TO THE GROWING ONE

When Schwagenscheidt developed his ideas about the *Nature City* (*Naturstadt*), which then became the *Raum-* and *Wohnstadt*, Le-Corbusier's ideas about the *Machine for Living* (*Wohnmaschine*) also took shape. For both architects, nature played a significant role in the design. Furthermore, both architects used the word "cell"[2] to describe the basic units and spatial proportions at the core of their ideas. To Schwagenscheidt, the cell was the basic unit constructing the city, clusters composed of several buildings and arranged together around a joint court **(Fig. 1)**. Nature played an elementary role in those clusters' composition, and life was formed by and around it.

Schwagenscheidt titled his concepts differently through the years, but the characteristics of the natural spaces remained the same. From the beginning in the twenties (1920-1923) with the drawings titled *Outside Space* (*Außenraum*), all the way to the sketches done more than forty years later of the courts and open squares in the Nordweststadt. Those spaces were always "spatial creations" that modelled the "ideal of introversion of a centered place that can be experienced and lived through residing" in them (Gleiniger 1995, 153f). Moreover, the head of the planning department in Frankfurt/ Main back then, Hans Kampffmeyer Jr. (1912-1996), shared this social intention of shaping life in the city anew through the urban design composition of living cells and nature. In his book, published shortly before the complete realization of the new city quarter, Kampffmeyer emphasizes that the " […] humane and truthful city planning visions for them, the name Schwagenscheidt stands for, were especially attributed to the planning of the green areas, as those living green (*Wohngrün*) should fulfill their function in shaping the society" (Kampffmeyer 1968, 62).

Corbusier´s design homogeneity of the *Machine for Living* suggests, in a way, an abolishment of the differences between classes: All cells (buildings) look the same, and all apartments look the same. In his concept, workers, doctors, and university professors live together in one cell. These social ideas are just as present in Schwagenscheidt´s ideas of living: The cells building the Raumstadt are composed of different buildings, which aim to gather around one court, the doctors living in their houses with

2. Cell in the context of Corbusier´s *Machine for Living* and Schwagenscheidt´s *Wohnstadt* is to be understood as a spatial reference (=a small unit) and not in relation to biology.

the workers, or single-parent families living in one of the apartments of the high-rise buildings. With the change of title, Schwagenscheidt then diverted the focus of his concepts from nature toward the residents and users of the envisioned spaces', giving them a chance to intervene in nature and modify their living environment. Moreover, nature systematically came to his aid in this conscious decision to place people at the concept's center and give them an active role in shaping and re-shaping their living environment (Preusler 1985, 44). Nature was then given an extra role as the platform for neighborhood life. This idea will be further emphasized as Schwagenscheidt starts formulating his *Growing City* (*Die wachsende Stadt*) concept. Again, by diverting the focus from the built to the unbuilt, Schwagenscheidt made another achievement: Giving the residents an intermediate space that could be changed upon, extracted from, or further completed. Furthermore, though the playing field should be clearly defined, the game's rules are left to the players. Schwagenscheidt wanted the spaces to have a clear and definite form that would be kept despite the possible additions or subtractions done by the residents´ intervention (Preusler 1985, 45).

He was unequivocal regarding both the physical borders of intervention and his professional borders as an architect. The residents' interventions are not supposed to make the city bigger; they are just supposed to make it more suitable to their requirements and changing needs: "Each family has its own little plot of land. On it, they can build what they wish. They extend or reduce their house as may prove necessary" (Schwagenscheidt 1957, 107). Since the people living in the city can participate in designing their neighbourhoods and quarters, he stressed that the architect is not the main focus when designing the space but rather the person who is supposed to live in it (Preusler 1985, 50).

The conceptualization of the idea of the *Growing City* took shape mostly during his years of practice in the USSR, and it originated from his observation of the working and living conditions of both those workers contracted with raising the new cities in Russia and those who were supposed to be populating them. For him, here lies the opportunity to help those parts of the population that belong to the "lower cultural levels" to have the possibility to live and change their environment into a "paradise city", which in turn, as he was convinced, "should contribute to the development of the people" as they take part in its realization gradually till it becomes its beautiful end form (Preusler 1985, 104). With this idea, Schwagenscheidt strived to develop an urban design approach to benefit the life of the "millions of helpless comrades yearning for air and son" (Preusler 1985, 107). The uniqueness of the concept lies not just in its high aspirations to build a living environment that allows its residents to modify it further as they wish. Just as attractive are the social, ecological, and economic qualities of the idea as it calls for the design of worker's barracks with a flexible layout that will be constantly changeable in their inner spaces as the building of the city progresses and the number of workers

changes. The barracks take form; the inner spaces are modified, becoming more communal, until they arrive at their final stage, where the barracks are transformed into individual apartments. Then, the focus is diverted back toward the outside areas between the buildings, and nature captures his role at the stage´s center again as the space that brings it all together and forms the city **(Fig. 2)**.

Schwagenscheidt's enthusiasm about the necessity of the direct connection between men and nature resulted in the idea that a city could temporarily even function without sewage canalization during its construction. For him, a one-story building has a natural connection with its garden and with the earth, and in a city based on such a concept, one can even spare the canalization since the human excrement can be directly used as compost for the earth. With this concept, Schwagenscheidt advocates for a city's planning without the necessary canalization infrastructure or high-rise dwellings, claiming that the urban landscape with low-rise buildings gives nature its ability to express itself fully (Schwagenscheidt 1949, 20).

Through the many drawings produced over the years to explain his urban ideas, Schwagenscheidt was determined to transfer an atmosphere rather than present a spatial organization. Seeking a way to capture the *genius loci* of his cities, he first created nature scenes and later moved on to present urbanity through staging daily sceneries of street life and neighborhood gatherings full of people of all ages and occupations, described in such detail that one can start understanding their character **(Fig. 3)**. Either way, it was always the ambition to capture the feeling of the possible inter-relationships that will occur in the spaces he creates, whether between men themselves or men and nature. To that extent, both Norberg-Schulz and Schwagenscheidt identified nature as a completion of the private sphere, claiming that the outside natural space is the extension of the house and the spatial tool to let us, as individuals, engage in society.

3. THE DIFFERENT NOTIONS OF HYBRIDITY

The current literature on *hybridity* as an architectural form or urban agenda can be roughly divided into four main themes: Functional, spatial, social and cultural, and processual hybridity. Though Schwagenscheidt´s *Raumstadt* concept offers some insights regarding the possible functional hybridity within his budlings, it is the potential processual hybridity that mostly resonates in his ideas. The informal character of space and the planner's intention to provide the future residents of his city the ability to adjust and readjust the built spaces to their demands reflects the necessity of the modern house to allow "the world of private, circumstantial life" to be visible (Norberg-Schulz 2000, 59). With the growing, adaptable city, Schwagenscheidt was also criticizing "[…] our cities [which] suffer from the fact that they are rigid as if they were built to last". Schwagenscheidt aimed to create a "natural city […] with all modern technical achievements". He claimed that "life continues to change [and]

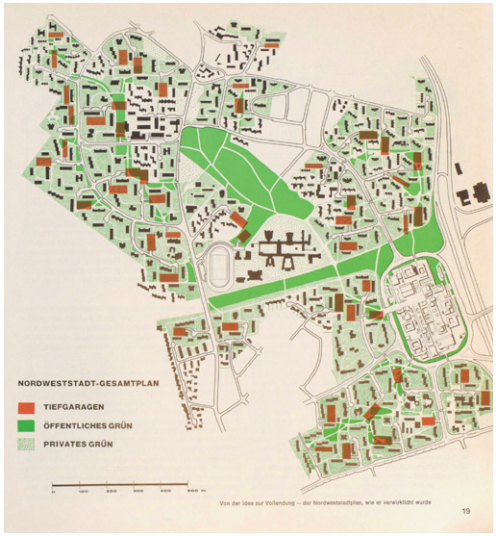


Figure 1. Plan of the Nordweststadt with the location of the underground parking lots (orange), the public (green) and private (dotted green) green spaces, 1968 © (Kampffmeyer 1968, 19)

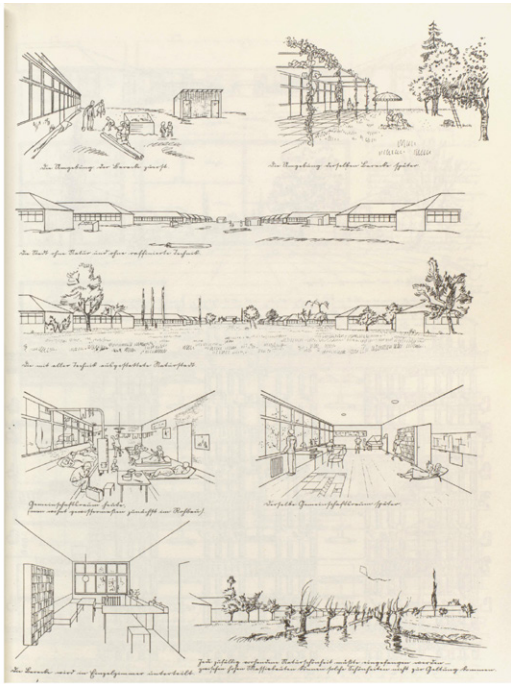


Figure 2. The Growing City, Realization stages, 1933 © (Schwagenscheidt 1949, 21)



Figure 3. Visions of neighborhood life in the Nordweststadt. Nature in the foreground, the buildings at the back, 1964 © (Schwagenscheidt 1964, 27, 51, 61)

that is why the cities no longer suit today's people. Hence [the solution is] the growing, lively, ever-developing city that easily adapts to new conditions!" (Schwagenscheidt 1949, 22).

The suggested interpretation of Schwagenscheidt´s *Raumstadt* concept as such of offering room for the processual hybridity to take place echoes Louis Kahn´s (1901-1974) urban ideas of "in-commonness" as an intention to create spaces that invite the people to experience and participate in their living city. For Kahn, connectivity is one of the planner's most significant assignments. The connectivity he refers to is not of "[…] going from place to place" but one which can create places, "areas which are treated as events in the plan and which give a feeling of connecting one thing to another, a feeling of belonging to everything in the city" (Kahn and Twombly 2003, 120f).

In 1969, Louis Kahn was a jury committee member responsible for selecting 13 international urban design projects to be presented at the UIA (International Union of Architects) World Congress of Architects in Buenos Aires. The Nordweststadt was the only German project selected to be discussed, and Tassilo Sittmann was able to present the project in Argentina. Four years later, on May 10th, 1973, the two Architects met again to stroll through the green parks of the Nordweststadt. While admiring the urban design concept of the quarter, Kahn criticized the "not adequate" realization of the dwelling building, implying that they do not suit the high quality of the urban planning concept (Gleiniger 1995, 151).

Norberg-Schulz concluded his book about the principles of modern architecture, claiming that modern life in the city is about having a "[…] sense of belonging and meaning […] and meaningful existence presupposes a meaningful place which is commonly shared" (Norberg-Schulz 2000, 113). Feeling loyal to the city and belonging in your living environment through nature was a repeated theme in the texts by Schwagenscheidt. The interaction with nature in the Nordweststadt nowadays is accomplished through both the overwhelming way in which one feels that one lives in a forest of trees and buildings and through the way that nature serves as a natural backbone for the layout of the pedestrian paths infrastructure, connecting not just the different public centers with each other but leading the way also between one dwelling cluster and then another. Examining the models made by Schwagenschedit and Sittmann for the competition, we can also understand the hierarchal differentiation of those spaces and how it strengthened the urban design concept. Unfortunately, this vital design approach was not realized as envisioned by its creators.

4. BETWEEN EARTH AND SKY: CONCLUSION

The paper aimed to show nature´s role in the urban concepts envisioned by Schwagenscheidt, which were modified and then implemented in the realization of Nordweststadt. The fact that his social and spatial intentions stayed mostly unrealized utopias might be because the realization of the project was done under the supervision of the architects but according to construction plans composed by the three public building companies commissioned by the city. What remains clear is that the "principle of "openness"", both socially and spatially, is "unmistakably embedded in Schwagenscheidt's design" (Gleiniger 1995, 152), and this openness allows us to interpret and envision nature in the Nordweststadt and other post-war modernist housing projects as a potential hybrid field for future adaptation.

The city's ability to adapt is another concept that Norberg-Schulz briefly touches, saying that to "reveal how things could be, means to add something they are "lacking". A lack, however, is not foreign to the thing, but rather something which belongs to its hidden nature […] It is what the situation lacks, which sets the historical process in motion, and makes ever

new interpretations necessary" (Norberg-Schulz 2000, 115). For Norberg-Schulz, architecture's role was to complete the "lacking" between earth and sky and to transfer sites into places. For Schwagenscheidt, in my opinion, it was the role of the men and women, children and elderly, who lived between the earth and sky, to turn their living spaces into places of participation and new cities awaiting ever-new interpretations. As Louis Kahn wrote, hybridity's spatial expression should include the aspirations of that which it cannot express. This aspiration must "resort to measurable means; it must resort to nature of nature, which deals with completely measurable things". According to that, hybridity is, therefore, "a beginning – it is not a continuation – of something that is there, but something which gives direction and almost immediate participation to all" (Kahn and Twombly 2003, 76f). Perhaps, by revealing some aspects of the design concept of Schwagenscheidt anew, we can finally give its *hybridity* notions a beginning and immediate direction of fulfilment. ■

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BIOGRAPHY

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FROM EDEN TO BABYLON. THE ROLE OF NATURE IN LIMA'S NEIGHBOURHOOD UNITS

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#12

ABSTRACT

Soon after the end of WWII, architects in Lima were vividly debating the urgency of planning the city's growth. The discussion was centered on the idea of Neighbourhood Unit which condensed and incarnated many different social, cultural, economic, architectural, and urban design ideals of that period. Responding to the need to provide mass housing and large-scale green areas in Lima, the concept *Unidad Vecinal* became the main design and planning instrument for the renovation and expansion of the city. This urban development provided a variety of housing typologies, traffic separation, open green areas, recreational and educational infrastructure, commercial spaces, and sports facilities. The essential principles of this concept were thought to organize the growth of the cities and had to provide good living conditions to all residents. In order to achieve that challenge, "nature" played different roles: in the first projects nature had a fundamental role of holding the architecture and give quality to the urban project, and later on, in the last projects, nature was placed within architecture to ensure good living conditions to the urban projects.

This paper will study two cases of Neighbourhood Units in Lima, the first built between 1945 and 1949 and the second around 1968 and 1975. In the first case, architecture was placed in the middle of agricultural lands and projecting a "natural Eden-like" context. In the second case, architecture was placed in the arid city's outskirts and deployed vegetation and green areas in some specific places —as Babylon Gardens did— to represent "nature" and enhance the urban spaces. In this sense, Unidad Vecinal 3 (1946) and PREVI Lima (1969), not only stand out for being the most ambitious, and coherent examples of each 'moment', but also, because they presented different roles of nature incarnated in the same urban design concept.

The 1940s and 1950s witnessed a surge in collective housing, becoming synonymous with urban planning. Large-scale housing projects were designed following the concept of the "neighborhood unit" and with several variations, encompassing modern designs and even self-help initiatives in Latin America. However, the following two decades (1960s and 1970s) saw a shift in the architectural discourse. The focus moved from housing projects as mere clusters of units within a master plan to the importance of the urban fabric and public spaces. This realization, initially seen in European cities, emphasized the role of public spaces in fostering a sense of community. It quickly gained traction worldwide, dominating international architectural discussions throughout those decades.

In this way, the dominant ideas in the ways of conceiving architecture and the city have been evolving over the decades, but they always return to the central theme of the discipline: the form of "inhabitation" in relation to the "nature", emphasizing the tension between *artifice and nature*, that is inescapable when designing new habitats. As pointed out by Norberg-Schulz —in relation to F.LL. Wright ideas[1]—, the "natural house" should allow people to be free and in close contact with nature, as a universal right. For Norberg-Schulz it was a paradox that the industrialized world had to create the desire for a 'natural' life[2], precisely, because its development made it evident that this social ideal has become a necessity for everyone and not only for a privileged group of people. The idea of modern architecture working towards that end of freedom and inner connection can be also found in the conception and development of the concept of Neighborhood Unit as a search for a 'natural environment' for an ideal life.

1. NATURAL HOUSE AND NATURAL ENVIRONMENT FOR MASS HOUSING

Continuing with the idea of the 'natural house', as Norberg-Schulz has pointed out, the search of modern architects (Mies van der Rohe or Le Corbusier) focused on finding spatial freedom and classical order from their first houses.[3] However, in those houses, modern architecture did not fully satisfy the idea of an actual "natural house" because they did not look like "houses".[4] That is, they did not offer to the families a recognizable image of a home. In this context, during the post-war decades, the image of modern housing became a recurring theme of debates, and, an object of criticism.

In the case of Peru, if we compare two paradigmatic Neighbourhood Units, —the official modern housing prototype— we can observe that while in the Unidad Vecinal 3 (UV3), the theme of the "natural house" with green areas suffers from the same problem as did the modern architecture (clearly influenced by the German Siedlungs from the Weimar Republic), whereas in the case of PREVI Lima, 25 years later, the challenge was resolved by designing single-family homes clusters, small-scale plazas and gardens, and different urban thresholds which were quickly appropriated by their residents by building additions, and giving them particular characteristics that made them easy recognizable as their homes.

Note: all translations of the text have been done by the author.

1. *"Wright interpretaba lo natural como una nueva clase de vida informal, en contacto con los materiales naturales, con artefactos sencillos, y escuetos, y, en la medida de lo posible, con un entorno natural."* Christian Norberg-Schulz, *Los principios de la arquitectura moderna* (Barcelona: Editorial Reverté, 2015), 98.

2. Norberg-Schulz, *Los principios de la arquitectura moderna*, 109.

3. In reference to their design of Ville Savoye or Tugendhat House in the decade of 1920.

4. Norberg-Schulz, *Los principios de la arquitectura moderna*, 119

In that line of efforts, Architect Fernando Belaunde reported in *El Arquitecto Peruano* journal —and claimed for— the need for new social housing, as well as public spaces and green areas in the city. Around 1945, he and his team started to work in the "Lima Housing Plan", which was published in June that same year as part of the new Government initiative.[5] The idea was to provide a new urban and social model that could tackle what the journal had previously identified as "the unavoidable duty of educating the popular masses and raising their current degrading standard of living".[6]

Addressing the housing deficit, government officials and architects at the National Housing Corporation (CNV) in coordination with the National Urban Planning Agency (ONPU) starting to work on projects for mass housing and large-scale green areas in Lima.[7] In this context, the Peruvian *Neighborhood Unit* became the main design and planning instrument for the renovation and expansion of the city. In doing this, housing projects provided a variety of housing typologies, traffic separation, open green areas, recreational and educational infrastructure, commercial spaces, and sports facilities, reinventing the concept of neighborhood unit in different social, cultural and economic contexts. In the first projects, such as UV3, "nature" —or the open landscape to be more specific— had a fundamental role in the design. Nature was the "host" and the "setting" that provided all attributes to the place and gave meaning to architecture. Nature produced through the landscape design the spatial qualities, whereas, in the last projects, such as PREVI-Lima, "nature" had a secondary role. Nature —or enclosed landscape, more specifically— was placed in-between buildings, representing nature, and deployed as an instrument of architecture and urban design to ensure good living conditions.

2. MASS HOUSING IN LIMA'S VALLEY: BUILDING UV3 AS A NEW EDEN

Lima Housing Plan lead by Fernando Belaunde in 1945 hybridized urbanization models such as British Garden City, German *Siedlung*, American Neighborhood Unit along with the pan-European *existenz-minimum* concept with the Peruvian traditional urbanization and socialization patterns such as *plazuelas*, pedestrian pathways and balconies animating the public spaces. The ideas for the Peruvian Neighborhood Unit were adopted, adapted and transformed into local conditions several times, being the UV3 its first materialization. As an urban and social ideal, this new model brought the community to the forefront to promote social development.

The ideal of a group of houses surrounded by large green areas, enjoying gardens in-between the buildings were present in the modern culture since the mid-1930s, promoted in the CIAM congress and the modern master's projects, which Le Corbusier summarized as "sun, air and greenery". The provision of greenery in parks and gardens was not only an element for entertainment, but also for 'medication' in the context of a polluted city center. As pronounced by Belaunde in a conference in 1945:

5. El Arquitecto Peruano, "El Plan de Vivienda del Gobierno Peruano" (Lima: El Arquitecto Peruano N.98, September 1945), n.p.

6. *"El ineludible deber de educar a las masas populares y elevar su degradante nivel de vida actual"*. Fernando Belaunde, "El barrio unidad. Instrumento de descentralización urbana," El Arquitecto Peruano no.83 (June 1944): n.p.

7. See, Sharif Kahatt, *Utopías Construidas. Las unidades vecinales de Lima* (Lima: Fondo Editorial PUCP, 2015): 99-115.

"The study of communities as a whole, where everyone has equal access to sunlight, fresh air, and parks, and where a harmonious balance is achieved between homes and the essential public services that support them, encompassing civic, educational, religious, commercial, and recreational aspects, is perhaps the most captivating topic of our time."[8]

A characteristic of urban "life" in this project is the fact that, in UV3 (as UV Callao, and others projects from those years), architects search for solutions to housing crises in "the nature", finding the place in the middle of the valley to achieve a new urban life, with green areas as the main support for a new society. The complex is placed in the middle of nature. The building-city-landscape reintegration was the result of the search for building and urban environment in the open landscape. As Lewis Mumford pointed out, Howard's idea of garden city, *"is not a suburb but the antithesis of a suburb: not a more rural retreat, but a more integrated foundation for an effective urban life"*.[9]

UV3 has more than 85% of open areas and its central green area characterizes the project as a "metropolitan park". The playgrounds, reflecting pool and other spaces placed in that area, reinforces that idea of offering a natural environment —a natural house—to the low-income families. The creation of a new large-scale community inhabiting housing blocks in a green and pastoral landscape in the middle of the Lima Valley as part of the modernization project is the most compelling idea for the first generation of modern architects.

UV3, as UV in Callao Port, were designed on agricultural land, which allowed them to take advantage of the existing conditions of the pre-Columbian water channels that irrigated the area (derived from the Rimac river), as much as the fertile soil of the plot to quickly grow trees, bushes and different species. The visual relation to the Rimac valley is key to understand the idea of "nature". The idea of the 'natural house' as mentioned by Norberg Shulz, was projected to offer the experience of being surrounded by the natural landscape achieving freedom, and enjoying fresh air and vegetation in the connection between interior and exterior spaces, not only in residential spaces (porches and balconies), but also in the community spaces located in the central area.

In the other hand, the concept of Neighborhood Unit has been permanently renovated, and has incarnated different urban forms, housing typologies, programs and activities, taking root in particular realities where it has gained strength among citizens. Therefore, the Neighborhood Unit must be understood as a conceptual "support" in housing and urbanization developments in which nature played different roles. Two decades after UV3 was built and many different housing projects were completed, PREVI Lima was planned as new solution for low-income families, with a different urban design strategy, in which, nature and landscape had a secondary role in the configuration of the neighborhood.

3. MASS HOUSING IN LIMA'S OUTSKIRTS: BUILDING PREVI LIMA AS A NEW BABYLON

PREVI Lima was envisioned as a way out of an overwhelmed reality of housing deficit and economic scarcity, following what Jose Luis Sert used to

8. *"El estudio de la comunidad como un todo, en la que se implante una efectiva igualdad en cuanto al beneficio del sol, del aire y de los parques, en la que se establezca el necesario equilibrio entre las casas y los servicios públicos que las complementan, en el orden cívico, educacional, religioso, comercial y recreativo, es quizá el más apasionante de los temas del momento."* Fernando Belaunde, "Reflexiones a los nuevos Arquitectos," El *Arquitecto Peruano*, no. 101 (December, 1945): n.p.

9. Lewis Mumford, "The Garden city idea and Modern Planning" in Ebenezer Howard, *Garden Cities of To-morrow* (Cambridge Mass: MIT Press, 1965), 35.







Figure 1. CNV, Fernando Belaunde Project coordinator, Unidad Vecinal, SAN Archive, 1949.

Figure 2. PREVI Office, Peter Land, Director, PRELI Lima, Lima, Perú, 1968-1975. SAN Archive, 1975.

Figure 3. PREVI Office, Peter Land, Director, PREVI Lima, Lima, Perú, 1968-1975. Author's photo, 2024.

claim to be "urban minded", meaning, finding solutions to urban problems within the city, instead of abandoning it.[10] More than two decades after the completion of the first Neighborhood Unit, the housing deficit in Lima had only worsened. Internal migrations to the capital city in search for new opportunities of social development became the common denominator for thousands of families. For that reason, squatter settlements (informal neighborhoods), became the most effective instrument of urbanization and the access key to housing options in the urban areas.

Since the early 1950s, an enormous population in Lima has been living in squatter settlements in the city outskirts known as "barriadas". These areas expanded as immigrants pushed their homes out into the desert in search for new empty areas. Between 1940 and 1972, Lima grew from nearly 660 000 to 3'420,000 inhabitants, by approximately 500%. Following the principles of the 'site-and-service' projects (included into the 1962 *Ley de barriadas*), new ideas emerged to construct urban encounters, using urban design elements to provoke urbanity. These strategies reveal the merger of two different responses that were manifested in cultural productions.

In this context, the strategy of low-cost, high-impact popular housing was resorted to "site-and-services" urbanizations, combined with "self-help construction" and complemented by "social organization". With this, CNV offices went from planning large works of housing towers, bars and blocks and commercial, educational, and recreational services for thousands of inhabitants, to "design" large plots for housing, and assigning spaces for

10. Jose Luis Sert, *Urban Design Conference*, Washington DC, 1953, JSL Archive, Special Collections Department, Harvard GSD.

"future services and community infrastructure", foreseeing in the organization the future collective construction of schools, markets, churches, parks, among other spaces for social development.

In PREVI Lima, the 'open-end' design approach was absorbed to integrate the popular knowledge from the existing (informal) city, as well as integrating traditional local spaces such as small squares, alamedas, and porches, in this high-density neighbourhood. The construction of a progressive single-family housing development, organized in small-scale clusters with lush gardens celebrating the collective spaces, was successfully achieved in PREVI Lima, and other similar projects such as Tupac Amaru and Los Proceres, was the response to the same idea of providing "small community" spaces animated with vegetation to foster social integration.

In this way, PREVI Lima achieved its goal of being an evolving neighborhood, recreating the natural scene throughout gardens, planters, and green spots in all small plazas was one of the great contributions. This network of instant urban oasis offering a "natural environment" is crucial in the character of the place. The inventiveness and biggest potential of the project was to *architecturalize* nature in these small spaces, bringing together the residents and turning the place into an inhabitable 'open-work'.

The participation of its residents to build progressively the collective urban form and its green spaces is crucial. It is in the juxtaposition of *artifice and nature*, that architecture played a key role of completing the urban space with natural areas ensuring quality of life. Most likely, this compenetrating relation established between architecture and the residents throughout the construction and self-help has produced and consolidate the idea of the "natural house" in its spaces, particularly through the freedom of every user to transform their houses.

4. CONCLUSION: THE ROLES OF NATURE IN ARCHITECTURE

The concept of a Neighborhood Unit can be defined as a set of residential buildings of different types, civic and commercial buildings organized around public spaces and articulated to generate an ideal citizen environment, that is, a development that provides basic activities and services such as commerce, education and entertainment within a pedestrian human scale place, which generates its own sense of urbanity. In the postwar period, experiments and constant reviews to achieve social development appropriate to material and economic limitations, the concept of Neighborhood Unity in Lima was consolidated as the social condenser of ideals that evolved throughout the time absorbing different goals, including the role of nature in the urban realm. As Iñaki Abalos has stated, the notion of *nature* is a cultural "construct" that "*undergoes changes and mutations in direct relation to the organization of the knowledge of different cultures*".[11] In this way, the neighborhood unit act as a framework to implement different ideals of modern urban life, which has allowed new models of urbanity be experimented.

During the mid-1940, UV3 was projected based on free-standing structures, surrounding a large open green space and surrounded by

11. Iñaki Ábalos, *Atlas pintoresco. Vol.1. El observatorio* (Barcelona: Editorial GG, 2004), 90.

thousands of trees (re)presenting an Eden-like environment for the low-income families in Lima. The former agricultural land was transformed into a colossal naturalized environment, that contributed to improve citizens' urban daily life. Later on, during the late-1960, PREVI Lima was conceived as a systematized network of flexible housing clusters and open spaces flourished by green areas throughout ensuring quality of life. In this arid part of the city, the main goal was to provide pathways, plazas and porches along with new green areas, planters and gardens, to provide shadow and fresh air to the places of social encounter.

All of these experiences have become part of the universal culture of architecture and urban projects in the international scene and offer to the present vivid testimonies of an array of ideas and ideals that were at stake in the design of single-family houses, collective housing and the urban spaces of the modern city. ■

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MODERN HOUSING PRODUCTION ON THE AXIS OF INDUSTRY: THE EXPANDING BOUNDARIES OF ISTANBUL

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ABSTRACT

Modern housing's quest for contact with nature can also be observed in a series of labour houses in Istanbul. Industrialisation, which began later than in European cities, led to a sudden increase in the population of Istanbul, and the resulting housing issue emerged. Migrants built their own houses in the absence of any initiative to produce planned neighbourhoods, leading to many slums, particularly around the industrial areas. The risk of urban sprawl caused by housing problems made intervention necessary. European experience was utilised to shelter low-income labour. Since the existing legal framework prevented the construction of low-cost planned neighbourhoods for labour, the government made the necessary adjustments: Türkiye Emlak Kredi Bank, which financed the construction, was established, and a law authorising the operation of housing cooperatives came into effect. These cooperatives built numerous labour houses near industrial areas during the 1950s, starting with row houses and transitioning to block apartments by the 1960s. The study examined five neighbourhoods associated with industrial areas that had the most contact with nature. These neighbourhoods were local adaptations of German siedlung, and the research of construction processes contributed to the city's housing production history. Relevant industrial plants, most of which began production in the 19th century, including a textile mill, a bus garage, and a dockyard, were demolished as part of new development projects. A brewery and another textile mill were more fortunate and are still in use with valuable adaptive reuse projects. The labour houses associated with these plants are still in existence though they have not been extensively studied architecturally. However, Istanbul's rapid urbanisation and ongoing transformations put their existence at risk. The study aims to clarify the background of labour housing production, to contribute to their representation, and, most significantly, to investigate their potential for the future.

1. INTRODUCTION

Turkey restructured and emphasised industrial production in the first quarter of the 20th century. As bureaucrats moved to Ankara, the new capital, the way was paved for the industry in Istanbul. Some 19th-century industrial buildings were reused with annexes, while new plants were also built. Post-war economic problems affected Turkey, although it did not participate in WWII. People having financial difficulties in rural Anatolia began to migrate to cities, and this internal migration provided the labour force needed for industrial growth. However, housing the growing population became an essential problem for Istanbul. Labour housing cooperatives played a role in addressing the housing shortage. In addition to rationalisation and standardisation, some of these products were in contact with nature and were able to respond to the demands of modern housing.

2. THE HOUSING PROBLEM AND BEYOND

With the rise of industry in Istanbul, immigrants began to dominate areas formerly inhabited by high-income groups for centuries. The economic problems following WWII and the relocation of high-income groups prevented the planned housing construction and led to the lack of maintenance of existing residential stock. As Istanbul's population surged, housing solutions fell short closer to the middle of the century. The city's new residents sought to address their housing needs independently, as there were no initiatives to deal with the housing problem.[1] This led to the emergence of slums especially in the vicinity of industrial complexes. Skidmore et al. identified severe hygiene problems in their studies about these slums, and they warned of the risk of health problems for future generations.[2] Recognizing the dual threats of urban sprawl and public health crises in Istanbul, efforts to tackle the housing problem began.

The first steps to address the housing issue in Turkey were taken immediately after WWII. However, following preliminary studies and unsuccessful experiments, housing production only began in the 1950s. First, the government established the Türkiye Emlak Kredi Bank in 1946, modelled on the French Crédit Foncier system.[3] By the early 1950s, the bank had built the first planned housing complex in Istanbul, Levent and Koşuyolu. These neighbourhoods, in the British garden-city typology, were built in phases.[4-5] Given the limited municipal involvement, the Bank built not only the housing units but also the infrastructure, roads, and streets. Consequently, house prices rose, making these areas geared more towards the upper middle class, despite the growing housing needs of low-income workers. Thus, the Bank's housing projects, designed with higher quality and luxury than necessary were criticised[6] by various circles. Nevertheless, the Bank's constructions provided valuable experience in planned housing production.

3. PRODUCTION OF LABOUR HOUSING COOPERATIVES

Law No.6188, enacted in 1953, allowed for housing cooperatives to build homes on land with a master plan provided by the municipality and financial support from the Bank. Construction surged, and the well-known architect Seyfi Arkan was commissioned to manage the master plan studies.[7] Arkan and

ACKNOWLEDGEMENT: Istanbul Technical University – Scientific Research Projects (BAP) coordination department supported and funded the PhD thesis that produced this study.

1. Yıldız Sey, "To House the New Citizens: Housing Policies and Mass Housing," in *Modern Turkish Architecture*, eds. Renata Holod and Ahmet Evin (Philadelphia: University of Pennsylvania Press, 1984), 166.

2. Louis Skidmore, Nathaniel Owings, and John Merrill, *Construction, Town Planning, and Housing in Turkey* (New York: Skidmore, Owings and Merrill, 1951), 64.

3. Esat Tekeli, "Yeni Emlak Kredi Bankası," *Ulus*, June 19, 1946, 2.

4. Johannes Hendrik van den Broek, *Habitation 3 U.I.A: Programme, Design and Production* (Amsterdam: Elsevier Publishing Company, 1964).

5. Hatice Ayataç, Nilüfer Baturayoğlu Yöney, and Ayçim Türer Başkaya, "The Planning of Housing Areas in Turkey, Prof. Kemal Ahmet Aru's Design Approach in Levent Phase IV," in *Kemal Ahmet Aru / Professor, Architect-Urban Planner 1912-2005*, eds. Nuran Zeren Gülersoy and Kerem Koramaz (Istanbul: ITU Foundation, 2016), 251.

6. Fehmi Yavuz, Ruşen Keleş and Cevat Geray, *Şehircilik: Sorunlar Uygulama ve Politika* (Ankara: Ankara Üniversitesi Basımevi, 1978), 620.

7. Şengül Öymen Gür and Murat Gür, "Cumhuriyet'in Mimarı Seyfi Arkan'I Son Müridi Anlatıyor," *Yapı* 238 (September 2001): 51.

municipal architects designed and prepared many master plans.[8] Labour housing cooperatives constructed two-storey single-family houses like the Bank. However, they preferred the more affordable row houses instead of detached units. Although production continued until the mid-1960s, a new legal arrangement established by the Condominium Law, enacted in 1965, provided the legal basis for multi-storey buildings,[9] leading cooperatives to shift towards apartment blocks.

When industrialisation began in Istanbul, the outskirts of the historical settlements were chosen for industrial activity in the 19th century. The first plants were established west of the Historical Peninsula, north of Pera, around the Golden Horn, and on the far shores of the Bosphorus. In the early 20th century, production persisted in these facilities under various corporate identities.[10] Similarly, the new plants were located on the city's periphery at the time. Following proper legal arrangements, labour housing cooperatives planned and constructed modern neighbourhoods near industrial areas. These neighbourhoods were designed within the framework of longer-term urban planning in mind and made significant contributions to the development of their environment. Infrastructure systems were extended to these environments, and public transportation services made them more accessible. Although the history of plants dates back to the 19th century, Istanbul's industrial areas became part of the city only in the 1950s when planned labour housing was implemented. Continued domestic migration from this date led to rapid urbanisation, and the industrial areas of the mid-century became urban centres over time.

3.1. LABOUR HOUSES AS A TRANSPOSED TYPOLOGY

The housing problems resulting from industrialisation were not unique to Istanbul. A similar case occurred in almost all European cities following the Industrial Revolution. However, the tenement typology developed to solve this problem often failed to provide enough air and sunlight,[11] and soon proved impractical. At the beginning of the 20th century, the issue of labour houses in healthy environments, which was on the agenda of industrial cities, was also a widespread discussion in architectural circles. It is essential to examine the emergence of the modern housing concept before discussing the housing problem. Frank Lloyd Wright designed a wide range of houses in the United States around the same time. These were detached single-family houses built in suburban or rural settlements.[12] The new models differed in design from all previous samples and revolutionised housing design. Norberg-Schulz analysed Frank Lloyd Wright's production as a new kind of informal living with natural materials, simple, straightforward artefacts, and, if possible, contact with a natural environment.[13] Wright's approach influenced the ongoing struggle to address housing problems, which intensified in Europe after WWI. The Neues Bauen movement, which emerged in Germany and was characterised by the standardisation and rationalisation principles[14] of Modern Architecture, set the standards for the period with its productions in Berlin and Frankfurt. Although these new siedlung typologies could not use natural materials like Wright, they never compromised on being simple, plain, and in contact with nature.

Akcan states that German siedlung ideals were adapted to produce planned neighbourhoods in Turkey.[15] Therefore, neighbourhoods built by labour housing

8. Seyfi Arkan, *Türk Himark Yapı Müessesesi Sahibi Seyfi Arkan ve Eserleri* (İstanbul, 1956).

9. Sibel Bozdoğan and Esra Akcan, *Turkey: Modern Architectures in History* (London: Reaktion Books, 2012), 161.

10. Yurdanur Dülgeroğlu-Yüksel, *Lost Informal Housing in Istanbul: Globalization at the Expense of Urban Culture* (London: Routledge, 2023), 10.

11. Esra Akcan, *Architecture in Translation: Germany, Turkey & the Modern House* (London: Duke University Press, 2012), 36.

12. Christian Norberg-Schulz, *Principles of Modern Architecture* (London: Andreas Papadakis Publisher, 2000), 49.

13. Vincent Scully, *The Shingle Style and The Stick Style* (New Haven: Yale University Press, 1971), 162.

14. Walter Gropius, *The New Architecture and the Bauhaus* (Massachusetts: The MIT Press, 1965), passim.

15. Esra Akcan, *Architecture in Translation: Germany, Turkey & the Modern House* (London: Duke University Press, 2012), 164.



Figure 1. National Economic Institute's poster and the backyard of Arpaemini labour houses © Mustafa Sayan & Esra Şahin, 2021.

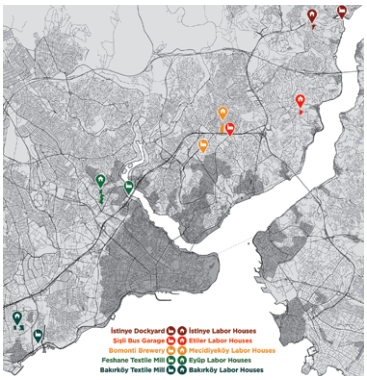


Figure 2. Location of selected labour houses and associated industrial areas in Istanbul © Salman & Ozturk, 2024.

cooperatives can be deemed local siedlung models. Due to climate conditions, certain changes in building design and construction were inevitable. In addition, due to the topography, it was impossible to see the straight lines of the vista and the perfect alignment of the German siedlung in Istanbul. Contact with nature was a sine qua non-criterion in discussions on the production of planned neighbourhoods in Turkey. The European experience could not be ignored in this process. In one of the early discourses, Vietti Violi stated that the labourers in newly industrialised Turkey used to be farmers, accustomed to living outdoors and now spent all day long inside factories. To facilitate their swift transition to urban life, it was crucial that they spend their recreation time in houses that were suitable for their old lives, with their gardens.[16] On the other hand, Oelsner declared that in the siedlung settlements, the largest room in the house was the garden, which was the element that enriched and gave meaning to the modest housing unit.[17] Expert opinions on contact in nature guided decision-makers in housing production. In 1951, the Istanbul Municipality included the following article in the regulations it prepared for the social housing groups: Residents are responsible for maintaining and nurturing the trees to be planted in front of houses and gardens. In case of destruction, they must plant a new tree in the same place. It can be assumed that labour housing cooperatives were also produced in accordance with these regulations and that architectural designers considered contact with nature. In the meantime, in 1942, the National Economic Institute promoted the idea modern urban residents connecting with nature with the slogan: "The citizen grows fruit and vegetables, both to decorate and to feed." Ihap Hulusi, a prominent illustrator of the period, designed a poster depicting this slogan with people gardening in front of housing units **(Fig. 1)**.

3.2. ISTANBUL'S LABOUR HOUSES IN CONTACT WITH NATURE

Labour housing cooperatives began construction after the necessary arrangements were made for planned neighbourhoods. Housing units required gardens to be in contact with nature. However, some neighbourhoods were built in the dense pattern of the old town, while others were built within industrial plants and could not touch nature. Within the scope of the study, the labour houses analysed were built where contact with nature is most evident **(Fig. 2)**.

In 1937, Sümerbank assumed the management of Istanbul's important textile mill, Feshane. Although the Feshane labourers' housing cooperative was

16. Paolo Vietti Violi, "Anketimize aldığımız ilk cevap," *Ulus* (November 2, 1935): 4.

17. Gustav Oelsner, "Modern İskan Semti ve Şehircilik," *Arkitekt*, 175-176 (1946): 168.

established in 1950, it could not produce until legal regulations were enacted. The cooperative was reactivated in 1954 and bought land. In the same year, the master plan for the land was designed by architect Güngör Kaftancı. Construction of 200 units of housing continued until the late 1950s.

TEKEL was the sole producer and distributor of all alcohol and tobacco products in Turkey. Istanbul's first brewery, Bomonti, built in 1902 in the north of Pera, was taken over by TEKEL 1934. The brewery labourers' housing cooperative was founded in 1952. Istanbul Municipality provided land for the cooperative, and Arkan's team prepared the master plan. The neighbourhood, comprising 123 housing units, commenced construction in 1955 and was completed in 1957.

Sisli Bus Garage was built in 1949 with a modern parking lot and repair shop. The housing cooperative of bus garage labourers was established in 1956. The cooperative purchased land and architect Ergun Evrenol completed the master plan for the neighbourhood in 1958. The construction of Etiler Labour Houses, with 100 units, was completed in the early 1960s.

Istinye, situated on the far shores of the Bosphorus, has a long history of repair yards since the mid-19th century. An extensive dockyard was established here in 1912. The dockyard became state property in 1928. The Istinye Dockyard labourers' housing cooperative was founded in 1952. Arkan's team designed a master plan for a plot of land belonging to the municipality. However, that project was never built. A newly approved master plan in 1965 initiated the construction process of the Istinye labour houses. The neighbourhood, completed in 1967, had 136 units.

All of the case housing groups were constructed as two-storey row houses. In Bakırköy, Mecidiyeköy, and Etiler, each unit was inhabited by a family, while in Eyüp and Istinye, the ground and first floors were occupied by different families. All cases were designed for labour, offering optimal comfort and minimal construction costs, resulting in a simple and straightforward architectural style. The contact of the housing units with nature was possible at different points. In all cases, the units were designed a few meters back from the street, with a small front garden in this area. The front gardens were modest green spaces that provided the transition of the units into the public sphere, buffering the street activity from the tranquillity of the house. Low clotures defined the boundaries with the street and the adjacent front garden. The actual contact with nature was only possible in the backyard. Backyards were quite large and were family-only spaces with no public access. Instead of front gardens where seasonal flowers were grown to adorn the house with the beauty of nature, the backyard served as both a recreation area for the family and a fruit and vegetable garden. The boundary elements of the backyard were not clotures or fences but landscape elements such as a tree and natural stones placed in the corners. When shared with a friendly neighbour, the backyards had no boundary. The backyards, adjacent to each other between two parallel streets, looked like urban-scale green areas in Bakırköy, Eyüp, and Mecidiyeköy labour houses. Since Etiler and Istinye labour houses were on sloping land, only a unit and its backyard could be terraced. The backyards provided an opportunity to wile away the time while maintaining contact with nature. The backyards allowed residents

to observe seasonal changes and plant growth, and it was claimed they provided basic nutrients like vegetables and eggs.[18] Areas where neighbours could spend time together were just as crucial as the gardens used by families. In Bakırköy and Mecidiyeköy, parks with playgrounds and recreational areas were planned within the neighbourhoods to provide contact with nature. The parks planned at the end of the housing rows allowed for contact with nature and isolated the units from the noise and pollution of the main street in Eyüp. The sloping land of Etiler and Istinye prevented the planning of an additional nature contact area.

4. CONCLUSION

In the 1980s, global economic tendencies were bolstered by national-level privatisation. Many state-owned industrial plants were sold or privatised, and production was halted. This led to the transformation of labour houses. In the 1990s, labourers from these retired plants moved to settlements near their new workplaces. These neighbourhoods were situated on the outskirts of Istanbul but were transformed into centres over time with the city's rapid urbanisation. After the abandonment of labour, higher-income people and small businesses preferred the neighbourhoods. The new users did not hesitate to intervene in the housing units according to their needs, and over time, the integrity of the neighbourhoods suffered. Furthermore, the areas where houses were in contact with nature also had their share. Front gardens were paved for parking lots, while backyards were used for the construction of new places to meet additional needs. However, these areas have the potential as urban green spaces in terms of resilience, sustainability, and wholefood and should be preserved.

The housing problem in industrial cities is a global phenomenon. In contrast to European cities, Istanbul encountered this at a later stage. The labour housing in Istanbul plays a significant role in modern architecture's history. It is essential for urban history due to its pioneering role in expanding boundaries and as the indirect place of 20th-century industrial production. In this context, documenting these structures is critical in developing proposals to sustain their existence. The cases within the scope of the study are relatively fortunate in terms of maintaining their authenticity and integrity. However, many similar 20th-century housing examples, essential for illustrating the industry-housing relationship, have been demolished or transformed due to neo-liberal policies. There is an urgent need for a new 20th-century narrative and conservation perspective, considering these housing cases' architectural and social heritage. ■

18. Seyfi Aşuroğlu, "Ucuz Evler Nasıl Yapılmalı," *Tan*, March 12, 1940, 5.

BIOGRAPHIES

Yıldız Salman. Born in Istanbul in 1968, Yildiz Salman serves as an assistant professor at Istanbul Technical University (ITU) and teaches the preservation of cultural heritage in undergraduate and graduate programmes. Trained as a preservation architect, her research and professional work are focused on urban conservation, and conservation of modern and industrial heritage. She has been in Torino Polytechnic, Italy, and Columbia University, USA as a visiting scholar during her PhD studies. Salman is the co-chair of Docomomo Turkey and a member of ICOMOS Turkey National Committee, ICOMOS International Scientific Committee on Twentieth Century Heritage and is involved in many NGOs as an activist.

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VILLAGES, HOUSES AND GARDENS. CATHOLICISM'S CONTRIBUTION TO SOCIAL HOUSING IN URUGUAY

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ABSTRACT.

Exploring the history of local social housing, works and events emerge from the period spanning the late 1960s to the mid-1970s. During that time, regulatory frameworks were established, and key, disciplinarily interesting, housing complexes were constructed. Participants in this process belonged to different generations, professions, and political backgrounds. Beyond an evident interest in housing, they did not seem to share other common motivations. However, many shared an often overlooked commonality: involvement in the local Catholic cadre.

The study of Catholic social space reveals a constant appreciation for rurality that stood in contrast to the city, coinciding with an architectural movement that questioned the values of large urban centres. Catholics envisioned a utopia that sought the re-enchantment of the modern world through the restoration of family life and community, the recovery of roots and stable relationships with the land, creative work, and artisanal techniques. The strategy involved two operations: civilising the countryside and ruralising the city, building houses in villages and garden suburbs.

Based on these premises, this paper examines and interprets the first housing complexes built under the cooperative system in the suburbs of Montevideo. It contends that their location, features, forms of association, and compositional resources stemmed from the ideas and initiatives of Catholic agents, who were key in recovering values and countering the effects of secularisation. The research relies on primary sources and evidence arising from an ongoing doctoral thesis at the doctoral program at the Facultad de Arquitectura, Planeamiento y Diseño de la Universidad Nacional de Rosario.

Between 1969 and 1970, Montevideo saw the construction of the first housing complexes under the cooperative system, under the responsibility of the Centro Cooperativista Uruguayo (CCU) for technical assistance.[1] COVIMT 1, 2, and 3 were located in the city's northern outskirts. These efforts extended the early experience in rural towns towards the interior of the country, where self-management, common ownership, mutual aid, tested building types, appropriate technologies for unskilled labour, and assorted forms of unit association had been experimented with.

For the design of the Montevideo complexes, Mario Spallanzani adopted two compositional structures used in inner cities. Ruling out the block logic that organised the COSVAM cooperative built in Salto, he adopted the centralised organisation, reminiscent of that used in the Isla Mala cooperative in Florida, and the meandering line, defining the Éxodo de Artigas complex in Fray Bentos.[2]

The houses displayed exposed brick walls with staggered joint masonry, and sloping roofs with brick tiles, fibre cement sheets, and supported by concrete beams. Spallanzani designed two types of units. The single-level typology is quite similar to that used in the complexes in Salto and Fray Bentos. Additionally, for these complexes, he designed two-storey units. By incorporating duplex houses, he managed to reduce the frontage dimension to just five linear metres. This approach maximised space for gardens in the front area of the houses and communal garden areas.

1. COMPOSITIONAL ELEMENTS OF THE COVIMT 1, 2, 3

COVIMT 1 Cooperative was the first mutual aid and user-regime project to be built in Montevideo. Architect Miguel Cecilio led the group of participants, collaborating with social worker Daisy Solari and Spallanzani on the design. The development includes twenty two-bedroom houses and ten three-bedroom houses, all of which are duplexes, with one exception. They were arranged in two rows of fifteen units each, facing each other, with gardens at the front and vegetable gardens in the back. To avoid symmetry, Spallanzani employed two operations. He staggered the rows along the longitudinal axis slightly, taking a dimension approximately equal to half the width of a dwelling. This resulted in a slight delay in the western row marking the entry to the complex, accentuated by the short distance between the first two houses located on the street **(Fig. 1)**.

Towards the south, he successively withdrew the units, then repositioned them from the midpoint of the site. The setback of the houses exposed the blind party walls, accentuating the texture of the exposed brickwork. Additionally, it avoided monotonous front facades by creating visual excitement through volumetric variations offered by the typology in the elevations.

Those corresponding to the houses located in the centre of the composition are almost half the size of those at the ends. The sacrifice of individual lots was compensated by expanding the communal garden area. By significantly widening the interior area, a private communal space for the residents was created, enclosed by the site's boundaries.

1. Marta Risso and Yolanda Boronat, *La vivienda de interés social en Uruguay: 1970 – 1983*, (Montevideo: Fundación de Cultura Universitaria, 1992); AAVV, *Cooperativas de vivienda en Uruguay. Medio siglo de experiencias* (Montevideo: Facultad de Arquitectura, 2015).

2. Mary Méndez, "Catolicismo y ruralidad en los sesenta. La civilización del campo y el inicio del cooperativismo de vivienda," in *Casas Comunes. Arquitectura para la vivienda social en Uruguay*, ed. Mary Méndez, Santiago Medero, Martin Cajade and Pablo Canén (Montevideo: Fadu, Udelar, 2024), 318-330.

The undeveloped area of this complex is very large, encompassing 83% of the property. A collective unbuilt area, making up 38% of the total land, is designated for gardens and pedestrian paths. Private unbuilt spaces, including front gardens and rear orchards, account for 34%, while vehicle paths occupy the remaining 11%.

In designing the COVIMT 2 cooperative complex, architect Cecilio collaborated once again with Spallanzani. The development consists of 43 duplex units: 24 of which have two bedrooms, fifteen have three, and four others have four bedrooms. The land is rectangular, covering slightly more than 1.5 hectares. The houses were arranged in three rows and placed along a winding road. Some of the resources already tested in the previous complexes were used there, such as the staggered longitudinal rows to mark the access, setbacks, and also the display of blind party walls. However, a greater regularity is observed in the composition of the facades, achieved by using groups of two, three, four, or five units as the basic compositional unit.

In the overall organisation of the layout, a decision was made that inverted the compositional logic of COVIMT 1. Here, the complex opens towards the ends, narrowing towards the centre of the site, creating a strong sense of very efficient introversion. This effect is enhanced by the turn established by the street and partially hiding the complex. A square that results from separating the two eastern rows provides continuity to the collective use space. In this design, the unbuilt area is also very substantial, occupying 81% of the property. It is distributed into a collective-use unbuilt area that occupies 42% of the total land designated for tree-lined plazas. The private unbuilt area hosts front gardens and rear orchards, occupying 39% of the total, with the remaining 11% taken up by a vehicle path **(Fig.2)**.

The COVIMT 3 cooperative, made up of Aurora textile factory workers, began meeting in 1968. The 44 duplex houses were arranged in four rows facing each other, overlooking a longitudinal park crossed by pedestrian paths. In the initial design, the complex opened towards the busier east street, while the quieter west side had no buildings. The funnel-like shape allowed for a plaza facing the main street and drew people towards the back, creating a gradient of intimacy.

The finally constructed project has some significant variations from the initial proposal. The most notable change was the disappearance of the funnel shape, replaced by a symmetrically-based organisation. Although altered by the setbacks of the house groups in the rows, the effect is one of greater overall regularity. The image of houses aligned along a traditional street is accentuated by the interior vehicular path, which was built instead of the originally planned garden. The vehicular street reduced the area designated for squares and collective gardens, resulting in an increase in impermeable surfaces and a lack of trees.

However, a substantial total unbuilt area was maintained, at 80% of the property. The unbuilt area for collective use occupies only 26% of the total land, increasing the private unbuilt area with front gardens and rear orchards, which occupy 46% of the total. The vehicular path takes up the remaining 8% **(Fig.3)**.

2. PERSISTENCE AND UPDATING OF THE TRADITION OF THE GARDEN SUBURB

According to Spallanzani, the two-storey houses he designed for these complexes were inspired by those built in the new satellite cities of the Greater London Plan. In an interview conducted in 2015, the architect indicated that his work at the CCU had been influenced by the architecture being built there. He pointed out that the typologies of the Montevideo complexes were particularly related to those used in the city of Harlow.[3]

The master plan design of Harlow was projected for 60,000 inhabitants and was led by urban planner Frederick Gibberd. It was the first to be approved in 1947. Located in the northern periphery of London, it followed the design guidelines of Raymond Unwin's garden suburbs. The proposal relied on the installation of industrial areas, the separation between vehicular and pedestrian traffic, and the construction of a civic centre. The houses were grouped into neighbourhoods where families could establish community relationships. Thirteen neighbourhoods were considered for a population between 3,500 and 6,000 people each. Each neighbourhood, unique in its physical organisation, formed a community with a primary school, shops, and buildings for common use. The operation included the incorporation of parks, greenery, and trees alongside areas of agricultural land.

For the housing, Gibberd defined a two-storey typology, with gardens at the front and orchards at the back, avoiding separative elements defining the plots. He chose dark brick walls and pitched roofs covered with tiles. Most were arranged in regular rows, some stood alone, and provisions were made for grouping in towers. Gibberd pointed out the advantages of duplex houses arranged in rows, as they were more economical, but above all, because they allowed for the creation of urban environments, he considered beautiful.[4]

The villages of the Greenbelt were known to Uruguayan architects through Gibberd's books and the English magazine *Architectural Review*, and they were highly regarded. The composition of the complexes designed by Spallanzani expresses a clear relationship with these urban designs. As with the London New Towns, the first suburban cooperative complexes in Montevideo updated the tradition of the garden suburb in the local context. In the 1960s, lessons learned in the first half of the 20th century were recovered, and the main references were reviewed, including Werner Heggeman, Camillo Sitte, Lewis Mumford, Raymond Unwin, Patrick Abercrombie, and Thomas Sharp.

However, it is important to note that the complexes designed by the CCU had other motivations. While the network of satellite neighbourhoods in London aimed to control the growth and sprawl of the urban area, eliminating the proliferation of uncharacterised peripheries, Montevideo's complexes chose to settle on the urban edges, establishing a population in peripheral areas and fostering a suburban culture.

Due to their small size and lack of inclusion in a comprehensive urbanisation operation, each cooperative housing complex constitutes a fragment, disconnected from its surroundings. They consist of individual, isolated solutions marked by strong introversion. Each one presents the image of a small, closed, and

3. William Rey, Laura Alemán, and Mary Méndez, *Entrevistas. Edición especial* (Montevideo: FADU, Udelar, 2018), 115.

4. Frederick Gibberd, *Diseño de núcleos urbanos. Escenología y plástica* (Buenos Aires: Editorial Contemporánea, 1956), 221.

disciplined village community, comprised of families, which starkly contrasts with the bland areas where they are located. They articulate a positive moral appraisal of rural values, communal gardens, home, family, and community.

3. CATHOLIC MATRIX EVIDENCE

The suburbs were seen as a potential blend of rural charm and urban sophistication. Cooperative complexes aimed to bring a rural touch to urban spaces, limiting crowding, eschewing high density, and regulating upward growth. Discussions on city life values from a disciplinary standpoint aligned with principles rooted in the Catholic faith.

The research and work with the primary sources on which this paper is based enable us to affirm that it was the actions carried out within the Catholic social space and the ideas upheld by Catholics that made it possible to materialise these works. Below, evidence of this is presented, using a genealogical strategy that explores the formative years, beginning with an initial observation.

3.1. EVIDENCE ONE.

The chapter that established the legal framework for housing production under the cooperative system of the 1968 Housing Law was drafted by architects Juan Pablo Terra and Cecilio, incorporating the experiences of Irureta, Spallanzani, and Solari. Architect Horacio Terra Arocena was then president of the Instituto Nacional de Viviendas Económicas. Almost all of them were part of the local Catholic cadre. The two Terras, a father-and-son duo active in politics, represented political parties linked to the Church in the Uruguayan parliament. Juan Pablo advocated for the creation of two institutions inspired by the ideas of Louis-Joseph Lebret. Irureta and Solari had longstanding leadership roles in lay youth organisations. The CCU was created by Bishop Luis Baccino, along with a group of Catholic militants trained in cooperativism at the Catholic University of Leuven. Irureta and Solari were two of the technicians who created the division responsible for housing in that institute.

3.2. EVIDENCE TWO.

Beginning in the 1940s, a distinctive philosophy regarding housing started to take shape within the Catholic social context. Between 1935 and 1957, the *Tribuna Católica* magazine was the authorised interpreter and disseminator of Catholicism in Uruguay. Terra Arocena was its director between 1941 and 1944, and again from 1949 to 1957. A review of its pages confirms the persistence of the spiritualism of Henri Bergson, the notion of the Common Good, and the promotion of collective forms of property derived from Integral Humanism by Jacques Maritain, the need for the development of people's spiritual values, and the community civilisation promoted by Emmanuel Mounier. The magazine disseminated Lebret's ideas through institutions created under the imprint of Human Economy.

3.3. EVIDENCE THREE.

Among lay militants and local catholic hierarchies, there was a persistent admiration of rural life and a strong aversion to urban life. The tension between

the countryside and city and the interest placed in rural matters emerge from *Tribuna Católica* and the book *Detrás de la ciudad. Ensayo de síntesis de los olvidados problemas campesinos*.[5] Throughout the book, elements are presented that articulate the proposal to modify the situation: the creation of villages composed of farming families trained in agricultural schools, living in hygienic shacks. The promotion of productive villages not only aimed to alleviate rural poverty but also to encourage the urban population to return to the countryside, which would result in the integration of agrarian spirit into national life.[6]

3.4. EVIDENCE FOUR.

The Law of Populated Centres, an initiative of Terra Arocena, was the first legal instrument to bring these proposals to life. The National Foundation Friends of the Rural Child united Catholic agents and urban planning technicians from the Institute of Urbanism of the Faculty of Architecture with the mission of creating orchard villages, incorporating cooperative production. They believed that they would transform the inhabitants of shantytowns into happy farmers, exerting a civilising influence on the country, and humanising rural territories through a new exemplary lifestyle.

3.5. EVIDENCE FIVE.

In the orchard village of Polanco del Yí, the construction of houses through mutual aid was experimented with for the first time in Uruguay. It was believed that it would not only foster communal living but also build the necessary collective spirit. The village represented the initial application of architect Carlos Gómez Gavazzo's ideas in creating a territorial settlement model, which culminated in his theory of Rural Planning in Uruguay.[7] The collaboration with Catholic agents also influenced Mauricio Cravotto in defining his theory of the "Happy Village" and in recognising the need for a "village doctrine" to initiate a new housing policy.[8] Mutual aid was applied for economic reasons, but the positive acknowledgement of collective construction was accompanied by other motivations. The joint effort not only aimed to produce architectural works but also to build community, foster group development, involve people in the finished product and collaborate in subsequent actions. Thus, by building the house, they shaped individuals, the family, and the community.

3.6. EVIDENCE SIX.

They used local materials and artisanal construction techniques conducive to mutual aid. They associated the concept of useful and joyful work with this particular form of collective production, contrasting it with alienated labour. With this, they picked up on a tradition that dated back to the thinking of John Ruskin and William Morris, critics of factory production and industrialisation.

3.7. EVIDENCE SEVEN.

The location of housing complexes on the urban peripheries implied a continuity with rural life, valued in the encyclicals and pastoral letters of John XXIII and Paul VI.[9]

5. Juan Vicente Chiarino and Miguel Saralegui, *Detrás de la ciudad. Ensayo de síntesis de los olvidados problemas campesinos* (Montevideo: impresora uruguaya, 1944).

6. Mary Méndez, "Atlas rural. La trama católica detrás de la ciudad," *Vitruvia* 7 (2020): 61-83.

7. Lucio de Souza, *Imaginarios rurales. El modelo de afincamiento en la Planificación rural del Uruguay de Carlos Gómez Gavazzo* (Montevideo: Biblioteca Plural, 2019).

8. Mary Méndez, "Aldea Feliz," in *La Aldea Feliz. Episodios de la Modernización en Uruguay* (Montevideo: MC, MREE, FADU, May 2014).

9. Michael Löwy, *Guerra de dioses. Religión y política en América Latina* (México D.F., Siglo XXI, 1999).

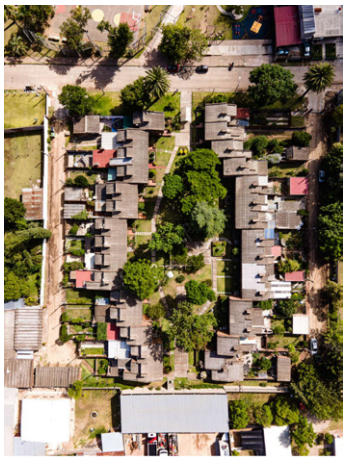






Figure 1. Mario Spallanzani, housing complex of the COVIMT 1 Cooperative, Montevideo, Uruguay, aerial view taken from a drone. © Fernando García Amén, 2023.

Figure 2. Mario Spallanzani, housing complex of the COVIMT 2 Cooperative, Montevideo, Uruguay, aerial view taken from a drone. © Fernando García Amén, 2023.

Figure 3. Mario Spallanzani, housing complex of the COVIMT 3 Cooperative, Montevideo, Uruguay, aerial view taken from a drone. © Fernando García Amén, 2023.

3.8. EVIDENCE EIGHT.

The significance of the nostalgia for Paradise in Eden within the matrix of Catholicism and the possibility of its recovery through architecture.

4. CONCLUSIONS

Catholic agents played a crucial role in promoting and carrying out low-income housing projects in Uruguay. Their influence extended from the creation of institutions to the promotion of laws and the shaping of public opinion. Following Michael Löwy in his studies on Catholics in Latin America, it is possible to consider that, starting from the diagnosis of modernity as rupture, Catholics committed to a common utopia: restoring family life and community, reclaiming roots and stable relationships with the land and nature, fostering creative work, craftsmanship, and joyful labour. They promoted housing cooperatives as privileged instruments to recover values and resist the disillusionment of secularisation of the modern world.

The homes built through mutual aid demonstrate the success of their intentions. The system of collective tenure, a system contrary to private property, aligns with the Thomistic Common Good. The first cooperative housing complexes took the form of houses, formally defined yet clustered together, a physical correlate of family life in neighbourhood relationships. Their modest size fostered close-knit relationships among neighbours. The location in peripheral areas, and the presence of orchards and gardens, derive from a moral interpretation of natural environments. Life could be purified and cleansed by caring for flowers, cultivating orchards, and creating communal gardens to provide a framework for enriching community experiences. ■

BIOGRAPHY

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DEVICES FOR THE PERCEPTION OF NATURE. RICHARD NEUTRA'S SUBURBAN SINGLE-FAMILY HOUSES

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#12

ABSTRACT

The issue that Richard Neutra was most concerned with was the relationship between humans, nature, and architecture. Since humans have evolved in nature, he believed that their physical and mental health depends on contact with nature. Consequently, he focused on the question of how external nature (the environment) affects the biological nature of man, and what this means for the design of the human habitat.

This paper explores how Neutra understood the relationship of architecture, humans, and nature. It looks at the features of nature that, in his view, characterize good suburban building sites. It analyzes how he planned suburban homes and their surroundings to provide residents with closeness to nature, spaciousness, and privacy. And it asks how the relationship of the building to nature changed when he began designing courtyard houses on smaller lots. To this end, it uses mainly primary sources and often refers to the case studies of the Kaufmann Desert House (1946–47) and the VDL Research House (1932–33, 1939–40, 1963–65).

The results indicate that for Neutra, nature is not something untouchable, but something that can be improved, staged, and even simulated without losing its positive effects. In suburban environments, he felt that such manipulations of nature were necessary to do justice to human nature. Yet he did not believe that it is possible to breathe life into architecture so that it becomes nature itself. It remains an artifact that must subordinate to nature by becoming a device for the perception of nature.

1. INTRODUCTION

The issue that interested Richard Neutra most throughout his life was how humans, nature, and architecture interact. Accordingly, he read numerous books on subjects related to the nature of the environment and the nature of man. Concerning the environment, he was particularly interested in evolution, ecology, zoology, and ethology; regarding the nature of man, he was most curious about philosophy, anthropology, ethnology, medicine, visual perception, and nearly all branches of psychology. His writings reflect his readings.[1] In practice, his thinking about nature had an impact on the urban layout, the evaluation of the site, the orientation and placement of the building, the landscaping, the façade treatment, the selection of materials and colors, and the climate control.

Although, as with nearly all architects, Neutra's theories are not as important as his built work, it is inevitable to study them carefully to understand his work in depth. Existing research has struggled with this task. Some have not given much space to his theories, concentrating mainly on stylistic and biographical issues.[2] Others have stayed so close to his texts that they have added little to what he has already said.[3] Still others have shown that his techniques for relating to nature are more deeply embedded in contemporary debate and practice than is evident from his writings, but have not done full justice to the specific character of his approach.[4]

2. UNDERSTANDING NATURE

Neutra understands nature not as something opposed to humans, but as something to which humans, as living beings, belong. Since humans evolved in nature, he believes that they are only adapted to the types of sensory stimuli that nature provides. When humans are exposed to stimuli to which they are not adapted because they are new or beyond their perceptual capacity, their physical and mental health is threatened. Such stimuli originate primarily from man-made, chaotic environments such as unplanned, noisy urban places. Colored neon lights, overhead power and telephone lines, and the arrhythmic flow of road traffic are examples.[5] All human interventions in the environment—from roads to cities to single-family houses—must therefore be designed to meet human biological needs. Identifying these needs and developing appropriate designs is a practical problem that is accessible to rational thought and has to be addressed with the help of all the sciences. Designs that fulfill this requirement are what Neutra calls biorealistic.[6] When it comes to architecture, their most important characteristic is their openness to the outdoors—to nature.

In keeping with his belief that architecture should be open to the outdoors, Frank Lloyd Wright's interweaving of interior and exterior spaces and his practice of engaging with the peculiarities of the landscape and the place always met with Neutra's full approval ever since he first studied the Wasmuth portfolio long before immigrating to the United States in 1923.[7] By contrast, he considered perfectly regular buildings inappropriate because of their inability to respond to the heterogeneous conditions of

1. Most importantly Richard Neutra, *Survival Through Design* (New York: Oxford University Press, 1954).

2. E.g. Thomas S. Hines, *Richard Neutra and the Search for Modern Architecture: A Biography and History* (New York: Oxford University Press, 1982).

3. E.g. Barbara Lamprecht, *Richard Neutra: Complete Works* (Köln: Taschen, 2000).

4. E.g. Sandy Isenstadt, *The Modern American House: Spaciousness and Middle-Class Identity* (Cambridge: Cambridge University Press, 2006).

5. Neutra, *Survival Through Design*, 194.

6. Neutra used this term for the first time in Richard Neutra, "An Architect Worries About Organic Unity," 1953, Richard and Dion Neutra Papers (collection no. 1179). Los Angeles: Charles E. Young Research Library, University of California (hereafter cited as UCLA), box 161, f. 9.

the environment—the view, the wind, the sun. For example, he criticized Ludwig Mies van der Rohe for designing the façades of projects such as the Lake Shore Drive Apartments to be identical on all sides, placing formal purity and regularity above nature.[8]

Frank Lloyd Wright's request to design buildings that grow and take root made no sense to Neutra. In his view, this idea inevitably leads to a objectionable imitation of external nature. Instead, architecture should openly acknowledge that it is an artifact assembled by human hands.[9] To Wright, Neutra's argument was irrelevant because his Neo-Platonic view was that if he succeeded in designing a building according to the basic principles of nature, it became a manifestation of nature.[10] Neutra was also critical of the equally idealistic concept of Le Corbusier's Modulor. In his view, the Modulor mistakes a purely human and obsolete invention, the golden section, for a principle of nature.[11]

Yet Neutra did not want his buildings to appear as artificial as possible. He always considered the use of natural materials, such as wood or natural stone, permissible, and, beginning in the 1940s, highly recommended.[12] Similarly, although Neutra rejected the imitation of nature itself, in many cases he welcomed the simulation of nature's effects and the enhancement of nature. For example, he wanted to introduce dynamic artificial lighting that emulated the constantly changing color and brightness of daylight by means of dimmers.[13]

3. SELECTING THE SITE

In Neutra's eyes, large lots in the midst of a pristine landscape offered the best conditions for designing a house with a good relationship to nature. However, he felt that the suburbs, where most of his houses are located, often provided satisfactory conditions as well.

Of the qualities that characterize a good site, a good view, i.e. a view of an element of nature, was most important to him. Preferably this element was as far away as mountains, dunes, or lakes, because he believed that the eyes only relax when they accommodate to the distance.[14] Nevertheless, he also appreciated views of closer elements of nature, such as trees or gardens.

Neutra then argued for land with naturally formed relief, including hollows and streams. Consequently, he rejected the practice of "land developers and subdividers [...] who [...] wade through the bush and over the hills, cut the trees, excavate the good earth, bulldoze and bully the landscape, victimize it to the rectangularity of a gridiron [...] to get so and so many fifty-foot lots on the market."[15] In projects on large, ungraded lots such as the Tremaine House (1946–48), Neutra almost always succeeded in preserving much of the relief and carefully fitting the house into it, roughly following the movements of the relief. Accordingly, he criticized Le Corbusier's buildings on pilotis for ignoring the natural slope of the terrain.[16]

In addition, Neutra preferred sites with preserved vegetation, especially trees. At the Eurich House (1939), he used the huge old oak trees he had found on the property to frame and shade the building.

7. Dione Niedermann (Neutra's future wife) to Lilly (Antoinette) Niedermann (her mother), 01 May 1922, Richard J. Neutra Collection. Pomona: College of Environmental Design (ENV), Cal Poly Pomona (hereafter cited as Pomona); Neutra, Richard, to Eugen Rentsch, 15 October 1951, Frank Lloyd Wright Correspondence, 1900–1959. Los Angeles: The Getty Research Institute.

8. Richard Neutra, "Bauen, eine höchst menschliche Angelegenheit," 23 October 1956, lecture, audio recording, ETH Zürich.

9. Neutra, "An Architect Worries," 8.

10. Frank L. Wright, *An Autobiography* (New York: Duell, Sloan and Pearce, 1943), 305–16.

11. Richard Neutra, "Architektur als angewandte Physiologie," *Baukunst und Werkform* 8, no. 1 (1955): 9–21.

12. Richard Neutra, "Perpetual Comeback – Wood in Building," 1945, UCLA, box 91, f. 12.

13. Neutra. *Survival Through Design*, 183–87.

14. Richard Neutra, "Oeuvres récentes – propos sur l'avenir de l'Architecture," *Architecture de lumière*, no. 13 (1965): 2–19, 11.

15. Richard Neutra, *On Building: Mystery and Realities of the Site* (Scarsdale: Morgan & Morgan, 1951), 12.

16. Richard Neutra, "Man the Measure," 1970, Pomona, 211–12.

In his writings, Neutra also recommended considering several non-visual parameters such as climate, wind, sunlight, sounds, and odors when choosing a lot. In practice, however, apart from intrusive noise, these rarely played an important role, as it was more than difficult enough to find an affordable building site with a good view, a naturally formed relief and an old stock of trees.

Neutra was rarely able to influence the selection of the site, as his clients typically had just purchased or were in the process of purchasing a lot when they contacted him. Whenever possible, he visited the lots in person. As a rule, he had many photographs taken, for his memory and for his staff, who usually did not inspect the more remote properties. He also had contour maps drawn, with curves spaced one foot apart, showing prominent rock outcroppings and important plants, especially trees, with size and species.[17]

4. ORCHESTRATING SPACE

To connect the inhabitants with nature, Neutra opened up the building by removing walls and blurred the boundary between indoors and outdoors by extending architectural elements into the garden and integrating elements of nature into the interior. In this way, he interlocked the two areas and created a zone that mediated between the architectural artifact and the conceptually untouched nature.

The Kaufmann Desert House (1947), for example, is surrounded by a zone in which architectural elements that extend beyond the house, such as floors, walls, and roof overhangs, intermingle with elements of geometric ground design, such as the plateau around the swimming pool, and with geometric plantings, such as the lawn. This zone flows seamlessly into an outer, more natural area characterized by a lawn with scattered boulders, often combined with perennials or desert plants **(Fig. 1)**.

For spectators from within, Neutra orchestrated the view in a manner akin to landscape painting and stage design by combining the best distant views with scenically staggered horticultural and architectural screens. Thus, he created a "little visual empire"[18] that provoked a "feeling of spaciousness."[19] In most cases, the observers' backs were protected by a closed wall. This made them feel safer, Neutra believed, because it freed them from having to monitor the rear space for possible attackers with their generally forward-facing eyes.[20] In suburban areas, the screens and the closed back walls were given the second task of visually blocking out unnatural disturbances such as neighboring buildings and streets outside the property lines **(Fig. 2)**.

The prospects offered to passersby were not equally important to Neutra. Rather, he was primarily concerned with blocking certain views of them in order to ensure the privacy of the house. To this end, he again used the screens, giving them a third function. As a result, the streetscape is rather accidental and not always attractive.

5. NATURE IN DENSE ENVIONMENTS

As early as the 1920s, Neutra was averse to both living in the city's sea of tenements and in the countryside. Rather, he preferred to live in a single-family-

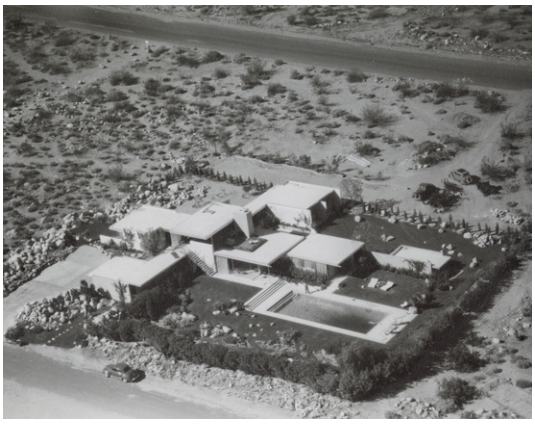
17. Neutra Office, "Contour & Survey Map Suggestions," 1952, UCLA, box 103, f. 3.

18. Neutra, *Mystery and Realities*, 62. Cf. p. 54.

19. Many residents used the term "spaciousness" to describe their homes. See, e.g.: Hinds, Jay, to Richard Neutra, 12 March 1952, UCLA, box 61, f. 3. Cf. Isenstadt. *The Modern American House*.

20. Neutra, *Survival Through Design*, 220.





house in a green suburb with fresh air and a forest or lake nearby, while staying close to the city center to advance his career and visit places like libraries, museums, concert halls, and theaters. In return, he was willing to accept a long commute. Accordingly, the two rented rooms he was most comfortable with at the time were located in the suburbs. One was in the Eichkamp housing estate in Berlin, at Königsweg 15, very close to the Grunewald forest and the Hundekehlsee lake; the other in the Chicago suburb of Highland Park, about a 20-minute walk from Lake Michigan, at 642 Vine Avenue.[21]

When Neutra and his family were first able to afford a house in 1932, they quickly understood that it would be a mistake to buy a lot where they would prefer to live—on one of the hills surrounding Elysian Park, Los Angeles. What they needed was not only a nice place to live, but also a suitable location for his architectural practice. In the end, they settled on the compromise of buying a small lot of about 400 square meters that was highly visible from the Silver Lake Boulevard, easily accessible from both Los Angeles and Hollywood, and still offered a beautiful view of the mountains and the artificial lake.[22]

Neutra designed a two-story house as close to the boulevard as permitted, using the full width of the lot. In 1939, he added a single-story building at the rear, again occupying almost the entire width of the property and creating a courtyard between the two buildings. Because the new patio lacked a view, he was unable to realize the concept of a nature near space that stages a distant view. It is probably for this reason that the first publications on the annex avoided discussing the courtyard and were accompanied by plans that refrained from depicting the main house.[23]

About 10 years later, around 1950, Neutra began to present the courtyard as the most important feature of the project and described it as an exemplary solution for dense construction on small lots, meeting the needs of people with limited budgets for spaciousness, privacy, and closeness to nature.[24] By the early 1960s, Neutra's understanding of dense courtyard housing had changed again. He now saw it primarily as a typology that prevents the construction of suburban neighborhoods of widely spaced single-family homes that consume too much land and generate too much traffic, resulting in air and noise pollution.[25]



21. Richard Neutra, to Dione Niedermann, 23 October 1921, Pomona; Richard Neutra, to Lilly Niedermann, 13 July 1922, Pomona; Richard Neutra, to Francis Toplitz, 12 March 1924, Pomona.

22. Dione Neutra quoting a letter from 1933 in Dione Neutra, "My Life with Richard Neutra: 1933 to 1970 and Beyond," 1983, Pomona, 1.

23. "House of Richard J. Neutra," *California Arts & Architecture* (December 1940): 24.

24. Willy Boesiger (ed), *Richard Neutra [1923–50]: Buildings and Projects* (Zürich: Girsberger, 1951), 26–29.

25. Neutra, "Man the Measure," 527.

Figure 1. Richard Neutra, Kaufmann Desert House, Palm Springs, California, 1946–47. View from living room. The oleander hedge hides the street but not the view of the foothills. (Photo by Julius Shulman, job 093-30, © J. Paul Getty Trust. Getty Research Institute, Los Angeles, 2004.R.10).

Figure 2. Richard Neutra, Kaufmann Desert House, Palm Springs, California, 1946–47. Aerial View. (Photo by Julius Shulman, job 093-30, © J. Paul Getty Trust. Getty Research Institute, Los Angeles, 2004.R.10).

Figure 3. Richard Neutra, VDL II, Los Angeles, 1963–65. View of the courtyard. The outdoor mirror provides a sense of spaciousness. (Photo by Julius Shulman, job 3989-57k, © J. Paul Getty Trust. Getty Research Institute, Los Angeles, 2004.R.10).

The main house burned down in 1963. When it was rebuilt, the floor plan was essentially retained because it had performed well and because it would otherwise have been prohibited to build up to the property line again. However, the courtyard façade, which had been designed in 1932 as a rear façade with high windows because the house was mainly oriented towards the lake and the boulevard, was now opened towards the courtyard. To make the courtyard appear more spacious and natural, Neutra refined his architectural means, bringing them closer to the simulation of nature. To allow plants to grow everywhere, he designed automatically irrigated flower boxes that float high above the courtyard. To visually enlarge the space, he strategically placed large outdoor mirrors **(Fig. 3)**.[26]

While Neutra initially saw the selection of the site and then the courtyard as compromises, he later came to see them as model solutions for building dense environments that do justice to human nature by integrating and enhancing external nature. This reinterpretation is in line with the simultaneous international trend of replacing suburban single-family homes with dense, low-rise typologies.[27]

6. CONCLUSIONS

Neutra believed that humans depend on nature for their physical and mental health. However, he does not see nature as something untouchable, but as something that can be improved, staged and, to a certain extent, even simulated without losing its positive effects. In suburban environments, and even more so in courtyard housing, he felt that such manipulations of nature were necessary to do justice to human nature. Yet he did not believe that it is possible to breathe life into architecture so that it becomes nature itself. It remains an artifact that must subordinate to nature by becoming a device for the perception of nature.

Do Neutra's buildings correspond to the concept of *the natural house* as articulated by Christian Norberg-Schulz, which loosely refers to Wright's publication with the same title?[28] In line with it, Neutra opened his buildings to their surroundings, destroyed the box, and used many natural materials. Also in keeping with the concept, but not discussed in this paper, he developed floor plans for an informal, free lifestyle and offered a refuge. However, unlike Norberg-Schulz and Wright, he fully trusted in the validity and universality of scientific methods, adapted his buildings to specific local conditions rather than to a local tradition or a genius loci, and was hardly interested in symbols. ■

26. Richard Neutra, "V.D.L. Description (Space–Physiologically Responded to Perception-Apperception)," 15 January 1966, UCLA, box 1448, f. 2.

27. Ot Hoffmann and Christoph Repenthin, *Neue urbane Wohnformen: Gartenhofhäuser, Teppichsiedlungen, Terrassenhäuser* (Berlin: Ullstein, 1966).

28. Christian Norberg-Schulz, *Principles of Modern Architecture* (London: Andreas Papadakis, 2000), 48–59; Frank Lloyd Wright, *The Natural House* (New York: Horizon, 1954).

BIOGRAPHY

Matthias Brunner. After having studied architecture at the ETH Zurich, Matthias Brunner worked for several architects. Then, he joined the Accademia di architettura, Mendrisio, mostly focusing on his doctoral dissertation on Richard Neutra's approach to natural and artificial light. Subsequently, he became a lecturer and research associate at the Frankfurt University of Applied Sciences, where he analyzed large German postwar housing estates. Today, he teaches architectural theory at the Haute école d'ingénierie et d'architecture Fribourg and is a project manager at the Büro für Baugeschichte, Schaffhausen, Switzerland—a small business active in the field of historic preservation.

ADAPTING MODERN PUBLIC SPACE TO ACTUAL NEEDS

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#13

ABSTRACT

Adapting modern public space to actual needs is a topic we discuss in a dialogue between different cultural and geographic realities in Chile and Germany. Both countries can look back on a history of adapting open spaces of modern complexes to contemporary needs.

Since 1960, Chile has implemented transformations in modern spaces following political utopias and social changes. The alterations pursued urban renewal through establishing "neighbourhood units" or through formalising informal settlements. The intensity of social needs and self-help dynamics has continued to influence original layouts to this day. Two specific examples of public space typologies in a Sites & Services settlement in Santiago illustrate how changes in public space made by users to satisfy their social needs enable different forms of public interactions.

In Germany, there has been a shift in appreciation for large scale modern housing complexes. In the 1990s, they were criticised as dinosaurs and even partially demolished in shrinking cities. Nowadays, their contribution to the increasing housing shortage, and their adaptability to climate change are appreciated. Given this context, the adaptation of open spaces has become all the more relevant. Two projects from Cologne show how upgrading helps to improve the living conditions of modernist housing complexes.

1. INTRODUCTION: OLD SPACES, NEW CHALLENGES

For publicly accessible space created in the zeitgeist of the modern movement to maintain its relevance as a site for gatherings and interactions, adjustments are necessary. While most modern complexes maintained their overall structure, public life in outdoor spaces has changed over decades. Nowadays —with changing cultural and ethnic compositions of city societies, with new habits concerning outdoor activities and communication, and with the desire of city dwellers to participate actively in co-producing cities, and with a changing climate— there is a growing necessity to adapt these spaces in Chile and Germany.

First, we focus on Chile's research on modernist public spaces in urban renewal through cases of neighbourhood units"[1] and Sites & Services-settlements[2]. These housing projects are widespread throughout Santiago and convey many experiences of adjusting the modernist vision to a concrete social context. In the 1950s and 1960s, Chilean architects, sociologists, and urbanists reenvisioned the role of public space in modern architecture by reorganising urban layouts, fostering different scales of sociability and implementing building methods, such as assisted self-construction.

Today, neighbourhood units and Sites & Services settlements are still valued in Chile, mainly because of their excellent urban standards. Studies on the adaptability of modernist complexes to today's social interactions and everyday practices in large housing ensembles like Villa Portales show that the community lacks appropriate spaces for their daily and meaningful activities, provoking tension and frustration within the surrounding community[3]. Another situation is evident in Sites & Services settlements built on a self-construction scheme. The original layout provided an excellent structure to develop a wide range of differentiated social interactions and feasible appropriations to promote public spheres.

Germany has pursued different ideas to improve the living conditions in modernist housing ensembles over decades. In the 1990s, they were often considered as "dinosaurs" and even partially demolished in shrinking regions. Nowadays, however, their potential is seen differently. Due to a growing housing shortage, they are acknowledged for providing large numbers of much-needed apartments, especially in metropolitan cities. Unfortunately, the overall conditions of many projects have suffered over decades due to a lack of investment in the building stock and in public spaces, leading to a deterioration in their visual appearance. Additionally, a one-sided occupation by disadvantaged households has led to an increase in social and ethnic segregation. The government has implemented various initiatives and funding programmes to address these issues —ranging from "quarter management" to "quarter development concepts" to "integrated urban development concepts"— and all efforts have involved collaboration with residents, owners and government officials. Nevertheless, most projects still struggle with a poor reputation and are marked by lack of order, cleanliness, and safety concerns along with important deficiencies in education, recreation, and cultural offers.

1. Neighbourhood Unit is a concept coined first by Clarence Perry (1920) that consisted in a settlement layout that included social infrastructure and green areas beyond dwellings. Perry also stated that a neighbourhood is a small-scale community where people know each other, share many of their activities, and provide a sense of belonging. However, the former modernist settlements in Chile followed Le Corbusier´s concept of *"Unité d´habitation"* which refers to an ensemble composed not only of dwellings, but also of a street layout, social and commercial infrastructure, as well as open space layout for leisure.

2. Sites-and-Services schemes are the provision of plots of land with a bare minimum of essential infrastructure needed for housing. These are government projects which go from a minimal level of a plot to an intermediate level of "serviced sites" to an upper level of "core housing" completed with utilities and access to community-based services. See: Sites and Services – and subsidies: the Economics of Low-Cost Housing in Developing Countries, 1987 in: Urban Planning and Design Branch, UN-Habitat, April 2012.

3. Rosanna Forray, F. Márquez, and V. J. Furio. "The Memory of Inhabiting Modern Architecture: Villa Portales, 1955–2010." *Latin American Perspectives* 44, no. 3 (2017): 64–82.

Despite the aforementioned problems, modern complexes are today appreciated for their adaptability to climate change: Their compact building structure, large public spaces, and flexible social service system make them pioneers in the debate on urban climate adaptation, sustainability and urban greening. Several German cities have cooperated with landscape architects and urban designers and upgraded the modernist settlements. Among them is the city of Cologne, whose neighbourhoods Chorweiler and Gremberg are described below.

Other countries have also gained experience in this area. Therefore, it is time for a global discussion: What changes are necessary to adjust public spaces to today's needs? How can they serve as multifunctional stages to accommodate a contemporary and dynamically changing public life? How can we adjust them to changing climate conditions, varying cultural and ethnic compositions of societies, changing outdoor activities and communication habits, and the desire of urban dwellers to participate actively in co-producing cities?

These questions were the main focus of Session 29: Adapting Modern Public Space to Actual Needs of the Docomomo conference 2024 in Chile. The session will explore Latin American and European examples and discuss inspirations for modern complexes waiting for adaptation.

2. CHILE: TRANSFORMATIONS IN SITES & SERVICES URBANISATIONS

The modernisation of the state in Chile in the 1960s cannot be closely tied to the production of modern urban layouts provided by Sites & Services settlements[4], which were conceived as a solution for deprived inhabitants coming from informal settlements. Despite the fact that various architects designed 466 such settlements between 1960 and 1980 in Santiago, there are similarities in the public spaces design. They included zoning of activities such as housing, sports facilities, education and health, as well as differentiating the streets and open areas based on their functions and promoting various scales of sociability.

Since the 2010s, "neighbourhood improvement programmes" have been implemented in these settlements, and contrary to the original characteristics, a scheme of state-assisted self-construction[5], the actual programmes did not consider community capacity of self-organisation and failed to integrate them into the city's public sphere[6]. Other studies underscore the potential of improving urban quality of life by defining the layout instead of undefining the built lots[7]. In the following lines, we present the study of appropriations in two kinds of squares made by dwellers and how they modify the original layout's idea of sociability[8].

2.1 APPROPRIATION: CLOSING AND OPENING TO THE PUBLIC

The main square contains a football field, which is centrally located and highly accessible from the adjacent main roads. However, the public character conceived for this space in the original layout was transformed by the appropriation practices of a private football club.

4. These settlements are called in Chile "Operación Sitio" settlements.

5. Francisco Quintana, "Urbanizando Con Tiza" *ARQ*, no. 86, 2014: 30–43. https://doi.org/10.4067/S0717-69962014000100005

6. Luis Francisco Letelier, S. Micheletti, and J. Vanhulst, "Prácticas Instituyentes en el Espacio Vecinal : El Barrio Como Un Común." *Polis* 15 (45), 2016: 105–19.

7. Emanuel Giannotti and Hugo Mondragón, "La Inestabilidad de La Forma Arquitectónica y Urbana. Proyectos Para Barrios Populares En Santiago de Chile. 1953-1970." *Bitácora Urbano Territorial* 27 (1) 2014: 35–46.

8. Elke Schlack and Carolina Fariña. "The Public and the Community in Tension in Self-Built Urban Spaces: The Case of the 'Operation Sitio' settlements in Santiago de Chile." In: *Intersections - IV Interdisciplinary Congress of Research on Architecture, Design, City and Territory. Scales, Agencies and Territories in Latin America*. ed. Vicuña, M. et al. (Heidelberg: Springer, 2024 (in progress).

The small square is surrounded by dwellings that have only two entrances. Despite this communitarian character, the original urban layout anticipated for this space, the variegated neighbour's interventions, responding to different interests, ages, and genders, made this place more public.

Both transformations of the original settlement plan show the power of appropriations in public spaces. The study explores how to construct spaces with robust community structures without sacrificing the originally planned public sphere and the ability to include a wider public.[9] The adaptation of modern layouts presents the challenge of accommodating different forms of appropriation without altering the initial concept of a public space integrated with the city.

3. GERMANY: GREENING PUBLIC SPACE AND ADDING OFFERS FOR ENCOUNTER AND ACTIVITY

3.1 CHORWEILER: INTEGRATING OPPORTUNITIES FOR ENCOUNTER AND ACTIVITIES

Chorweiler is a large housing complex consisting of several high-rise buildings grouped around a central area in the north of Cologne. The complex was initially planned in the 1920s but was constructed only in the early 1960s and expanded further in the 1970s. Based on the concept of "urbanity by density," Chorweiler had long been praised for being the largest housing settlement in Western Germany.

In recent years, Chorweiler has made the news for its negative headlines. The housing stock and its surrounding public spaces cried out for renovation. This has led to poverty, conflicts and deterioration which place an additional burden on the already disadvantaged population. When affordable apartments became rare in metropolitan Cologne, Chorweiler garnered the city's attention. Eventually, in 2016, they initiated a renovation process supported by landscape architects and participation experts: "This time, by upgrading the public space of the complex, a better appearance and reputation should emerge, and with this, a better link of the residents' to their neighbourhood should be developed."[13]

In order to accomplish this goal, the office Urban Catalyst from Berlin collaborated with the landscape architect lad+ from Hannover to hold a participation process. Through several events and workshops with residents, different ideas for redesigning the public realm were developed in an iterative process. To the landscape architect, it was clear that at the end of such a process, the result would not be a spectacular design, but rather ideas for practical open spaces: "Chorweiler had enough of grand ideas from architects' desk. Now it was time for seemingly banal, however important things like elements with water, leisure- and outdoor sports facilities without entrance fees, space for seating, meeting and relaxing", says Martin Diekmann[10].

In 2021, Chorweiler's residents' ideas were implemented. The large, multifunctional Liverpool Plaza, the central Paris Plaza, and the adjacent Lyon Passage were redesigned. Although the renovation appears modest

9. Elke Schlack, et al., "The Public and the Community in Tension in Self-Built Urban Spaces"

10. Juliane von Hagen, "Dem Großen mit kleinen Schritten begegnen" *Deutsches Architektenblatt* no.11. 2021: 12-18.

at first glance, altogether 150 new trees were planted, 1.200 square metres of play- and sport areas were built, 450 metres of seating erected, and 130 bike parking racks constructed.

The large, centrally located Liverpool Plaza. which was once simply a large parking lot, has been transformed into a multifunctional urban plaza. Its considerable size and dimensions make it an ideal space for events, festivals and markets. To make the best use of the space, the landscape architects surrounded the central area with a border zone featuring trees, benches, and various recreational facilities. Outside of events, this zone is ideal for resting and sitting, and frames the large space giving it a human dimension.

The adjacent smaller public space, the Paris Plaza, is surrounded by public buildings and the communicative centre of Chorweiler: the shopping mall. For a long time, the mall was the most frequented spot. However, now, following its renovation, Paris Plaza has become more popular thanks to its water fountain, trees providing shade, and a large table. Since Paris Plaza functions as the "living room" of Chorweiler, its surface is made of red bricks resembling a carpet.

North of the Paris Plaza lies Lyon Passage. Like Liverpool Plaza also, Lyon Passage was also too large in its original design. Therefore, the landscape architects flanked its eastern side with seating steps and reduced its size visually. On its western side, a new boulder wall was built in conjunction with a playground. What used to be the windowless backside of the shopping mall is now a magnet for those who love physical challenges.

3.2 GREMBERG: GREENING THE PUBLIC REALM

The described project in Cologne-Chorweiler is an example of a modern complex that has been upgraded by altering the public space. A similar strategy was applied in Gremberg, a borough at the southeastern edge of Cologne. The starting point there was the intensive heat development in this neighbourhood. It is dominated by several types of multi-storey buildings with open spaces in between. Many of them, however, lacked amenities for social interaction, play or sport, as well as trees and vegetation for shade, and many areas were unattractive. According to a study conducted in Cologne, Gremberg suffered the most from increasing levels of heat resulting from climate change. Therefore, the city developed a landscape concept which became the basis for reimagining Gremberg's public spaces.

The internationally renowned office WES landscape architecture from Hamburg undertook this task of upgrading public spaces, creating green spaces, reducing sealing, implementing areas for various sports and play activities, and planting many trees[11]. Under the headline "ecological revitalisation of Westerwaldstraße" a residential road was converted into a pedestrian-friendly pathway with greenery. Like pearls on a necklace, three large green spaces now line up along this green corridor. All of them used to be unattractive, neglected spaces. After their redesign, they now offer easily accessible, peaceful seating areas in the middle of the housing stock, jogging tracks, playing fields, playgrounds, and challenging bike trails.

11. Martin Diekmann, *Livable Chorweiler Cologne. lad+ landschaftsarchitektur.* (Hannover: Diekmann 2021).



Figure 1: Original "Operación Sitio" settlement plan.1970. Source: SERVIU, Servicio de Vivienda y Urbanismo, Chile.

Figure 2: Overview of two spaces in Sites & Services settlements in Santiago's El Bosque district: the main square (above) and the small square (below). Source: Schlack & Fariña, Research: Public Space and Community Authorities, Nucleo Milenio Autoridad y Asimetrías de Poder NUMAAP, 2018-2022. Drawing: F. Ibacache, 2024.

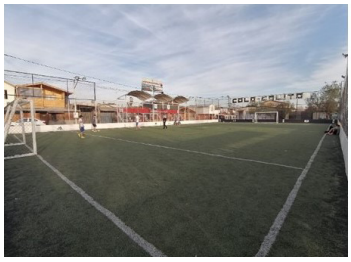




Figure 3: Vision for a Green Chorweiler (Source: Adrian Calitz und lad+, Hannover)



Figure 4: Cologne-Gremberg's Green Corridor Westerwaldstraße (Source: WES Landscape Architecture, Hamburg)





Similarly to Chorweiler, the planning was developed in close cooperation with the residents.

The list of projects aimed at adapting the urban environment in Germany to the increasing effects of climate change could be continued. Currently, the government of the state Northrhine-Westfalia is investing 250 million Euros in converting neighbourhoods into swamp cities. This involves disconnecting sealed urban surfaces from the mixed-water-sewer-system and increasing the rate of evaporation in situ[12]. Additionally, discussions are ongoing about greening facades and roofs. In this debate, modernist housing complexes play an important role, as they are considered ideal for these adaption measures.

4. CONCLUSION: BROADENING THE PERSPECTIVE

Although modernist complexes followed the same architectural and urban design ideas worldwide, the ensembles experienced different changes, alterations and adaptations over time.

Chile's public policies consider the regeneration of Site & Services settlements as a crucial area of focus. The goal is to care for the already existing "culture" of self-organisation. Today, the challenge involves adapting spaces to the increasing population and housing demand, especially in pericentral areas. At the same time, it is important to facilitate social interactions and cooperation between inhabitants of different generations and cultural backgrounds. Hence, adequate public space becomes a central element of the community and its public life.

The revitalisation and greening projects in Germany share similar goals. For instance, in Cologne-Chorweiler and Cologne-Gremberg, public spaces were reconceptualised and redesigned, leading to improvements not only in the public realm but also in terms of the living conditions, identification and care by the residents of the community.

In Chile and Germany, the debate on transforming the public realm of modern projects and modernist-inspired self-constructed settlements will continue. Although conditions and regional characteristics differ, the exchange of experiences makes the benefits visible: how healthy, safe, cohesive, accessible, affordable and sustainable living environments for large portions of populations can be sustained. ■

12. Juliane von Hagen, "Grünes Veedel, lebenswertes Veedel. Ökologische Revitalisierung Westerwaldstraße Köln." *Freiraum gestalten* 02.2023: 24-31.

13. Juliane von Hagen, "Wasser in der Stadt von morgen." *Garten+Landschaft* June. 2020: 2.

BIOGRAPHY

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Juliane von Hagen holds a Diplom-Ingenieur in Architecture and a Doktor-Ingenieur in Planning from RWTH Aachen University, Germany and a Master of Science in Urban Planning from Columbia University. She is now working as Adjunct Professor at Pennsylvania State University and Texas A&M University in their Study Abroad Programmes. In addition to running stadtforschen.de, an office for urban research, development, and communication, she also works as a freelance journalist in Germany.

TAKE THE HEAT: ADAPTING MODERN PUBLIC SPACE TO ACCOMMODATE OLDER ADULTS' NEEDS

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ABSTRACT

How can the parameters of public space influence the lives of the most vulnerable populations and promote sustainable ageing? Urban overheating requires a multi-layered understanding of climate change and its impact on cities' physical, ecological, social, and economic structures. This concern is at the heart of the ongoing multidisciplinary research project "Climate Adaptation for Older People Living in Vulnerable Urban Areas" (CAOP). Considering that the built environment is prone to disruptions brought by urban heat islands (UHI), this paper argues that while most spatial and social structures may experience these phenomena, they primarily affect the most vulnerable and thus, the design that takes their needs into account may produce a more inclusive, resilient, and adapted built environment. Therefore, the authors propose to analyse one of CAOP's case studies – the São Roque da Lameira neighbourhood in Porto, Portugal – as the laboratory to discuss the renovation and retrofitting measures of public spaces inspired by modern principles with a view to responding to present and future demands of the health, comfort, and well-being of the most vulnerable. The paper discusses the methodology generated within CAOP's research to identify morphological units with specific spatial characteristics. In parallel, the proposed process analyses the relationship between the spatial configuration and microclimate of urban spaces and community perceptions (through urban ethnography), thus crossing tangible and intangible dimensions to establish a new typo-morphological classification of a heat-prone neighbourhood. Due to their extensive green areas, this paper argues that such modern public spaces carry great potential to be adapted to creating age-friendly spaces, which could be enhanced through a comprehensive framework tool for multidisciplinary assessment. This tool will contribute to urban design research by highlighting principles to support sustainable urban strategies to prepare for change.

1. INTRODUCTION

The financed research project "Climate Adaptation for Older People Living in Vulnerable Urban Areas (CAOP). Designing a climate-responsive and community-based methodology" [PTDC/GES-URB/2038/2021] aims to investigate how planning and urban design can increase resilience in public – open, semi-open, and green spaces – urban places, considering that the collective use of these spaces can influence the health and well-being of older people living in vulnerable urban areas.

Climate change caused by urbanisation affects the urban thermal environment more directly than global climatic changes[1], influencing the entire population's quality of life, health, and well-being. It also impacts subsistence and the main infrastructure[2] [2], depending on the magnitude, intensity, and frequency of the event. Extreme heat is the one event that more seriously impacts the population, alongside ranges between night and daytime temperatures, landslides, extreme waves, excessive rain, storms/tornados, and extreme cold. In Portugal, and more specifically in Porto, the studies of Monteiro et al.[3] have highlighted the influence of the extreme heat phenomenon on the health conditions of populations. The literature also supports that older people are particularly vulnerable to the impacts of climate change[4,5]. Recognising the importance of developing a multidisciplinary approach to climate change, CAOP involves an integrated set of analysis methods of urban morphology, ethnography, and co-creation, as well as design and simulation methods, that will allow for the establishment of adaptation measures and facilitate their implementation. As the current percentage of adults over 65 in Portugal is high, a considerable portion of this population can be negatively affected by climate change. Against this background, the outreach of the ongoing research is expected to be high. The ultimate goal is to develop a "Handbook for Climate-Responsive and Community-Based Urban Planning / Design" that will contribute to creating accessible and inclusive environments. As part of broader research and an ongoing process, the present paper seeks to discuss the potential of modern public spaces in fulfilling that goal.

The design of public space integrated into planning emerges as an essential dimension that can contribute to the quality of life of older populations, mitigating the effects of climate change. Its importance is highlighted in international agendas. This complex framework requires the study of several areas of knowledge framed within a holistic approach to public space, considering the social, physical, and environmental aspects that interact and change over time. The solutions to climate adaptation may involve strategies that facilitate "socio-ecological" approaches that are more integrated into urban design. Therefore, from a holistic point of view, it is essential to establish strategies for designing public spaces, with the contribution of collective information from their users. References to public housing outdoor spaces, which are usually vulnerable to climate change impacts, serve as an example. Public housing estates, as social support mechanisms, tend to accommodate vulnerable populations (such as lower-income families, older adults, and dependent individuals with special needs, among others) but they are also strategic laboratories where public

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1. Benita Y. Tam, William A. Gough, and Tanzina Mohsin, "The impact of urbanization and the urban heat island effect on day to day temperature variation," *Urban Climate* 12 (June 2015): 1-10. https://www.sciencedirect.com/science/article/pii/S2212095514001126.

2. Claudia Baldwin, Tony Matthews, and Jason Byrne, "Planning for Older People in a Rapidly Warming and Ageing World: The Role of Urban Greening," *Urban Policy and Research* 38, no. 3 (July 2020): 199-212. https://doi.org/10.1080/08111146.2020.1780424.

3. Ana Monteiro, Vânia Carvalho, Teresa Oliveira, and Carlos Sousa, "Excess mortality and morbidity during the July 2006 heat wave in Porto, Portugal," *International Journal of Biometeorology* 57, no. 1 (January 2013): 155-167. https://doi.org/10.1007/s00484-012-0543-9.

decision-makers may implement qualification actions and inspire private investments and the broader production of the built environment.

The selected neighbourhood is situated in an urban rehabilitation area ('ARU', in Portuguese) of Corujeira, in the parish of Campanhã, Porto, Portugal.

The "Popular Housing Estate of São Roque da Lameira" was built by the Porto Municipality between 1959 and 1962 – during the "Estado Novo" authoritarian regime – under the "Improvement Plan for the City of Porto" (1956-66), promoting municipal housing for the lower-income population. This neighbourhood emerged in an area considered peripheral to Porto at the end of the 1950s. **(Fig. 1)**.

The design of the general site plan reflects the fragmented and low-standard appropriation of some of the guidelines of the Modern Movement and the Charter of Athens principles, whereby several medium-rise blocks are created and dispersed across generous green areas[6]. However, the modern plans encountered some problems regarding the design of the public spaces as they "pushed for innovation in indoor conditions while leaving the outdoor environment behind"[7]. This study aims to identify the specific vulnerabilities and potential in adapting public spaces to face extreme heat, while discussing the resources that can be activated to mitigate the impacts of climate change on older people.

2. A FRAMEWORK FOR ASSESSING PUBLIC SPACE ADAPTATION UNDER INCREASING HEAT

Evaluating the interplay between public spaces and the communities is mandatory to create opportunities for cities to reassess their role. Developing evaluation methods that capture the public space as a critical tool for adapting to climate change is urgent, given its inner capacities, qualities, and resources. This ongoing research addresses the morphological analysis of physical spaces from a relational point of view, considering different socio-spatial analysis solutions. Therefore, to understand the adaptive capacity of cities' public spaces in climate change, they must be regarded as social and ecological urban environments that implement and capture interactions between people and place. In this context, one might question urban morphology's influence on this adaptive capacity. As previously noted, cities will face different challenges and commitments in the future. Thus, if their adaptive capacity is improved, adjustments to new circumstances and changing conditions will be enhanced without significant disruptions.

The qualities of public space can be evaluated through its assets, in other words, through the assets of its tangible capital – physical and ecological – and of its intangible capital – social, institutional, and economic. The physical and ecological elements, regarded as tangible resources, can contribute to the functionality and resilience of public spaces. The intangible resources are also essential for the renewal of public space. From this point of view, existing resources represent a potential for the successful adaption of public space.

This section proposes an assessment methodology of the physical features of public space based on quantitative and qualitative criteria, using

4. Sarah Harper, "The Implications of Climate Change for the Health of Older Adults," *Journal of Population Ageing* 16, no. 3 (August 2023): 565-568. https://doi.org/10.1007/s12062-023-09425-6.

5. Teodora Figueiredo, Luís Midão, Pedro Rocha, Sara Cruz, Gisela Lameira, Paulo Conceição, Rui J. G. Ramos, Luísa Batista, Helena Corvacho, Marta Almada, Ana Martins, Cecília Rocha, Anabela Ribeiro, Fernando Alves, and Elísio Costa, "The interplay between climate change and ageing: A systematic review of health indicators," *PLoS One* 19, no. 4 (April 2024): e0297116. https://doi.org/10.1371/journal.pone.0297116.

6. Gisela Lameira, and Luciana Rocha, *Mapping Public Housing. Guide to specific terminology in state-subsidized residential architecture in Portugal [1910-1974]* (Porto: Faculty of Architecture of the University of Porto, 2019), 79. https://mappingpublichousing.up.pt/images/Guia/Lameira_Rocha_MapaDaHabitação_GuiaParaUmaTerminologiaEspecifica(2019).pdf

7. Daniel A. Barber, *Modern Architecture and Climate: Design before Air Conditioning* (Princeton: Princeton University Press, 2020). ISBN: 9780691170039.

the São Roque da Lameira neighbourhood as a sample. Several steps, including ongoing and future observations and interviews, are foreseen to validate the quantitative results and provide qualitative information to complement the analysis. The result of this assessment specifies the relationship between physical features and perceived qualities related to physical and functional vulnerability, considering the existing vulnerabilities and potential **(Fig. 2)**.

Focusing on public housing and its construction period, the outdoor space features and neighbourhood characteristics, this study identifies the physical/spatial vulnerability indicators of the units under study by considering predetermined urban form elements: street, neighbourhood, block, building, and open/green space **(Fig 3)**. More specifically, the analysis of the street system will provide the means to evaluate the degree of accessibility, centrality, and redundancy. Streets, squares, and green spaces will be analysed on the basis of proximity, porosity, and diversity elements. Following the methodological approach of Monteiro and Pinho[8], in this step, the spatial syntax will also contribute to unravelling the potential of the spatial accessibility of the street systems. Axial maps will be created, i.e., detailed maps of the spatial structure in the selected study areas[9]. The e-spatial analysis will also operate to evaluate the open spaces. After evaluating the correlations between the urban form characteristics and the social and environmental processes, the typo-morphological units will be classified, in line with the works of Eldesoky, Gil and Pont[10].

In operational terms, the Geographic Information System (GIS) will enable a study of the correlation between the values of the structural and configurational analysis and the results of the typo-morphological analysis, namely the correlation between i) the characteristics of accessibility to social infrastructure for the population over the age of 65 years, ii) the characteristics of semi-private and semi-public space, iii) the characteristics of public space and the results of the typo-morphological analysis. It should be noted that this framework will be completed with a microscale three-dimensional model using the Envi-Met programme. This is currently being developed by the Faculty of Engineering of Porto University under the same project.

Additionally, the qualitative assessment of the selected public spaces involves participatory processes – ongoing and future interviews and workshops with different agents, including the residents – and observations in the field, seeking to understand the influence of public spaces on people's quality of life and well-being, that could explain their *functional vulnerability*. Also, these observations and interviews will bear in mind urban design qualities such as imageability, visual enclosure, human scale, visual permeability, and complexity[11,12]. The assessment focuses on an open public space within a five to ten-minute walking radius (equivalent to 400-800 meters). The interviews will be conducted with key informants. Depending on the local context, the assessment will allow us to select, add, and prioritise specific indicators, given that a walking interview offers excellent potential to understand the population's connections with the place[13].

Figure 1. "Improvement Plan for the City of Porto" (1956-1966). © Porto Municipal Archive.

Figure 2. São Roque da Lameira neighbourhood areas. © authors, using municipal cartography

Figure 3. Street, neighbourhood, block, building, and open/green space indicators: classifications, measurements, and sources

Figure 4. The "Popular Housing Estate of São Roque da Lameira" (1959-1962), Arch. Vasco Mendes, Miguel Romão Pinto, Alberto Rosmaninho, Rui Paixão. © GISA, Porto Municipal Archive (left); São Roque da Lameira neighbourhood, 2023 © authors

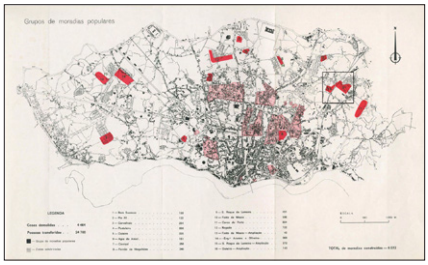
Figure 5. The "Popular Housing Estate of São Roque da Lameira" (1959-65): deployment area (top); Day-care Centre, playgrounds with wooden equipment (down left) and ramps for people with reduced mobility. © Porto Municipal Archive

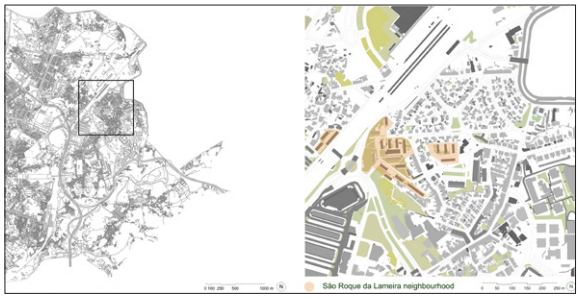
8. Ana Monteiro, and Paulo Pinho, "MAP: a methodology for Morphological Analysis and Prescription," *Urban Morphology* 25, no. 1 (September 2021): 57-75. https://doi.org/10.51347/UM25.0004.

9. Bill Hillier, Alan Penn, Julienne Hanson, Tadeusz Grajewski, and Jianming Xu, "Natural Movement: Or, Configuration and Attraction in Urban Pedestrian Movement," *Environment and Planning B: Planning and Design* 20, no. 1 (February 1993): 29-66. https://journals.sagepub.com/doi/abs/10.1068/b200029.

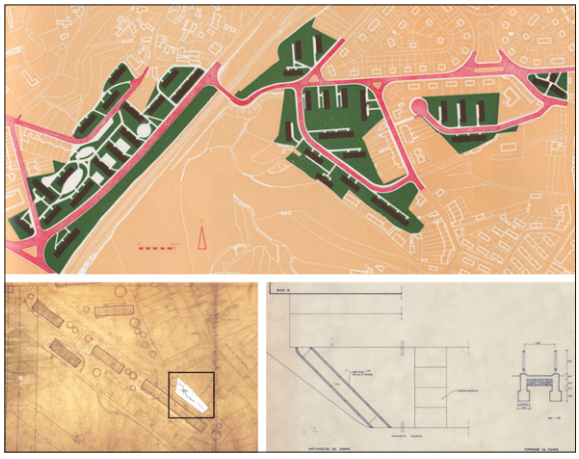
10. Ahmed Hazem Eldesoky, Jorge Gil, and Meta Berghauser Pont, "Combining environmental and social dimensions in the typomorphological study of urban resilience to heat stress," *Sustainable Cities and Society* 83 (August 2022): 103971. https://www.sciencedirect.com/science/article/pii/S2210670722002918.

11. Reid Ewing, and Susan









Indicators	Measure	Source
Street		
Street orientation	Orientation	Abdeldayem et al. (2023)
Street length/width	Distance	Abdeldayemet al. (2023)
Width/building height	Proportion	Abdeldayemet al. (2023)
Angular integration	Numeric	Eldesoky, Gil, and Pont (2022)
Connected node ratio	Numeric	Romice, Porta, and Feliciotti (2020)
Neighbourhood		
Segment intelligibility	Numeric	Eldesoky, Gil, and Pont (2022)
Building density	Numeric	Romice, Porta, and Feliciotti (2020)
Block		
Number of blocks	Numeric	Abdeldayemet al. (2023)
Block length max/Block length min	Distance	Abdeldayemet al. (2023)
Number of intersections	Numeric	Abdeldayemet al. (2023)
Space enclosure	Nominal based on numeric	Eldesoky, Gil, and Pont (2022)
Ground space index	Nominal based on numeric	Eldesoky, Gil, and Pont (2022)
Building		
Building numbers	Numeric	Abdeldayemet al. (2023)
Average building height	Numeric	Abdeldayemet al. (2023)
Accessible ground space	Numeric	Eldesoky, Gil, and Pont (2022)
Accessible floor space	Numeric	Eldesoky, Gil, and Pont (2022)
Accessible area of green/open space (m2)	Numeric	Eldesoky, Gil, and Pont (2022)
Accessible distance of indoor social infrastructure (m)	Numeric	Eldesoky, Gil, and Pont (2022)
Open/Green space		
Open/green space ratio	Numeric	Li, Wang, and Niu (2023)
Permeable Surfaces ratio	Numeric	Li, Wang, and Niu (2023)
Open/green diversity	Numeric	Li, Wang, and Niu (2023)
Size	Numeric	Romice, Porta, and Feliciotti (2020)
Functionality	Numeric	Romice, Porta, and Feliciotti (2020)
Sky view factor (SVF)	Proportion	Abdeldayemet al. (2023)

Handy, "Measuring the Unmeasurable: Urban Design Qualities Related to Walkability," *Journal of Urban Design* 14, no. 1 (February 2009): 65-84. https://doi.org/10.1080/13574800802451155.

12. Walid S. Abdeldayem, Sherif Morgan, Sawsan Bakr, and Ayman Abdelhamid, "Parameterize walkable urban forms considering perceptual qualities," *Journal of Engineering and Applied Science* 70, no. 1 (May 2023): 52. https://doi.org/10.1186/s44147-023-00221-9.

13. James Evans, and Phil Jones, "The walking interview: Methodology, mobility and place," *Applied Geography* 31,

3. CASE STUDY FRAMING

This paper focuses on specific typo-morphological units of the São Roque da Lameira area, namely those corresponding to the construction of social multifamily housing. The "Popular Housing Estate of São Roque da Lameira"/São Roque da Lameira neighbourhood was built with public investment between 1959/61, having been expanded in 1965. (Fig. 3, 4)

Framed within the modernism tradition, the São Roque da Lameira neighbourhood comprises planned architectural ensembles with typo-morphological uniformity, structured by a regular road network. The urban fabric includes large plots of land, blocks, and buildings with 4 to 5 floors, often far from the street. In keeping with a number of multifamily housing neighbourhoods from the 1950s/60s, this neighbourhood displays a low level of integration, with less articulated public space areas and an urban frame more focused on the buildings than on the structure of the streets and their connections.

Nowadays these open spaces are quite degraded and poorly maintained, with unauthorised parking and a lack of shade and amenities, thus usually deserted

and uncomfortable. They show potential for the renewal of public spaces in terms of accessibility, proximity, and conviviality, meeting most people's health, comfort, and well-being requirements, and particularly climate change.

Climate studies of Porto point to an increase in the number of days of intense heat in summer and significant differences in temperature in different city areas14. The type of land occupation conditions the emergence of various microclimates, with the parish of Campanhã being associated with increased temperatures. It is also exposed to other vulnerability factors related to territorial segregation, resulting from both the rugged terrain and the ruptures caused by the fast lane that cuts through the parish territory, thereby contributing to the increase in social segregation within and beyond its area. This study, thus, expresses concerns regarding public space, which is understood as a device for the urban integration of the housing neighbourhood taken as a case study. Despite recent interventions (2013) in São Roque da Lameira neighbourhood buildings (mainly in the exterior envelope) and the installation of some public equipment in the surroundings (clotheslines, benches, sport equipment), this area displays weaknesses in the interplay between people and outdoor open/green spaces, hence discouraging neighbourhood relationships.

The former urban principle of building housing integrated into green areas also highlights the potential for minimising climatic stress. Reference to the documentation regarding the design of adjacent areas and equipment proves that the Modern Movement ideals expressed concern for promoting collective outdoor use spaces for recreational practice and social life. Some neighbourhood plans make the design of social facilities and amenities visible, such as access ramps to buildings and a children's playground with wooden equipment, reinforcing functional concerns.

While underlining the potential for adaptation of this modern movement's outdoor design principles and reclaiming their rearrangement according to the older adults' needs, the CAOP research project proposes to develop a responsive design manual by adopting a typological reconfiguration strategy that considers physical-functional, perceptive, and behavioural aspects, without erasing the modernism ideals to promote healthier lives.

4. FINAL REMARKS

This study delves into the adaptability of urban form and public spaces to climate stress, considering older people's health and well-being. Studies have demonstrated the importance of urban form in climate adaptability, exploring its role in mitigating the impacts of heat islands (IHU) and the influence that its features have on the tolerance of older adults to high temperatures.

This work addresses the indicators of urban form that allow for the assessment of its dynamic adaptive capacity. Notably, this paper proposes a methodology that targets the correlation between the urban form characteristics and measures associated with climate change adaptation and the population's perceptions of public spaces. It seeks to apply their correlation to a case study, the São Roque da Lameira neighbourhood, a morphological unit with modernism origins.

no. 2 (April 2011): 849-858. https://www.sciencedirect.com/science/article/pii/S0143622810001141.

14. Câmara Municipal do Porto (CMP), *Suporte Biofísico e Ambiente. Estrutura Ecológica e Biodiversidade. Relatório de Caracterização e Diagnóstico, revisão do Plano Director Municipal do Porto*. (Porto: Câmara Municipal do Porto, 2018).

Making neighbourhoods more permeable to change, more inclusive and comfortable, with a high degree of interaction among residents, may be achieved through (1) the design of more comfortable and safe paths, (2) the elimination of architectural barriers, (3) the integration of different mobility modes (buses, cars, on foot) and (4) the design of small clusters of comfort in a context of accessibility and proximity, with amenities, trees, shade, resting areas and leisure spaces.

The notion of how "to live spaces" takes on greater importance, not only as a socialising factor but also for climate change reasons. It is assumed that open, green public spaces will become agents of urban and sociological transformation and prevent the effects of climate change. We believe that establishing principles based on determining the degree of influence of urban form characteristics on the resilience – adaptation and transformation – of typo-morphological units to extreme heat will enable a strategic approach to proposing new possibilities for the design of public space as regards thermal confrontation. Some challenges related to the different comfort levels in public spaces have required an integrated legibility process of the characteristics of the open/green spaces for enhanced social interaction toward climatic adaptation. In fact, it is acknowledged that modernism's ambition was to create healthier environments for future society, shaping inner comfort. Nowadays, the focus is expected to be on indoor and outdoor spaces, promoting their articulation and improving shared areas. ■

BIOGRAPHIES

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PUBLIC SPACE FOR CHILDHOOD, ART AND BIODIVERSITY IN BURLE MARX'S PLAZA PERÚ IN BUENOS AIRES: BETWEEN DOCUMENTING AND DEMOLISHING OR RESTORING AND REBUILDING

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#13

ABSTRACT

Plaza Perú is the only public space designed and constructed by Burle Marx in Argentina, a unique urban piece that, although reviled and forgotten for decades, still contains necessary values to rethink the culture of urban nature in contemporary habitat, in the context of those shortcomings that Buenos Aires City currently suffers from. Its history is well known, and the City Council commissioned the project to Burle Marx's studio, while the work was carried out by the Council services, and headed by architect Marta Montero. The project was developed to address the tension between industrial uses and residential expansion, in an urban environment lacking recreational spaces for children. The core element of the design, the so called "*muro-juegoñinico*", consisted of a large spiral playground for children, shaped like a sculpture to provide a safe area from the danger of urban traffic. The playground's backdrop was a mural inspired by the industrial warehouses nearby. Burle Marx's project included thorough research on local biodiversity and its potential for design in terms of geometry, space, colour, and time, taking into account their natural cycles. In spite of the fact that the project represented the perfect blend of urban landscape, biodiversity, painting, sculpture and architecture, the cultural incomprehension of this masterpiece led to its partial destruction by the City Council. While key elements of the Plaza have been destroyed, such as the "*muro-juegoñinico*" and the mural, the original layout and various elements of the landscape design still stand on site. In light of this distorted masterpiece, this paper aims to reflect on the challenge posed for its future and its role in the contemporary city: to document and demolish, to pave the way for a new project; or consider its restoration and reconstruction as a significant part of Buenos Aires city cultural heritage.

1. INTRODUCTION

The only plaza designed and built by Burle Marx in Argentina[1] is a key urban piece that, although reviled and forgotten for decades, still upholds the necessary values for rethinking the issue of the culture of urban nature in the contemporary habitat, addressing the shortcomings that the City of Buenos Aires currently suffers from. This masterpiece was distinguished for having achieved a perfect harmony between urban landscape, biodiversity, painting, sculpture and architecture. On the basis of this value, and considering its contemporary scope as architectural and landscape heritage, it is proposed to reflect on its restoration and reconstruction.

2. PROJECT AND RESEARCH

The City of Buenos Aires, in commemoration of the 150th anniversary of the independence of the Republic of Peru, built a plaza in an urban area with conflicting industrial uses and residential interests. The Plaza named República del Perú was inaugurated on December 12, 1972. The project was commissioned by then Mayor of the City, Saturnino Montero Ruiz, to the Brazilian landscape architect Roberto Burle Marx, who developed it alongside his partners, Haruyoshi Ono and José Tabacow. The work was carried out by the technical services of the Municipality of the City of Buenos Aires and directed by Marta Montero, an Argentine architect and landscape designer who had previously collaborated on various projects with the Brazilian master. Montero's role was fundamental for the realisation of the work, given that she had to face several challenges and difficulties, such as the lack of availability of some of the projected species, and a change of political administration in 1973 which led to a loss of interest and support. She defended the work of Burle Marx and sought to preserve its aesthetic and functional value, despite the modifications and deterioration that the Plaza experienced over the years.

The design was conceived to address the lack of children's playgrounds in the neighbourhood. At the heart of the project was a playful space modelled as a sculpture, surrounded by parterres located towards the perimeter of the block, with a mural inspired by the profile of the neighbouring industrial warehouses which served as a backdrop. The enveloping geometry of the spiral playground, named by the Studio as the "*muro-juegoniñico*"[2], sought to offer children a playful space protected from the dangers of the intense vehicular traffic in the environment. The urban promenade features, in it's most visible corner, a statue of Inca Garcilaso de la Vega[3]—considered the first cultural *mestizo* of America, since in his literary work he sought to assume and reconcile his two cultural legacies, the Inca and the Spanish. The piece contains heraldic symbology alluding to this nature and is surrounded by a semi-circular bench designed for contemplation.

The uses proposed for each sector —children's recreation, resting spaces for the elderly— coupled with the works of urban art —the sculpture, the mural, and the "*muro-juegoniñico*"— were integrated into a plastic composition with landscape design, creating, in the words of Arch. Montero,

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1. Other projects and works of the Burle Marx Studio in Argentina: 1962: *Barrio Parque Norte*, Martínez, Province of Buenos Aires, in association with Archs. G. Madero, H. Delfino, H. Scasso and R. W. Hüther; 1971: *Urban Renewal Plan Zona Sur; Plaza Constitución, Plaza Lezama, Plaza Garay* and *Chacra Saavedra*, for the Municipality of Buenos Aires City, led by Arch. J. Kurchan; 1973-1979: *Torres Canning* in association with Aisenson Studio. (Berjman,2014: 30-44)

2. It is a play on words: wall=muro, play=juego and child=niño. The suffix *-ico* is used in Argentina, not as a diminutive as in other Spanish-speaking countries, but as an indicator of the relationship of an adjective with the derivative base, with the sense of "characteristic of, similar to, typical of". In this case, it is applied to a noun: child. Possibly meaning: "play wall for children".

3. It is a replica of the artwork made in 1967 by the Peruvian sculptor Joaquín Roca Rey, located in the Giardino Piazzale Scipione Borghese, Villa Borghese, Rome.

"a children's oasis in full urban concentration, alternating green and dry spaces, plays and breaks."

The colour palette highlighted the different shapes and spaces: red, black, white, ochre, green and grey for the architectural surfaces; in addition to the polychromy of the native flora: the indigo of the jacarandas, the red of the ceibos and the yellow of the tipas, among several other native specimens arranged in favour of a plastic experience for the visitor.

Arch. Montero explained the design methodology applied, which helped to understand the way in which research and plastic sensibility were integrated:

> *When Roberto Burle Marx came to Buenos Aires to design the Plaza República del Perú, he was sixty-two years old. As his method consisted of working with the flora of the place, he took the trouble for months to study our native plants. We made excursions to places in the countryside where there was still some originality, because in Buenos Aires almost everything is exotic or imported from abroad. Fortunately, in some parts of the province, primitive landscapes are preserved. He looked, recognised, and chose the plant repertoire. At the time of planting, the municipal nursery did not have the species he had envisioned. I had to transplant adult trees from other* plazas*:* tipas, jacarandas *and* ceibos.[4]

3. DESIGN CONCEPT: GEOMETRY, NATURE AND COLOUR

In Burle Marx's work, formal variations can be distinguished over the years. These changes stemmed from a search that involved the study of a morphological repertoire that oscillated between the orthogonality of the right angle and the organicity of biomorphic geometry. As a design resource, during the 1960s, he made curves and straight shapes coexist, arranged in an orthogonal grid. By the 1970s, he had reached a level of maturity that prompted him to take advantage of all formal combinations, creating an eclectic composition by applying a variety of formal systems without transitions, combining contradictory qualities, as defined by Arch. Montero.[5] To design the Plaza, Burle Marx was inspired by the conch shells he collected when he was a child. During his visit for the inauguration, in an interview for a local newspaper, he explained:

> *The spiral is a shape that I like very much, because it is an organic shape, which is found in nature, in shells, in plants, in animals. It is a form that has movement, that has rhythm, that has life. I wanted to make a spiral that would be a playground for the children, that they could go up and down, in which they could have fun and learn at the same time.*[6]

In turn, his deep understanding of plant physiology and morphology played a key role in the design of the colour, textures and different spatial qualities for each sector of the Plaza, based on the natural cycles of the species throughout the seasons.

4. Marta Montero, *Burle Marx, Paisajes Líricos*, (Buenos Aires:Iris 1997), 11

5. Montero, *Burle Marx, Paisajes Líricos* 1997: 11

6. Interview with Roberto Burle Marx, La Nación, January 1972.

4. THE INCOMPREHENSION OF THE PROJECT AND ITS PARTIAL DESTRUCTION

The lack of maintenance over the years, caused the *ceibos* to dry up due to lack of watering. Those were replaced by *lapachos*, which are a slow growing species, so that the Plaza gradually lost its shade. The play on colours that had been projected with the foliage and flowers never came to be. The mineral elements chosen for Plaza Perú —cobblestones and cement stained in ochre— became blurred over time.

Amid a lack of understanding of the project, negligence and cultural apathy, the "*muro-juegoniñico*" faced heavy criticism from some residents and politicians. Concerns were raised about the danger for children, the likelihood of them falling and getting hurt, and its potential to attract graffiti. There were also worries about the sandpit causing contamination and the entire structure becoming "a bolthole for tramps and addicts."[7]

In 1980, the adjoining shed that supported the mural was demolished, and fifteen years later, in 1995, Mayor Jorge "Topadora"[8] Domínguez ordered the demolition of the spiral volume, the core of this design, despite protests from residents, architects, landscape architects and defenders of cultural heritage. The demolition was met with strong opposition. Brazil's leading newspapers —*Folha de São Paulo, O Estado de São Paulo, Jornal do Brasil*— the Central Society of Architects of Buenos Aires, professors from the Faculties of Agronomy and Architecture and Urbanism of the University of Buenos Aires, as well as the Burle Marx office in Rio de Janeiro made their protests heard.

In 2001 the Museum of Latin American Art of Buenos Aires (MALBA) was inaugurated on the adjacent plot to the Plaza, a private institution that preserves and exhibits an outstanding artwork collection by the main modern and contemporary artists of the region, which is of great cultural impact for the city. Since MALBA became so popular, there has been a significant change in the way the plaza is used. The Plaza itself, which previously served as an area for children's leisure and for the elderly to relax, became a place just for passing through, a forecourt that is no longer comfortable. Occasionally, there are fairs and food stalls during the weekends, but during the week, it is an undefined space, provisionally active, but of little relevance for the neighbourhood on a day-to-day basis.

Despite these events, the "*muro-juegoniñico*" and the playful spirit of this Plaza still persist in the collective memory of the inhabitants of the city. Despite the fact that its construction was left unfinished and it became a vestige in ruins before its completion, the project conceived by the Brazilian master is latent, still awaiting the opportunity to be restored and reconstructed.

5. DOCUMENTATION & DEMOLITION VS. RESTORATION & RECONSTRUCTION

Faced with the current situation of the distorted masterpiece, this paper aims to reflect on the challenge posed for its future and for its role in the contemporary city. On the one hand, an option would be to survey, document and demolish, to make room for a new project, as has been proposed in the

7. In "Primer paso para ampliar el Malba bajo una plaza," *Clarín*, November 11, 2011.

8. Topadora=Bulldozer

project to expand MALBA by occupying the underground of Plaza Peru, thus finally erasing all vestiges of Burle Marx's original project[9]. On the other hand, another approach could be to consider its restoration and reconstruction not only as a significant part of the cultural and landscape heritage of the city, but also in terms of a contemporary project design paradigm to address two contemporary urban problems faced by the City of Buenos Aires. These include the lack of green spaces that boost urban biodiversity and the lack of public spaces intended mainly for childhood. These issues are on the public agenda, on the one hand in the Urban Environmental Plan (2008), which promotes improving the citizenship quality of life and providing access to and enjoyment of green urban spaces for all residents, while also preserving environmental, architectural, and cultural heritage. On the other hand, the Children's City Index (ICI), which evaluates the urban quality in relation to the availability of facilities required to guarantee childhood development within the framework of the International Convention on the Rights of the Child, National Law No. 26,061 and City Law No. 114 on the Comprehensive Protection of Children and Adolescents' Rights.

All these issues and design values are still present in this space and can be considered and recovered through the restoration and reconstruction of the original Burle Marx's Plaza Perú Project.

In addition, recovering this masterpiece which brought together common values to modern Latin American culture would be consistent with the current situation of the immediate urban environment, dominated by the MALBA.

Although the "*muro-juegoniñico*" and the mural have been destroyed, the original layout of the whole landscaping project is still preserved, as well as the pathways, the equipment - ribbon benches and linear benches-, the statue of the Inca Garcilaso de la Vega, the parterres and some of the species initially planted. Regarding vegetation, the only tree species that remained over the years is the *Jacaranda*, as the rest were replaced with other varieties such as *Palo Borracho* —a native tree—, Maple, Ash and Privet —EEI[10]—, which has had negative consequences in view of the contemporary issue of biodiversity loss, but also considering its significance in terms of the original project concept associated with the research on the American landscape identity.

In addition, it is important to consider that it is still possible to carry out archaeological surveys to find the vestiges of the demolished elements, recover the species still on site and replant those projected, based on the vast documentation preserved on the project and its materialisation.[11]

6. MATERIALITY VS. AUTHENTICITY: A RECURRING DILEMMA IN MODERN ARCHITECTURE PRESERVATION

Even though the theory and methodology adopted for the conservation of Modern Heritage should not differ with respect to those used for previous historical periods, many interventions carried out on these works have radically changed fundamental preservation principles: minimum intervention, maximum preservation of the original materiality, conservation *as it was found* and *where it was found*, reversibility and discernibility of the

9. "Project by Arch. Ott," *Clarín*, November 11, 2011.

10. Invasive alien species (EEI) causes loss of biodiversity, affecting public health, economy loss and degradation of historical and cultural values, https://www.argentina.gob.ar/ambiente/biodiversidad/exoticas-invasives/eei#:~:text=%20species%20ex%C3%B3ticas20invasivoras%20%(EEI,causes%20p%C3%A9rdida%20%of 20biodiversity

11. Preserved by Arch. Montero, by the Historical Archive of the City of Buenos Aires and by the Burle Marx Institute.

interventions carried out, ruling out reconstruction[12]. In fact, reconstruction has been a common practice in conserving the architectural legacy of the 20th century, ranging from modification of materials and constructive details to improving durability and the full reconstruction of lost works[13]. An in-depth analysis of this practice involves rethinking the concept of authenticity and considering its meaning in different cultures and historical periods. In these contexts, the authenticity of cultural heritage is not solely based on material originality, but also on its ability to guarantee the permanence of its essential values, such as historical and documentary significance, cultural and symbolic meaning, and design and craftsmanship[14].

The reconstruction of those demolished features of Plaza Perú should aim to authentically document its own constructive nature, form and texture and to recall the original space with scientific rigour. In this way, it could faithfully recreate the historical-aesthetic message of Burle Marx's project, ensuring that it can be passed down from generation to generation.

In addition, there are objective advantages that could help to reduce hypotheses about the original elements. This is because the project. Has been thoroughly documented allowing for its in-depth knowledge. Photographic records and drawings are available for both the project under construction and its subsequent stages, including demolitions and transformations over the years. Likewise, temporal proximity allows for contacting the authors or their collaborators[15], in this case the Burle Marx Institute and the director of the work, Arch. Montero, who has provided invaluable details about the design and construction process, and preserves detailed work documentation.[16]

Just as in the case of artistic assets, inappropriate interventions on *gaps* can distort and seriously affect authenticity.[17] In the case of Plaza Perú, those modifications after demolitions —including planting species over the void left by the spiral, that were not foreseen in the original project, such as *Palos Borrachos*, *Lapachos*, *Gramineae*, in addition to the changes in paving, lighting equipment and furniture— represent in themselves a false landscaping. A work stripped of its essential attributes cannot in itself be authentic, however authentic some of the preserved elements and species may be. Intervening in these gaps and recovering their functional values would not mean supplanting the author or falsifying his work. On the contrary, it can be a way of restoring its authenticity. As in the case of historic gardens, here, authenticity does not depend on the material originality of its elements, but on preserving its layout, its botanical and artistic wealth as a means to transmitting the sensory and aesthetic experience felt by the early users to future generations[18].

Finally, it is essential to understand that for the City of Buenos Aires, the recovery of this Burle Marx's masterpiece would be a cultural reparation. This would allow for a better understanding of its historical and cultural significance in relation to the contemporary habitat and the cutting-edge ideas associated with Modern Latin American Heritage. ■

12. *Venice Charter* (1964).

13. German National Pavilion, Barcelona International Exhibition (1929), by L. Mies van der Rohe and L. Reich; Spanish Pavilion, Paris International Exhibition (1937), by GATEPAC, *Pavilion de l'Esprit Nouveau*, Paris International Exhibition (1925), by Le Corbusier; among others.

14. *Nara document on authenticity* (1994) and *Carta de Brasilia. Documento Regional del Cono Sur Sobre Autenticidad* (1995).

15. Berthold Lubetkin at Penguin Pool, London Zoo, Truus Schröder, at Schröder Rietveld House, José Oubrerie at Saint-Pierre Firminy Church, among others.

16. Interview with Arch. Montero at the course "Intervention Project in Architectural Heritage," Institute of Architecture and Urbanism, Habitat and Sustainability School, UNSAM.

17. Such is the case sadly known around the world of the so called "restoration" of the *Ecce Homo* of Borja in Spain, in "The restoration of an *eccehomo* becomes a world sainete," *El País*, August 23, 2012.

18. *Historic Gardens. The Florence Charter* (1981)





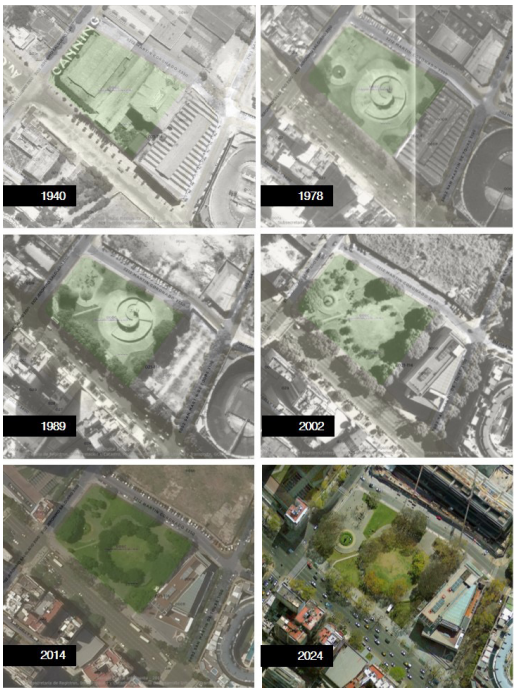


Fig. 1 Aerial view of the Plaza Perú. (Circa inauguration, 1972). (Font: Arch. Montero)

Fig. 2 The "*muro-juegoniñico*", with the mural as backdrop. (Circa inauguration, 1972). (Font: Arch. Montero)

Fig. 3 Plaza Perú Timeline. (Author's elaboration, 2023).

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REDEFINING THE ROLE OF PUBLIC SPACE AS AN URBAN CONNECTOR IN THE LORD COCHRANE HOUSING COMPLEX IN VIÑA DEL MAR

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ABSTRACT

Designed by architects Juan Echenique, Alberto Piwonka and José Cruz, and built between 1961 and 1964 in the Recreo district of Viña del Mar, the Lord Cochrane Housing Complex was part of the new concept of urban development promoted at the time by the Housing Plan of the Corporación de la Vivienda (CORVI). The project proposed a housing density that would allow for the presence of green areas and the incorporation of various services, in favour of programmatic and social integration. It also envisaged the conformation of housing buildings of different typologies and sizes, a park and associated facilities: a plaza, a school, space for a neighbourhood council and community centre, sports fields, a parish church and car parks.

This paper aims to analyse the public space of the PLC, comparing the visions and models proposed by its architects in the initial design, and how its form continues to meet the current needs of its inhabitants. One of the main aspects that allow it to be defined as a pioneering project of modern architecture in Chile is the relationship between the typological experimentation of the housing blocks and the topography, characterised by a steep slope and a natural environment.

The conclusions reveal the peculiarities of an example of rational architecture, valuable for its link with the city's history, for its relationship with the landscape, for the challenge posed by the topography, and for the redefinition of public space. By rethinking the park's role as a factor capable of mitigating the dichotomy between public and private space, the housing complex could present an opportunity to develop urban regeneration strategies that could be applied to other case studies in the region.

1. INTRODUCTION

This paper presents the case of the Lord Cochrane Housing Complex (1961-1964) as a project that closely linked housing development policies and the postulates of modern architecture in Chile. It attempts to explain a complex that has gone unnoticed by critics and Chilean historical and heritage studies but nevertheless encapsulates and proposes fundamental issues about the political and architectural processes of the 1960s.

In 1961, the Corporación de la Vivienda (CORVI) launched a competition to develop a housing and community facilities programme on a hill in Recreo, Viña del Mar, to construct the Lord Cochrane Housing Complex. The land, which belonged to the Caja de Previsión de la Marina Mercante[1] (CAPREMER), was acquired by CORVI in an operation in which 10% of the housing would be given to the fund as payment for the land, and the remaining 90% to CORVI's affiliates.[2] The team made up of the architects Juan Echenique, José Cruz, and Alberto Piwonka won the competition, and the project was built by the construction company Nahmias Hnos. y Cía. The original project envisioned a social mix of buildings, with public housing for CORVI, housing for members of the Caja de Empleados Particulares[3] (EMPART) and housing for workers of the Caja de Marina Mercante Nacional (CAPREMER) and the Caja de Previsión de la Defensa Nacional[4] (CAPREDENA).

A review of the historiography of the Lord Cochrane Housing Complex in the context of modern architecture in Chile revealed no monographic publication is dedicated to the work. Similarly, there is little research on the development of public housing in the Valparaiso Region.

The study by Torres[5] highlights how, in the 1960s, the expansion of Viña del Mar was approached as a housing challenge in which the topography defined the limits of urban design and accessibility. However, at the same time, it enhanced possibilities for architectural design, as in the case of the Lomas Victoria Housing Complex in the Viña del Mar Alto area (EMPART, 1960) or the Lord Cochrane Housing Complex in Recreo (1961-1964, Piwonka, Echenique and Cruz). Ferrada's research[6] aims to address the main landscape issues related to the modern collective housing built in the city-port of Valparaiso between 1906 and 1976, highlighting how the complexes built between 1953 and 1976 were part of the work carried out by the CORVI to transform the housing problem into a matter of social and political rights.

An important precedent regarding the evolution of the public space of the complex is the doctoral thesis by Carrasco[7], which reviews the current state of seven modern housing complexes built in Valparaiso and Viña del Mar. It demonstrates how the appearance of new high-rise models on the hills had significant consequences on the scale of the neighbourhood and the city, such as the appropriation of the common heritage of the citizens —the view of the bay landscape— and a certain lack of control in the relationship between the built and its immediate surroundings.

However, no research has analysed the Población Lord Cochrane from the perspective of modern public space, comparing the visions and models

1. Merchant Navy Provident Fund.

2. Molina B., Cristóbal, *Concursos De Arquitectura en Chile: su aporte al desarrollo cultural y a la calidad de vida*. Santiago, Chile: Consejo Nacional de la Cultura y las Artes, 2015.

3. Private Employees' Fund.

4. National Defence Provident Fund.

5. Torres Gilles, Claudia, Gonzalo Abarca Gambaro, y Sandro Maino Ansaldo. 2022. "Arquitectura Moderna De Viña Del Mar, 1930-1970. Aproximaciones Para Su valoración Patrimonial". *Revista De Arquitectura* 27 (43). https://doi.org/10.5354/0719-5427.2022.67060

6. Ferrada, M. (2024). "Explorando las claves paisajísticas de la vivienda colectiva moderna: Valparaíso, Chile (1906-1976)". *EURE* (Santiago), 50, no. 149, 1-27. https://dx.doi.org/10.7764/eure.50.149.09

7. Carrasco Walburg, Carolina. La espacialidad del encuentro. Análisis de las comunidades de los conjuntos habitacionales moderno en el caso chileno del Gran Valparaíso (PhD diss., Universidad Politécnica de Madrid Escuela Superior de Arquitectura, 2015) 237-240.

that the architects promoted in their design and how its form continues to meet the current needs of its inhabitants.

Questioning the current state of public space within modern housing complexes would help develop ideas for its conservation and possible adaptation. For this reason, it is necessary to ask: What has determined the abandonment of modern public space? What are the current needs of the inhabitants and the communities of the complex? How can the public space of the modern complex be adapted to these needs?

The purpose of the study is to analyse how the current public space differs from that of the modern era and to update the structuring role of the natural public space for the recovery and improvement of the complex. The research is based on primary sources from historical archives, magazines of the time, and the photographic record of the current state of the public space of the complex, as well as the historical and morphological analysis of the architectural attributes.

2. BETWEEN THE LANDSCAPE AND MODERN ARCHITECTURE

The space of Valparaíso is an architectural phenomenon that generates remarkable and profound human characteristics evident in its buildings. Beneath the city's picturesque space, many valuable architectural lessons coincide in essential points with current research: "To give the inhabitants the enjoyment of space, of the sun and a panorama to look at every day."[8]

This is how the *Revista de la Construcción* described the works of the Valparaiso housing plan at the beginning of the 1960s. The José Ignacio Zenteno housing complex on the Lechero hill, the Loma Victoria complex in Viña del Mar and the Lord Cochrane Housing Complex in Recreo were among those presented. What unites the complexes is their location in the amphitheatre of Valparaiso, whose essential characteristic is that the hills, the sea, the sky and the horizon, form that space.

Marina Waisman[9] argued that the work of architecture is inseparable from its environment, even more so than physically or conceptually, since architecture is conceived in an obligatory way from a location in a specific site, and this site and its circumstances constitute basic elements for the conformation of the programme and for the subsequent development of the work. For Waisman, identifying the typology of the relationship between the work and its surroundings is an element that provides access to an in-depth look at the ideological meanings of the form and reveals facets of the designer's thoughts on the urban project.

The general approach of the Lord Cochrane Housing Complex project responds to the site's topography and incorporates the natural space of the three ravines into its organisation by defining their urban edges. In particular, the three longitudinal residential blocks, through their concave and convex shapes, create a filtering area with the roads that define the site, thus creating a sector intended for parking. On the other hand, it leaves the three ravines present on the site intact, creating a green lung within the complex.

8. "Realizaciones del Plan Habitacional en Valparaíso," *Revista de construcción*, no.52 (September,1966):51-64.

9. Waisman Marina. *La estructura histórica del entorno*. Buenos Aires, Argentina: Ediciones Nueva Visión, 1972.

The complex was configured from two typologies of blocks: the curved, larger blocks, placed parallel to the elevation and formally insinuating the terrain altitude and with an external circulation system, and the smaller-scale linear blocks, placed in two groups perpendicular to the elevation and arranged in steps on the slope. As described in *Auca*,[10] the complex was organised in two sectors: one located in Valparaiso (sector 1, 303 flats), made up of two of the curved blocks (A and B), and three smaller-scale blocks (D, E and F); and another located in Viña del Mar (sector 2, 276 flats) made up of a curved block (C) and five blocks arranged perpendicularly to Manuel Rodriguez street.

Its location makes the Lord Cochrane Housing Complex an exceptional case in the relationship between private and public space. The complex allows us to analyse the evolution of the concept of public space according to modern postulates, showing a link between the conceived model and the built reality.

The centre of the complex was planned between blocks B and C. The school, gymnasium, church, market, and shops were to be located there. Later, after the first phase had been built, the construction of these buildings, except for the church and the Lord Cochrane School, was dismissed. It was, therefore, not possible to define the space of the plaza.

In the original design of the complex, the construction of a plaza was envisaged as an urban element that would represent a milestone in the planning, since it was considered to be an articulating space that would contribute to the improvement of the area and the well-being of the people, promoting the right to the city. In this sense, and following the postulates of the Modern Movement, the plaza, through its physical and experiential characteristics, determines the fulfilment of planning, the articulation of the urban grid and the interaction of the human being with the physical built environment, thus generating narratives of experience that nourish the rootedness, territoriality, identity, identification, legibility, accessibility, memory, connectivity and the improvement of the urban landscape. In the Lord Cochrane Complex, the non-execution of the community facilities and the plaza has transformed the natural space of the complex into the public space of the inhabitants.

What can be observed today is, therefore, a radical change in the definition of space, not only in relation to the surrounding urban fabric but also in the perception and sense of use that residents imprint on it. However, over sixty years of operation, interstitial, residual or lost spaces have emerged, which can be seen as unintended consequences of modernity and the total failure of an ideal of community space as such.

3. AN INTERIOR ALONG WITH THE CONTINUITY OF THE TOPOGRAPHY

The views from the top floors of the longitudinal blocks are powerful, with the older urbanisations below and the sea on the horizon. Faced with the task of building a new complex in a sparsely populated area like Recreo, the architects did not resort to the formal repertoire of the more common modern complexes, such as the prototypes of the neighbourhood units and towers,

10. Echenique, J., Cruz, J. and Piwonka, A. (1968). "Población Lord Cochrane." *Auca: Arquitectura Urbanismo Construcción Arte*, no.11 (1968):42-45. https://revistas.uchile.cl/index.php/AUCA/article/view/59004

but sought an answer in the more radical models of the modern tradition. Although not declared by the winning team, the Lord Cochrane Housing Complex shows, in the relationship that the buildings establish with the "void" of the public space, a certain analogy with Le Corbusier's Obus Plan (Algiers, 1932),[11] or with the proposal for the Naval School of the Institute of Architecture of the Catholic University of Valparaiso (IA-UCV, 1959). With the latter, in particular, there is a similarity in the spatial approach to the blocks, since the direction of the wind, the "cadet's routine" and the topography were the problems to which the project had to provide a formal solution. The observation of different acts on the site was the research tool.[12]

As Pérez points out, "form does not allude to the formal repertoire of architecture but rather to a specific configuration that responds to a given problem of the site."[13]

By analogy with the spatial structure of the Lord Cochrane Housing Complex, the IA-UCV project consisted of an open system that could contemplate additions and modifications in a clear logic of appropriation of the site, without altering its order. There was an idea of organic growth of the works at different scales; at the architectural scale of a house, as an ensemble, or an urban plan, the architectural approach longed for a system open to other processes, including additions, subtractions, and modifications, that would not disturb the organisation. There was a composition based on the external space, which was no longer what remained of the composition of the parts, but the empty space moulded the built one.

The particular relationship with the topography of the Lord Cochrane Housing Complex also suggests a connection with the Quartiere INA-Casa di Forte Quezzi project in Genoa. The architects' research, rather than defining the individual dwelling – not very innovative from a typological point of view, but interesting from the point of view of the relationship between individual and collective spaces – was aimed at developing a settlement model that would transform a sparsely populated sector of an isolated fragment, devoid of relations with the older neighbourhoods, into a structure that would establish an organic dialogue with the territory.

According to Argan,[14] the urban character of modern architecture was based on the idea that only by thinking of urban space is it possible to define the architectural form of each building within it. The Italian historian identified two dominant trends in modern European architecture: on the one hand, the "continuous projection," the "unlimited divisibility of space," the "search for quality" in the precise definition of the quantitative situation, and, on the other hand, a genuine "search for plastic formal evidence." Aalto's architecture was the first to achieve this synthesis, and Argan recognised its ability to perceive the geometric plan as a surface embedded in its environment, whose luminous condition was concretised in geometry itself, and which was located in the natural environment as a constructive, divisible and plastically articulated plane. Aalto intuitively understood not only that architectural form had to originate in the natural condition, but also, above all, that by locating itself in the natural condition, it had to radically transform it.

11. Molina B., Cristóbal. "Trozos en el territorio, la población Lord Cochrane." In Patrimonio moderno y ciudad. Actas 3er Seminario Docomomo Chile, Valparaíso, 2009.

12. Braghini, Anna. El espacio como interpretación de la arquitectura. El IAU de la Universidad Nacional de Tucumán (1947-1952) y el IA de la Universidad Católica de Valparaíso (1952-1960). (PhD diss., Pontificia Universidad Católica de Chile, 2023).

13. Pérez O., F. (2007). *Guillermo Jullian: Valparaíso y los años formativos. "Massilia: anuario de estudios lecorbusierianos"* (Santiago de Chile: Ediciones ARQ, 2007):54-67.

14. Argan, Giulio Carlo. *El concepto del espacio arquitectónico desde el Barroco a nuestros días*. Buenos Aires, Argentina: Nueva Visión, 1966.

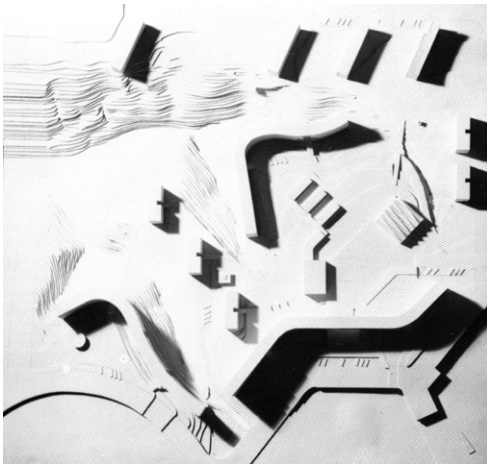






Figure 1. Juan Echenique, Alberto Piwonka and José Cruz, Lord Cochrane Housing Complex, Recreo, Viña del Mar, 1961-1964 © Archivo Alberto Piwonka, Archivo de Originales Facultad de Arquitectura, Diseño y Estudios Urbanos. Pontificia Universidad Católica de Chile.

Figure 2. Lord Cochrane Housing Complex, Recreo, Viña del Mar © Anna Braghini, 2024.

Figure 3. Juan Echenique, Alberto Piwonka and José Cruz, Lord Cochrane Housing Complex, Recreo, Viña del Mar © *Revista de la construcción*, no. 52, September,1966.

Examining the public space of the Lord Cochrane Housing Complex, it is easy to see that the arrangement of the longitudinal blocks also succeeds in shaping the space around it. Any observer who takes a closer look at the plastic form of the complex can see that it moves away from the purely formal character defined by a certain "aestheticism" of the complexes of the same period, such as the Recreo Alto Housing Complex. This is a precedent of the rationalist architectural criteria implemented in the organisation of settlements on slopes, in a context with rural qualities and in the process of densification, where the neighbourhood consisted of small houses perched on the hills and some chalets on the lowest elevation of the hill. Or as in the case of the Unidad Vecinal Loma Victoria in Viña del Mar, whose spatial organisation responds to the slope by defining a grid of perpendicular streets, with the larger linear blocks positioned perpendicular to the slope and the smaller blocks positioned parallel to it.

From 1973 onwards, the establishment of the military dictatorship radically changed social policy and signified the end of the welfare state. In the Lord Cochrane Housing Complex, the centralised administration ceased to function and each block began to be managed autonomously. This led to the separation of sectors and the initial closures of circulation and access to the blocks. In recent years, for security reasons, the communal areas have been progressively closed off with bars and, particularly on the ground floors of blocks A, B and C, the residents have closed off the public areas close to their flats.

4. CONCLUSIONS

The current state of neglect of the public space in the Lord Cochrane Housing Complex could easily suggest that the "experimental" nature of the complex has not lived up to modern expectations. However, when analysed in terms of the form of public space, the open space of the sclerophyllous forest shows an extraordinary relevance, despite the changing environmental conditions. Its density and the value of the forest as a green lung are flexible enough to accommodate new forms of public use. The public space not only acts as a unifying element in the layout of the residential buildings but also mediates their relationship with the surrounding neighbourhood.

The current relevance of the complex lies in its expansive green space, as a forest is integrated into the ravine, although unfortunately abandoned in certain parts. It is, therefore, urgent to propose an architectural and urban intervention to restore the semi-public status of those spaces that have been lost and have now taken on a private character. This category encompasses the common areas of buildings, courtyards and plazas that have been fenced off and locked up, and no longer function as public spaces. The proposal involves exploring strategies to reinterpret the public space of the Lord Cochrane Housing Complex as a nexus and promoter of urban identity, not only between the different blocks of flats but also with the urban fabric that surrounds it, favouring the neighbourhood use of the spaces. Undoubtedly, the public space of the forest plays a key role in the identity of the complex. ■

BIOGRAPHY

Anna Braghini. Architect IUAV, Istituto Universitario di Architettura di Venezia in 2009. She holds a Master's in Architecture from the Pontificia Universidad Católica de Chile (2017) and a PhD in Architecture and Urban Studies at the Pontificia Universidad Católica de Chile and IUAV (2023). Currently, she is an Associate Professor at the School of Architecture and Design of the Pontificia Universidad Católica de Valparaíso. She has worked as an architect at the architectural firm CZA Cino Zucchi Architetti in Milan from 2009 to 2015. At the same time, she taught at the IUAV (2012-2016). Her field of study focuses on the history and criticism of modern architecture.

OPEN SPACES IN MODERNIST HOUSING COMPLEXES: URBAN AMBIANCE IN THREE CASES OF SANTIAGO DE CHILE

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#13

ABSTRACT

The research seeks to reveal the preferences of users for typological public spaces of the modern urban complexes considering the lessons that could be deduced from this way of densifying the city. The public spaces of three modernist housing complexes of Santiago de Chile (San Borja, Torres de Tajamar and Inés de Suarez) are disassembled, the uses are registered, and the ambiances identified to relate the spatial characteristics with the preferences of the users.

1. THE STUDY OF URBAN AMBIANCE IN THREE MODERN COMPLEXES OF SANTIAGO

In Santiago de Chile, as in other parts of the world, the mass housing complexes of the modern movement covered large patches of urban land. In these, a different logic to the traditional compact block of the Latin American city was configured, with important interior spaces, circulations and commercial plinths that were dissociated from the street and vehicular traffic. The research seeks to reveal the preferences of users for these public spaces — which prove to be highly versatile in their potential for adaptation — considering the lessons that could be deduced from this way of densifying the city.

The modern complexes were promoted by the welfare state during the government of Eduardo Frei Montalva (1964-1970) and were continued by the government of Salvador Allende (1970-1973). In 1965 the Urban Improvement Corporation, CORMU (1965-1969) was created to developpe a policy of "urban renewal", with the expressed idea of improving and renewing deteriorated areas of cities, increasing urban density, freeing up a high proportion of land and proposing a counterweight to the expansion of the urban sprawl. Since the creation of the CORMU, many complexes were built in the principal cities of Chile, and their residences remain in used and have a medium price in the real estate market, especially due to their central location. The public spaces of these complexes experienced deterioration, and this, in an unequal way depending to their typological condition. That is why this text focuses on exposing the search for an understanding of the different formal conditions that influence or could influence the evolution of the different pieces of public space that make up three modern housing complexes in Santiago.

The public spaces of San Borja (Bresciani, Valdés, Castillo y Huidobro Architects, 1969-1976), Torres de Tajamar (Bresciani, Valdés, Castillo, Huidobro and Prieto Vial, 1967) and Ines de Suarez (Barrenechea, Ehijo, Lawner, 1970) are disassembled, the uses are registered, and the ambiances identified to relate the spatial characteristics with the preferences of the users. The characterization of the spaces in four types: squares, connectors, shelters and remnants show that the shelters are the more used spaces and the ones with the featured ambiances, challenging the role of the square as a primary space. The proposition aims at understanding how using the concept of ambiance informs about urban micro-spaces. Ambiance is here understood as the emerging feature of the relationship between inhabitants' spatial practices, space and its sensory elements, since built environment becomes meaningful when used, inhabited and enhanced by individuals[1]. The study of the environment — in the sense of ambiance — would focus therefore on understanding the spatial and sensory devices that allow social practices to produce a particular and identifiable characteristic of a given space. The exposition delves into the spatial analysis of the possible motivations that lead to the choice of the shelter versus the square, by observing the use in practice. The choice of ethnomethodology, in that case, substitutes the study of perception per se by the study of the implementation of perception

1. Jean-François Augoyard Vers une Esthétique des Ambiances" in *Ambiances en Débat* ed Pascal Amphoux; Jean-Paul Thibaud, Gregoire Chelkoff, (Bernin: Editions À la Croisée, 2004); Jean-François Augoyard, *Pas à Pas*, (Bernin: Editions À la Croisée, 2010); Jean-PaulThibaud, *L'espace urbain en méthodes*, (Marseille: Editions Parenthèses, 2010)

in practice; aiming to understand how individuals' coexisting ways of perception are incorporated in daily activities and are their constitutive elements[2] A summary of the previous works that analyze the four typified spaces will be presented[3] and a detail of the observation of the inhabitant practices located in the squares and shelters will be exposed to relate them to the characteristics of the built space and its emergent perceptual properties.

2. THE SQUARES, CONNECTORS, SHELTERS AND REMNANTS

In previous research, the public spaces of the three chosen modern complexes were studied and cropped into four archetypal spaces that were identified and catalogued for each complex. The square is the prime space of urbanism since the Renaissance[4], and in the modern architecture of this large residential ensembles takes the most significative space between towers. In the three of them it is elevated from street. Especially in San Borja and Inés de Suarez it was conceived as a double square, one more public accessing to the buildings and an upper square more intime, conceived for the dwellers. In both cases, these upper squares are closed, denied to residents and the public by bars.

The connectors were the most singular characteristic space of these modern complexes, supposed to allege fluid access to the residential towers, and the expression of the new free experience of space. In Torres de Tajamar, the connectors are at the same level of the square and access, and maintain their condition of a corridor. In Ines de Suarez they were double: on the same level of the street and also on an upper level, connecting with the second square, now closed. In San Borja, connectors were conceived as a second possibility to experience and access the ensemble, connecting it with the city and at the same time, isolating the peasant from its realm. Nowadays, these connectors figure completely closed, and were only opened for exceptional days in the last years, showing its immense possibilities and the interest of neighbors[5]

The shelters are probably the most difficult to describe. It references to the haven created by the setback of the buildings in relation to the official street line. This is produced at the same time by the will of the modern complex to generate spatial rules differentiated from the traditional checkerboard pattern; and, by the need to solve the contact space with the pre-existing city. In this space the insertion of the modern complex within the urban realm is negotiated: the shelter is the space of Sola Morales' urban acupuncture (2018), the place where the gaps of the urban layout are harmonically combined. By resolving both the different heights of the plinth and the street and the distances with the pre-existing buildings, it offers a space for mediation. It is in this space where the suture between the modern complex and the urban permanencies are played. Adopting mostly the appearance of a bay, these spaces reveal to offer the most interesting possibilities for multiple uses.

Lastly, the remnants are constituted by the spaces with no conceived use. Mostly thought as gardeners or similar, there are abandoned and deteriorated. Especially present in San Borja withs different forms, leftover spaces are better solved in the other two complexes and particularly nearly absent in Inés de

2. Jean-Paul Thibaud, "Una approche pragmatique des ambiances urbaines", in *Ambiances en Débat*, ed by Pascal Amphoux; Jean-Paul Thibaud, Gregoire Chelkoff (Bernin: Editions À la Croisée, 2004.); Jean-Paul Thibaud, "Regards en Action, Ethnométhodologie des Espaces Publics", (France: Éditions À La Croisée, 2002)

3. Ximena Arizaga, "Espacios De Uso Público En Los Conjuntos Habitacionales Del Movimiento Moderno: El Ambiente Urbano En Tres Casos De Santiago De Chile", *Ciudades*, no 23 (Mayo 2023) 21-45

4. Françoise Choay and Eric Lengereau, "Place" in *Dictionnaire de l'urbanisme et de l'Aménagement* ed by Pierre Merlin. Françoise Choay. (France: Presses Universitaires de France, 2010)

5. Ximena Arizaga, "Learning from the ambiance throughout Urban Renewal. Three neighborhoods of Santiago de Chile." *Bitácora Urbano Territorial*, 32, (2022), 233-274. https://doi.org/10.15446/bitacora.v32n1.96010

Suarez. Remnants contribute to the unpleasant vision of the modern complexes and suffer from the unsolved administration of the common spaces.

The decoupage of the four typological public spaces is shown in the **Figure 2**, and examples of each space in the modernist housing complexes are shown below.

3. THE USES AND THE AMBIANCES

For each of the modern housing complex, the uses and the ambiances of each typological spaces were registered between 2018 and 2024, in different moments of the year and in different days and hours. Considering some regards for the research: the three ensembles have similar accessibility by underground and are connected with principal avenues, and despite their differences the three of them are inhabited by similar socioeconomic households. From the three, San Borja is the more centric and submitted by more metropolitan uses in its surrounds, and, Inés de Suarez is in the more residential context.

Principal uses in San Borja complex, without considering its environment are stationery shops due to the proximity with an architectural school, hairdressers, food locals and clothes' small locals in its plinth and a supermarket. In Torres de Tajamar, the corridors are surrounded by hairdressers, offices, small groceries, coffees, a pharmacy, a bar, a game-store, a cabaret, and a betting shop. The Ines de Suarez complex, in the observed years, maintains a martial arts dojo, laundries, a pizza restaurant, groceries, a greengrocery and offers since, new martial arts academies, coffees and a bakery.

The principal square in San Borja experienced since 2018 furniture changes: the space was implemented with flower pots, benches and a pergola. The locals in the borders remain, more deteriorated each year, giving this space an atmosphere of desolation and abandonment despite these efforts. The upper space once invested by an organization which tried to activate it, is now completely abandoned. The concerts, art and crafts market and its festive atmosphere has since disappeared. The points where the modern complex meets the ancient city experience different chances. Bordering the south and the school of architecture of the University of Chile, once a regiment building, a greengrocery used to occupy the sidewalk. In this shelter between the plinth and the road, between the modern architecture and the ancient building and trees, a neighborhood life used to accomplish. On the top of the plinth a coffee still takes place taking advantage of this balcony of the city. Unfortunately, the absence of the greengrocery with its friendly tenants, the choreography of the buyers, the smell and colors of the fruits and vegetables is gone, living the corner grey and gloomy.

The principal square in Torres de Tajamar remains nearly identic during these years, mostly empty, the octagonal kiosks that used to be empty have been occupied by groceries since. The square itself, seems to activate only for counted moments like the event produced in 2016, for the art fairy "espacios revelados" produced by the artists Courtney Smith and

Iván Navarro. Other spaces have little changes, the secondary square has been redesigned with a playground space, used by skaters; a new coffee appeared, the hairdressers are renewed. Still, the haven in the borders remain the more used, with an active life specially at lunch time **(Fig 3)**. The virtuous ambiance is here concentrated in the borders where Tajamar complex neighbors the other buildings and galleries.

Inés de Suarez, is faithful to its residential character, small changes are multiple without a radical intervention: the greengrocery every Wednesday and Saturday improves its services, the locals change and the context remains. The use is more and more intensive in the central covered square: young people dancing their choreographies, children rolling (Fig 4); and, more people in the coffees located in the havens. Probably due to its residential condition, it retains a particular freshness that is benefited by the mix of elderly and young inhabitants who have arrived in this neighborhood and also in the surrounding area.

4. CONCLUSIONS: THE APPEARENT POSSIBILITIES OF ADAPTATION

For each typology of public space identified a different kind of possible uses and practices seems to be adopted. The sum of the formal space, the use and the practice traduce ambiances that seem to have similar bases in the three cases.

Connectors, even if the original possibilities were promising, remain in San Borja and Ines de Suarez truncated. The used connectors are mostly corridors in Tajamar and Ines de Suarez, where these spaces are opened and related to other bigger spaces: square or gardens. In these two complexes connectors keep a positive use and have a neutral ambiance. In San Borja where the principal connectors in the original project were the upper gateways, now closed, the connections are improvised spaces, gloomy, dirty and trapped between buildings.

Squares in San Borja and Torres de Tajamar are mostly empty spaces. In the second case, the space is activated when events considering an important group of persons take place. Currently space is occupied by timid persons lunching in a corner, young mothers playing with their children, or passers-by. In San Borja the space of the square is rarely activated, again, it is only with massive events when it takes sense: a volleyball match for example before the unfortunate last intervention[6]. Since the benches, pots and pergola was installed it only looks more uncleaned and uncomfortable: it's only a passing place. The covered square in Inés de Suarez is the most used, a comfortable floor attracts different activities specially for the younger: dance, roller, yoga. The groceries in the edges are active and needed by the neighbors. This mix of a needed commerce and a clean space seems to be at the core of success and a positive ambiance.

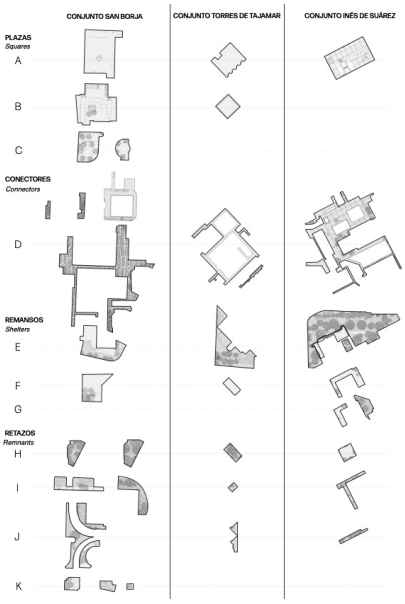
The case of the shelter has similar characteristics of use and practice for the three modern complexes chosen. In San Borja, this is the only

6. Arizaga, "Learning from the ambiance throughout Urban Renewal. Three neighborhoods of Santiago de Chile."









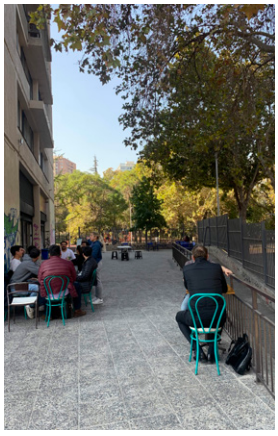


Figure 1: San Borja[7], the upper connectors and the square. © Arizaga, X. 2017.

Figure 2. Decoupage of the typological public spaces in San Borja, Torres de Tajamar, Inés de Suarez Modern Housing Complexes. Arizaga, X. (2023).

Figure 3. Torres de Tajamar: the Shelter. © Arizaga, X. 2024.

Figure 4: Inés de Suarez: skating on the square. © Arizaga, X. 2023.

Figure 5: San Borja: a balcony to the city. © Arizaga, X. 2024.

space in the plinth that invites you to stay **(Fig 5)**. A café has maintained this space for the years of observation, with tables that take advantage of both the shade of the oldest trees, planted on the sidewalk in counter bass; as well as the retreat from the noise and bustle of the street. In Inés de Suarez, each of the bays are occupied by a café, a restaurant, with tables and chairs. Away from the street and the vehicular traffic, here too, the space invites you to stay longer, it hosts a commerce that benefits from this condition of both edge and contact with the surrounding city. In the Tajamar Towers Complex the haven is the space of urban life, several cafes enjoy this space of friction with the city, a sort of small square is created in the distance from the building across the street. Every day it is possible to see this space occupied by an important number of people at lunch time, it is a sunny place separated from the noise of the main avenue and protected from the hustle and bustle of the street.

In conclusion the less flexible spaces turn out to be the largest: the squares. Around these spaces, commerce has less relation with the

7. In the San Borja Modern Housing Complex only the peace considered between Alameda Bernardo O'Higgins, Portugal, Marcoleta and the Parc are considered in the decoupage.

surrounding city, which probably hinders its development. This is particularly marked in San Borja, where the premises deteriorate year after year. In the Tajamar complex, although they maintain a certain standard, they have changed from being public places to offices. In Inés de Suarez, on the other hand, the residential character retains a certain flow of people loyal to the groceries and the principal use of the dojo.

In the other hand, most flexible spaces are the havens: the space of friction with the involving city. This condition favors the existence of a kind of commerce open to a public use, inviting the pedestrians to access and stay in the modern architectural ensemble. It's the space for social interactions, and urban conviviality. The coffees and restaurants usually installed in these shelters take advantage of the architectural form: where a fold is made in the form these premises take advantage of the space to install their tables, their chairs and invite the passer-by to sit down. ■

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ADAPTING A BRUSSELS URBAN REGENERATION TOOL TO THE SPECIFIC CHARACTERISTICS OF A LARGE SOCIAL HOUSING ESTATE. THE CASE OF THE SUSTAINABLE NEIGHBOURHOOD CONTRACT (CQD) PETERBOS

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ABSTRACT

In the early 1990s, against a backdrop of social tensions, the Brussels-Capital Region implemented Sustainable Neighborhood Contracts (CQDs, *Contrats de quartiers durables*) to encourage projects respectful of the existing urban fabric and socio-ecological conditions rather than resorting to prevalent demolition-reconstruction methods. These contracts, funded regionally and implemented at the municipal level, target specific neighbourhoods grappling with social, economic, and urban challenges. Their focus includes public property projects to enhance housing, revamp public spaces and infrastructure and establish community facilities. Additionally, they incorporate socio-economic initiatives to stimulate local societal and economic vitality, emphasizing resident participation.

CQDs have evolved over 25 years, adapting governance and strategies to address the region's diverse needs, extending their scope to new territories. The CQD Peterbos stands out by exclusively targeting a large post-war social housing estate, departing from earlier approaches focused on older traditional urban fabric.

The paper discusses the transformation of Peterbos Park (1968-1981), the Brussels' largest social housing estate built on the outskirts of the city centre, emphasizing the need for urban renewal tools to align with the unique social, morphological, and architectural aspects of such context. Successful intervention requires deep engagement with local communities and a thorough understanding of the site's history and original goals. The challenges of intervening in large-scale social housing estates located outside city centers underscore the need to adapt CQD objectives and resources.

This contribution is an opportunity to put post-war social housing intervention policies in Brussels into perspective, including in terms of architecture practices.

This contribution is based on the results of the "LOGOS/RES-E3" research project (*Le logement social comme resource : énergie, économie, environnement social*)[1].

1. INTRODUCTION

In Brussels, as in many European cities, the post-war period was characterised by urban modernisation and economic development. Numerous districts, were renovated, completely rebuilt, or built ex novo as part of ambitious urban development projects, sometimes by using questionable methods. It was only with the regionalisation process initiated in 1989[2] that Brussels embarked on a revitalizing campaign of its historic neighbourhoods, spurred on by citizen protests highlighting persistent social divisions and calling for more humane intervention that would be more respectful of the existing urban fabric.

Born in the early 1990s, the Neighbourhood Contracts (CQs, *Contrats de Quartier*), which would evolve into Sustainable Neighbourhood Contracts (CQDs, *Contrats de Quartiers Durables*) in 2010, are urban renewal tools developed and implemented by the Brussels-Capital Region with the aim of providing comprehensive solutions in neighbourhoods facing social, economic, and urban challenges.

2. DEFINING THE CONTOURS OF URBAN REGENERATION

Inspired by the scheme introduced in France in the 1980s, known as for Neighbourhood Social Development (DSQ, *Développement Social des Quartiers*), the Brussels tool is based on 4 key principles: (1) Actions on different levels: housing construction and renovation projects are combined with the redevelopment of public spaces and various initiatives to promote social cohesion; (2) Collaboration between stakeholders: the Brussels Region, as subsidising authority, and the municipalities are the main players in the partnership, but the dynamics to be put in place also involve the CPAS (public centres for social assistance), public interest organisations, private investors, associations and local residents; (3) Multiple scales of interventions: the block and individual building policy is extended to a neighbourhood policy, thereby establishing the boundaries of a new administrative unit; (4) A given timeframe: the program is being developed over a four-year period, extended by two years to finalise the implementation of the operations. The new urban regeneration policy is therefore defined as a reciprocal commitment - hence the term 'contract' - to draw up and implement an integrated programme, negotiated collectively, in a given area and over a given period.

CQDs are selected based on a priority zone that has undergone various name changes over time, such as ZPR (*Zone à Protéger et à Rénover*, 1984), EDRL (*Espace de Développement Renforcé du Logement*, 1993), and EDRLR (*Espace de Développement Renforcé du Logement et de la Rénovation*, 2002), evolving into Urban Revitalization Zone (ZRU, *Zone de Revitalisation Urbaine*) in 2012, amended in 2016 and 2020 to incorporate socio-economic indicators, extending beyond the condition of buildings. This adjustment allows for a redefinition of priorities and, consequently, a reshaping of the geography of the most vulnerable neighborhoods. These are gradually forming a contiguous space, commonly known as the 'poor crescent' of Brussels, contributing to the "representation of a continuous,

1. Research project (2022-2025) funded by Innoviris via the Prospective Research Program UCLouvain – Saint-Louis, proff. G. Marino (dir.), C. Cavalieri, G. Ledent, A. Courbebaisse, G. van Moeseke, N. Bernard ; Université libre de Bruxelles, prof. M. Hudon.

2. In 1989, Belgium undertook a process of regionalisation aimed at transferring political powers from the federal institutions to the Flemish, Walloon and Brussels regions, in order to better respond to the country's regional and linguistic aspirations.

unified territory of poverty and blight, at the core of a Region whose other territories remain relatively unknown and under-investigated"[3].

3. BEYOND 'CELLULAR THINKING'

Over the last 25 years the tool has evolved both in its mechanisms and modes of governance to address the region's contemporary challenges, refining its objectives through a succession of organic ordinances and diversifying consequently his resulting urban production. Thanks to a constant interest for innovation, this instrument has become a veritable "machine for renovating the city"[4] and which today extends to more remote areas in the second ring of the Brussels region. The urban regeneration policy that initially consisted of successive interventions in neighbourhoods as "disconnected cells"[5], has gradually evolved into a more global policy **(Fig. 1)**.

In particular, a new ordinance adopted in October 2016[6] proposes new tools to go beyond 'cellular thinking'[7] by promoting better connectivity between 'pockets', working on connections and interfaces.

Another output of this ordinance is the inclusion of new types of neighbourhoods in the ZRU perimeter, including social housing estates. Within this framework, the first CQD whose perimeter was defined exclusively around a large social housing estate, was Peterbos Park.

4. PETERBOS PARK BETWEEN THE LINES

Built in Anderlecht between 1968 and 1981, Peterbos was designed as an inhabited park to support the densification of this district on the outskirts of Brussels, through a logic of green continuity[8] and car accessibility. Nowadays, it represents the largest social housing estate in the Brussels Region, with a total of more than 1,400 dwellings on 17 hectares, representing around 4,000 inhabitants, almost all of whom are social tenants.

Managed by two distinct public housing companies[9] who have taken turns to carry out renovations, some of them major, without any long-term strategic vision, the site has gradually lost any overall coherence **(Fig. 2)**. For many years, it has received a rather negative reception both from the public and its own residents. The park is regularly in the news due to incidents of delinquency that have gradually tarnished its image. In addition, public and open spaces have suffered particularly from neglect and lack of maintenance, leading to a loss of interest and attractiveness to residents. And yet they are an essential feature of large housing estates as they are the main meeting places for residents, the first "commons", and therefore a key issue.

However, the site has outstanding features. Designed in the spirit of a 'park system'[10], Peterbos is an important landscape piece in a network of green spaces on a metropolitan scale, linked by the 'green promenade' that borders the site to the north. The concept of a residential park is embodied in the spatial organisation of the site and the layout of the buildings. The distance from the road allows the green to take centre stage in the relationship with the outside world. This 'open-order' urban feature, which is the identity of Peterbos Park, has remained largely untouched until now.

3. Mathieu Berger, *The lifetime of a policy. Chronicle of Brussels Neighbourhood Contracts*. (Brussels, Belgium : CIVA, 2019), 47

4. Mathieu Berger, *op. cit.*, 109.

5. Françoise Noël, *La ville rapiécée. Les stratégies de la réhabilitation à Bruxelles*, (Bruxelles : Presses de l'ULB, 1998)

6. The 2016 ordinance is the result of a rigorous study to redefine the tools carried out by an external consultancy entitled "*Plan-guide de la rénovation urbaine durable*".

7. Mathieu Berger, *op. cit.*, 54.

8. Commune d'Anderlecht, *Anderlecht commune verte : urbanisme en action*, (Bruxelles : Meddens , 1963)

9. Public social housing in Brussels is overseen by the Brussels-Capital Region Housing Company (SLRB, *Société de Logement de la Région Bruxelloise*), which supervises Public Housing Companies (SISP, *Sociétés Immobilières de Service Public*) of which there are currently 16 spread across the Region. These entities manage housing units and ensure access to social housing for low-income households, in collaboration with public authorities.

10. Leloutre Gery, "Le Park System d'Anderlecht. Construction d'un espace public pour la couronne verte bruxelloise," *Bruxelles Patrimoines* 22–23 (September 2017):114–129.

Furthermore, it is representative of a widespread practice in Europe during the post-war period.

5. RECREATING LINKS BY THE GROUND

As part of the CQD diagnosis, the municipality commissioned Studio Paola Vigano and vvv office to produce a masterplan aimed at "recreating links" between the various entities on the site, but also beyond.

Their analysis suggests that the ground "is a monumental base-ground, with low walls, slopes, staircases, inspired by the Italian Renaissance Garden"[11]. Indeed Peterbos Park is built on a slope, and the design of its spaces is based on a meticulous topographical design. The ground project, established subsequently to the site development plan, is uniformly based on functionalist principles of flow separation: cars remain at the edge of the site, in parking areas arranged around the main access roads. As at the Cité Modèle (R. Braem, V. Coolens, L'Equerre, R. Panis, Groupe Structure, J. Van Doosselaere, 1956-1972), the ground beneath the towers is levelled to create a unified plateau, resulting in differences in height, naturally separating pedestrian areas and car parks. The park features pathways cross the area at a distance from the buildings, creating green spaces at their base. These distinctive characteristics are primarily evident in the initial phase of site construction, whereas the later-built southern part appears to be more fragmented.

Similar to other social housing developments built at the time, financial and logistical imperatives have gradually eroded Peterbos' foundations, leaving the neighborhood devoid of social amenities and essential businesses. What was intended to be a model inhabited park has progressively transformed into an isolated enclave. The progressive development of regional road infrastructure around the perimeter reinforced the rupture and today contributes to the site's introversion and thus, his negative perception.

Based on this diagnosis, the masterplan's proposal aims to extend the identified qualities and the spirit of "monumentality" outwards, towards the city, while at the same time bringing the ground of the city into the Peterbos. This ambition is reflected in the creation of a system of squares located on the edges of the site, "aiming to transform physical or visual 'barriers' into potential places that reinforce the link with the natural ground, the slope of the valley"[12]. The most significant project involves the enhancement of a new entrance in the east of the park. Based on a deep analysis of existing mobility dynamics, it aims to develop a genuine multimodal platform along the main boulevard, which currently acts as a border. At the western part of the site, a similar approach is being adopted with the creation of a local-scale square connected to the neighbouring *Cité Jardin*. Optimization of the parking areas promotes new public spaces whose clarity is ensured by uniform material choices, providing a new coherence and identity to the site.

6. NEW CENTRALITIES

Another specific strength of the CQD tool is that it is based on involving local residents in the planning of their living environment. Participatory

11. Paola Vigano & vvv architecture urbanisme, *Peterbos. Vivre le parc, habiter la ville*. Masterplan, 2020, 21.

12. Paola Viganò & al., op cit., 162.

workshops highlighted the need to move away from the monofunctionality of the neighbourhood, firstly by integrating projects that could attract an external public to the site, and secondly by opening up the possibility of creating employment within the Peterbos. Indeed, the site is currently inhabited by a highly marginalized population with a high unemployment rate **(Fig. 3)**. With the support of the masterplan, the CQD has undertaken: (1) the requalification of the ground floors of the buildings and (2) the construction of new social facilities, initially planned in the first plans of the site but never really achieved[13]. The CQD therefore plans to build a nursery and a facilities hub, itself designed as one of the park's new centrality. This hub is designed to integrate into the landscape, transition smoothly with the relief through adapted features, and ensure the fluidity of movement. His rooftop terrace provides a panoramic view of the surrounding.

7. LIMITATIONS & ADAPTATIONS OF THE CQD TOOL

While the CQD and its masterplan strive to reintegrate Peterbos into society via social and spatial initiatives, it is evident that this approach alone won't address the deeper social challenges emblematic of many housing estates.

Indeed, by concentrating on the public space as the only area for action, Studio Paola Vigano and vvv office highlighted a first limitation of the tool. They are aware that the space for manoeuvre in such a context is both wide and narrow.

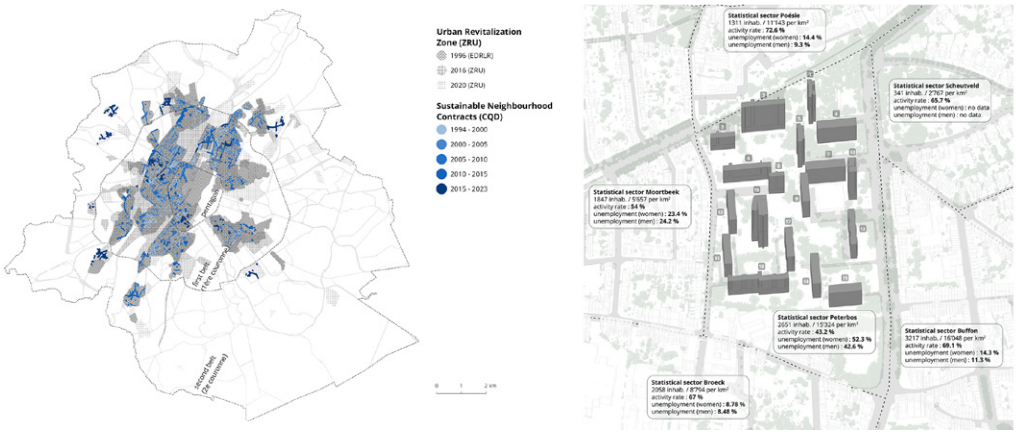
> *Wide, because it fulfils a plurality of practices, ordinary and extraordinary: public space concerns everyone. Narrow, because our project does not have the power to transform the inequality concentrated at this site, which is linked to past decisions that have turned out to be ineffective from the perspective of social integration.*[14]

Another particularity of a site like Peterbos lies in the multitude of actors involved in its slow and gradual transformation. The CQD must accommodate (but can also rely on) projects led by other stakeholders benefiting from their own specific budgets, particularly for building renovations carried out by Public Housing Companies (SISP), which began in 2010, ten years earlier. It is clear that the qualities of the site highlighted in the masterplan have always been overlooked in SISP decisions. From the beginning, and in response to years of neglect in maintenance, these have favoured interventionist attitude, deep renovations, leading to the detriment of the site's integrity and the complete metamorphosis of its buildings.

In addition, this decision-making complexity is not without consequences for local residents. Researchers from the SOHOLAB project (2017-2020), whose main objective was to explore effective ways of involving residents in the regeneration of large social housing estates such as Peterbos, have identified two significant impacts arising from the overlapping of actors and funding sources, as well as the associated temporalities, along with the lack of a comprehensive vision of the site on the part of the residents.

13. Commune d'Anderlecht, *op. cit.*, 40.

14. Paola Viganò, Bertrand Plewinski, Guillaume Vanneste, & Nicolas Willemet, "Peterbos: Living in the Park, Inhabiting the City," in *Urban Living Lab for Local Regeneration*, N. Aernouts et al. (eds.) (Cham : Springer, 2022), 157.





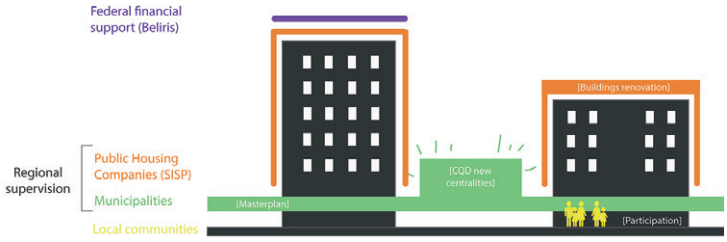


Figure 1. Mapping of the evolution of the Urban Revitalization Zone (ZRU) and the Sustainable Neighbourhood Contracts (CQD). Data source: BruGIS WFS ; UrbisAdm

Figure 2. Peterbos park, Anderlecht, 2023, aerial view. The overall coherence between the different buildings has been lost in the course of renovations. © Authors, 2023.

Figure 3. Layout of the blocs in Peterbos Park and socio-economic features. Data sources : Urbis-Adm 3D ; Urbis-Lidar ; IBSA – taux d'activité et de chômage 2021 ; Statbel – population 2022

Figure 4. Overlap of stakeholders and tools in Peterbos Park. © Authors, 2024.

On the one hand, the multi-actor regeneration of the site created a lot of confusion. The missions and structure of the different agencies are hardly understood. On the other hand, the ad-hoc interventions, consultation processes without actual interventions, malfunctioning transfer systems during renovation works and poor communication about renovations, contributed to feelings of powerlessness regarding the resident's living situation.[15]

When we consider both the shortcomings of the Peterbos site and the efforts undertaken by the CQD to address them, alongside the recent adaptations in the CQD tool, doubts raise about its suitability for addressing the challenges of a social housing estate. Indeed, by concentrating the intervention efforts of a CQD exclusively within the

15. Maranghi, E., Cognetti, F., Ryckewaert, M., Aernouts, N., Mosseray, J., Lefrançois, D., Wachter, S. & Labied, N. *"5 themes from urban living lab experiences in large-scale social housing estates"*, (Brussels: Soholab, 2020)

perimeter of a large social housing estate, is there not a risk of repeating the same mistakes as the initial project? As the challenges of these neighbourhoods are not isolated - they are intrinsically linked to the wider socio-economic and urban dynamics of the Region - extending the scope of the CQD to the surrounding areas, as recommended, and favouring a broader approach could have significant benefits.

8. CONCLUSION & PERSPECTIVES

While it is important to distinguish between the renovation of buildings, carried out by the Public Housing Companies (SISP), and the socio-spatial actions as part of the CQDs, it is clear that by operating at the same time in the same area, i.e. large social housing estates, the actions overlap. The resulting project is a fusion of their respective tools, even if they are, most of the time, not really linked (Fig. 4).

In this respect, an analogy can be drawn between the observations made in this article about CQD tool and the intervention policies on social housing buildings in Brussels.

First of all, the overlapping of actors and funding sources, while inherent to the Belgian institutional system, is not beneficial. The Peterbos' transformation will have lasted 20 years. The fragmented interventions, both spatially and temporally, not only have had detrimental effects on daily life and resident trust but have also led to an irreversible loss of architectural coherence and quality.

Secondly, the CQD mechanism is often politically influenced by power dynamics between the regional authority with its own objectives, and the municipalities, which defend their autonomy. A comparison can be made with the issues surrounding the renovation of buildings, which often involve a blend of conflicting quantitative goals regarding energy efficiency, environmental impact, logistical and economic limitations, cultural values.

To address these issues, it would be useful to rethink the CQD tool with a more integrated approach, bringing together all stakeholders to establish a comprehensive strategy based on a common diagnosis and action plan before any renovation. In the case of large social housing estates, this would facilitate greater interactions between the ground floors of buildings, owned by the SISPs, and the public spaces owned by municipalities, which they help to animate.

Finally, it is important to keep in mind the limitations of urban planning as an action tool. Just like architecture, it can't be solely blamed for the social issues within it. Nor can it claim to solve social divides.

More generally, it would be interesting to move beyond well-meaning rhetoric and address fundamental questions about the position and significance we envision for these neighborhoods in our future societies. To continue fulfilling their social role while maintaining their original identity, large-scale social housing estates requires, above all, a political stance. ■

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BIOGRAPHY

Morgane Bos, graduated with a master's degree in Architecture (ULiège, 2012), started her professional career in architecture's offices in Barcelona and Brussels. Since 2018, she has been a researcher and teaching assistant at LOCI Faculty and LAB Institute. She is currently working on a doctoral thesis under the supervision of Prof. Giulia Marino, investigating the interventions carried out on Brussels social housing built between 1949 and 1980 to address contemporary challenges, with an attention paid to their heritage identity.

Giulia Marino graduated in architecture from the University of Florence and PhD in science from the École Polytechnique Fédérale de Lausanne. She is professor at UCLouvain, LAB Institute Brussels, and EPFL Lausanne. Her scientific interests are centred on the strategies for the conservation of the modern and contemporary heritage, and on the history of construction techniques and twentieth-century building services. She is Vice President of Docomomo Switzerland since 2015 and ICOMOS Member.

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COMMUNITY LIFE AND MANAGEMENT OF NEIGBOURHOOD UNITS

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#14

ABSTRACT

The focus of this paper is to debate modern residential housing developments from the point of view of management, with a particular emphasis placed on social housing developments, especially in Latin America, debating the forms of appropriation and social organisation by the state or by the residents. Originally built as part of social welfare initiatives—which in Latin America have remained incomplete—housing projects have had issues of maintenance, management, and occupation from the outset. Unlike European cases, these developments still have a small, but growing, critical fortune in terms of heritage, management, memory, and social appropriation. In most cases, the states that built them and were originally responsible have sold the properties to the residents. These residents now must deal with the challenges of managing the buildings, the common spaces, and the transformations, while at the same time preserving the memory of the past of these places. Therefore, the issues related to the occupation, management and appropriation of housing are huge challenges for modern social housing in Latin America, which this contribution seeks to explore from various perspectives.

1. INTRODUCTION

The development of modern architecture and urbanism between 1930 and 1979 had a profound impact on the urban structure of Latin American cities and metropolises. This impact is visible today in the large neighbourhood units and in the large portions of the urban fabric that was built on behalf of modern ideals. The housing developments built in the second post-war period are important examples of the realisation of modern ideas in Latin American cities. Furthermore, they have already been extensively researched from many perspectives, especially in the international context. For Miles Glendinning, the mass production of social housing for low-income citizens, usually in high-rise towers or horizontal blocks, was a global phenomenon. It became a model of housing and city adopted in cities around the world, from Moscow to Buenos Aires, from Stockholm to Singapore, combining elements of state and modern architecture.

It could be noted that a correlated phenomenon of broadening the bibliographic bases on 20th century architectural production has also been taking place in other Latin American countries. If in the 1990s Roberto Segre had stated that the social housing built by the emerging industrial proletariat was inadequate and insufficiently addressed in most studies on Latin American architecture, there has been a shift in this trend in recent years. There has been a push for studies that focus on local cases as there was in Brazil, resulting from the increase in postgraduate programmes, and greater stimulus for publication and the historicisation of 20th century architecture. On the history of housing, works by Anahí Ballent, Francisco Liernur, Graciela de Garay, Ana Patricia Montoya, Umberto Bonomo, Flávia Brito, Enrique De Anda, Manuel Ruiz, Rosa Aboy, Sharif Kahatt, José Huapaya Espinosa, Camila Ferrari, Nilce Aravecchia-Botas, Diego Franco and Dinalva Roldan have contributed to a better understanding and interpretation of production in specific cases such as Argentina, Venezuela, Chile, Peru, Colombia, Mexico and Brazil.

There are still many aspects related to the residents, their socioeconomic characteristics or the forms of organisations that were implemented in the neighbourhood units of Latin America that have not been thoroughly researched. The session titled "Management and community life of Latin American neighbourhood units" analyses the development of the large housing complexes built in Latin America between 1930 and 1970. For almost half a century, critiques of this architecture have focused on its architectural, cultural, and social homogeneity, both in the Soviet world and in Western countries. However, empirical research has demonstrated the variety of post-war public production in some parts of the world, overcoming the consensus of unity, monotony, and lack of diversity. In contrast, the experience of modernity in public housing was much further from uniform monochrome, and much closer to embracing overall diversity and complexity in its colours, forms and social composition.

2. HOUSING AND ITS HERITAGE DIMENSION

The solutions for housing on the continent have been diverse and widely debated. If they were built on the basis of compromises between the state and

modernisation in the mid-20th century, they persist as a legacy in contemporary times, revealing and interpreting the ambiguities of the modern project, the tensions over its realisation, its forms of constitution and urban occupation and, finally, the appropriations and reappropriations in its trajectories.

In Europe, the discussion surrounding the legacy of social housing from the 1940s to the 1960s has been intense since the 1980s. This was triggered by the crisis of the welfare state, which redefined the parameters of state action in the field. Important experiments in research, preservation and restoration have taken place in various European countries such as Germany, Italy, England, France, and the Netherlands, and these have garnered the attention of residents, public authorities and interested parties. The ways in which this legacy has been interpreted have varied, both in terms of the character of the complex and the country. From the iconic structures of the inter-war period to the mass complexes of the post-war period, a wide range of considerations have been articulated as a legacy for future generations. Responses have ranged from mass demolitions to the challenges of integrating migrant populations into the suburbs, as well as exemplary cases such as Berlin's Unité d'Habitation. Moreover, UNESCO's consideration of iconic Berlin complexes as world heritage sites demonstrates the diversity of paths and possibilities that housing complexes present as part of our heritage.

In Latin America, housing projects and neighbourhood units have played a significant role in housing policies. For many, however, they have remained incomplete or frustrated achievements, while for others, they represent hope for effective state action on the issue. All the same, it seems correct to state that they remain as documents of a historical process that provided housing for workers during brutal transformations in labour relations, urban territory occupation and social relations. Their permanence in contemporary Latin American cities and the discussion of their legacy for future generations remains a relatively unexplored subject, particularly if we consider the joint meanings of this production. Changes in lifestyles, patterns of working-class domesticity, urban transformations, new labour relations and the role of the State in Latin America when addressing the issue of social housing are all part of a larger body of questions and research responsibilities when considering this legacy.

3. COMMON SPACE AND THE CHALLENGES OF COMMUNITY

In the second post-war Neighbourhood Units, the garden city layouts were replaced by green areas not crossed by vehicular streets, therefore creating macro blocks penetrated only by pedestrian access pathways to the apartment buildings. In these neighbourhoods, land occupation varies between 20% and 40% of the land available for common use, with most of it being used for green areas and equipment. The facilities in the metropolitan experiences of Neighbourhood Units are integrated into the complex, either through dedicated buildings or by occupying the first floors of residential buildings for this purpose.

The common space of the large Neighbourhood Units of the second post-war period is a co-owned space, managed by the communities of new neighbours that inhabit them.

The shared identity is a social capital that in some cases has given rise to community projects, such as the publication in 1966 in the case of the Portales Neighbourhood Unit of the local newspaper Quiubo Vecino.[1]

This local newspaper, produced in 1966 by one of the inhabitants of the complex, can be considered testimony of the new social dynamics that involved the residents of the Unidad Vecinal Portales, built in Santiago de Chile. In this newspaper, products and services were advertised for the neighbours, the residents were invited to participate in community life, and protests were made against the lack of solidarity with the neighbours. **(Fig. 1)** A very representative example of this is the editorial of the Director included in issue Nº. 2 of the newspaper dated July 25, 1966, which describes the objective of this instrument of community building:

Quiubo Vecino! It reached every home in the neighbourhood. It came to make itself known, to show itself. Most of the neighbours welcomed the newspaper with sympathy and enthusiasm. But there were also selfish, indifferent, pessimistic people: they closed their doors, said this was nonsense, that it would fail, etc. It's sad, but there are always people like that.[2]

The article uses an ironic and provocative tone with the objective of denouncing the lack of interest and calling for greater participation from the inhabitants. The same inhabitants who had to live together in this new complex. These neighbours came from different sectors of the city of Santiago, but they shared the lowest common denominator upon which to build the new community. They were all members of the same social security fund and belonged to the same socioeconomic status.

In the case of Brazil, the transformation process took place in the 1960s, when the housing complexes were no longer under the direct administration of the State, which was essential in shaping the broader ideological project of Brazilian workers. The houses built during the Estado Novo regime transcended the sense of a mere "roof over one's head" – they were also aimed at conforming and educating workers. Management of the units went beyond the bureaucratic or physical aspects but stemmed from such convictions and was often closely connected with social work programmes, in which social workers played an active role.

Especially in the housing complexes of the Retirement and Pension Institute of Industrial Workers (IAPI), social workers played an active and direct role in numerous aspects of private and public life. They provided training in home management and child-rearing skills, and organising social functions such as parties and recreation. Such activities were overseen by complex administrators, and are remembered by their residents.

The sale of the residential units marked the end of the social project. Following the sale, the residents themselves began managing the buildings, but only the residential blocks, and the complexes lost their purpose as a

1. Umberto Bonomo, "The Common Space Project. The case of Latin American Neighbourhood Units", In *Contested Legacies: Critical perspectives on Postwar Modern Housing*, edited for Andrea Migotto and Martino Tattara, 115-130. Leuven: Leuven University Press, 2023. P.127.

2. NN. "Quibo Vecino", Nº 2, Biblioteca Nacional, Santigo de Chile, 1966. P.2. Traslated by the authors.

neighbourhood unit that offered several services, such as a school, daycare, health clinic and social club. Residents had to organise themselves into condominiums, whose structure determined whether the blocks would be split or joined, according to the ability of residents to form associations. At the Santa Cruz Housing Complex, in São Paulo, built by the IAPB, residents with a rich history of union organising managed to create a condominium for all the blocks, ensuring their unity. With this, the blocks were not isolated from each other and were fenced off as a unit, not individually. Other complexes were not as fortunate, with condominiums being created for each block, resulting in buildings being fenced off individually, and in the progressive privatisation of semi-public spaces, such as gardens and squares.

Ownership of the dwellings and the properties they are situated on is at the centre of most management and conservation issues for these complexes. Transfer of management to residents led to conflicts that were resolved on a case-by-case basis and according to the capacity of each group of residents to articulate their demands. Residents are responsible for tasks such as trash disposal, collecting maintenance fees, installing new equipment, and solving everyday problems. Pressured by the increasingly common problems of urban violence, the residents of the housing complexes, built on ample spaces open to the streets, began feeling more vulnerable, prompting calls for security measures. However, they often cannot carry out or afford improvements such as installing fencing around the entire plots, which are usually very large and controlled by the public authorities. Actions against urban violence were implemented on a block-by-block, and unit-by-unit basis. Initiatives such as fencing off buildings individually interfere and go against the principles of the modern courtyard by breaking up the building-lot relationship. They go beyond individual attempts to transform and improve homes, such as replacing window frames, a classic management issue in sites of historic interest.

In many cases, the complexes were not built under the most favourable of conditions, and the original projects were far from being completed. Due to construction costs or their location in the urban landscape, the complementary services were deprioritised or not even designed. Often, only the residential buildings were built. In São Paulo, for example, the Várzea do Carmo Residential Complex, by Attílio Corrêa Lima, was only built partially, with nothing more than the residential buildings being erected. The intricate project featuring community facilities such as a school, day care centre, health centre, movie theatre, restaurant, and open areas for leisure and sports never came to fruition.

The Pedregulho Residential Complex, an emblematic work of modern Brazilian architecture, was left to fend for itself for several years, and residents faced challenges in maintaining their apartments. **(Fig. 2)** Despite being abandoned by the government and not owning the apartments, Pedregulho residents appropriated the buildings on their own behalf, making many internal renovations and adaptations. In the 2000s, according to data from Helga Santos, around 50% of the residents were from the initial occupation in the 1960s – mostly comprising service and industrial workers,







Figure 1. Bresciani, Valdés Castillo y Huidobro, Unidad Vecinal Portales, Santiago, 1968. Neighbours holding a vegetable market in the common areas of the Portales neighbourhood unit. (Photo by Fernando Moscoso, Estudio Social y Urbano del Conjunto Unidad Vecinal Portales, Biblioteca Universidad de Chile, 1968, Santiago de Chile).

Figure 2. Affonso Eduardo Reidy, Pedregulgo, Rio de Janeiro, Brasil. Image of Block A before the restoration. (Photo by. Flávia Brito do Nascimiento, Rio de Janerio, 2012).

Figure 3. Affonso Eduardo Reidy, Pedregulgo, Rio de Janeiro, Brasil. Image of Block A after the restoration. (Photo by. Flávia Brito do Nascimiento, Rio de Janerio, 2015)

as well as civil servants. They were mainly from a working class that enjoyed upward mobility during a period of economic stability for the country, with access to consumer goods that are symbols of recent social transformations in Brazil. Since the apartments are owned by the Government of the State of Rio de Janeiro, which never managed their occupation, the units are transferred or sold in contracts between the parties. In this context, residents were faced with a void left by the authorities and the many visits by architects, and there were growing expectations for a restoration project.

In 2015, the restoration works in Block A of Pedregulho were completed, bringing new visibility to the complex. **(Fig. 3)** The project was kickstarted after inadequate public works by the government, which owns the complex, led to a movement to restore the building, which was then identified as a cultural asset. This movement was taken up by architect Alfredo Britto and the Residents Association of the complex, represented by its director, Hamilton Marinho. It meant involving trade associations and public authorities and putting pressure on the owner of the building to contract a project and carry out the necessary works. The restoration, the only of its kind in Latin America for a modern complex posed various challenges to the materiality and habitability of the place, whose residents attribute great significance to the historically constituted space. The iconic intervention in just one of the blocks has put the rest of the modern project on hold, with expectations for the restoration to be expanded to the neighbourhood unit. The open areas and communal buildings, such as schools, a laundry, and a market, are in an advanced state of disrepair.

4. CONCLUSIONS

Housing is a fundamental aspect of cities and the challenges associated with it are often substantial. Some of the continent's housing developments are close to a century old, while others are more than half a century old. Despite their differences, they all share common problems. We refer to the management mechanisms to administer the life of the new neighbourhood communities

and the mechanisms for the maintenance of the urban environments as well as the buildings that compose them. It is essential to recover the "common good" perspective of cultural heritage mentioned by architects when addressing Latin America's heritage challenges. This involves recognising the values of identity and reference that heritage holds for the community.

It is clear that heritage is created in the present, and in light of its issues, the starting point would be to consider the local values and/or significance for residents, without which heritage does not exist. This path, therefore, can only be travelled from the 'users' of cultural items in their broadest sense, including the imagined communities that are interested in, study and produce social housing. If the history of housing in Latin America has a role that oscillates between reference, criticism, and frustration, we propose discussing how it can also mobilise the idea of cultural heritage. While we agree with Roldan that neighbourhood units have been created far from the sociological concepts that gave rise to them, we would like to point out that there are cases in which neighbourhood units have managed to amalgamate very significant experiences of building social identity among residents. It is crucial to build meanings of permanence and safeguarding based on the everyday experiences and perspectives of the residents and inhabitants. ■

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THE IMPLEMENTATION OF THE SALVADOR RESIDENTIAL COMPLEX: FROM MODERN CONCEPTION TO THE CONTEMPORARY APPROPRIATION OF ITS COMMON SPACES

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ABSTRACT

In the 1940s, the Salvador Residential Complex (CRS) was built by the Industrial Retirement and Pension Institute (IAPI), standing as an important milestone for housing production in the capital of Bahia - Brazil. This article aims to: (i) introduce the connections between the CRS and the EPUCS; (ii) present the proposal for the common areas; (iii) reveal the appropriations and transformations of collective areas. To formulate these reflections, initially a bibliographic and documentary review was carried out on the proposed concepts and the subject of our study; subsequently, we conducted on-site visits to the CRS to survey its current situation; finally, we organized activities and interviews with the residents to gain further understanding. The importance of this research lies in elucidating the dynamics of CRS based on the relationships between the standard model of its housing units and the collective domestic facilities. Furthermore, the research analyzes the alignment of its implementation with the assumptions of modern architecture and urbanism and the transformations of the CRS in the face of the complex relationship between the proposal about living and the multiple dynamics of individuals in space. In general, these analyzes considered the resident´s' actions and thus questioned how much these spaces represent impositions of the modern architecture and urban planning project.

1. INTRODUCTION

Several authors have discussed the importance of housing production for workers for the architecture of the modern movement.[1][2][3][4] Between formal experiments, debates about the minimum house and technical innovations, countless sets were built around the world, and in Salvador (Bahia, Brazil) this was no different. At the beginning of the 20th century, discussions about social housing emerged, based on a modern conception that dialogued with urban disciplines, referring to the ideals proposed by the First International Congresses of Modern Architecture (CIAM). At this time, two events marked this convergence in the city: the 1st Urban Planning Week, in 1935, and the Salvador City Urban Planning Office (EPUCS), where international ideas about modern minimum housing circulated.

At the end of the 1940s, the Salvador Residential Complex (CRS) was built by the Industrial Retirement and Pension Institute (IAPI),[5] being an important milestone for housing production in the capital of Bahia. The project was designed by architect Hélio Uchoa, an IAPI employee and member of the Brazilian CIAM group and had the participation of EPUCS in the initial phase of the proposal. The chosen area was located on the periphery of the city, a mostly rural area, where there was an intention of enhancing industrialization. The initial proposal was that the CRS would be a Residential Sector of the city and would have had, presumably, a higher occupation than what finally occurred.

In this context, the main objectives of this article are: (i) introduce the connections between the CRS and the EPUCS; (ii) present the proposal for common areas, focusing on what was actually executed; (iii) reveal the appropriations and transformations of collective areas, motivated by the needs of the residents and the urban dynamics, discussing their motivations and needs; (iv) analyze the alignment of its implementation and transformations with the assumptions of modern architecture and urbanism.

To accomplish this, the study conducted bibliographical and documentary reviews, on-sites visits and interviews with residents. These efforts contributed to developing a comprehensive tool to characterize the CRS and assess the satisfaction of its residents.

2. THE SALVADOR RESIDENTIAL COMPLEX

2.1 CONNECTIONS BETWEEN CRS AND THE EPUCS

The Salvador City Urban Planning Office (EPUCS) was established in 1942, under the coordination of sanitary engineer Mário Leal Ferreira, with the primary objective of developing a Master Plan for the city of Salvador, that included the housing issue.

EPUCS proposed that the state should acquire or expropriate lands considered suitable for habitation, organize them into parcels and equip them with all necessary infrastructure. EPUCS recommended where these workers' housings should be concentrated, under the justification that certain regions could function as catalysts for social development. These guidelines appear to have influenced the choice regarding the location of

1. Ana Beatriz Costa, Larissa Silva-Dias, and Flávia Nascimiento, "Modern Housing and the challenges of preservation: IAPI Vila Guiomar, Santo André/SP", *Cadernos do PROARQ*, no.38 (July 2022): 127-150.

2. Miles Glendinning, *Mass Housing: Modern Architecture and State Power – A Global History,* (London: Bloomsbury, 2021).

3. Nilce Aravecchia-Botas, *Estado, arquitetura e desenvolvimento: a ação habitacional do IAPI*. (São Paulo: Unifesp, 2016).

4. Nilce Aravecchia-Botas, Trânsito de ideias e conformação de práticas: arquitetura e urbanismo na ação habitacional do IAPI." *Pós. Revista do Programa de Pós-Graduação em Arquitetura e Urbanismo da FAUUSP* 23, no.39 (July 2016): 36-52.

5. The "Instituto de Aposentadoria e Pensões dos Industriários – IAPI", was established in the Getúlio Vargas Government, and had a great entrepreneurial role, using its social security funds in the production of social housing in Brazil.

the proposal of Vila do IAPI, developed by EPUCS, with participation of architect Diógenes Rebouças (Andrade Junior, 2012).[6]

This plan suggested an occupation of the land with residential blocks on pilotis, arranged in parallel formation, with equipments that appeared to be complementary to the housing proposal and for community use, considering that it has characteristics that may refer to the "Neighborhood Unity" design principles. Based on these assumptions, the proposal for Vila do IAPI, preliminarily developed by EPUCS, seems to align with universal proposals of modern architecture.

Although this proposal was not completed, it served as a guideline for one that was built, located in a different parcel in the same region, the Salvador Residencial Complex (CRS).

At the time that CRS was built, during the 1940´s, the area in which it was established was considered a peripherical one, predominantly rural and with lack of urban infrastructure. However, it had some prior popular occupations such as Corta Braço,[7] inhabited by unemployed individuals or those in precarious work situations. Therefore, the proposal for the CRS fits this aim to promote housing, industrialization and modern planning developed by the EPUCS during that time. It's worth mentioning that the EPUCS plan to the area was never fully executed.

2.2 PROPOSAL

The final proposal for the CRS included 264 residential units distributed in five blocks of four stories, elevated on pilotis, with a single typology of two bedrooms. The Minimum Unit consists of a living room, kitchen, toilet and two bedrooms, articulated by a central circulation area, with floor surface area of 34.09m². There is a concern with the compact spatial organization and with the idea of minimum circulation. The connection of the minimum unit with the external circulation is established by small corridors that lead to the stairs with fan-shaped pattern, a situation that does not allow many interactions between neighbors, because it does not include spaces for permanence. They also do not exist on rooftops that were designed with a single slope.

One of the peculiarities of the complex is that the service area was not implanted in the minimum housing unit, but on the ground floor of each of the five blocks, with three different sizes. In each of these blocks there were laundry rooms equipped with eight concrete washing tanks. This arrangement allowed for the provision of one of these facilities per apartment. These were designed next to the stairwells which, together with the pilotis, were the only elements built on the ground floor. The laundry rooms had some curves and diagonal walls and were arranged to provide certain privacy to the housework. There was no architectural solution to lay the laundry. There weren't other common facilities included in the proposal of the residential complex that was built.

The parallel arrangement of the five blocks on pilotis, with a certain asymmetry, created a collective area for the residents. Initially, this area didn't seem to have any designated purpose for either the residents or the

6. Nivaldo Andrade Junior, *"Arquitetura moderna na Bahia, 1947-1951: uma história a contrapelo"*. Salvador, (Phd diss., PPGAU-UFBA, 2012).

7. The first collective occupation of Salvador (1946).

surrounding community. Rather, it consisted of a large free area that was enhanced by the existence of elevated buildings on pilotis **(Fig.1)**.

The complex, originally open to the city in its design, lacked provisions for community engagement in the sense of being public and serving the broader society. The facilities provided were primarily aimed at serving the residents of CRS, thus moving away from a more substantial implementation of the "neighborhood unit" concept.

As mentioned before, although the CRS was created in conjunction with EPUCS, its ideals were not fully implemented. Nevertheless, the CRS served as a starting point for transforming its surroundings, with a realization that consciously contrasts - and challenges - the pre-existing context.

2.3 CONTEMPORARY APPROPRIATIONS

The appropriations made by the residents of CRS can be understood as an act of making it one's own, demonstrating how these residential spaces were assimilated or rejected by CRS residents, based on their needs, desires, or cultural reasons. Thus, some interventions and their main motivations, which altered elements of the original CRS proposal, will be presented.

Regarding communal spaces, initially, each unit had the right to use a sink located in communal laundries situated on the ground floors of each block. However, this solution was not continued, since residents began to carry out this activity within their own homes, as indicated earlier. Thus, these spaces were vacated, with their sinks removed. They came to be used as storage rooms, changing their physical characteristics from partially open to fully enclosed, becoming underutilized with inappropriate uses.

This situation highlights questions about the adherence of the equipment to the paradigms of modernity, which preached the importance of collective systems focused on domestic tasks as a socialization tool for what would presumably become modern families. The current state of the laundry room reflects a symbolic narrative that encapsulates the tension between collective and private interests. Initially, the space was characterized by its openness, inviting residents to interact freely, and fostering a sense of communal connection. However, its transformation into a confined area with restricted access signals a shift towards prioritizing individual privacy over communal engagement.

Initially, all CRS blocks had open floor plans, with the presence of pilotis, providing free access. However, this space also underwent transformations which were coordinated and executed by the condominium management with the consent of the residents. This led to the assertion of the independence of each block instead of the common relationship established among all of them.

The closure of the pilotis areas resulted in the creation of some access "halls", a feature commonly found in residential condominiums later built in Salvador. The partial closure of some of these areas allowed us to witness fragments of the original solution of the pilotis, the volumes that protect the staircases, and the laundry rooms.



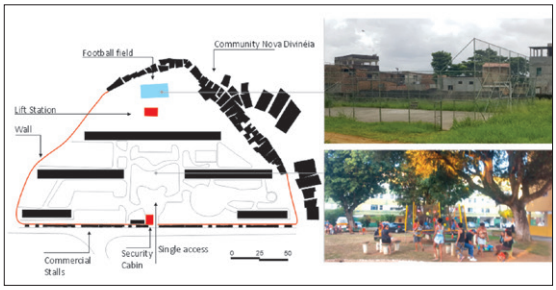






Figure 1 - Implementation of the set and what was really executed. Aerial photograghy. Apartment, laundry and block design. ©Fundação Mário Leal Ferreira; Prepared by the authors, based on Nunes Junior (2020).

Figure 2: Set of images and plans illustrating the transformations. Aerial photography of CRS. Contemporary situation. ©Google maps; Prepared by the authors, based on Nunes Junior (2020).

Figure 3: Set of images and plans illustrating the current situation and the use of collective spaces. Photography and design © Nunes Junior. Prepared by the authors, based on Nunes Junior (2020).

This modification restricted the "Corbusian" principle of free circulation under the built blocks and its permeability relationship in the collective area of the complex. The discourse of modernity intended by the aim of elevating the buildings, and making their ground floors as free as possible, was broken by the possible need to singularize each primary block, making them more easily recognizable compared to the homogeneity of the initial proposal.

The variety of colors of the blocks today also highlight their differences, making identification easier. A different solution from the white and gray color presented on the originally facades, which, in line with what was stated by Kopp (1990) when referring to the monotony of German complexes, could be read as an expression of parity for those who would lived there, "everyone has the same rights and this equality is expressed visually through uniformity and repetition."[8] **(Fig.2)**

Currently, CRS is configured as a closed complex, limited partly by a wall and partly by the community of Rocinha.[9] Despite its recent designation, CRS traces its origins back to an older nucleus that coexisted with the development of this occupation. At the same time, the remaining area of the complex was filled by the above-mentioned occupation, making it a "boundary wall" between these two realities.

The wall in question was built because of the condominium's initiative during the 1990s. However, at the time, residents seemed to lack consensus on the decision. Such an approach stands in contrast to modern architectural principles, according to which buildings should be free from elements such as traditional walls, which would constitute obstacles to surveillance and free movement around the city (Corbusier and Jeanneret, 1929 apud Aymonino 1973). This wall can represent the collective strength

8. Anatole Kopp, *Quando o moderno não era um estilo e sim uma causa*, (São Paulo: Nobel, 1990), 51.

9. Informal occupation bordering the CRS.

in the face of the disorderly growth of the city around it, and with this argument it would make the implementation of walls to protect communal space almost inevitable.

The condition as a closed complex within the city, possibly due to the reasons explained, protected the generous internal space. It is worth noting that, in a similar way, this solution began to be adopted in residential condominiums, especially those inhabited by the middle class of Salvador.

The communal area has come to be recognized as a safe space for residents' leisure activities. These activities include a meeting place for residents, children's play, sports activities, as well as the construction of a general events space in the complex, where parties and celebrations organized by the residents are held, and a gathering and conversation area for residents in the more wooded sections.

The back of the complex is characterized as a sparsely used area, aside from a football field. In this space, there is a sanitation pumping station that is protected by a building and a considerable area bordering the Divinéia community. The frequent use of this space as a parking lot for trucks was also noted.

During the interviews, it became clear that the collective areas became a safe place for residents' leisure activities, gatherings, children's games and sports. These areas were identified as the most valued by the residents, providing a sense of security and allowing collective coexistence practices "under control" and surveillance **(Fig.3)**.

3. CONCLUSIONS

Regarding contemporary appropriations, the analysis of the use of collective areas of CRS revealed that certain functions initially planned for these spaces have influenced the habits of current occupants and others were transformed. This suggests that certain aspects of the original design may have sparked a new way of living from the very beginning of occupancy, a new logic of living that still resonates today.

In some of the collective areas of the CRS, such as the leisure areas, there were no need for significant adjustments and showed positive indications of residents' satisfaction. Nevertheless, changes in uses and transformations were noticed in other collective areas, to meet the needs of current residents, expressing more cultural and economic aspects, such as the collective laundry areas. These changes also emphasized more private customizations at the expense of more collective ones.

The "personalization" of collective spaces sought to meet contemporary demands, based on the pacts established there. The porosity of the complex in relation to the space that surrounds it decreased at the same time as they became increasingly densely occupied, raising the need for control of who and how could access the complex.

The research holds importance in its exploration of the CRS, focusing on the relationships between the standard model of its housing units, linked with the use of the collective domestic equipment and their implementation

connected with the assumptions of modern architecture and urbanism. Moreover, it investigates the transformations of the CRS in the face of the complex relationship between its proposal about living, and the multiple dynamics of individuals in this spatiality. Overall, these analyzes provided insights on the resident´s actions, and thus raised questions about how much these spaces represent impositions of the modern architecture and urban planning project. ■

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JUST PATIOS MAKE CITIES? A REVIEW OF THE TOWN PLANNING ASSOCIATES PROJECT IN MARACAIBO, VENEZUELA

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ABSTRACT

In 1951, Town Planning Associates (TPA) collaborated with the Venezuelan office, Planificación y Vivienda, featuring Architects Moisés Benacerraf, Carlos Guinand Baldó, as well as Engineer Francisco Carrillo Batalla, for a project in Maracaibo. This city was rapidly evolving into a hub for Venezuela's burgeoning oil industry. La Pomona Housing emerged as the only neighbourhood unit entirely conceived and constructed by TPA. The project encompassed single-family homes with central patios, multifamily dwellings, a school, health facilities, a shopping centre, and sports fields. In this endeavour, the architects strategically utilised the patio as a unifying element, responding to the climatic nuances of the region and drawing inspiration from the organisational structure of traditional Venezuelan colonial residences. Despite careful consideration of climatic conditions and cultural context, the complex has undergone substantial transformations, retaining only fragments of its original architectural integrity. This analysis delves into the potential factors contributing to this evolution, centring around three fundamental questions: Was the project designed for Venezuela's demographic landscape circa 1950? Why was the patio-centric housing unit strategy deemed a response to the housing deficit? Furthermore, considering this project as a response to post-war European city reconstruction, why was this model regarded as relevant for consolidating new peripheral areas in Venezuela?

1. INTRODUCTION

As we have seen (…), design objects constantly transform depending on the ways in which they are appropriated, received, and re-signified in each case. Therefore, neither materials, things, spaces, places, bodies, nor architectures can be considered immutable elements whose behavior can be taken for granted and, therefore, anticipated[1]

Town Planning Associates (TPA) was a project office founded by Josep Lluis Sert, Paul Lester Wiener, and Paul Schulz, based in New York and active from 1942 to 1959.[2] Their proposals focused primarily on urban planning, and particularly, expanding Latin American cities. They combined a territorial organisation approach inherited from the International Congresses of Modern Architecture (CIAM) implementing local components from the places they designed for.[3]

During the period from 1949 and 1952, TPA undertook four projects in Venezuela, including two proposals for new cities,[4] one neighbourhood unit, and a single-family house. These projects coincided with the expansion of Venezuelan cities during decades marked by economic growth from oil and metallurgic exploitation, and the establishment of American companies like the Creole Petroleum Company and Chevron in the country.

The growth of urban areas in line with oil and metallurgic activities led to the construction of housing complexes financed by public institutions like Banco Obrero. Most of these projects were designed through the Taller de Arquitectura del Banco Obrero (TABO), in collaboration with other national offices. The TABO's activity has been extensively documented in prior research by Beatriz Mesa Suniaga[5] and Lorenzo González Casas.[6]

TPA arrived in Venezuela as collaborators of the studio Planificación y Vivienda, led by Francisco Carrillo Batalla, Carlos Guinand Baldó, and Moisés Benacerraf. Additionally, Sert had previously been invited as an advisor for the Caracas Regulatory Plan due to his presidency of CIAM and collaboration with Le Corbusier on the Master Plan for Bogotá. Thus, Venezuela became the fourth Latin American country to receive projects from TPA.

2. TPA AND ITS CONNECTION WITH THE U.S. DEPARTMENT OF STATE

TPA's association with Latin America began during World War II. Paul Lester Wiener's wife was the daughter of Henry Morgenthau, the Secretary of the Treasury during the Roosevelt administration.[7] In 1942, the office proposed a prototype series of housing developments for the War Department known as Ratio Structures.[8]

Starting in 1944, they initiated a series of planning projects for new cities in Latin America, including plans for Brazil (Cidade dos Motores), Peru (Chimbote and Lima), Colombia (Bogotá and Medellín), Venezuela (Ciudad Piar, Puerto Ordaz, and Pomona), and Cuba (Havana) **(Fig. 1)**. However, the choice of these cities was not arbitrary; rather, these locations

1. Uriel Fogué, *Las arquitecturas del fin del mundo* (Puente editores,2022).

2. Josep Maria Rovira, *José Luis Sert: 1901-1983* (Milan: Electa, 2003).

3. Paul Lester Wiener and José Luis Sert, "The work of Town Planning Associates in Latin America 1945-1956", *Architectural Design* 27, no. 6 (June 1957).

4. An extensive analysis of the projects for Ciudad Piar and Puerto Ordaz has been previously conducted by MSc. Arch. Ricardo Avella. "Ciudad Guayana, a planned growth pole on the Orinoco. A critical assessment on the role of spatial planning". *Academia*, accessed May 5, 2024, https://www.academia.edu/39780480/Ciudad_Guayana_a_planned_growth_pole_on_the_Orinoco_A_critical_assessment_on_the_role_of_spatial_planning

5. Beatriz Meza Suniaga, "El Taller de Arquitectura, una dependencia técnica del Banco Obrero en Venezuela", *Tecnología y Construcción* 32, no. 2 (2016).

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7. Josep Maria Rovira, *José Luis Sert: 1901-1983* (Milan: Electa, 2003).

8. Josep Maria Rovira (ed.), *SERT 1928-1979 medio siglo de arquitectura* (Barcelona: Fundación Joan Miró, 2005).

9. Carola Barrios. "¿Pueden los patios hacer ciudad? Las huellas de TPA en Brasil y Venezuela". *ZARCH. Journal of Interdisciplinary Studies in Architecture and Urbanism*, n.º 1 (diciembre):70-81.

10. Own elaboration. Data retrieved from Barrios, 2013.



Figure 1. TPA Projects in Latin America: (1) La Habana, (2) Medellín, (3) Bogotá, (4) Maracaibo, (5) Ciudad Piar, (6) Puerto Ordaz, (7) Chimbote, (8) Lima, and (9) Rio de Janeiro. Territories connected through the Airport Development Programme: Route 1 (Texas-Panama-Colombia-Venezuela, in yellow), and Route 2 (Puerto Rico-Martinique-Guyana-Brazil, in green).[10]

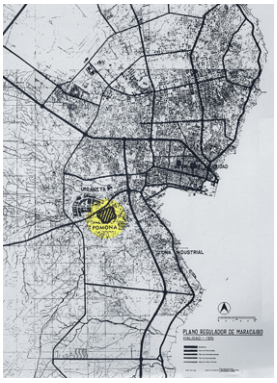


Figure 2. Pomona Housing Development location, Maracaibo, Venezuela[12].

aligned with the Airport Development Programme established in 1941 between the U.S. Department of State and the War Department.[9]

The primary goal of this programme was to secure strategic locations for raw material extraction needed for wartime production. In the case of Venezuela, eight landplanes were constructed for air communication, operated by Pan American Airlines, along with maritime routes connecting cities along the Orinoco River for the transportation of mineral resources. Consequently, under the guise of commercial activities, a close connection and flow of mineral and oil resources from Venezuela to the United States were established[11].

3. THE POMONA HOUSING COMPLEX

Of all the projects undertaken by TPA in Venezuela, Pomona stands out as the only Housing Development completed in full. Remarkably, this project was also the sole extensive endeavour completed during Sert's entire career. Financing for the Pomona project came from Banco Obrero, which supported most of the housing developments in the country until 1958.

The Pomona Housing Development, located in Maracaibo, Zulia state, was situated in an area that served as the epicentre of petroleum activity throughout the 20th century (**Fig. 2**). The project began during the Military Government led by Carlos Delgado Chalbaud and reached completion under the dictatorship of Marcos Pérez Jiménez. Despite the political turbulence and governance challenges in the country, construction of housing plans proceeded without interruption, as these developments were considered vital for sustaining economic growth.

According to the 1950 census, Zulia experienced exponential growth in its urban population, surging from 61.5% to 75.3%[13] within a period of 9 years due to the expansion of the oil industry. Maracaibo and Bolívar districts served as the primary destinations for this influx of population.

The studio Planificación y Vivienda, under the leadership of Francisco Carrillo Batalla in partnership with Carlos Guinard and Moisés Benacerraf, was tasked with designing the Pomona project and initially engaged TPA as consultants, who later assumed primary responsibility for development. The development was completed in 1951, with construction commencing immediately alongside the planning for new developments in Ciudad Piar and Puerto Ordaz.

The Pomona Housing Development programme encompassed 192 single-family houses, 114 apartments in low-rise blocks, a primary school, a nursery, areas for children's play, a service station, parking facilities, and commercial spaces. The houses were designed in two types: single-family units with yards and apartment blocks. Apartments were categorised into three types based on the presence of terraces and patios, while single-family homes varied across six types with sizes ranging from 74.5 to 94.6 square metres.

Given Maracaibo's extreme climatic conditions, the local office made specific design requirements. Buildings were oriented and shaded to facilitate cross-ventilation within the homes year-round. Extensive

https://doi.org/10.26754/ojs_zarch/zarch.201319359.

11. *Ibidem*.

12. Image retrieved from: Villanueva, C and Celis, C. "La Vivienda popular en Venezuela 1928-1952". Caracas, Venezuela: Banco Obrero, 1953.

13. (Venezuela, 1950).

eaves and roof covers were incorporated to provide shade over common areas and facades. Additionally, concrete ventilation blocks were used to promote continuous airflow within the buildings. The interior layouts of both single-family homes and apartments were kept straightforward to accommodate the diverse lifestyles of the population.

4. PATIO AS A STRUCTURE

In the Athens Charter (1933), Le Corbusier divided the city's organisation into four fundamental zones based on its function: living, working, recreation, and circulation[14]. Building on this, Josep Lluis Sert, following his collaboration with the Swiss-French architect and as president of CIAM (International Congresses of Modern Architecture), introduced the *patio* as a fifth function, enriching the functional framework of new cities.

The patio, serving as an organising element, evoked the social activity seen in ancient public squares. By scaling urban design to a pedestrian level, the patio facilitated interaction among inhabitants, nature, and recreational spaces. Sert also envisioned the patio as a democratic element where all citizens were equal, advocating for its inclusion across all aspects of city planning.

TPA's urban proposals served as a way of experimenting with different uses of the patio. In their 1953 article "Can patios make cities?"[15] published in *Architectural Forum*, Sert and Wiener described the diverse architectural solutions achieved through patios in Latin American cities: from patio houses and neighbourhood patios to patio parks, buildings, and civic centres **(Fig. 3)**.

The Pomona Housing Unit exemplifies this use of the patio concept. The patio is integrated as a key functional element within each of its designed spaces. Referring to the aforementioned article, we can identify the following types of patios at Pomona **(Fig. 4)**:

Patio houses: Two types are present in single-family units: interior patios that connect different spaces within the house, and rear patios that provide a connection to the exterior.

Neighbourhood patio: Located on the ground floors of residential buildings and within apartment complexes, often featuring terraces and balconies.

Patio buildings: Notably integrated into the school at Pomona, where classrooms are raised on stilts over a continuous patio extending into play areas.

Civic Centre Patio: Although Pomona lacked a formal civic centre, the commercial hub was organised around a central patio, shaping the surrounding commercial areas.

5. THE POMONA HOUSING COMPLEX, 70 YEARS LATER

Despite the considerations made by the studio Planificación y Vivienda and TPA, the Pomona Housing Complex experienced successive alterations to adapt to the lifestyles of its inhabitants. Today, few traces remain that allow for the identification of the original project. The concrete ventilation blocks on the facades were filled in to enhance home security and install

14. Le Corbusier, *The Athens Charter*.

15. Paul Lester Wiener and José Luis Sert, "Can patios make cities?", *Architectural Forum* 99, no. 2 (August 1953):124-130.



Figure 3. Diagram of the different scales in which the patio can be used within projects of new cities[16].

mechanical ventilation equipment while living areas were extended to occupy the entire patios.

Exploring aspects that may have been overlooked by the architectural teams, two factors stand out: the development of housing projects in response to housing shortages, and the consolidation of Maracaibo's peripheral areas.

One relevant question to consider today concerns the relevance of the Neighbourhood Unit model for Latin American cities. In the specific case of Venezuelan cities, there was no general city planning to connect these neighbourhood units, resulting in isolated populations to which, in subsequent decades, vast extensions of informal settlements developed, attracted by the provision of basic services such as water, electricity, waste collection, among others.

The truth is that as they were state-promoted developments, it was unaffordable to develop many other neighbourhood units like Pomona. However, during the same period, the General Rafael Urdaneta Urbanisation was also constructed, designed by the Venezuelan architect Carlos Raúl Villanueva. Subsequently, other multifamily building complexes like Las Pirámides were built, further consolidating the area as a residential zone where planned developments coexist with informal housing.

6. FINAL REFLECTIONS

The Pomona case appears to demonstrate that architectural ideas or intentions alone are not enough to achieve successful outcomes. The inclusion of multi-scalar patios, intended to complement the ideas of the CIAM, aimed to provide a spatial connection between communities and thus ensure the long-term viability of this type of urbanism. However, the uncontrolled growth of Maracaibo City and various unexpected situations hindered the success of the original plan.

These situations vary in nature; nonetheless, they all have a political origin with significant institutional and social implications. A number of relevant issues can be highlighted from this:

The interconnection between these types of housing complexes and urban centres must be carefully planned from the outset and reinforced over time. Viewing these interventions as anchor points that the city relies on to expand seems to be the correct strategy. Otherwise, they are doomed to become inert islands within an urban landscape that develops independently and according to its own rules. However, such situations are beyond the control of the architectural project and depend on a level of planning at the metropolitan scale, which, in this case, was nonexistent and beyond the architect's scope.

6.1 THE GOVERNANCE OF MODERN GROUND FLOORS

Like many modern housing complexes, the Pomona Housing Unit featured open ground floors designed to facilitate interconnection between buildings. Nevertheless, there were no clear guidelines for managing these common areas. While their creation was a significant achievement for Latin American cities, the lack of administrative capacity or tradition resulted in liminal spaces that quickly deteriorated.

16. Own elaboration. Image © Wiener, P. and Sert, J. "Can Patios Make Cities?" 1953.

Organisational weaknesses—whether public or private, institutional or collective—led to the emergence of vacant spaces that were swiftly occupied by the homeless. This occupation, initially temporary, eventually became permanent, resulting in entire communities inhabiting informal spaces linked to the original urban project, significantly altering it.

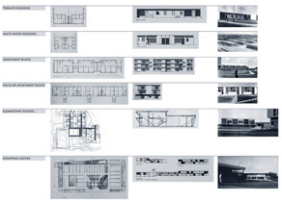


Figure 4. Patio typologies in Pomona. Author's elaboration based on the Pomona Neighbourhood Unit plans. (Villanueva, C and Celis, C., 1953).

6.2 MULTISCALAR VANDALISM

The vandalism of the urban project to obtain basic services is another immediate consequence of the informalisation. A curious fact, in many Latin American cities, informal settlements disrupt planned urban developments by illegally obtaining services. Faced with the government's inability to control and respond to informal occupation, these new communities meet their energy and waste needs through pre-existing installations, exceeding their capacity and causing them to collapse. All of this occurs without any legal consequences.

As a result, the complex underwent various interventions to include peripheral fencing throughout the sector, aimed at controlling access to common areas. This pattern is repeated on a smaller scale: the front and back yards of single-family homes were fenced in and, in many cases, incorporated into the interior of the home.

Vandalism is not, however, limited to services and common areas. Smaller open areas, initially intended as private courtyards, end up providing opportunities for theft by newly emerged criminal elements. Consequently, this architecture designed for well-being and community living is voluntarily altered by the occupants to mitigate insecurity.



Fig. 5. Original (1952) and current situation. Own elaboration. Image (left) from Villanueva, C and Celis, C., 1953.

6.3 FINALLY, THE MARACAIBO METRO

In 2008, another large-scale public intervention, such as the consolidation of Sabaneta Avenue and the construction of Line 1 of the Maracaibo Metro, ended up isolating the sector from the urban fabric. Thus, urban evolution along with socio-political conditions have reduced or nullified the initial project's ability to provide the planned quality of life for its inhabitants, making it seem even flawed or useless in terms of its original purpose.

Anticipating and avoiding such unforeseen situations depends on metropolitan-level planning that exceeds the scale of the urban housing and facilities project. Moreover, integrating these large-scale projects within an urban development plan surpasses architectural vision. Creating the right conditions for the success of such interventions is in the hands of the local administration. Effective institutional performance, on which urban planning directly depends, is possible only in a political context that offers favourable conditions: democracy, transparency, and administrative continuity.

Good projects rarely thrive under bad governments. Over the years, informality has created an amalgam that reaches and erodes this type of urbanism. In Pomona, the original sound design was unable to adapt to the numerous unforeseen and negative changes, preventing it from flourishing as the intended haven of well-being. ■

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THE EMPART I HOUSING COMPLEX IN IQUIQUE, CHILE. COLLECTIVE HOUSING IN A DESERT LANDSCAPE

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#14

ABSTRACT.

The present work forms part of a doctoral thesis focused on the study of housing estates constructed between 1936 and 1976, situated in four port cities of northern Chile: Arica, Iquique, Tocopilla, and Antofagasta.

Using the Empart I housing estate, constructed by the Caja de Empleados Particulares (1963-1965) and designed by architects Alberto Sartori, Francisco Schlotfeldt, Jaime Silva, and Sergio Arias, located in Iquique, as a case study, this research aims to uncover its history and the design strategy devised by its creators through planimetric analysis, periodical publications, local press, and relevant literature on the subject.

The investigation of this housing estate has allowed for an understanding of the influence of modern architecture on an intermediate, remote, vibrant city, located on the border, which was one of the latest to be incorporated into the national territory. Furthermore, it has emerged as a noteworthy local case in terms of enhancing housing conditions in the Norte Grande and fostering community life by establishing a new urban landscape.

As part of this study's findings, it is evident that this housing project demonstrated the adaptation of modern movement ideas, manifested in both its architectural design and its location, to address the conditions of the desert landscape and an urban context with heritage significance, proposing an adaptable and resilient architecture in response to the environmental conditions of the desert.

1. INTRODUCTION

Modern architecture developed in northern Chile, specifically in the four port cities of Arica, Iquique, Tocopilla, and Antofagasta, proved to be particularly suited to these newly annexed territories, which became a laboratory for architectural and urban experimentation. The designers were able to address the particularities of the desert, and through these new architectures, which "dialogued with the specificities of each place under a modern language, increased the sense of belonging and identity of the progressive northern society throughout the 20th century."[1]

The scarce precipitation, moderate temperatures indicating a good climate, combined with the geographical features, colours, and contrasts, turned the coastal desert into a unique and attractive environment for architectural experimentation and the development of housing complexes. These complexes enabled people to settle in these distant cities, leading to their growth and development.

Upon review of disciplinary sources, photographic records, and conducting field visits, it is evident that the housing complexes were a tangible realisation of ideas, visions, and institutional policies coloured by the experience of a modernity shaped by an extreme landscape. Examples include the Collective Buildings (1942) constructed by the Caja de Seguro Obrero Obligatorio in the four aforementioned cities, the Chinchorro (1955) and Estadio (1957) housing developments managed by Sociedad Modernizadora in Arica, as well as the Gran Vía Housing Complex (1955-1976) constructed by the Caja de Empleados Particulares (EMPART) and the Salar del Carmen Housing (1964), developed under the Housing Corporation (CORVI), both of which are located in Antofagasta. These are representative works of the Norte Grande and have become part of Chilean and Latin American architectural historiography.

However, in all these cities, smaller-scale housing complexes were also built, which managed to consolidate the urban block both in central and peripheral areas, and created new ways of making a city. In Iquique, particular attention should be paid to the Empart I housing complex or "Población Cachimbo," for the Caja de Empleados Particulares, designed by architects Alberto Sartori, Francisco Schlotfeldt, Jaime Silva, and Sergio Arias.

This residential project was featured in the Chile Housing Plan (1963), a publication by CORVI. It presents the work of the institution through a selection of cases representing its activities across the country. The residential complex, based on the combination of low-rise blocks and housing, is showcased through images that express a distinctive architectural language interpreting and responding to the climatic conditions of the desert's aridity.

To highlight the most relevant aspects of this residential project, the following sections will address the circumstances and background that facilitate its understanding and particularly its significance as part of the housing laboratory conducted in Northern Chile.

2. HISTORICAL BACKGROUND OF THE COMPLEX

The genesis of this housing project dates back to January 25, 1963, when CORVI issued a public call for the construction of a housing complex for

1. Claudio Galeno. "Confined Laboratory: Modern Architecture in Northern Chile." *Revista de Arquitectura* 14, no. 17 (2008): 18–29.

members of the Caja de Empleados Particulares. According to local press reports, the complex was to consist of "18 two-storey houses and another 24 apartments in four-storey blocks."[2] The construction of this new housing project commenced in June of the same year, at a cost of 650 million pesos.[3]

Local press followed the housing developments in the city closely, considering the gradually increasing demand for housing as well as the changes and improvements introduced by such projects. They noted the following:

> *"Iquique, which for years was characterised by its lightweight buildings, reminiscent of the old American west cities, and still having some wooden structures in certain areas, is now seeing the rise of modern and earthquake-resistant constructions made of concrete and steel. Numerous banking institutions, as well as industries and traders, are currently modernising their buildings with these materials, with many also demolishing their old structures to erect modern buildings. CORVI, for its part, has already begun the construction of more than 150 solid-material houses as part of an organised programme started last year. All these works, in addition to creating new job opportunities, are enabling Iquique to advance rapidly in its urban development."*[4]

The construction of this housing complex thus became a valuable contribution to the renewal and densification of the city's central area, as well as part of the solution to the housing demand and improving living conditions in a desert city. The formal expression of the project did not go unnoticed by the local press. Photographs from the construction process highlighted that: "The housing complex being built by the Housing Corporation between Aníbal Pinto and O'Higgins streets will have a unique architectural style. This housing block will feature 42 houses of two or more storeys,[5] which will beautify the area." This indicated morphological similarities to the houses in the Población Salar del Carmen in Antofagasta, which had an aesthetic reminiscent of houses in North Africa, reflecting similar climatic conditions to those of Northern Chile.[6]

Finally, on February 13, 1965, the Caja de Previsión de Empleados Particulares handed over the houses and apartments of the housing complex, which "not only beautifies our city but also alleviates the acute housing problem faced by Iquique, caused by the industrial progress experienced,"[7] as reported by the local press. The keys were handed over to the selected occupants in the presence of authorities, and a tour of the new neighbourhood was subsequently conducted.

3. THE URBAN-ARCHITECTURAL PROPOSAL AND ITS SCOPE

This housing complex was situated on land belonging to the Diocese of Iquique, on one of the largest urban blocks in the area, close to the historic centre of the city. The lot, which had an area of 5,129 m^2, had an L-shaped configuration that allowed for two frontages.

From a regulatory perspective, the land was located between two zoning areas according to the Iquique master plan of 1960: the Historical Conservation

2. *El Cavancha*, 12 January 1963.

3. *El Cavancha*, 4 June 1963.

4. *El Cavancha*, 5 March 1964.

5. *El Cavancha*, 9 October 1964.

6. Umberto Bonomo. *The Dimensions of Modern Housing: The Unidad Vecinal Portales and the Production of Economic Housing in Chile, 1948-1970*. Doctoral Thesis, Pontifical Catholic University of Chile, 2009.

7. *El Cavancha*, 13 February 1965.

Residential Zone, with a maximum height of two storeys, and the Residential Zone Type One, South Port sector, which permitted a maximum height of four storeys. This dual condition explains why the existing façade lines are set back, as a strategy for placement and to respect the building line in the area of the block that was under mixed urban conditions.

The general layout is based on the arrangement of five residential blocks, four of which are situated on the eastern frontage (blocks A, B, C, and D) facing Aníbal Pinto Street, which has an urban character and runs north-south through the historic centre of the city. Two blocks provide the main access to the complex, which is topped by an open space in the centre of the roof slab that connects them, and also houses the staircase leading to the aerial corridor of the complex.

At the ends of the facade are the other two staggered blocks that complete the eastern frontage. Additionally, there are areas designated for parking, service cabinets, and access to the ground-floor apartments. The fifth block (E) is positioned parallel to the interior of the complex.

The eighteen houses that make up the complex are located in the interior, making up both the perimeter of the central communal space and the irregular edge of the site, which is managed through the patio of each unit. The two-storey houses are primarily arranged in pairs, but with some modifications, such as the connection between units via an open terrace on the second floor or the party wall when there is a stagger between the houses.

Daily life would occur within the housing complex, which did not allow for automobile access, placing further emphasis on domestic scale, social cohesion, and neighbourhood life for its residents. This concept remains a unique residential space in the city to this day.

Regarding the characteristics of the units, the housing project proposed five blocks with the following units: four ground-floor apartments of 59 m^2 and twenty duplex apartments of 74 m^2, and eighteen single-family homes, each with 70 m^2 of built area, including a private yard and front garden. All residential units included three bedrooms and one bathroom.

The impact of this housing complex within the residential production developed by CORVI is also acknowledged by scholars in the field. For example, Raposo (1999) cites it as a case study to highlight the housing developed by this institution as architectural and urban heritage, noting that:

> *"At the microsystem level, these are building types and grouping morphologies that architecturally express a concept of residential community, family, and domestic lifestyle, organisation of coexistence, conditions for the reproduction of social life, and the socialisation of individuals in habitability."*[8]

This description highlights the process of consolidation and housing experimentation occurring in the country, with Iquique presenting itself as the only complex capable of providing a new kind of urban interiority, in addition to offering privacy for its residents' daily activities.

By comparing the residential strategies developed in Israel, which share similar climatic conditions, it is evident that in order to consolidate middle-

8. Alejandro Raposo. "The Social Housing of CORVI: Another Heritage." *Revista INVI* 14, no. 37 (1999): 41–73.

class housing, as seen in the EMPART complex, efforts were made to articulate "the individual and the collective, the private and the public."[9] These actions allowed for the creation of a community identity in housing complexes within a desert environment by integrating different spatial scales through balconies, walkways, and front gardens.

4. FROM HOUSING COMPLEX TO SOCIAL CONDOMINIUM

The EMPART housing complex was a modest-scale residential project in which its designers effectively considered the urban, social, environmental, and territorial conditions of the area. Moreover, this case highlighted the role of housing in Iquique as a political tool for social progress, demonstrating that the construction and development of housing complexes, even on a small scale, positively impacted on the local community by fostering well-being, community roots, and resilience in the face of the challenging conditions of the territory.

Some of the latest adversities faced were the earthquakes that occurred on April 1 and 2, 2014, with magnitudes of 8.2 MW and 7.7 MW, respectively, affecting the main cities of Northern Chile. Among the infrastructures that were affected were social housing complexes in Iquique. Although the EMPART complex did not suffer from major damage, it was included in the list of social condominiums[10] that benefited from repairs and improvements provided by the Ministry of Housing and Urbanism.

These actions were initially carried out in 2016 and involved cleaning and painting the facades of the blocks, repairing cracks, and restoring common areas, particularly sidewalks, to current standards. As a result, the social condominium "Arturo Prat," as it was later named by the community, began to recover and improve its usability. The local authority recognised these efforts, stating:

> *"Social condominiums like 'Arturo Prat' are a jewel of our regional architecture, demonstrating the housing policy developed by the State 50 years ago. Today, we are once again building social housing of this scale that provides a higher quality of life to families opting for subsidised housing solutions."*[11]

These statements demonstrate the benefits of constructing micro-neighbourhoods in Iquique during the 1960s.[12] Although driven by economic reasons, this approach allowed for a limited number of families, which facilitated more effective and direct coordination among neighbours, particularly in decision-making that could involve them, as was evidenced during the repairs in 2016.

Additionally, the involvement of residents, recognition by authorities, and academic contributions, such as the study of the Master Plan since 2018, have elevated local modern architecture as part of the city's heritage and preserved a set of anonymous and ordinary works,[13] like the EMPART complex, which, after over fifty years of use, is now undergoing a new phase of renewal in its communal spaces thanks to collaborative efforts between residents and government[14]. ■

9. Yael Allweil and Itai Ben-Asher Gitler. "Middle-Class by Design: Mass Housing Estates and the Consolidation of the Israeli Urban Middle-Class." *Docomomo Journal* 68 (2023): 18–25.

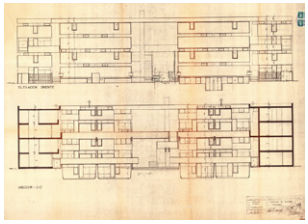
10. In 2017, the Ministry of Housing and Urbanism established the Housing Complex Regeneration Programme, also known as social condominiums, with the aim of improving low-rise condominium buildings and their surroundings. (See Decree 18. Regulation of the Housing Complex Regeneration Programme for Social Housing, Santiago, Chile).

11. "Neighbours of CCSS Arturo Prat Show Off Renovated Common Areas." Accessed 1 May 2024. https://www.goretarapaca.gov.cl/vecinos-de-ccss-arturo-prat-lucen-renovados-espacios-comunes/.

12. Víctor Valenzuela. "Urban Planning and Housing Estates in Northern Chile: The Case of Iquique, 1936-1976." *QRU: Quaderns de Recerca en Urbanisme* 14 (2023): 172–193.

13. Umberto Bonomo. *Ordinary vs. Extraordinary: Houses and Monuments*. Santiago: Ediciones UC, 2021. 138–151.

14. For the second time, this housing complex will benefit from the "Housing and Neighbourhood Improvement" programme promoted by the Ministry of Housing in 2024.



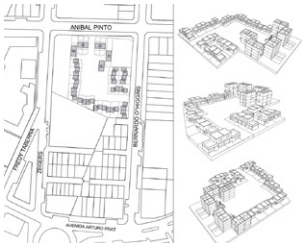




Fig.1. Elevations and sections of blocks A, B, C, and D of the housing complex. Source: Municipal Archive (c 1965). Iquique. Public use documentation.

Fig.2. Left: Site plan of the housing complex. Right: Isometrics of the housing complex. In both graphic resources, the formation of the community space can be observed. Source: © Author's archive, 2023. Drawing elaboration: Jeremy Toledo.

Fig.3. Left: Aerial view of the complex as it currently stands, where the original project is distinguishable. Right: Current photographs of the housing complex after the improvements and repairs carried out by the Ministry of Housing and Urbanism. Source: ©Author's photographic archive, 2020. Aerial view provided by Ronald Caldas. Drawing elaboration: Jeremy Toledo.

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RE-NEGOTIATING MODERNITY: APPROPRIATION AND EVERYDAY LIFE AT CENTRO URBANO ANTONIO NARIÑO IN BOGOTÁ, COLOMBIA

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#14

ABSTRACT

In the mid-twentieth century, through the establishment of housing institutions, the Colombian government faced the challenge of providing proper accommodation to urban families in order to alleviate the deficit and improve living conditions. Once the homes were assigned and delivered to the new families, the housing institutions gradually relinquished the responsibility of managing and maintaining properties, transferring the responsibility to the new owners. According to the high-rise co-property regulation Law 182 of 1948, they had to establish community rules to manage and preserve the buildings, facilities, and green open areas.

Centro Urbano Antonio Nariño - CUAN is a neighbourhood unit built in Bogota between 1952 and 1958, which has been remarkably well-preserved. Its significance to the history of modern architecture in Colombia has been widely studied, but little has been said about the implications and challenges of its maintenance. Currently, there are legal regulations that govern the procedures and limitations for physical improvements such as the National Co-ownership Law 675 of 2001, the CUAN co-ownership regulations and the declaration of Cultural Interest Property. Even so, not all modifications are carried out under these instruments, small adjustments have been promoted by neighbours to beautify, singularise and decorate the common spaces.

Based on direct observation and interviews with current residents, this paper intersects the discourses underlying the principles of the neighbourhood unit and the present appropriation of the common spaces at the Centro Urbano Antonio Nariño. Drawing on theories of the production of space and the social construction of taste, the analysis highlights the strategies implemented by small neighbourhood communities to update common areas thus promoting spatial and ornamental adaptations that align with the desires, ideals, tastes, and needs of the inhabitants. The aim is to shed light on non-formal community agreements to unveil the assortment of activities, users, and affections deployed in the common spaces.

1. INTRODUCTION

During the first half of the twentieth century, the unstoppable tide of rural-to-urban migration changed the urban fabric of the main Latin American cities. The accelerated rate of population growth resulted in deplorable residential standards, the mushrooming of informal housing, the construction of "shantytowns" on the outskirts, and overcrowding in old traditional houses. In the book *Cities of Latin America. Houses and planning to the south*[1], Francis Violich pointed out that two-thirds of the population inhabited precarious housing with lacking living conditions.

Colombian peasants who migrated to the large cities were attracted by better living conditions, work, education, and security, which contrasted with the impoverished rural areas affected by a civil war called "La Violencia". Investment, development, and concentration of capital were more than evident in the cities and naturally, internal migration to the principal towns: Bogotá, Cali and Medellin, increased the housing shortage and transformed the urban landscapes. As a result, the Colombian government faced the challenge of providing housing by addressing the deficit and improving living conditions for workers and employees through the creation of institutes and housing programmes throughout the country.

The Ministry of Public Works introduced a national infrastructure plan for the physical transformation of cities with the construction of public buildings that communicated, through architecture, the power and governance of the state. Although the Instituto de Crédito Territorial - ICT, the Banco Central Hipotecario - BCH, the Caja de la Vivienda Militar – CVM and other institutions were in charge of state social housing, the ministry promoted the most important state multi-family housing project: the Centro Urbano Antonio Nariño[2] in Bogotá, designed by the architects Néstor C. Gutiérrez B.[3], Daniel Suárez Hoyos, Rafael Esguerra García, Enrique García Merlano, Alberto Herrera V., Juan Menéndez, Jaime del Corral y Álvaro Cárdenas and the engineers Doménico Parma Marré and Guillermo González Zuleta.

The ICT, responsible for selling the apartments, progressively withdrew the management and maintenance obligations upon awarding and delivering the apartments to the new families. This was done in order to transfer the responsibility to the residents and prepare the community to undertake the complete and independent management of CUAN within a short timeframe. The legislation pertaining to the ownership of apartments in the same building, Law 182 of 1948 "high-rise co-property regulation", required owners to establish the community rules and select an administrator to manage the financial resources for the maintenance and operation of the buildings, facilities, and green open areas.[4]

Historians have emphasised the importance of the CUAN for as the first attempt at multi-family state housing for sale through horizontal ownership. It was based on self-sufficiency and establishing a new communal life under the neighbourhood unit model. The project was built on a plot of land measuring 150.815,93 sq metres, and the construction of the building occupied 16.589,75 sq metres (11% of land use) and included

1. Francis Violich, *Cities of Latin America. Houses and planning to the south*. (New York: Reinhold Publishing, 1944)

2. The civil works began in May 1952 under the supervision of the Ministry. In 1953, when the structure had already been completed, the construction was suspended for a while and the project was sold to the Banco Popular, which modified two buildings to turn them into hotels. In 1957 the Ministry recovered the property and then sold it to the ICT, which was in charge of the sale of the apartments. Finally in 1959, the two blocks transformed into hotel rooms were sold to the Corporación de Residencias Universitarias of the Universidad Nacional de Colombia, to be converted into dormitories.

3. Prior to the design of the project, Gutierrez was sent on a commission to visit and study examples of the most important residential architecture in the continent, in Venezuela, Mexico, different cities in the USA.

4. Victoria Sánchez, *Colombia's History of Modern Architecture revisited through the housing agency Instituto de Crédito Territorial: 1939 - 1965*. Austin: PhD. Dissertation University of Texas, 2018, 304.

134.226 sq meteres[5] of open areas in which there are 960 apartments distributed over nine[6] 13-story towers and six 5-story blocks, long corridors, lifts, staircases, free ground floor-plants, gardens, and different facilities such as schools, market, laundry, church, theatre, playgrounds, sports courts, parking lots, etc. **(Fig. 1)**. Its importance in Colombian architectural history is unquestionable. However, little has been said about the implications and challenges of keeping the project up to date to fit today's lifestyles after more than 60 years of occupation.

Based on the theories of the production of space and the social construction of taste, the analysis highlights the non-formal strategies used by small neighbourhood communities to maintain, preserve, and keep common spaces up-to-date and promote ornamentation plans that reflect the desires, ideals, and needs of today's inhabitants within a modern project.

2. THE CLASH: IDEAL TO REAL

Idealisations are formed by overlapping concepts and representations of what a place can become without directly addressing the problems that such a place should solve. These types of representations are abstractions of a projected future without socio-spatial definition or a certain organisation of space according to reality, as Henri Lefevbre claimed in the *Production of Space*[7]. In architecture, abstractions often prioritize manipulating shapes and forms over actual content, as Fernando Lara described as "the quality of dealing with ideas rather than events, or something that exists only as ideas… plans do not register community life."[8]

The concept of the *neighbourhood unit* served the government and architects to plan major housing projects and to provide housing for large number of families. To this end, the resident selection process was one of the main tools available to the ICT to ensure that the inhabitants of their neighbourhoods met its ideal expectations. Income and family unit size were the criteria of selecting middle class residents to satisfy the income group that the Ministry of Public Works wanted for the project.[9]

This idealisation of the *neighbourhood unit* as the solution to the "housing problem" in Colombian cities clashed with the actual reality of the families occupying the CUAN. On the one hand, the assumption was that through mass housing projects, new residents would be taught how to be modern inhabitants in a changing city, by assuming a single way of life for all families, determined by the mortgage loan payment capacity and the number of inhabitants per unit, while ignoring their cultural backgrounds, habits and needs. On the other hand, the typology of high-rise blocks freed up the common floor, conceived as the ideal space to foster social interaction and support the collective activities of the residents, avoiding the fact that 89% of the ground is an open area that will require permanent maintenance, which becomes an extra expense to be paid by the co-ownership. **(Fig. 2)**.

The circumstances made it difficult for a cohesive and effective community to take charge immediately of the maintenance of its own project. As a result, both the community and ICT were compelled to

5. Ana Patricia Montoya, El Centro Urbano Antonio Nariño, un nuevo concepto de vivienda y vida urbana. *Revista Urbanismos*. (Bogotá: Universidad Nacional de Colombia. 125 – 137, 2005)

6. Currently, two blocks belonging to Corporación de Residencias Universitarias are fenced off and are not part of the CUAN residential area.

7. According to Lefevbre, the conceived space attempts to reduce the experience to its representations, to what is legible. Lefevbre, Henri.

8. Lara, Fernando. "Abstraction is a Privilege". Accessed 6th may, 2024. PLATFORM: Abstraction is a Privilege (platformspace.net)

9. According to Sánchez, moral standards were set for selection process such as: christian habits, legitimate children and good habits. Sánchez, Victoria. *Colombia's History of Modern Architecture revisited through the housing agency Instituto de Crédito Territorial: 1939 - 1965*. Austin: PhD. Dissertation University of Texas, 2018, 311.

manage the project on a collaborative basis until the end of the 1960s.[10] However, it was not always an easy relationship that certainly reduced the space for residents' participation in administrative decisions. Since then, different legal instruments have regulated the physical improvements made in the CUAN. The current National Co-ownership Law 675 of 2001 grants exclusive property rights over private property and co-ownership rights over the land and common property. The CUAN's co-ownership regulations govern the interaction between community members. Additionally, the property was declared a Cultural Interest Property in 2001, highlighting its architectural and urban values and its importance for Bogota and the country as it inaugurated a new urban way of life.

Despite this, not all the modifications are carried out under these instruments; small adjustments have been promoted by the neighbours to beautify, singularise and decorate the common spaces. Inhabitants have renegotiated the conditions set by modern architecture in the production of space and its appropriation over time, which occurs differently in the project based on the location and its occupants.

3. CONSENSUS: APPROPRIATION AND EVERYDAY LIFE

In an effort not to compromise on the physical or spatial values of the project or the aesthetic principles that emphasise its uniqueness in the architectural context, the taste(s)[11] which have been spatialised in minor physical interventions can now be traced back to its origins and the life stories it harbours.

In the CUAN, there are four different levels of appropriation of the common areas. In general, the residents interviewed expressed their awareness of the importance of the CUAN for the history of architecture. Therefore, the care of the project is assumed as a civic duty because "the CUAN belongs to Bogotanos"[12]. Furthermore, the notion of a highly walkable city, with complementary services and isolation from the surrounding chaos is among the favourable conditions highlighted by residents. Undoubtedly, nature is part of the created landscape: "one of the virtues of the proposal is that the freed-up land is occupied with new concerns, such as the incorporation of the natural environment as part of the programme."[13]

The second level of appropriation is the direct impact of shared amenities such as schools, theatre, supermarket, church, laundry and stores in the surrounding area. Although the CUAN administration oversees general maintenance, individual facilities such as the store, laundry and church manage themselves, while the theatre and schools are overseen by the Secretary of Education and Culture respectively. Such entities make decisions on the immediate physical environment of the buildings: fences, gardens, trees, floors and furniture.

A third level of appropriation can be observed in common areas of the ground floor without the direct influence of a building. These spaces are transformed by neighbourhood communities for collective activities and are open to those who wish to participate. Activities include soccer

10. Decree 1234 of 1963.

11. Bourdieu, Pierre. *La distinción. Criterio y bases sociales del gusto*. Barcelona: Penguin Random House, [1979] 2016.

12. Expression of a resident who has lived in the CUAN since 1980.

13. Hernández, Carlos. *De Le Corbusier a Sert en el Plan Director de Bogotá 1947-1953*. Bogotá: PhD. Dissertation Universidad Nacional de Colombia, 2017.







Fig 1. Centro Urbano Antonio Nariño. Architects: Gutiérrez, Suárez, Esguerra, García, Herrera, Meléndez, Del Corral and Cárdenas. Bogotá, Colombia, 1952 - 1958. Aerial view. © Niño, Carlos. Arquitectura y Estado, circa 1965.

Fig 2. Centro Urbano Antonio Nariño. Architects: Gutiérrez, Suárez, Esguerra, García, Herrera, Meléndez, Del Corral and Cárdenas. Bogotá, Colombia, 1952 - 1958. Green open area. © Photo: Liliana Andrea Clavijo García, 2023.

Fig 3. Centro Urbano Antonio Nariño. Architects: Gutiérrez, Suárez, Esguerra, García, Herrera, Meléndez, Del Corral and Cárdenas. Bogotá, Colombia, 1952 - 1958. Adapted and beautified common spaces. © Photo: Liliana Andrea Clavijo García, 2023.

(in a local league), urban agriculture, gardening and planting of fruit and aromatic species, recreational activities such as yoga, aerobics or Zumba, gymnastics for seniors, and cultural activities such as story time, literary picnics or carpentry workshops[14].

Finally, a fourth level of appropriation is driven by differentiation between the occupants of each one of the buildings. The six four-story blocks mostly house public residences for the military forces. The one-bedroom apartments are generally rented to young couples or individuals, with only a few owners living there. Families with one or two children at most, or seniors, reside in the larger apartments. Since the 1960s, the fence has isolated the block designed as a hotel, which is managed by the Universidad Nacional de Colombia, with no contact with the residents at the present time. Therefore, the location of the blocks in the project and the "type" of resident, have a direct impact on the intervention of the surrounding spaces and their appropriation.

The buildings under military care have a specific budget and maintenance guide that applies to the surrounding areas. The participation of this community, although active in the general meetings, depends directly on the Instituto de Casas Fiscales del Ejército de Colombia. Homeowners residing in the CUAN are undoubtedly the most active in conducting integration and beautification activities. The administration is responsible for

the maintenance and operation of the common areas in each block: elevators, corridors, premises, stairways, etc., activities enshrined in the horizontal property regulations.

In the blocks where there are more resident owners, it is common to find many minor interventions made to the immediate access areas. This can include the changing of flooring, planting of new trees, installation of ornamental fountains, ground and hanging pots, installation of benches, change of lighting, zoning of bicycle racks, flowers and special gardening features **(Fig. 3)**.

4. CONCLUSION

The users create spatial consensus to overcome formal unity, monotony, rationalisation, and typification, by constructing their own friendly environments for the community.

> *The greatest value of the complex is its common spaces. With 70 years of existence, the balance that can be made from the operation of CUAN is positive. The declaration of "Cultural Interest Property" allowed owners to fund conservation initiatives. The adjustments that have been made in the mechanisms of community life determined by the design of the complex have allowed to overcome periods of crisis, after which the perimeter was closed, and a management plan was drawn up that has given the compound a clean and cared for aspect to the blocks and their common areas.*[15]

The common spaces used on a daily basis are irrefutable proof that reality has surpassed the ideal of modern housing and that the life of the projects has taken the reins in the differentiated and complex occupation of the spaces. Small strategies of spatial intervention have favoured the CUAN and have breathed life into it for more than seven decades of use. This approach allows us to recognise the value of common spaces, not only as an extension of the activities of the home, but also as an opportunity to create community ties that are spatialised in small interventions. Considering the relationship between society and space in projects such as CUAN is an excellent input for identifying, on the one hand, how space is used today and, on the other, to reveal innovative non-formal strategies for conservation, habitability and coexistence over time. ■

14. The contributions for this type of intervention come from: CUAN Community Activities Fund, Voluntary contribution from residents, Development of fundraising activities or Crowdfunding.

15. Hugo Mondragón, et al., The urban forms of modern architecture 1945 – 1970. Colombia III (Santiago: Asociación de oficinas de arquitectos de Chile, 39, 25) https://upcommons.upc.edu/bitstream/handle/2117/130235/Mayorga_Fontana_LAS%2bFORMAS%2bURBANAS%2bDE%2bLA%2bARQUITECTURA%2bMODERNA.%2b1945-1970_Bogot%c3%a1%2b%281%29.pdf?sequence=1&isAllowed=y

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SOCIAL HOUSING AND URBAN IDEALS: A CASE STUDY OF QUITO, ECUADOR

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ABSTRACT.

Urban planning principles associated with the Functional City revolve around four collective functions: residence, work, recreation, and mobility. In the CIAMs, it was determined that housing discussions should always be associated with solutions that seamlessly integrate each project with the city in terms of its relationship with facilities, services, and circulation.

In the 1970s, Ecuador explored and implemented many modern housing projects based on late Modernism criteria. In the north of the city, high-rise buildings were planned with typology responses and innovative techniques, which were widely disseminated. In contrast, in the south of Quito, low-scale social housing was developed far from the economic poles, as stated in texts from the National Housing Board in Ecuador declaring this phenomenon.

The social housing project "Santa Anita", designed by architects German Samper and Fausto Banderas in 1970, works with the functional parameters of the Quito regulatory plan. It was proposed as an urban island of low-scale housing for workers. However, the project sought to establish a link on an urban scale as it was not designed exclusively as collective housing but rather treated like a block within the city - built as a replicable scheme in an additive spatial logic as part of the urban fabric.

Despite the generic condition of its collective spaces, the presence of transitional areas between housing groups and internal streets balances privacy and communal life.

Santa Anita presents itself as a social housing complex that, from its initial conception, gives primary value to the hierarchical arrangement of the ensemble over the individual housing units. The project operates through a system of layers that articulate the public, the collective, and the private. Through a multiscale approach, the project effectively articulates a balance between the individuality of residential units and the notion of the block ensemble.

1. PROJECT BACKGROUND

Santa Anita complex is located in the southern area of Quito. It was developed during the mayoralty (1970-78) of the architect Sixto Durán-Ballén (1921-2016), who led numerous projects in Quito aimed at giving a Modern character to a town with a strong Colonial and Republican heritage. These projects were justified through the Quito Regulatory Plan from 1945 led by Uruguayan Guillermo Jones Odriozola. The plan was characterised by the sectoral development of Quito from a hygienist and socially fragmented perspective, with the southern zone dedicated to the expansion of working-class neighbourhoods.

In addition to municipal support, the project involved "Mutualista-Pichincha'' as an economic manager. This institution qualified the financing and characterisation of future inhabitants. Santa Anita stood out as an anomaly in the Mutualista's profile since it was a project targeting a low-income population.

The project features a bi-national team from Colombia and Ecuador. Germán Samper, a prolific Colombian architect, led the design team at the age of 46. Samper had a solid discourse about the role of social housing in the context of Latin America. Samper's emphasis on "*low height and high density*" guided his design philosophy, influenced by his studies under Le Corbusier. His notable project "*La Fragua*" in Bogotá earned international recognition, leading to his participation in the PREVI competition (Lima,1967-1969). Fausto Banderas, who was 31 years old at the time, represented Ecuador, and the local team included Henry Carrión in a supporting role.

Fausto Banderas is a prominent architect in the local architecture scene, born in Ecuador but educated at UDELAR, Montevideo. He kept his office open for business until 2020, engaging in a prolific production of collective housing, government buildings, and other uses. His personal brand is often associated with the use of exposed brick, influenced by Eladio Dieste, who was once his professor in Uruguay. This collaboration, unusual for low-income projects, echoes historical architectural episodes in Quito during the mid-20th century under Sixto Durán-Ballén's administration.

2. PROJECT DESCRIPTION

Santa Anita was originally planned to have 80 blocks of 50 houses each, totalling 4,000 units, from which only 200 houses were built in 4 blocks. On each block, there was a communal nucleus consisting of a park centre and parking space on two differentiated platforms. Around this block centre, there was a ring of two-storey houses built on 20-metre-deep lots, forming a square cut at its edges by pedestrian passages connecting to the streets.

These pedestrian passages were covered at their ends by the so-called "bridge-houses", which allowed for flanking the inside of the block, creating an intimate character. The bridge-houses required the establishment of specific regulations that enabled the designation of private property under public space at ground level in such complexes, making this spatial mechanism a novel resource in Quito.

The block created this geometry through the association of four different types of houses, including the bridge-house, that allowed for the creation of a set with diverse options within the limited space available of the lots. The two-storey houses separated the social area on the ground floor from the bedroom area on the upper floor. The facades present a diverse catalogue of formal resources to define the individual geometry of each house through construction joints, as well as a subtle and proportionate interior/exterior relationship, giving an austere character to the complex.

3. URBAN IDEALS

Jones Odriozola's (1942-1945) regulatory plan for Quito proposed a spatial organisation based on rigid zoning, systematically grouping a series of interconnected elements at different scales. He likened it to the human body, where "cells, tissues, and organs united by circulatory, nervous, and skeletal systems make up the human body. Minimum units, neighbourhoods, districts united by a road and green system within a geographical skeleton form the city".[1] The plan declared that the southern part of Quito would host "worker housing" as part of an industrial zone and considered these areas as urban limits.

From its initial conception, regulatory planning's functional response manifests a very evident segregation of ideologies when deciding where to locate residential areas. This phenomenon was later translated into area coding in a 1967 plan, and a neutral stance was adopted with regard to segregation that achieved normative sectorisation and separated sections of the city as isolated elements.

Santa Anita development began in 1970 and was located in the southern peripheral area of Quito. The project aligned with Jones Odriozola's plan since the selection of lands were zoned for social housing. However, these were lands where specific dynamics or processes of urbanisation did not yet exist, and the only nearby feature at the time of the project's development was a military facility with a single access road. A significant-scale housing complex was projected and built in an area where the city had not yet "arrived."

In terms of connectivity with the existing urban layout at the time of the planning of the complex, the necessary articulation roads were not constructed, leaving the four built blocks as isolated elements of the urban structure.

In the 1970s, there was a large-scale architectural and urban development that left certain areas of the city "incomplete." While Jones Odriozola's plan established certain peripheral areas for the development of social housing, promoters prioritised low land costs in distant areas over the benefits of inserting collective housing in non-peripheral land; such experiences were replicated. Social housing did not fulfil its purpose and caused significant disruptions in the growth of the city due to several processes of land speculation.

In terms of state production of social housing, processes mainly fall on the Ecuadorian Housing Bank and the Social Security Institute. It was evident that the selection of areas in the southern part of the city was prioritized.

Santa Anita presents itself as a social housing complex that, from its initial conception prioritises the hierarchical arrangement of the ensemble

1. Guillermo Jones Odriozola, *Plan Regulador de Quito, Memoria Descriptiva, 1942-1945* (Quito: Municipio de Quito, 1945), 5.

over the individual housing units. Jones Odriozola establishes the functional relationships of the different elements in the city with a scalar consideration; relevant developments in architecture constitute "minimum neighbourhood units." These elements, according to their growth, made up neighbourhoods, small districts, and large districts. The initial plan for Santa Anita which considered a development of 4000 houses was a crucial component of this arrangement.

The single-family homes are arranged in a perimeter building creating distinct blocks with each house constituting an independent plot. The grouping of houses occurs around a central space, which is accessible by pedestrian streets, all with public nature. The interior of each block is used for communal recreational spaces and pedestrian circulation. The private entrances of the houses are oriented both towards vehicular circulation streets and towards public pedestrian streets. Public space is given necessary relevance from the configuration of residential elements for community life.

From an architectural standpoint, there is very meticulous spatial work in terms of transitions between public and private spaces. Within a small space, small elements served as transitions that allow the user to experience the change from the public realm of the street and sidewalks to the private area with a front garden, small changes of level, the house entrances, and a low-impact corner treatment.

4. DISSOLVING POLARITIES THROUGH THE BLOCK

The establishment of the Ecuadorian Housing Bank (1961)[2] and subsequently the National Housing Board (1973) led to the development of the various housing complexes in the late 1960s. This had two fundamental consequences: firstly, the emergence of a new collective form of habitation; and secondly, an interest from architects in social housing. Modern architectural concepts began to be applied to the most disadvantaged socioeconomic strata.

The project is designed to separate pedestrian and vehicular traffic. In fact, vehicular flows surround groupings of pairs of blocks peripherally, privileging the pedestrian character of the block interiors. The only vehicular space within the blocks is parking space that function as "*pockets*" within them. By applying this concept and arranging compact housing around open communal spaces, a pedestrian-friendly grouping with a human scale is achieved, using the characteristic orthogonal fabric of Modern urbanism. In this way, a system of pedestrian streets is created, connecting through the association of blocks, forming a complex network of horizontal pedestrian paths that establish a gradation between domestic and urban scales.

The interior passages have a public character, which creates a sense of similarity between the exterior and interior dwellings. There is no typological distinction between the dwellings oriented towards the external streets and those oriented towards the internal passages and block centres. The architectural design responds equally to both pathways, despite their different conditions.

The bridge-house serves as a residential threshold, reducing the scale of the interior passages and encouraging a collective understanding rather

2. Organisation where Fausto Banderas worked professionally upon his return from Uruguay.

than a public one. Therefore, it acts as a transition between the different vehicular hierarchies.

The project operates through a system of layers that articulate the public, the collective, and the private. These layers are materialised in an outer band attached to the main facade of the houses, which functions as a garden. This element provides the private domestic space with its own exterior that is directly related to the communal areas, in what could be termed an attempt to reclaim traditional gathering spaces.[3] This space ensures an adequate distance between blocks (6 metres) to guarantee proper sunlight exposure and humanisation of the urban space. While the interior pedestrian streets are 2 metres wide, the gardens ensure spatial relief between dwellings.

The concept of domesticity is defined by a scalar rather than a functional question, and the relationship between the public and the private does not occur as opposition but progressively, with the collective serving as an intermediary. The typological choice of the project establishes a dialogue between the scale of the house and that of the block.

The individual condition of the house, reinforced by the constructive joints and other elements such as the eaves that distinguish entrances, is counteracted by the geometric grouping, and the use of a homogeneous language that achieves a cohesive association of elements without resorting to typological models of a larger scale and compactness such as the slab, which is the archetypal model of Modern collective housing. Through a multiscale approach, the project effectively balances the individuality of residential units and the notion of the block ensemble.

It is noteworthy that while the modern project proposed orthogonal blocks as an archetype (rationalist grid), this is also found in previous traditional urban models and the foundational urban fabric of the vast majority of Latin American cities, which does not go overlooked by Germán Samper. In this sense, a conceptual hybridisation can be perceived between modern ideals (in the most orthodox sense inherited from the CIAM) and the traditional.[4]

The project blends modern ideas and inheritances. This is evident in elements such as the formal language or the use of the orthogonal grid, which reflect ideas from the CIAM. These include the integration between architecture and urbanism, between house and city, with the block serving as an articulating element from both a morphological and conceptual perspective.

Residential architecture defines collective spaces seeking a new and more human scale. Housing, collective space, and public space form an indissoluble system in which the unit of aggregation is not the house but the block.

> *[...] In my opinion, the current architecture is detached from the urban phenomenon, as the notion of a proper urban ensemble is something more than an agglomeration of isolated and disparate elements [...]*[5]

The project in Santa Anita is characterised by an urban rather than architectural structure that acts as an efficient assembly capable of adapting. Through this model, which serves as the basic unit of aggregation, the Santa Anita project

3. *"Users read the blocks, a meeting place with neighbours"*. Germán Samper, "Hacer ciudad en la ciudad, más allá de los macroproyectos," in *Casa+Casa+Casa=¿Ciudad?: Germán Samper, Una Investigación En Vivienda*, ed. Marcela Ángel and María Cecilia O´Byrne (Bogotá: Universidad de los Andes 2012), 281.

4. *"The cities of the past grew block by block; we can renew them on the same scale"* Ibid., 281.

5. Ángel, El proyecto urbano como investigación, 91. Written by Germán Samper on the occasion of the presentation of the schemes for the civic centre of the Muzú neighbourhood unit. (Bogotá,1954).

positions itself between the domestic and the urban, between the public and the private, between the individual and the collective, between Modern orthodoxy and post-CIAM reaction, dissolving conceptual polarisation.

5. BETWEEN JONES ODRIOZOLA'S CELL AND SAMPER & BANDERAS'S BLOCK

The reference to the European Modern Movement transformed certain buildings into by-products of cultural consumption with an aspirational quality widely embraced in Quito. In the pursuit of progress, the state of the image is fundamental; these references influenced the image, although not necessarily progress.

The spatial characteristics of the project encourages social connections, leading to the formation of a neighbourhood association responsible for certain aspects such as the maintenance of interior gardens or self-management of security. However, the lack of regulations protecting the project creates the potential for changes to its layout, such as increasing the number of stories in houses beyond current limits, allowing commercial uses on the street-facing sides of houses, and the absence of a public body responsible for preserving modern heritage (as opposed to colonial heritage).

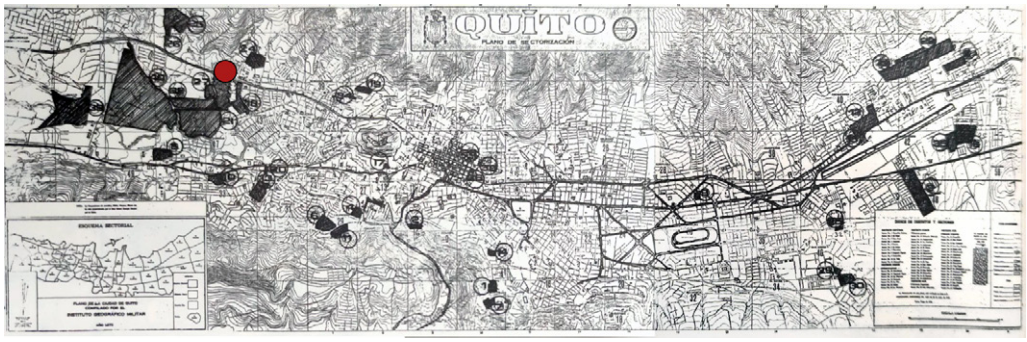
The autonomy of the lots in terms of property allows for individual decisions that can modify the original condition, regardless of the criteria of the neighbourhood association without legal attribution. The current state of the project is fundamentally a consequence of deregulation and normative lack of protection, and not attributable to the architectural approach of the project *per se*.

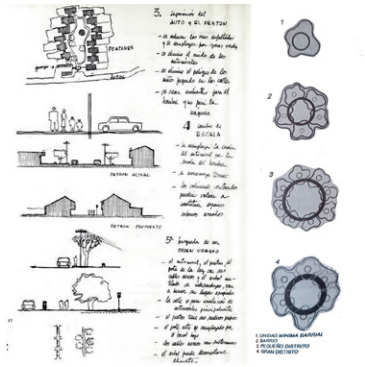
As in other Latin American contexts, this residential exploration reveals the administrative contradictions of an architectural project more advanced than its regulatory context.

The urban proposal and the residential complex stem from the additive logic inherited from modern principles. However, they differ in the scalar approach manifested in the divergence of the understanding of the basic grouping module. Jones Odriozola emphasises the "*minimum neighbourhood units*," while Samper, focuses on the block. The scale proposed by Samper and Banderas implies a humanisation of urban space linking it to the domestic scale. On the other hand, Jones Odriozola's vision applies the principles inherited from the "*Charter of Athens*" more literally, and Samper and Banderas's approach considers the contributions and reflections of subsequent decades stemming from debates arising from the CIAM principles.

The alteration of Santa Anita, compared to the original planning, occurred from the outset.[6] The current state of the complex shows that out of the initial 200 housing units, less than 10% maintain their original configuration. The regulations allow for both minor aesthetic modifications and significant morphological, typological, and functional changes due to the cadastral independence of the properties. The neighbours have subcategorised the streets and public spaces on a gradual scale to increase privacy from the heart of the block outwards, dividing it into

6. *"When they were being built, I […] attended once after they were completed and saw that they had already begun, as is typical in these social housing developments, the misguided intervention of the people."* Fausto Banderas, "Santa Anita residential complex and the experience with Germán Samper: interview with Fausto Banderas," by Néstor Llorca, Verónica Vaca and Enrique Ferreras, April 2024.





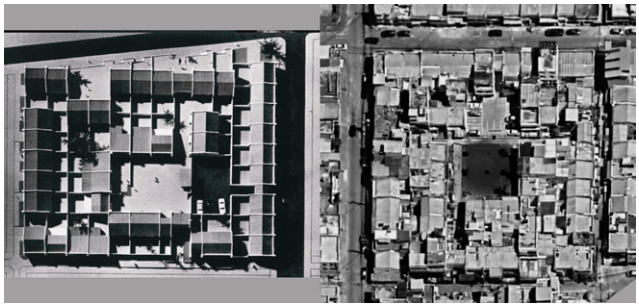




Fig 1. Ecuadorian Housing Bank BEV. Social housing projects developed in Quito from 1968-1978, Quito, Ecuador ©Trama Magazine

Fig 2. Germán Samper (left), Synthesis of a doctrine, in "Escala" magazine nº 17. Bogotá / Guillermo Jones Odriozola (right), "the city as a cell" Regulatory Plan of Quito, 1942 © Germán Samper ©Municipality of Quito

Fig 3. Germán Samper, Conjunto Santa Anita, Quito, Ecuador. Comparison between the 1972 project and the current state. Left. Project images ©Germán Samper, Right. Status in 2024 ©Enrique Ferreras

Fig 4. Current state of Santa Anita complex, Quito, Ecuador. Project modifications. Project in 2024 ©Enrique Ferreras

two independent realities, one towards the interior fostering a sense of community, and another towards the exterior in which the buildings function in isolation.

The project gravitates in a constant state of tension between the "neighbourhood cell" derived from Jones Odriozola's proposal in urban planning and the grouping based on the block by Samper and Banderas. Despite the multiple individual modifications on the different housing units, the notion of an ensemble based on the block configuration prevails in the project. ■

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BIOGRAPHY

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CIVICNESS AND TROPICALITY: RE-EXAMINING THE MODERNIST CIVIC BUILDINGS FROM THE 'GLOBAL SOUTH'

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ABSTRACT

Building on the existing discourse of how stylistic International Modernism symbolically constructed new cultural identities for post-colonial statehoods of the Global South, this introduction seeks to ground the rereading of the post-World-War II public constructions—from Karim Sayed's Egypt, Van Molyvann's Cambodia to Mendes da Rocha's Brazil, William Lim's Singapore, and more—also through the lens of climate localization in the Anthropocene. Built in the age before the proliferation of air conditioning, these buildings were already using tectonic devices such as the deep facade, brise soleil, roof overhangs, atriums, and more, to shade and facilitate air flow, localizing stylistic modernism in the specificities of their geographic and climatic contexts, and manifesting Sri Lankan architect Minnette da Silva had termed "Regional Modernism." Today, the global aspirations for the gleaming, tautly-enclosed and thin-skinned new structures, which represent economic prosperity and reflect the economics of construction under capitalism, are threatening to replace these very same civic buildings, both symbolically and functionally. Building on a trajectory of analysing architecture through their political ecological as well as environmental governance impacts, critical re-examination of the genealogies and materialities of some of the lesser-known modernist public buildings or the lesser-known aspects of well-known modernist buildings from the Global South framed by climate and context responsiveness, and the potentials for their valorisation and conservation is today much warranted.

"the South is going north" – Yung Ho Chang

Architectural modernism proliferated, in the aftermaths of World-War-II, as the internationally-circulating tectonic language. Its progressive expression for technological advancements and industrialized mass production were not only utilized for the rebuilding of the devastated cities of Continental Europe and the flourishing capitalist landscapes of North America,[1] representing both the liberal ideals of a democratic West and the collectivist ideals of a socialist East. The universalist architectural *lingua franca* of modernism is, perhaps more monumentally, deployed in constructing the historical identities of the many newly-independent nation states. In the new capital cities and public architectures representative of a new global order, the plastic expressions of modernism molded in reinforced concrete were tasked to be the material manifestations for post-colonial nationhoods.

Existing architectural discourses have already canonized the Punjab capital of Chandigarh (1950s) by Le Corbusier and his team and the capital city of Brasilia (1956-60) by Oscar Niemeyer and Lucio Costa and their team, as exemplars of how modernism came to express the aspirations and identities of the new nation-states through their urban design and architecture.[2] The Capital Complex in Dhaka, also a known architectural symbol for the establishment of the new nation of Bangladesh in 1971, highlights the famous modernist master Louis Kahn. Increasingly coming to the fore are the post-war public architectures in many parts of what is today referred to as the 'Global South,' in an expanding and more inclusive global history of architecture.[3] Many "local" architects, until-now unknown outside small circles of geographically-specific disciplinarians, and themselves often multi-lingual transnational cosmopolitans traversing global flows of knowledge—Vann Molyvann, Karim Sayed, Lim Chong Keat, Minnette da Silva, amongst numerous others—are also increasingly acknowledged for their contributions to and the realizations of the aspirations of a global modernism.[4]

From parliaments to schools, from stadiums to markets, these expressions of nationhood from what were formerly considered the 'periphery,' themselves where half the world's population lives, are additionally, *also* becoming recognized for the wisdoms and lessons they may offer the 'centre' today for environmental sustainability. Before the age of sealed facades and energy-intensive climatization, the taut skin of which seem to represent economic development and prosperity, many of the designers of the public buildings located in the Global South not only imbued their architectures with the modernist ideals of light, air, sun. But more crucially they localized these manifestations of the civic in their geographic and cultural specificities.

The shift to understanding architectural modernism as climatic is being tabled by recent scholars, in today's urgent need to address the human impacts on climate change. The research of architectural historian Daniel Barber, as published in his book *Modern Architecture and Climate: Design before Air Conditioning* (2020), begins with the understanding that "modern

1. James C. Scott, "The High-Modernist City: An Experiment and a Critique," in *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed* (London: Yale University Press, 1998), 103–46.

2. See, for example, Iwan Baan, *Brasilia-Chandigarh: Living with Modernity* (Baden: Lars Müller Publishers, 2010).

3. For the writing of a global history of architecture, see, for example, Mark M. Jarzombek, Vikramaditya Prakash, and Francis D. K. Ching, *A Global History of Architecture*, 2 edition (Hoboken, N.J: Wiley, 2010).even architectural historians who do not teach general survey courses are likely to enjoy and appreciate it.\" Annali d'architettura \"Not only does A Global History of Architecture own the territory (of world architecture

4. The recent book on architecture pedagogies, for example, is expanding on the canonical understanding of lineages. See, Beatriz Colomina et al., eds., *Radical Pedagogies* (Cambridge, Massachusetts: The MIT Press, 2022).

architecture was formulated, initially, as a strategy of climatic adaptability,"[5] and proceeds to examine its spatial and institutional consequences. From Le Corbusier's concern with the façade to the architecture outputs from Brazil, soon to become the poster child of and natural inheritor of European modernism, from the deployment of modernist tectonics in the American embassy buildings to represent Western liberalism in the ideological battles of the Cold War to the proliferation of a sealed and conditioned "planetary interior," Barber outlines an architectural evolution towards the contemporary spaces of capital and carbon. In his monograph *Modernism's Visible Hand Architecture and Regulation in America* (2018), the architectural historian Michael Osman went further to show how the management of the interior environment through mechanical ventilation, specifically in the context of American industrialization, was crucial to the evolution of infrastructures for social governance.[6]

Since the "facade was a mechanism of climatic mediation and environmental management,"[7] Barber focuses on tracing the development of shading devices, louvres, screens, jalousies, *brise-soleil* under modernism. While the envelope seems the most visible and representative tectonic device and component for the interaction of architecture with climate, it is but only one of the many case studies for understanding architecture's entanglements with "energy, politics, technology."[8] That the *brise soleil*, the deep façade and the overhang, made canonical by Le Corbusier's public buildings in Chandigarh and his later projects, including the Carpenter Centre in the northerly climate of Boston, was not the only spatial device for climate response would be obvious to practitioners in the South, whether a Global one or not. Many other devices and strategies deployed since historic times, including that of atriums, ceiling heights, interior spatial proportions for naturally ventilated air, water collecting roofs for natural cooling, and more all have and continue to contribute to the relationship of architecture to climate.

As architectural historian Jiat Hwee Chang's work, including his monograph *A Genealogy of Tropical Architecture: Colonial Networks, Nature and Technoscience* (2016) have shown already,[9] closer examination beyond only the envelope opens up the opportunity for scholars to probe how the post-war global circulation of modernism went beyond that of "climatic mediation and environmental management."[10] In Chang's analyses of the architectural languages used to represent the locality of British Malaya transitioning to the post-independence contemporary states of Malaysia and Singapore, it was the legacies of 'colonial regionalism,' which deployed vernacular symbols to justify the benevolent colonial rule, together with many of the local architects' understanding of the specificities of Southeast Asia's socio-climatics that shaped a new modernist architecture that is 'tropical.'[11]

In former British Malaya, the tropicality of architecture that was shaped by the "climate of decolonization" and produced as part of the aspirations for nation-building and identity formation was "not just designed to be in dialogue with the international discourse of tropical architecture"[12] that was being broadcast contemporaneously and more prominently. The most known

5. Daniel A. Barber, *Modern Architecture and Climate: Design before Air Conditioning* (Princeton: University Press, 2020).

6. Michael Osman, *Modernism's Visible Hand Architecture and Regulation in America*, Buell Center Books in the History and Theory of American Architecture (Minneapolis: University of Minnesota Press, 2018).

7. Barber, *Modern Architecture and Climate: Design before Air Conditioning*, 10.

8. Barber, M*odern Architecture and Climate: Design before Air Conditioning*, 9.

9. Jiat-Hwee Chang, *A Genealogy of Tropical Architecture: Colonial Networks, Nature and Technoscience*, The Architext Series (London ; Routledge, 2016).

10. Barber, *Modern Architecture and Climate: Design before Air Conditioning*, 9.

11. Jiat-Hwee Chang, "Race and Tropical Architecture: The Climate of Decolonization and 'Malayanization,'" in *Race and Modern Architecture*, ed. Irene Cheng, Charles L. Davis, and Mabel O. Wilson (University of Pittsburgh Press, 2020), 9.

12. Chang, "Race and Tropical Architecture: The Climate of Decolonization and 'Malayanization'," 9.

of these internationally recognized and circulating versions of tropical architecture was that of the British architects Jane Drew and Maxwell Fry, whose design research books *Village Housing in the Tropics* (1947)[13] and *Tropic Architecture in the Humid Zone* (1956)[14] advocated for the studies of climate localization as part of the viable transplantation of International Modernism, its ideals and forms originating in the temperate colder climates of the north. Having also worked closely with Le Corbusier on Chandigarh[15] the British architects' scientific research and development of shading and ventilation instruments made for a tectonic "dialect of internationalism,"[16] itself attesting to the directionality of learning-froms and civilizing missions as vestige of the colonial enterprise.

Architectural historian Hannah Le Roux cogently argued that the emergence of the study of a 'tropical architecture' was not only demarcated by a latitudinal-located equatorial zone and its indication of the combination of high temperature with high precipitation, but also was a legacy of the post-war reordering of global order shaped by the newly independent sovereign states.[17] The replacement of the term "colonial" with "tropical" in the building guidelines formerly called Colonial Building Notes and subsequently published as Tropical Building Notes drives home the continuities and ruptures of the term itself.[18] The 2024 exhibition entitled "Tropical Modernism" at London's Victoria and Albert Museum underlines,[19] if not starting to challenge, these oversights and exclusions that the technocratization of the 'tropics' has reinforced in architecture. As Chang also points out, publications with titles like *Tropical Houses: A guide to their design* (1961) and coming out of London was already criticized in the 1960s by architects who originate from Southeast Asia, who read them as reductive if not simply naïve.[20] The dominant conceptions of a 'tropics' or a 'South,' including their etymologies, underlying presumptions and insinuations, and as consequence their architectural manifestations all deserve examination and a re-writing of their historiographies.

Embedded in the term of a 'South' that is 'global' itself is a coincidence of the cardinal direction delineating the formerly colonial territories carved out by the Age of Conquest with the stage of development of these post-colonial states. That the contemporary term of the 'Global South' is used in lieu and to encompass 'developing' or, more optimistically, 'emerging' countries,[21] does not erase the legacy left by historic extraction from imperialist enterprises. A 'South' that is not dubbed 'global' at the same time also still denotes the cultural practices shaped by climatic and geographic specificities that are materially manifested in their built structures.[22]

Not soon after the re-publication of Drew and Fry's *Tropical Architecture in the Dry and Humid zones* (1964), the architectural historian Reyner Banham's *The Architecture of the Well-tempered Environment* (1969) would be one of the first to locate the development of modern architecture in the centre as being inextricable from the provisions of comfort and access that technological developments has made possible.[23] That Banham had been trained as an engineer underscores his reading of

13. Jane Drew and Maxwell Fry, *Village Housing in the Tropics* (London: L. Humphries, 1947).

14. Maxwell Fry and Jane Drew, *Tropical Architecture in the Humid Zone*, Reinhold International Library (New York: Reinhold, 1956), 10.

15. E. Maxwell Fry and Jane B. Drew, "Chandigarh and Planning Development in India," *Journal of the Royal Society of Arts* 103, no. 4948 (1955): 315–33.

16. Maxwell Fry and Jane Drew, *Tropical Architecture in the Dry and Humid Zones* (London: B. T. Batsford, 1964).

17. Hannah le Roux, "The Networks of Tropical Architecture," *The Journal of Architecture* 8, no. 3 (January 1, 2003): 337–54.

18. le Roux, "The Networks of Tropical Architecture," 348.

19. Victoria and Albert Museum, "Tropical Modernism: Architecture and Independence," Exhibition, Victoria and Albert Museum, 2024, https://www.vam.ac.uk/exhibitions/tropical-modernism-architecture-and-independence.

20. Chang, "Race and Tropical Architecture: The Climate of Decolonization and 'Malayanization,'" 9.

21. Sebastian Haug, Jacqueline Braveboy-Wagner, and Günther Maihold, "The 'Global South' in the Study of World Politics: Examining a Meta Category," *Third World Quarterly* 42, no. 9 (2021): 1923–44.

22. For the notion of the South to denote the climatic specificities, cultural habits developed, and their impacts on architecture, see, for example, Lewis Mumford, *The South in Architecture*, 1st ed., Dancy Lectures 1941 (New York: Harcourt, Brace and Co., 1941).

23. Reyner Banham, *The Architecture of the Well-Tempered Environment* (London: Architectural P., 1969).

modernism through the lens of technology and a fundamental scrutiny of architecture's disciplinary and professional role in relation to larger social transitions. Even though there were predictions that the global energy crises of the 1970s would challenge the constructions of centrally air-conditioned buildings enclosed by curtain walls,[24] the sealed and tempered environment has proven to be relentless, with the proliferation of ever-taller glass towers from Dubai to Singapore still today.

In the wake of a globalization of postmodernism in the 1990s, the architectural historians and theorists Liane Lefaivre and Alexander Tzonis's book *Critical Regionalism* called for a reconcilability of the modern and the local.[25] In their recalling of the works of the American historian and sociologist Lewis Mumford, whose *The South in Architecture* (1941)[26] had not rejected the positivism toward technology, but also opposed a reductive pitting of a local against a global that renders the universalist inevitably generic, their version of 'critical regionalism,' though starting to include token projects from the 'Global South' remains positioned from a vantage point where the fundamental assumptions of modern and tradition, of the developed and developing, of historical progression of ideas and of importation of ideas remained. This lingering presumption that International Modernism would be, in the non-West, an inevitable implant and in conflict with the continuity of traditions rooted in culture and place, often shaped by geography and climate, is what contemporary scholars re-evaluating the historiography of a tropical modern, itself fluid and evolving, are unpacking through their findings.[27] Already in the works and writings of architects like Tay Kheng Soon the specificities of socio-cultural and climatic regions are contesting an all-encompassing universality that the promise of technology boded.

Today, the growing body of examinations of buildings such as Lim Chong Keat, William Lim and Chen Voon Fen of Malaysian Architects Partnership's Singapore Conference Hall and Union House (1965),[28] shows how the 'South' has always been part of the consciousness of modernism localized and not only imported. Yet many works, for example Kington Loo's University of Malaya Grand Hall (1966), now called Dewan Tunku Canselor, remains to be understood in terms of influences of climate localization. Examination of the Cambodian modern master Vann Molyvann's civic buildings in Phnom Penh,[29] the construction of the National Stadium Complex (1963),[30] the State Palace (1966), and the Institute of Foreign Languages (1971), have also yet to fully unpack his seamless integration of climatically-localizing architectural elements within the evolving language, which both harks to venerable historic Khmer traditions of urbanism and architecture while deploying new modernist tectonic languages. Even though the distilling of how the atriums, *brise-soleils*, roof water collecting systems, window ventilation systems from Vann Molyvann's building have been conducted in the setting of design studios,[31] there remains little published analyses from which future generations could build, especially in light of the precarity

24. Paul Goldberger, "Energy Crisis May Doom Era of Glass Towers," *The New York Times*, December 6, 1973, sec. Archives, https://www.nytimes.com/1973/12/06/archives/energy-crisis-may-doom-era-of-glass-towers-energy-wasted-energy.html.

25. Liane Lefaivre, *Critical Regionalism: Architecture and Identity in a Globalised World*, Architecture in Focus (Munich: Prestel, 2003).

26. Mumford, *The South in Architecture*.

27. Jiat-Hwee Chang, "Deviating Discourse: Tay Kheng Soon and the Architecture of Postcolonial Development in Tropical Asia," *Journal of Architectural Education* (1984-) 63, no. 2 (2010): 20.

28. Chang, "Deviating Discourse."

29. Darryl Collins, "Vann Molyvann: Situating the Work of Cambodia's Most Influential Architect," *Perspecta* 45 (2012): 77–88.

30. Aita Flury and Katharina Stehrenberger, "Kosmisch modern: Vann Molyvann : Architekt des Königs," *Werk, Bauen + Wohnen* 94, no. 10 (2007): 40–47, https://doi.org/10.5169/seals-130603.

31. The 2024 spring semester studio that the architect Human Wu conducted at the University of Hong Kong, "Towards a New Vernacular Rethinking Housing Development in Phnom Penh," for example, looked closely at the tectonic and spatial devices of Vann Molyvann's and Geoffrey Bawa's buildings.

of many of these buildings in face of demolition-based development, replacing them with air-conditioned interiors enclosed by curtain wall.

Other blindspots of what Sri Lankan architect Minnette da Silva had termed "Regional Modernism" that deserve further unpacking, for example, are the works of Balakrisha Doshi, who also worked for Le Corbusier (1951-1954), including the Centre for Environmental Planning and Technology (CEPT) (1966) in Ahmedabad amongst many others. In South Asia, the buildings of Charles Correa in India and Jeffrey Bawa in Sri Lanka, similarly warrant further probing. In the Middle East, legacies of vernacular building practices for climate localization, as analysed by architectural and urban historian Sascha Roesler,[32] that could have influence on the modernism of Karim Sayed's realizations, including his masterplan of the Medinat Nasr (City of Victory) in Cairo,[33] amongst many other urban propositions also would worthy to draw out, if any.

The expansion of the architectural type of the public buildings, from congress halls to stadiums and sports facilities, the museums, libraries, universities, schools, post offices, market buildings, that have all become classic forms for modernist expression, includes another opening for the understanding of the meaning of civicness. In political economic contexts of rapid economic development, privately-developed buildings, including bank buildings, for example in Thailand, were also nodes of public education and modernization. Re-examining the office tower, in the rapid developments of Taiwan and Hong Kong, Asian Tiger economies by the 1970s, is another architectural type, whose instrumentalisation in the context of modernisation makes them also remarkably civic.

New ways of thinking today about architecture has been compelled by the irreversible impact that environmental degradation and climate change has wrought our planet, and through it the reframing of the Modern Movement in its engagement of the ecological. A repositioning the discipline as one deeply rooted in the specificities of geographies that shape the material and cultural construct for the built environment in fact is not innovative, but in parts of the world known as the Global South, ongoing since modernity. ■

32. Sascha Roesler, "Entangled Venting Systems, the Superimposition of Natural Ventilation and Air Conditioning," *FCL Magazine Special Issue: Natural Ventilation, Revisited: Pioneering a New Climatisation Culture*, no. 5 (2015): 148–53.

33. Nezar Alsayyad, "Encounters of Modernity and Tradition in Nasser's Egypt: Architecture and Planning Discourses of Karim, Fathy and Doxiadis in the Mid-Twentieth Century Architecture," *Tradtional Dwellings and Settlements Review* 33, no. 2 (2022): 7–20.

BIOGRAPHY

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URBAN TEXTURED PAINTINGS: EXPLORING CHEN CHI-KWAN'S HIGH-RISE MODERN ARCHITECTURE AND OVER-ALL INK PAINTINGS FROM THE "GLOBAL SOUTH"

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ABSTRACT

This paper re-evaluates post-war architecture in Taiwan from the perspective of the "Global South," critically examining its interactions with and resistance to the modernist influences from the "Global North." The focus is on Chen Chi-Kwan, a key figure in post-war architecture and painting, exploring how his designs—high-rise office buildings and over-all ink paintings—reflect localised adaptations to Taiwan's specific geopolitical and economic conditions and its climate, culture, and regional aesthetics.

Employing the framework of Critical Regionalism, Chen's work integrates modernist principles with traditional Chinese culture. His architectural designs make extensive use of local materials and construction techniques, creating structures that harmonise with Taiwan's subtropical environment. Similarly, his ink paintings innovate on traditional Chinese techniques, strongly influenced but not constrained by Western abstract expressionism, capturing the lightness and pleasure of contemporary life. Chen's work in both architecture and painting illustrates a shift from the "tradition of form" to the "freedom of life," from the continuation of national consciousness to the expansion of civic consciousness, mirroring the evolution of Taiwan's artistic and cultural landscape.

This study reveals the complex dynamics of globalisation, modernism, and tradition within Taiwan's architectural realm, enhancing our understanding of the global architectural discourse. It also unveils Taiwan's rich, yet overlooked cultural heritage, proposing new narratives and visions for its modern urban development through Chen's innovative integration of architecture and art.

1. INTRODUCTION: REVISITING POST-WAR ARCHITECTURE IN TAIWAN FROM A "GLOBAL SOUTH" PERSPECTIVE

"Global South" is a crucial term in contemporary international politics and economics, serving as a lens for understanding global shifts. The Cold War era's three-world model has evolved into today's "North-South divide." Modernism achieved dominance in the Global North, including Europe and the United States, spreading southwards through war, colonisation, trade, and cultural dissemination. The "Global South" typically refers to economically disadvantaged countries, primarily in South America, Africa, Asia, and Oceania. These regions have experienced rapid economic growth in recent years, boasting abundant natural resources and cultural heritage. While pursuing modernisation, these countries continually dissolve and resist Northern influences with their unique cultural and geographical climates.

Taiwan has always played an intermediary role on the world map. During the Japanese colonial period, it served as a springboard for Japan's southward expansion. After World War II, during the Cold War, it received U.S. aid and played a logistical role in opposing the Second World. In the 1970s, Taiwan lost its position as the representative of "orthodox China" after the Republic of China withdrew from the United Nations (1971) and severed diplomatic ties with the United States (1979). Despite its political and regional marginalisation, Taiwan's economy and commercial activities rapidly developed during this period, with a surge in the construction of residential and office buildings, which became part of the mainstream architectural production system. In Taiwan's modernisation process, post-war Taiwanese architects responded to the local climate and culture to resist the cultural dominance of the Global North. They sought to explore local practices within the context of globalisation.

This paper examines Taiwan from the perspective of the "Global South" through the work of post-war first-generation architect and painter Chen Chi-Kwan. His educational background bridges East and West: born in Beijing, China, in 1921, he studied and worked in the United States from 1948 to 1959, immersed in the trends of American modernist architecture and modern art. Since the 1960s, he has lived in Taiwan, successfully developing his architectural career and modern ink painting. His architectural and painting works reflect the absorption and resistance to modernism, blending traditional Chinese cultural connotations with Taiwan's regional characteristics. This paper focuses on Chen Chi-Kwan's high-rise office buildings and his Over-All Ink Paintings, which are clearly influenced by Western modernist architecture and abstract expressionist painting but are transformed to express a regional "texture." In architecture, this texture reflects changes in building facades in response to Taiwan's subtropical climate. In painting, it refers to innovative textures created using experimental techniques and multiple perspectives. The paper reveals the intricate connections between architecture and painting.

2. REVIEWING THE DEVELOPMENT OF CHEN CHI-KWAN'S HIGH-RISE ARCHITECTURE AND OVER-ALL INK PAINTING

Chen Chi-Kwan's painting style is closely linked to his architectural design. However, unlike architects such as Le Corbusier or Steven Holl, Chen did

not use his ink paintings as sketches for his architectural work; there is no direct link between the two. Instead, "painter" is another important identity of his as an "architect." His architecture and painting resemble parallel lines, displaying a complementary and resonant quality that requires future generations to study both together to understand and interpret them. This paper focuses on a special type of his ink painting, defined as "Over-all Ink Painting," similar to the "Over-all Painting" in American Abstract Expressionism. This means a unified treatment of the entire canvas, eliminating the hierarchical differences between top, bottom, left, and right. This flatness also demonstrates a departure from the traditional Western painting's emphasis on single-point perspective composition.

According to Fu Chao-Ching's (2019)[1] and Lin Chi-Chin's (1998)[2] research on Taiwanese office buildings, as well as Hsiao Chong-Ray's exploration of the history of post-war ink painting in Taiwan (1994)[3], the period from the post-World War II era to the late 1980s can be roughly divided into three phases. Below, Chen Chi-Kwan's office architecture and Over-all Ink Paintings are examined in the context of the development of Taiwan's modern movement. Observing Chen Chi-Kwan's Over-all Ink Paintings, the modes of expression can be divided into three aspects according to the periods: 1. freedom and innovation of brushstrokes, 2. flattening and horizontal layering of space, 3. rotating and dispersed perspectives. Through such a comparison, the parallel characteristics of Chen Chi-Kwan's architecture and painting, as well as their interaction with Taiwan's contemporary environment, can be understood.

2.1. PHASE 1: POST-WWII TAIWAN TO U.S. AID PERIOD (1945-1965)

During this period, Taiwan's office buildings were just beginning to develop, influenced by Western international styles and Chinese traditional styles representing national identity. In 1957, Chen Chi-Kwan came to Taiwan and contributed to the design of Tunghai University campus. In the early 1960s, he designed many residential buildings on the campus, incorporating local materials like ceramic pipes and tube tiles, pioneering experimental textural surfaces.

The late 1950s to early 1960s saw the emergence of "Modern Ink Painting," guided by societies like the Oriental Painting Society and the May Painting Society, inspired by "Abstract Painting." The Cultural Revolution in China prompted the Taiwanese government to launch the "Chinese Cultural Renaissance Movement," encouraging artists to modernise "Chinese Painting[4]."

Chen Chi-Kwan experimented with various innovative methods, using simplified lines from Chinese calligraphy, ink rubbing, and colouring the back of the paper, replacing traditional brushstrokes. His work reflected contemporary busy life, creating a light, floating sensation, similar to how he used local materials for architectural facades with strong regional characteristics.

1. Fu Chao-Ching, *An Illustrated History of Architectural Culture in Taiwan: Architectural Transformations from the Seventeenth to the Twenty-First Century (*Tainan, Society of Architectural Historians of Taiwan, 2019).

2. Lin Chi-Chin, *The development of office buildings' style in Taiwan(during 1945-1997)* (Taipei City: National Taiwan University of Science and Technology, 1998).

3. Hsiao Chiung-Jui, "The Emergence, Development, and Reflection of Modern Ink Painting in Postwar Taiwan," in *Proceedings of the Symposium on Modern Chinese Ink Painting* (1994): 26-33.

4. Chiung-Jui, "The Emergence, Development, and Reflection of Modern Ink Painting in Postwar Taiwan," 28.

2.2. PHASE 2: END OF U.S. AID TO THE SEVERING OF DIPLOMATIC TIES BETWEEN THE U.S. AND TAIWAN (1965-1978)

In the late 1960s, many Taiwanese companies built headquarters, adopting international styles. After opening his Taipei firm in 1965, Chen Chi-Kwan's office buildings gained prominence, including the Kaohsiung Export Processing Zone Administration Building (1967), Chiayi Land Bank (1968), and the Labour Insurance Bureau Building (1972). The Taipei Labour Insurance Bureau Building stands out with its cubic shape, central service cores, and north-south facing main spaces to reduce sunlight. Its facades feature protruding concrete blocks and recessed windows with hanging sunshades, reflecting traditional Chinese eaves brackets and adapting to Taiwan's subtropical climate.

In 1971, the Diaoyutai Islets Incident and Taiwan's withdrawal from the UN spurred local consciousness and the "Native Soil Movement." Chen's works like "Untouchable" (1967) and "Less is More" (1976) symbolised Taiwan-China relations, while "Vision" (1967) and "River Bend" (1977) explored complex landscape textures.

2.3. PHASE 3: SEVERING OF DIPLOMATIC TIES BETWEEN THE U.S. AND TAIWAN TO LIFTING OF MARTIAL LAW (1979-1987)

In the 1980s, Taiwan experienced a surge in the construction of office buildings of increasing heights and diverse designs, thanks to new materials and technologies like curtain walls. Modernist and late modernist styles dominated[5], as seen in Chen Chi-Kwan's works: Chang Hua Bank (1979), Central Bank First and Second Buildings (1979 and 1984), Taiwan Property Insurance Building (1979), Yang-De Building (1982), Kaohsiung Fishermen's Association Fisheries Building (1985), and Kaohsiung Hua-Yun Building (1987). These buildings featured vertical sunshades, creating an elegant yet silent beauty amidst urban chaos.

In art, Modernism returned to Taiwan with the establishment of the Taipei Fine Arts Museum's in 1984. Chen's prominence grew, with his first solo exhibition in Taiwan in 1980, followed by shows in 1991 and 2003. Beginning in the 1980s, Chen developed a new form of landscape painting, and his works viewed the world through "rotational" and "panoramic" perspectives, featuring compositions filled with totemic, radiating, concentric circles of clouds and smoke across long canvases. Although the patterned wind compositions in the paintings could be considered decorative, they, like the dense, fine sunshades of the Chang-Hwa Bank and Yang-De Building, serve not only to block Taiwan's hot sunlight but also to create a clean facade for the chaotic metropolis of Taipei.

3. INTERPRETING THE HEADQUARTERS OF CHANG HWA BANK IN TAIPEI (1979) THROUGH CRITICAL REGIONALISM

This paper selects a representative case from the third phase of architect Chen Chi-Kwan's work—the Chang Hwa Bank Headquarters in Taipei (1979). Located in the capital city of Taiwan, this building won the Taiwan Architect

5. Chao-Ching, *An Illustrated History of Architectural Culture in Taiwan: Architectural Transformations from the Seventeenth to the Twenty-First Century*, 807.

Magazine Award in 1979. Based on modernist principles, Chen responded to Taiwan's geography, climate, and cultural roots by using concrete structures to counter the crystalline and closed glass curtain office buildings of the global North. This approach aligns with the concept of "Critical Regionalism," named by Greek architectural theorist Alexander Tzonis and further developed by Kenneth Frampton in his subsequent essays[6]. Unlike the abstraction and formality of avant-garde modern architecture, Critical Regionalism underscores a direct dialectical relationship with "nature."

Both the "Global South" and "Critical Regionalism" stress the importance of preserving and developing local culture and characteristics in response to globalisation and modernisation. Architectural design should reflect the terrain, structure, climate, and light of Global South countries, opposing a singular modernist paradigm and seeking a path to modernisation that embodies local uniqueness. This chapter examines this work from the perspective of Critical Regionalism, referencing Frampton's discourse[7] on "shaping place-form", "world culture," "climate response and fenestration". It discusses how Chen Chi-Kwan used office architecture to construct the cultural identity of Taiwan as part of the Global South.

3.1. SHAPING PLACE-FORM

Critical Regionalism sets boundaries, emphasising how structures create a sense of place. In the 1970s, Chen Chi-Kwan attended urban design seminars, focusing on beautifying cities and understanding high-rise building issues. Taiwan's cities grew rapidly, and high-rise buildings became prominent, marking a transition from early development to urbanisation. Chen approached architectural design from an overall spatial environment perspective, akin to the situational atmosphere in his paintings.

The Chang Hwa Bank headquarters, located at Zhongshan North Road and Changchun Road **(Fig. 1)**, broke away from monotonous box-like high-rises by using an L-shaped configuration to create open urban space[8]. The building features an office tower and a business hall with a setback forming a column-free arcade, giving the building a floating, light aesthetic. The arcade responds to South China's spatial culture, providing shelter and display windows for businesses. Additionally, the rooftop garden, designed with Chinese classical motifs, integrates seating, ponds, and trees to express a Chinese-style landscape.

The design elements highlight the integration of architecture and environment, reflecting Chen's response to Critical Regionalism. He emphasised the building's role in the urban environment, enhancing the quality of urban public spaces. This holistic approach made the Chang Hwa Bank headquarters a city highlight and a reference for future urban design in Taiwan.

3.2. RESPONDING TO OVER-ALL INK PAINTING: CREATING AN IDEAL ENVIRONMENT OF "WORLD CULTURE"

Critical Regionalism cultivates a contemporary, place-oriented culture, while paradoxically creating a place-based "world culture." In a 1981 symposium, Chen proposed the concept of "world culture" for Taiwan's urban beautification,

6. Hal Foster, *The Anti-Aesthetic: Essays on Postmodern Culture* (Port Townsend, Washington: Bay Press, 1983), 27-47.

7. Kenneth Frampton, *Modern Architecture: A Critical History* (New York, Thames and Hudson, 1985), 327.

8. Chen Chi-Kwan Architectural Firm, "Changhua Bank Taipei Building," *Architect Magazine* (February 1980): 47.

emphasising cultural integration and the best aspects of both Eastern and Western cultures[9]. Chen's landscape paintings allegorise the modern city, transforming the visual experience of skyscrapers into the atmosphere of Chinese mountains. From the 1980s onwards, his works like "Valley" (1990) **(Fig. 2)** featured ink-washed mountains and small figures, creating an ideal realm[10]. These mountains resemble high-rise buildings with empty spaces akin to urban green spaces, reflecting contemporary architectural design's value.

Chen's landscape paintings can be compared to Le Corbusier's Ville Radieuse sketches, envisioning buildings that provide sunlight, fresh air, and a tree-filled future for urban life. Through his paintings, Chen expressed a longing for an ideal society and then brought this concept to life in the Chang Hwa Bank headquarters, offering valuable insights into contemporary architectural design.

3.3. CLIMATE RESPONSE AND FENESTRATION

Critical regionalism emphasises how local light dynamically illuminates structures, considering light as the primary medium to reveal the capacity and construction value of a building. It tends to treat all openings as subtle transitional zones capable of responding to place, climate, and light[11].

The Chang Hwa Bank high-rise office building consists of 14 floors with evenly distributed windows across the entire façade **(Fig. 3)**. The design cleverly positions staircases and elevators inside the building, ensuring that the cantilevered floor slabs on the façade range from 255 to 382 centimetres, thus avoiding structural columns interfering with the free design of the windows. All windows are standardised to a width of approximately one metre, fitting the required height and scale of the floors and beams, forming consistent rectangles. Between the windows are two thin, protruding panels, with recessed spaces in between, creating delicate and refined visual lines. Chen's ink paintings often use dots to form lines, and the slender sunshade panels resemble conceptual drawing lines[12], softening the imposing mass of the building in the urban landscape. This design not only enhances the aesthetic value of the building but also harmonises it with the surrounding environment.

In the façade design of the Chang Hwa Bank headquarters in Taipei, Chen Chi-Kwan ingeniously echoed the design principles of the Seagram Building (1958), adapting them to the local climate of Taiwan. The Seagram Building used bronze steel and large glass panels for its façade, emphasising its modernist minimalist aesthetics. In contrast, Chen Chi-Kwan used small concrete columns and reddish-brown bricks as non-structural pillars for the Chang Hwa Bank façade, providing shading and adapting to Taiwan's rainy, humid climate. Additionally, Chen used dark brown lines in the wall design to create a visual effect of fine lines, enhancing the building's three-dimensionality and aesthetics. The low, flat volume of the business hall is clad in beige stone, and the bevelled connection with the high-rise volume adds elegance and a harmonious transition to the overall building appearance. This design not only inherits the classic style of Mies van der Rohe but also integrates Taiwan's unique materials and climatic characteristics, showcasing Chen Chi-Kwan's localisation of modern architectural language.

9. Chen Chi-Kwan (oral history), recorded by Song Ching-Yi and Lu Hui-Hsin, "How to Beautify Our Living Environment—Summary of the 'Architecture and Art' Symposium," *Min Sheng Daily* (March 1981).

10. Pan Ping, *Chen Chi-Kwan—A Pioneer of Ink Painting at the Intersection of Eastern and Western Art* (Taipei: Artist Magazine, 2007), 60.

11. Frampton, *Modern Architecture: A Critical History*, 327.

12. Interview with Chen Shih-Lung, Chiang Mei-Chi, and Du Hsi-Sheng. (August 27, 2023). Location: Louisa Coffee, Taipei.



Figure 1. Current Exterior of the Taipei Chang Hwa Bank Headquarters ©Ning Tsai, 2024.



Figure 2. Valley, 1990, Ink and colour on paper, 32X62 cm ©Chen Chi-Kwan, 1990.

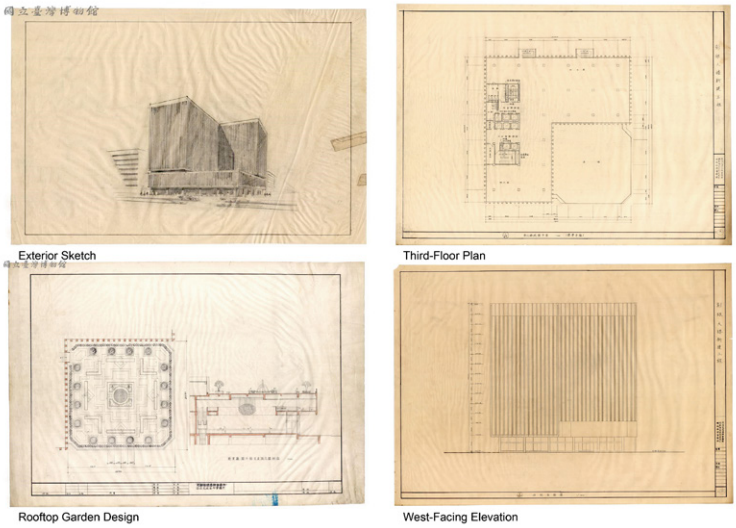


Figure 3. Chen Chi-Kwan, The Taipei Chang Hwa Bank Headquarters, Taipei city, Taiwan R.O.C., 1979, Exterior Sketch, Third-Floor Plan, West-Facing Elevation, Rooftop Garden Design. © National Taiwan Museum.

4. CONCLUSION: CULTURAL DYNAMICS IN TAIWAN'S ARCHITECTURE: MODERNISM, TRADITION, AND REGIONAL CONTEXT

This paper takes a fresh look at Taiwan's post-war architecture from the perspective of the "Global South," delving into its interactions with the dominant modernist influences from the Global North and its modes of resistance. Taiwan's unique political migration background since the end of World War II has led to the absorption of political, cultural, and economic developments from China. During the 1970s and 1980s, as rapid economic growth fuelled the rise of capitalism and consumerism, both the official architecture representing the Republic of China and the flagship buildings of capitalist private enterprises made their mark on the architectural stage.

Through the works of Chen Chi-Kwan, this paper reveals his assimilation and transformation of modernism. His high-rise office buildings adorned with ink painting artworks demonstrate localised responses to the subtropical climate, and the cultural, economic, and technical conditions of China and Taiwan. Architectural works such as the Taipei Changhua Bank Headquarters are seen through the lens of Critical Regionalism. This building, situated on an urban corner along the green belt in Taipei in the late 1970s, creates public spaces for civic life, continuing the tradition of incorporating green spaces into the city. It uses local materials and construction methods, transforming the Western modernist glass curtain wall buildings with a reinforced concrete column and beam system combined with window layout and sunshade

design. This creates spatial interfaces suitable for the subtropical climate, filtering sunlight to create shade. At the same time, the ink paintings draw from Western abstract expressionism and reattempt traditional Chinese ink painting techniques, incorporating perspectives of modern life experiences, merging traditional landscape painting with modern life. Additionally, from the 1950s to the late 1980s, the evolution from traditional forms to traditions of living in office building types in Taiwan can be observed, transitioning from Chinese imagery to gradually discarding formalism, from national consciousness to civic consciousness, creating urban green spaces and open areas for public sharing. Despite not being civil buildings, these structures are equally important, enriching Taiwan's urban spaces.

Chen Chi-Kwan's contributions highlight the complexities between globalisation, modernism, and Chinese tradition, showing a deep understanding of Taiwan's architectural environment and shaping of cultural dynamics of artistic expression. Re-examining Chen's works allows us to gain a deeper appreciation of the diversity of global architectural discourse and the richness of Taiwan's architectural cultural heritage, bringing reflective retrospection to the ongoing development of high-rise buildings today. ■

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BIOGRAPHY

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ARCHITECTURE FOR CHILDREN: COLONIAL ARCHITECTS, CLIMATE DESIGN AND ENDURING NURSERY BUILDINGS (1957-1964)

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ABSTRACT

The architecture of school buildings in former colonial territories became archetypal in terms of climate response by architects who mastered the language and technological lexicon of the Modern Movement. These architectures have been identified as optimal responses to a discourse close to current theories of mitigating the Anthropocene, insofar as they were focused on sustainable design and reduced the use of climate control technologies. After WWII, pivotal studies on designing with climate, by authors trained in former colonial geographies, such as the British architects Jane Drew and Maxwell Fry, encouraged school buildings to adapt adjusted to the various challenges of modern culture, including the climate and local resources. This position was widely promoted in the early historiography of the Modern Movement, which centred on the Global South, and extended to the study of Portuguese colonialism.

Against this background, this paper examines two nursery schools built in Maputo (Mozambique) and Luanda (Angola) in the early 1960s by the architects Pancho Guedes and Simões de Carvalho. These projects conveyed international debates that were in broader meetings promoting modern culture, such as the UIA (*Union Internationale des Architectes*). In particular, the *Charter for School Buildings*, resulting from the Rabat meeting in 1959, would have a direct impact on the rejection of the monumental scale, the introduction of spatial flexibility, structured circulation, and outdoor spaces on a child's scale. The nursery in the Cazenga neighbourhood (Angola) and the Piramidal kindergarten (Mozambique) are now established as educational institutions adapted to contemporary societies, with little maintenance and occasional adjustments to new programmes, reinforcing a formal and technical performance open to post-colonial societies and challenging the framework of their original conception. As true *Architectures for Children*, these buildings continue to contribute to early environmental education.

1. INTRODUCTION[1]

In 1944, the British architects Jane Drew (1911-1996) and Maxwell Fry (1899-1987) wrote a first book about architecture. Topics ranged from shelter as a biological need to systems of construction, design, history. It is not clear why this first edition was titled *Architecture for Children*, but it may have been from a didactic perspective. From the first pages, the school programme appeared as a potential guide to understanding the need for architecture.[2] According to the young couple, the school added to the problems raised by the design of the house: "There is the question of how to warm you in winter; how to keep you cool in summer, how to give light when dusk falls (…)."[3] The study was renamed *Architecture and the Environment* in 1976, emphasising that modern forms should follow sustainable avant-garde design.

Further books published by the duo between 1956 and 1964 would reinforce a "Tropical Modern" design,[4] in which the "Educational Building" became one protagonist in shaping new African nations. Drew and Fry also became notable for designing schools from the British colonial period to post-independence, "delivering an architecture that was not overtly 'colonial', yet responded to the colonial notion of school,"[5] as Jackson and Holland argued. Drew made the first plan for a school for a model village in Kenya (not built, 1938).[6] However, it was Fry who added one of the two types of nursery school to the duo's list of educational buildings **(Fig.1)**. These "small nurseries", from 1956,[7] were included in a larger series of schools built in Chandigarh (from 1951 onwards) and had "the front façade designed to be opened, blending the inside with the outside."[8] Similarities to this plan can be seen in the proposals by the architect Fernão Lopes Simões de Carvalho (b. 1929, Luanda, Angola) – whose work will be discussed in this paper – as the kindergarten in Novo Redondo, now Sumbe, Angola, from 1961.[9]

Between 1950 and 1966, Drew and Fry designed more than twenty-five school buildings, from the UK to Kenya, Ghana, Togo, Nigeria, and India.[10] These designs were adapted to tropical climates before any innovative programmatic formulation was considered. Of "primary schools," they wrote: "The program is simple – a room or rooms, a store, a latrine."[11] If in Africa the more conventional aspects of education were shaped by the axial organisation of these buildings, in post-colonial Punjab, India, the Model Secondary School in Sector-23 may have represented a step towards the "school under the tree", confirming the belief attributed to Drew that "education could take place beyond the classroom."[12]

This language was consistent with later guidelines for school design, which proposed the school as "a complement to housing"[13] and a promoter of "active teaching."[14] Major professional bodies, such as the International Union of Architects (UIA), began to include teaching in outdoor spaces in their recommendations. Collaboration between pedagogues and architects was advocated with the aim of "establishing standards"[15] that could be extended to functionalities and construction systems.

The school building soon became an architectural reference, placing children as interlocutors of the possibilities of modern design. It should

1. This research was funded by the European Union (ERC, ArchLabour, 1101096606). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Council. Neither the European Union nor the granting authority can be held responsible for them. ArchLabour, chaired by Milheiro. Also funded by the FCT through the "ArchWar" project (https://doi.org/10.54499/PTDC/ART-DAQ/0592/2020), chaired by Milheiro&Fiúza; and by IL Rodrigues' grant, FCT "Beyond Modern Housing…" (https://doi.org/10.54499/2022.00268.CEECIND/CP1750/CT0007).

2. Jane Drew and Maxwell Fry, *Architecture for Children* (London: George Allen and Unwin, 1944) 43-44.

3. Drew and Fry, *Architecture for Children*, 44.

4. E.g. "Tropical Modernism: Architecture and Independence," V&A Museum, London (2024). Visited as part of the preparation of this article (04/05/2024).

5. Iain Jackson and Jessica Holland, *The Architecture of Edwin Maxwell Fry and Jane Drew* (London: Routledge, 2016), 165.

6. Jackson and Holland, *The Architecture of Edwin Maxwell Fry and Jane Drew*, 337.

7. See Kiran Joshi, *Documenting Chandigarh* (Mapin Publications,1999), 195.

8. Joshi, *Documenting Chandigarh*, 243.

9. "A kindergarten preliminary project," 1961 (José Pinto), FLSC Archives.

10. Pinto, "A kindergarten preliminary project," 1961.

11. Maxwell Fry and Jane Drew, *Tropical Architecture in the Dry and Humid Zones* (Florida: Krieger Pub. Co., 1964 [1982]), 141.

be noted, though, that the interplay between a modern educational system and modernist architecture remained a "paradox" that "imposed a foreign pedagogy and associated cultural ethos, only partially modified to local conditions," as Liscombe argued about Fry and Drew's work in Africa.[16] In colonial circles, shaping "new" individuals had more complex aims than "climate literacy" through architecture. It oscillated between a process of re-education to create (so-called) "civilised" societies, or a pragmatic response to the "developmental" demands of organisations such as the United Nations (UN). Portugal, a UN full member since 1956, accelerated the construction of schools in the post-war period in compliance with international agreements.[17]

This paper considers the extent to which colonial architects sought to go beyond the abovementioned socio-political goals while incorporating groundbreaking interpretations of the latest pedagogical approaches of the time. Although most architects were part of the group of experts who participated in supporting colonialism – a process with significant physical, social, and identity nuances that architectural history has come to engage with, challenging the positivist and Western-centric views that have been earlier ascribed to the Modern Movement[18] –, they introduced key devices into their proposals that transformed schools into places open to local cultures.

2. EARLY CHILDHOOD SCHOOLS IN THE TROPICS

This paper surveys two nurseries designed in Africa in the early 1960s by the architects Pancho Guedes (1925-2015) and Simões de Carvalho: the Piramidal Kindergarten[19] and the nursery and kindergarten at the Cazenga Assistance Centre.[20] The first, in Lourenço Marques, now Maputo, the capital of Mozambique, was commissioned by Catholic nuns.[21] It was built from 1957 onwards in the Summershield neighbourhood, a city's "wealthy suburb,"[22] and opened in 1961.[23] The latter, in Luanda, the capital of Angola, was part of a community centre, designed in 1963 for the Administrative Commission of the Fund for the Popular Neighbourhoods of Angola (CAFBPA). It was intended for disadvantaged African populations.

While Pancho Guedes' drawing belongs to a new lineage in his creative production – which he provocatively called the "American-Egyptian style", incorporating the "eighth book" of *Vitruvius Mozambicanus*[24] – Simões de Carvalho's nursery was most likely an adaptation of a project developed around 1962 for the Angolan Provincial Settlement Board (JPPA). Both proposals were designed for children between the ages of three and five, as were Fry's schools built in India.

Significantly, they were launched at a singular moment in the debate on educational buildings in Portugal. The third edition of the UIA, held in Lisbon in 1953, had innovatively set up a working group on school buildings. Two main dilemmas guided the debate: on the one hand, the urgency of finding constructive and design solutions to overcome the serious lack of equipment for children and young people after WWII and in the face of increasing literacy programmes; on the other hand, the preference for buildings located in open and green spaces, integrated into "nature."[25]

12. Jackson and Holland, *The Architecture* (2016): 245.

13. [UIA, International Union of Architects], "School Construction Charter," *Binário* 77 (1965): 506.

14. UIA, "School Construction Charter," 508.

15. UIA, "School Construction Charter," 509.

16. Rhodri Liscombe, "Modernism in Late Imperial British West Africa: The Work of Maxwell Fry and Jane Drew, 1946-56," *JSAH*, 65 (2016): 194.

17. See Ana Vaz Milheiro, "Escolas em Angola durante o Estado Novo: arquitectura e arte," *Revista de História das Ideias*, no. 32 (2011): 601–630; Margarida Quintã, "Modern Schools in Angola, 1961-1975: Design with Climate and Heritage," PhD Thesis, IST, 2019.

18. See, among others, Ikem Stanley Okoye, "Architecture, History, and the Debate on Identity in Ethiopia, Ghana, Nigeria, and South Africa," *JSAH*, 61 (2002): 381–396.

19. Ana Tostões and Zara Ferreira, "Jardim Infantil Piramidal. The birthplace of "Américo-Egípcio," in *Modern Architecture in Africa: Angola and Mozambique*, ed. Ana Tostões (Casal de Cambra: Caleidoscópio, 2014), 328.

20. Ana Vaz Milheiro, "Fernão Lopes Simões de Carvalho, o arquitecto do Béton Brut," *JA – Jornal Arquitectos*, 236 (2009): 23. In his CV, Simões named this project the Cazenga Children's Centre, but this toponym refers to a different neighbourhood today.

21. Pancho Guedes, *Manifestos Essays Speeches Publications* (Lisbon: OA, 2007), 36.

22. Pancho Guedes, *Pancho Guedes Vitruvius Mozambicanus* (Lisbon: Colecção Berardo, 2009), 142.

23. Tostões and Ferreira, "Jardim Infantil," 328.

Pedagogical and hygienic needs were also discussed. Regional variations within national contexts were encouraged based on differences in climate. There was agreement on the idea of an "open school, because air, light and movement give students greater vitality and interest in their lessons."[26]

Portugal was represented by the architect Januário Godinho (1910-1990). His account of the Portuguese situation focused on the interplay between a country's economic situation and its constructive performance. He called for traditional systems to be used in the construction of schools, within specific regional and socio-economic contexts,[27] reacting cautiously to the wave of serialisation and prefabrication of post-war modern culture.[28]

Although architects in Portuguese colonies in Africa were not engaged in the central debates, they produced architectural works that reflected some aspects of the discourse. Until the late 1950s, the typological options for school construction were largely determined by the Colonial Public Works (CPW)'s models, crossing a range of architectural styles.[29] From that point onwards, "the notion that climate was the first constraint to be considered for building low-cost schools" began to emerge in the minds of architects.[30] This rationale could be depicted in the schools designed in Angola by architects Manuela Silva Mota (1936-?) and Antonieta Jacinto (1930-2021), around the early 1960s. These plans used devices to open the classrooms, "completely eliminating any separation between inside and outside."[31]

Despite the purported scientific and climatic standards, the examination of colonial school programmes must consider the socio-political circumstances in which they were implemented, acutely the enduring colonial networks of expertise and the asymmetric power dynamics of colonialism.[32] Moreover, the post-war rise in mass literacy in Africa cannot be understood in isolation from the outbreak of the struggles for liberation in Angola in 1961 and Mozambique in 1964. The warfare would influence the development of new educational models in both rural and urban areas, while driving architects to search for quick solutions with various construction materials.

2.1 THE PIRAMIDAL KINDERGARTEN (MAPUTO, MOZAMBIQUE, 1957-1961)

Pancho Guedes has been highlighted as a key figure of architectural production in colonial Africa.[33] Pancho's design of school buildings is well-documented, gathering aesthetic and constructive diversity. In his words, schools were "learning machines" and he was motivated to design them after discovering a "multiracial school in Swaziland."[34]

By 1972, Pancho had designed around nine school buildings. If the Piramidal kindergarten was the starting point, the clandestine school in the "caniço" (slum), also in Maputo, designed eleven years later, was the height of his reflections on this programme, evoking the traditional habitat. This was the building he showed to Alison and Peter Smithson in the late 1960s.[35] Both schools use modular squared elements with a pyramidal roof. This latter element had a double meaning: in the Piramidal kindergarten it was a scholarly citation of Louis Kahn (1901-1974); in the clandestine school it mimicked the

24. Pancho Guedes, "Vitruvius Mozambicanus," *Arquitectura Portuguesa* (1985): 36.

25. UIA, *Troisiéme Congrès de l'Union Internationale des Architectes: Rapport Final* (Lisbon: BNP, 1953), 339– 409.

26. UIA, *Troisiéme Congrès*, 350.

27. UIA, *Troisiéme Congrès*, 356.

28. UIA, *Troisiéme Congrès*, 357.

29. For Angola, see Maria Manuela da Fonte, *Urbanismo e Arquitectura em Angola* (Casal de Cambra: Caleidoscópio: 2013), 329-357. For Mozambique, see André Ferreira, "Obras Públicas em Moçambique," Master thesis, FCTUC, 2006: 137-140.

30. Quintã, "Modern Schools" (2019): 35–37. Silva Mota designed primary schools for four types of climate.

31. Fonte, *Urbanismo e Arquitectura*, 344.

32. Jiat-Hwee Chang, *A Geneaology of Tropical Architecture* (New York: Routledge, 2016).

33. Miguel Santiago, *Pancho Guedes, spatial metamorfoses* (Casal da Cambra: Caleidoscópio, 2007), 27–49.

34. Guedes, *Pancho Guedes*, 183.

35. For Pancho and Team 10, see Jorge Figueira, "The hand that rocks the cradle," in *Taborda, Lisboscópio* (Lisbon: Instituto das Artes, 2006), 99–109.

local self-produced constructions. While the *caniço* school supported the city's poor community, the Piramidal kindergarten was aimed at settler children.

The Piramidal school, with a capacity for 180 children (later 300), had a two-storey body, leading to a chapel (now a gymnasium), and giving rise to a series of external modules (storerooms). The main volume housed the classrooms, separated by the sanitary facilities.[36] The upper floor, intended as a dormitory, was converted into more classrooms. In 1964, Pancho described the building as being "white and blue with a little grey."[37] Today it has a much more vibrant colour palette **(Fig. 2)**.

Pancho wanted the school to be transformed into "many rooms of joy... and that every day [would] be one of celebration."[38] The outside had plenty of trees, making the "courtyard surrounded by a large and pleasant wall of green shade."[39] Given Pancho's strong awareness of the artistic impact of architecture, it was not the technical means of adapting to the climate that stood out in his speech – despite their power in defining design – but rather the sculptural elements evoked archaic architectural presences, the most obvious being ancient Egypt. The playgrounds of Dutch architect Aldo Van Eyck (1918-1999) also echoed.

2.2 NURSERY AND KINDERGARTEN AT THE CAZENGA ASSISTANCE CENTRE (LUANDA, ANGOLA, 1963-1965)

In Angola, Simões de Carvalho represented a different type of architect to Pancho. Despite his close association with Le Corbusier (1887-1965),[40] Simões saw himself as a technician and avoided the more artistic aspects of the architectural discipline.

The architect – who grew up in Luanda – promoted an architectural design anchored in climate control. While designing the nursery and kindergarten at the Centro Assistencial da Cazenga, in the early 1960s, he also worked on other projects for early childhood.

In 1963, after completing a two-rooms nursery for Sumbe, Simões proposed, with the architect Pinto da Cunha (1921-1985), a primary school and a kindergarten for the Fishermen's neighbourhood in the Island of Luanda (1963). The classroom was seen as a cell, creating relationships between the other programmatic elements. The simple plan was made complex by the elevation of the volumes. The walled elements were a key response for cross-ventilation and visually filtered the relationships between public and private outdoor spaces.[41]

Later, the kindergartens for the JPPA presented architectural elements inspired by other programmes – such as housing – by having vaulted roofs and an L-shape, with outdoor areas.[42] They in neighbourhoods mainly inhabited by the local African population as Simões trusted the school as the anti-segregation programme par excellence. These earlier plans were decisive in the design process of the Cazenga' project **(Fig. 3)**.

Neither the drawings nor the working process of the Cazenga buildings have yet been located. Recent visits to the site revealed that the educational area was accessed via a passageway. The nursery was organised around a

36. Tostões and Ferreira, "Jardim Infantil," 330.

37. Guedes, *Manifestos Essays*, 36.

38. Guedes, *Manifestos Essays*, 36.

39. Guedes, *Manifestos Essays*, 36.

40. Through contact with André Wogenscky (1916-2004), cf. Milheiro, "Fernão Lopes" (2009): 22.

41. Fonte, *Urbanismo e Arquitectura*, 345–346.

42. "JPP-EJ", C001-C010, 07/31/1962, FLSC Archives.

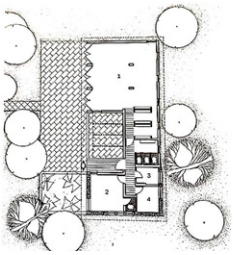




Figure 1. Maxwell Fry, Nursery School, Sectors-22&23, Chandigarh, Republic of India, 1956. © Credits Kiren, *Documenting...*, 1999; Inês Nunes, 2024.

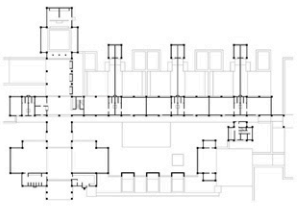
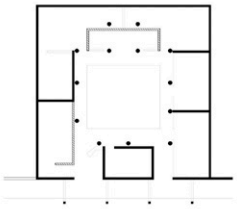




Figure 2. Pancho Guedes, The Piramidal kindergarten and plan diagram, Maputo, Mozambique, 1957-1961 © Credits Ana Vaz Milheiro, 2016; redrawing Filipa Fiúza.

Figure 3. Simões de Carvalho, Nursery and Kindergarten of the Cazenga Assistance Centre and plan diagram, Luanda, Angola, 1963-1965 © Credits Ana Vaz Milheiro, 2023; redrawing Beatriz Serrazina.





courtyard with a large tree, shaped by a portico of columns with a circular section. This central courtyard gave access to the rooms. The interiors were equipped with toilets and furniture adjusted for children. A mural of children's drawings faced the entrance hall, marked by a low bench with an organic shape. Plastic details can still be seen in small squared and rectangular openings in the staff office's façade, giving the interior a sculptural luminosity.

It is worth noting that Simões de Carvalho used the Modulor's dimensions to increase the sense of comfort, contributing to the almost domestic scale of the building. Ventilation ran freely along the ceilings.

3. CONCLUSIONS

The kindergartens by Pancho and Simões de Carvalho in Mozambique and Angola proposed different typologies and unique ways of learning. While the former maintained a linear logic and was innovative in its approach to outdoor spaces and circulation between functions, the latter stood out for taking advantage of a central courtyard to extend teaching activities and circulation outdoors, while also transferring the playground to open space.

Both went beyond the *form-follows-climate* formulation to propose spaces that were a real alternative to colonial education from the richness of their functions. This process resulted from previous experiences, including those of other architects, who began to open buildings' plans to the playground. These were broad interpretations of the theses promoting education beyond the classroom – such as those of Jane Drew.

In the case of Pancho's school, differentiated education was offered in the context of private structures, aimed at upper-class settler families. Simões de Carvalho's proposal, on the other hand, directly affected the education of low-income African populations, following his beliefs in a multiracial public school, strongly rooted in the so-called *popular* neighbourhoods.

The two schools ended up replacing the "civilizing" purposes foreseen in the educational dynamics of the colonial war,[43] by adopting a more universal and humanist approach. Architecture was thus supposed to be an active part of a "mental" construction by rejecting the monumental and aesthetic languages of the colonial state. Architects believed they were contributing to a future society with higher demands concerning function, technology, comfort and environmental behaviour. The permanent use of the two nurseries over the last 60 years, with minimal maintenance work and minor adaptations, mostly to increase their capacity, reveals the resilience of their modern design. They are considered here as true "Architecture(s) for Children" which shaped and continue to shape societies that are more rigorous about the value of their collective spaces. ■

43. Fonte, *Urbanismo e Arquitectura*, 345–346.

BIOGRAPHY

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BETWEEN TROPICALITY AND MODERNISM: EXPLORING ROBERT G. BOUGHEY'S ARCHITECTURAL SYNTHESIS IN THE GLOBAL SOUTH

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#15

ABSTRACT

In the transformative period of East Pakistan's (now Bangladesh) architectural development from the mid-1950s to the late 1960s, the region witnessed a fusion of local and international architectural dialogues. This era, significant for its architectural renaissance, was marked by the engagement of globally renowned architects alongside local experts, creating a distinctive modernist identity underpinned by regional sensibilities and climatic adaptations. Among the architects who left an indelible mark were Robert George Boughey (RGB) from Louis Berger Consulting Engineers (Pak) Ltd., whose contributions, despite their significance, have largely gone unrecognised. Boughey's involvement in East Pakistan was characterised by significant civic and infrastructural projects, facilitated by international collaborations and funding from entities like the Ford Foundation and the World Bank. These projects were not merely architectural feats but were emblematic of a broader ambition to forge a national identity through modernist architecture. Despite playing a crucial role in this architectural narrative alongside contemporaries like Louis I. Kahn, Paul Rudolph, and C. A. Doxiadis, Boughey's projects often go unnoticed or are underrepresented. In his projects, he used shading devices, such as *brise soleil*, vertical drop walls, projected verandas, shaded semi-open corridors, or overhanging roofs, to counteract the tropical sun and save the interior spaces from overheating by direct contact with the exterior. For monsoons and seasonal heavy rain, he included features like rain devices, waterspouts, and scoops to protect structures while representing rain as a celebrated architectural element. Arguably, his projects express modernity through these building features while aligning with local climatic traits. This study examines Boughey's architectural designs in East Pakistan, focusing on how they integrate modernist aesthetics with the subtropical climate's demands. It explores his use of natural ventilation, shading devices, and climate-appropriate materials, situating his work within Tropical Modernism and highlighting its role in advancing climate-responsive modernism in the Global South.

1. INTRODUCTION

In the tropics, nation-building in developing countries often involves embracing modern design and construction techniques. The adoption of Western design knowledge marked the spread of modernist architecture in post-colonial nations, symbolising a move towards national identity and hopeful futures.[1] During the 1950s and 1960s, South Asian architects such as Charles Correa, Minnette De Silva, and Muzharul Islam re-evaluated the concept of architectural design based on climatic traits through their localised modernistic design approaches[2]; arguably initiating the trend of incorporating climatic traits into buildings to establish national cultural identity.

Following the British India Partition in 1947, the strategic location of newly decolonised Pakistan played a significant role in its alliance with the USA in Cold War politics.[3] As a consequence of soft power and the theory of modernisation, there were US-based attempts at technical advancement, which led to the creation of new premises and developments, both infrastructural and technical, ultimately resulting in the recruitment of foreign architects and agencies through Ford Foundation grants, USAID, and World Bank sponsorship.[4] This also led to the opening of a local office in Dacca (now Dhaka) for the US-based consulting firm, Louis Berger Group.[5]

Among the foreign architects, Boughey's work was noteworthy for being locally adapted and harmonised with the contextual attributes.[6] Boughey's tenure as chief architect for Louis Berger Consulting Engineers (Pak) Ltd. from 1962 to 1964, alongside his academic and professional journey, highlights a narrative of contextual adaptation. Trained at the Pratt Institute and further educated through postgraduate studies in Tropical Studies, Boughey based his approach on sensitivity to the local climate, culture, and technological constraints.[7] His work, exemplified by the iconic Kamalapur Railway Station, demonstrates the application of modernist principles tailored to East Pakistan's subtropical milieu.[8] Despite his notable contributions, Boughey's works are often overshadowed by the more popular architecture of Louis I. Kahn, Paul Rudolph, or Doxiadis, whose works are recognised as the architecture of nation-building for a newly independent Bangladesh.

This research analyses Boughey's architectural projects in East Pakistan, scrutinising how his designs reconciled modernist aesthetics with the climatic exigencies of a subtropical environment. It explores the integration of natural ventilation, shading devices, and materials conducive to thermal comfort, positioning Boughey's work within the broader framework of Tropical Modernism within the Global South.

The research method adheres to Groat and Wang's interpretative historical research approach.[9] It involves conducting a literature review of secondary sources, analysing field surveys of local projects, and creating drawings from survey sketches. Additional steps include acquiring architectural drawings and photos from archives as well as conducting interviews with the architect to gain first-hand insights.

1. Duanfang Lu, *Third World Modernism: Architecture, Development and Identity*, ed. Duanfang Lu (New York: Routledge, 2011), 19.

2. Prajna Desai, "Architecture and Environment," in *The Project of Independence: Architectures of Decolonization in South Asia, 1947-1985*, The Museum of Modern Art, New York, 149-155.

3. Abul Tayyeb, *Pakistan: A Political Geography* (London: Oxford University Press, 1966).

4. Farhan Karim, "Between Self and Citizenship: Doxiadis Associates in Postcolonial Pakistan, 1958-1968," *International Journal of Islamic Architecture* 5 (2016): 135-161. doi:10.1386/ijia.5.1.135_1.

5. Rafique Islam, *Daniel Dunham: Pioneer of Modern Architecture in Bangladesh* (Scottsdale, AZ: The BookPatch, 2014), 01-20.

6. Shamsul Wares, "Bangladesher Panchash abong Shat Dashaker Sthapatyer Katha" (The History of Architecture of Bangladesh in the 50s and 60s)," *Nirman Shilpe Bangladesh*, 6th Special Issue of Aniomito Aniket, Bangladesh University of Engineering and Technology (1984): 70-80.

7. John Hoskin and Robert G. Boughey (Bangkok: The Key Publisher, 1993).

8. Mrinalini Rajagopalan, "Marooned Moderns: Preservation and the Long Shadow of Colonialism," in *The Project of Independence: Architectures of Decolonization in South Asia, 1947-1985*, The Museum of Modern Art, New York, 166-169.

9. Linda Groat and David Wang, *Architectural Research Method* (New Jersey: John Wiley & Sons, 2013 ed.).

2. TROPICAL MODERNISM:

After World War II, the focus on architecture in tropical regions increased as decolonising areas of the British and French Empires started to consider the impact of climate on building design.[10] Tropical Architecture transitioned from a focus on hygiene and medicine to modernism, with a particular emphasis on adapting to local climates. This shift was influenced by European modernist architects engaging with colonial traditions, forming a distinct post-war architectural movement.[11] In the 1950s and 1960s, Tropical Architecture emerged as climate-responsive modernism, recognising economic constraints that made mechanical climate control impractical in the Third World. Scholars such as Iain Jackson see it as an adaptation of European styles for the Tropic of Cancer and Capricorn[12], while Mark Crinson views it as a metropolitan phenomenon perpetuating colonial frameworks through imperial channels like architects, publishers, and schools, suggesting a neo-colonial aspect.[13]

The environmental discourse often categorises Tropical Architecture as a scientific approach to climatic design, devoid of colonial connotations.[14] However, debates persist, such as those between Fry and Drew, who disregarded prior indigenous practices[15] and scholars like Chang and King, who emphasise 'transculturation'—exchanges between colonisers and colonised.'[16] Vandana Baweja underlines Tropical Architecture's dual role in reinforcing colonial ties and promoting sustainable design.[17]

On the other hand, a technical view of Tropical Architecture can be identified in Koenigsberger's "Manual of Tropical Housing and Building: Climatic Design." The book suggests orienting buildings to catch prevailing winds and minimise solar heat, using a north-south alignment and east-west elongation to optimise airflow and thermal comfort.[18]

In extreme climates, such as deserts or polar regions, specific architectural forms are necessary. However, sub-tropical climates welcome a type of architecture prioritising regional specificity and climate responsiveness. Scholars like Harry Seckel emphasise aligning building orientation with prevailing winds to facilitate natural ventilation.[19] Tropical Modernism leverages open layouts and extensive overhangs to promote air circulation and light penetration, essential for comfort in tropical environments.[20] Barreneche emphasises balancing tropical breezes and sunlight with protection against heat and seasonal storms.[21]

In Bangladesh, characterised by a subtropical monsoon climate with seasonal temperature fluctuations, high humidity, and significant rainfall, architectural considerations are shaped accordingly.[22] The following section analyses four buildings designed by Boughey, examining how his design approaches align with Tropical Modernism and the extent to which climatic traits influenced his designs. Did his design attributes reflect the context of Tropical Modernism, and how did climatic considerations influence his architectural choices?

10. Vandana Baweja, "Otto Koenigsberger and the Tropicalization of British Architectural Culture," in *Third World Modernism: Architecture, Development and Identity*, ed. Duanfang Lu (New York: Routledge, 2011), 238.

11. Baweja, "Otto Koenigsberger and the Tropicalization of British Architectural Culture," 237.

12. Iain Jackson, "Tropical Architecture and the West Indies: from Military Advances and Tropical Medicine, to Robert Gardner-Medwin and the Networks of Tropical Modernism," *The Journal of Architecture* (2013): 167-195.

13. Mark Crinson, *Modern Architecture and the End of Empire* (Aldershot, Hants, England: Ashgate Publishing, 2003).

14. Jeffrey Cook, "Six Evolutionary Phases Toward Solar Architecture: Thermal Application of Solar Energy in Buildings," in *Eighth Biennial Congress of the International Solar Energy Society, Perth,* ed. International Solar Energy Society and S. V. Szokolay (Perth: Pergamon Press, 1983), 4-15.

15. Edwin Maxwell Fry, "Le Corbusier at Chandigarh," in *The Open Hand: Essays on Le Corbusier*, ed. Russell Walden (Cambridge: The MIT Press, 1977).

16. Jiat-Hwee Chang and Anthony D. King, "Towards a Genealogy of Tropical Architecture: Historical Fragments of Power-Knowledge, Built Environment and Climate in the British Colonial Territories," *Singapore Journal of Tropical Geography* 32 (2011): 283–300.

17. Baweja, "Otto Koenigsberger and the Tropicalization of British Architectural Culture," 237.

3. ANALYSIS OF THE SELECTED PROJECTS OF ROBERT G. BOUGHEY THROUGH THE LENS OF TROPICAL MODERNISM

3.1 KAMALAPUR RAILWAY STATION (KRS):

Kamalapur Railway Station in Dhaka, Bangladesh, exemplifies modernist architecture, blending functionality with cultural symbolism. Initially designed by Daniel C. Dunham and revised by Boughey, the project evolved to meet the demands of a major transport hub and the cultural expectations of the Railway Board[23] **(Figure 01)**. Boughey advanced the "Dome Umbrella Scheme" into a three-dimensional parasol roof, balancing modern modular design with the railway authority's desire for Islamic identity, emphasising practical concerns about large-scale construction and climatic comfort.

The primary challenge was creating a parasol roof that met functional demands and adaptability. Boughey aimed to establish a flowing structure supported by a grid-patterned system, providing shade from sun and rain.

The terminal's central feature is a parabolic shell roof, shading the main pedestrian circulation above low-rise structures. These buildings, arranged linearly, house essential passenger amenities like ticket counters and waiting lounges. Forty-nine columns support thirty-six cusped shells in each square bay, using locally sourced materials and traditional construction techniques.[24]

The cusped, thin-shell modules were constructed using locally sourced, reusable formworks and bamboo scaffolding.[25] This arrangement integrates the spaces below and aligns with traditional building practices that incorporate overhanging roofs, vertical shading devices, and shaded semi-outdoor spaces, suited to the local climate.

The roof mirrors the traditional Mughal pavilion, promoting air circulation and offering protection from sun and rain.[26] The lower platform roof, constructed from elongated concrete vaults, ensures a continuous covered walkway for passengers, providing shade.

3.2 BOYS HOSTEL BUET:

Following the British Partition in 1947, architectural trends favoured heavy brick walls with small openings, dark interiors, and clichéd art deco exteriors. Against this backdrop, architect Boughey introduced a design approach in 1962 at Bangladesh University of Engineering and Technology (BUET) for the boys' hostels **(Figure 02)**.[27]

Boughey's design utilised concrete frame structures, allowing for nearly transparent internal walls, cantilevered balconies, and spacious corridors. Each hostel features two identical residential wings, a canteen block, and a multi-purpose block housing common rooms and prayer spaces. Two offset wings create a central courtyard, enhancing communal interactions. These wings, 232 feet long and 33 feet deep, are oriented along the East-West axis to maximise exposure to the north and south, optimising conditions for the tropical climate.

The layout features open verandas and corridors with wall-to-wall windows to the north and south. Cantilevered beams support the corridors and balconies, adding visual depth and passive cooling features. The

18. Otto Koenigsberger, Tony Ingersoll, Alan Mayhew, and Steven Szokolay, *Manual of Tropical Housing and Building: Climate Design* (Hyderabad: Universities Press, 1975), 122-127 and 213-220.

19. Harry W. Seckel, *Hawaiian Residential Architecture* (Honolulu: Bishop Museum Press, 1954).

20. Richard Powers and Philip Richardson, *Living Modern Tropical: A Sourcebook of Stylish Interiors* (New York: Thames & Hudson, 2012), 6-7.

21. Raul A. Barreneche, *Pacific Modern* (New York: Rizzoli International Publications, 2006).

22. "Climate of the World: Diagrams for 2000 Stations," Weather Online (1999), accessed May 2, 2024, https://www.weatheronline.co.uk/.

23. Islam, Daniel Dunham, 15.

24. Adnan Morshed and Nesfun Nahar, *DAC Dhaka Architectural Travel Guide* (Barcelona: Altrim Publishers, 2017).

25. Islam, Daniel Dunham, 15.

26. Robert G. Boughey, interview by Fatema Tasmia, "A Study on the Evolution of Physical and Spatial Attributes in the Architectural Works of Robert G. Boughey in Bangladesh," January 2020.

27. Shamsul Wares, *In Fifty Years of Architecture in Bangladesh*, ed. Mahmudul Anwar Riyaad Nasreen Hossain (Dhaka: The University Press Limited), 37-41.

facade emphasises horizontal lintels and vertical downspouts, avoiding arbitrary decorative elements for a logical, climate-oriented design.

Boughey incorporated downspouts to channel rainwater from the roof to the ground via concealed vertical shafts, addressing monsoon rains. The design features vertical drop walls, pervious railings, and overhanging verandas, protecting the structure from the harsh southern sun while maintaining its aesthetic and functional qualities.[28]

The ground connection is subtly elevated, blending in with the gardens and outdoor spaces. This thoughtful integration, along with a disciplined use of materials, aligns with the tropical modern architectural philosophies conveyed in the designs of Paul Rudolph at the Bangladesh Agricultural University and Muzharul Islam at the Faculty of Fine Arts, Dhaka University.

3.3 BUET GYMNASIUM:

Designing large structures presents significant challenges, particularly when creating column-free, expansive spaces. Built in 1964, the BUET gymnasium serves as a model for multiple indoor sports and various university events.

The building's east-west orientation maximises natural light from the north and south, while solid brick walls on the shorter east and west sides shelter indoor spaces from the heat. The building's structural integrity is reinforced by massive sine-curved beams inspired by bridge construction and designed to vary in depth according to the roof's load **(Figure 03)**. Diagonal beams brace the columns on each side of the mezzanine floor. The roof design incorporates outward folding edges and scuppers to channel rainwater, while clear-story lighting beneath the roofline illuminates the interior. Vertical fins adorn the external walls on the western and eastern sides, mitigating heat gain and adding visual interest.[29]

3.4 SAINT JOSEPH HIGHER SECONDARY SCHOOL

St. Joseph Higher Secondary School in Dhaka, built in 1964, incorporates climatic adaptations into its architecture **(Figure 04)**. Shielded by trees, the academic wing is split into two parts, extending along the East-West axis to maximise southern and northern exposure, thus ensuring cross ventilation and optimal daylight, centring around a courtyard, which enhances visual and environmental connectivity.

Stairways connect the two wings, with the north wing accessible from ground level and the south wing from an elevated landing. Modular drop walls break up long corridors, providing shade and maintaining a comfortable indoor environment.

The reinforced concrete structure supports cantilevered corridors free from vertical obstructions, enhancing the facade's modular nature. Originally designed breakout spaces in the south wing facilitated natural cooling and informal learning but they were later converted into additional classrooms, reducing passive cooling features. Angled sunshades and vertical drop walls protect against rain penetration.

28. Boughey, interview by Fatema Tasmia, January 2020.

29. Boughey, interview by Fatema Tasmia, January 2020.









#15

Figure 01. Kamalapur Railway Station (K.R.S), Dhaka, Bangladesh (then East Pakistan), 1961-1964. Source: RGb Associates, 1964.

Figure 02. Boys Hostel BUET, Dhaka, Bangladesh, 1962 - 1964 Source: RGB Associates Archive, 1964.

Figure 03. BUET Gymnasium, BUET, Dhaka, Bangladesh, 1962-1964. Source: RGB Associates Archive, 1964.

Figure 04. St. Joseph Higher Secondary School view from North-West Corner, 1962-1964. Source: RGB Associates Archive, 1964.

These designs illustrate effective climatic adaptations and align with the features of Tropical Architecture discussed in Koenigsberger's book and other scholarly discourses. Boughey's buildings are elongated along an East-West axis to maximise natural ventilation, enhancing comfort and energy efficiency. Features like vertical drop walls, louvres, brise soleil, projected verandas, overhanging roofs, airy interiors, and courtyards for better light and ventilation reflect the principles of tropical design.

Rain gutters, rain downspouts, and scuppers are inevitable and obvious building attributes that are accommodated to redirect and channel out the rain. Boughey has incorporated these elements in all

his buildings **(Figure 01-04)** and, arguably, attempted to enhance the aesthetics of rainfall as expressed in his design sketches.[30] Through downspouts and scoopers, rainwater was collected and channelled with a rhythmic splashing sound creating a harmonious and symphonic connection between the user, the built spaces, and nature. Moreover, to protect the pavilion-like space of Kamalapur Railway Station, Boughey initially designed a perimeter grill or *jali* surrounding the main structure that would allow air flow while reducing solar gain. However, this feature was not included in the final design. These design choices demonstrate a nuanced understanding of the interplay between architecture and the tropical climate, ensuring that buildings not only function optimally but also resonate with their environmental context.

In sections 02 and 03, I disagree with the idea of associating Boughey solely with the emergence of Tropical Architecture or Tropical Modernism in "Global South," as he was not a discrete figure in the context of the post-colonial 1960s but an active agent of this transcultural exchange and transnational institutional network. However, his buildings are well equipped with climatic features and effectively incorporate logical planning, and spatial coherence, accentuating their design and making them more user-friendly in terms of climatic comfort without relying on mechanical means. Hence, his design approach can be argued as one of the pioneering attempts to follow Tropical Modernism in post-colonial East Pakistan and South Asia.

4. CONCLUSION

Considering these historiographical, socio-political, and climatic conditions, Boughey can be viewed as a transnational agent who localised his modernist training to suit tropical climates. His designs, including rain devices, sunshades, overhanging verandas, and airy interiors, reflect a blend of modernist principles with local climatic needs.

Boughey's appointment through transnational networks and Cold War politics places him among expatriates who adapted their modernist ideas to local contexts. This aligns with Mark Crinson's views on the development of Tropical Architecture and the influence of architects, publishers, or schools in colony-metropoles. Boughey's practice in 1960s East Pakistan positions him as a pioneer and field-level expert of Tropical Modernism in South Asia, demonstrating expertise in climate-adaptive design before it was formally recognised as a distinct architectural theory in the Global South. ■

30. Boughey, interview by Fatema Tasmia, January 2020.

BIOGRAPHY

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FLEXIBLE ARCHITECTURE FOR NEW EDUCATION: NORDIC INSTITUTE FOR DEVELOPMENT MANAGEMENT (IDM) IN TANZANIA.

MARYIA RUSAK
ETH ZURICH

#15

ABSTRACT

In the second half of the 20th century, educational buildings played an important role in the process of nation-building of the newly independent African states. Between the 1960s and 1970s, hundreds of elementary and technical schools, teachers' colleges, and universities were endowed with the task of educating the new generation of African professionals and public administrators. Large university projects were among the most significant public buildings constructed at the time, contributing to public and civic life. The educational politics of "Africanisation" was also reflected in the buildings' architectural language, as imported modernist forms were adapted to local climatic realities through a wide range of tectonic devices, local materials, and stylistic elements. Today, the architectural histories of these educational buildings and their role in national heritage remain severely overlooked. The paper aims to address this shortcoming by dissecting the many architectural layers behind the project for the Institute of Developmental Management (IDM) in Tanzania, built in the early 1970s and financed through the joint effort of Nordic countries. Originally intended to address Tanzania's manpower requirements, the project underwent a series of design transformations introduced by local and foreign "experts." Its architecture then represented a site of negotiation between local Tanzanian needs and imposed Western techno-scientific education models of the late 1960s. Building on the original archival research, the paper investigates the many archaeological layers behind this seemingly typical "tropical modernism" university project, intending to complicate the long-assumed divide between the Global South and the Global North. Today, these buildings are still in use, and through focusing on histories of architectural inter-dependencies, this paper introduces the term "mixed modernisms" to encourage a different line of thinking about the architectural value of such projects—and therefore, their preservation.

1. INTRODUCTION

In 1969, German art historian Udo Kultermann wrote that educational buildings were among "the most significant architectural achievements in Africa."[1] Indeed, as countries in the region acquired independence after years of colonial rule, processes of nation-building closely correlated with the development of national educational systems. In the 1960s and 1970s, hundreds of elementary and technical schools, teachers' colleges, and universities were constructed across the region, translating abstract ideas of nation, statehood, educational and labour priorities into built form. University projects, in particular, played a crucial role in the political processes of decolonisation and served as catalysts for technological and social development, where different ideas of statehood were tested and negotiated.[2] However, while endowed with representational values, new national university projects faced financial constraints. Often, they required substantial financing from abroad and were sponsored by a string of international donors. This meant not only an influx of foreign capital but also technological and personnel "assistance"—architects, engineers, planners and bureaucrats who brought architectural and technological models from the Global North to the Global South.

Through a brief study of the Institute for Development Management, originally a branch of the University of Dar es Salaam built in the early 1970s and financed via networks of Nordic foreign aid, this essay engaged with complex institutional dynamics behind educational buildings in post-independence East Africa. Financed from abroad, at the request of the Tanzanian government, and designed by British architects under the supervision of Nordic "experts," the project reveals the complex multi-layered nature of the architecture of foreign aid. Such transnational architectural projects not only delivered practical programmatic solutions but became complex instruments of nation-building and negotiating various geopolitical power alliances.

2. NORDIC SPIRIT IN EAST AFRICA

Nordic Involvement in East Africa began in the early 1960s with the establishment of an inter-parliamentary ministerial council, Nordisk Råd, which joined the efforts of respective Nordic organisations. Newly independent countries in East Africa—Tanzania, Zambia, Kenya and Uganda—were selected as "focus areas" based on the principle of geographic concentration.[3] During the Cold War, Nordic countries fashioned themselves as "humane internationalists." This meant providing generous international aid packages for large "developmental" projects to fill the void created by the withdrawal of colonial powers.[4] Norwegian urban theorist Karl Otto Ellefsen, on discussing Nordic involvement in the region, argued that it could be seen as an extension of the tradition of protestant missionaries, which aimed to impose "good" by transferring ideas, knowledge and money—often with political gains at home.[5] There was a shared belief among Nordic politicians that the social-democratic model could be exported.[6] Projects in education

1. Udo Kultermann, *New Directions in African Architecture* (George Braziller, 1969), 25.

2. Tim Livsey, *Nigeria's University Age: Reframing Decolonisation and Development* (Palgrave Macmillan UK, 2017), 2. Ola Uduku and Kuukuwa Manful, "Building for Higher Education in Africa," Docomomo Journal 69 (2023), 4-5.

3. NORAD, *Dette bør du vite om norsk u-hjelp* (Oslo: NORAD, 1978), 8-17. "Nordiska Rådet. Medlemsförslag. A 484/e," Box Xa-0010 Nordisk Samarbeids råd, in RA/S-6306/X/Xa, Riksarkivet, Oslo, Norway.

4. Sunniva Engh, "The 'Nordic Model' in international development aid: explanation, experience and export," in *The Making and Circulation of Nordic Models, Ideas and Images* (London: Routledge, 2021), 125-126.

5. Karl Otto Ellefsen, "Countryside Reconstruction in Postcolonial Africa, The Ujamaa Experience," note 8, in *African Modernism and Its Afterlives*, ed. Nina Berre (Bristol: Intellect Books Ltd, 2022), 83.

6. Knut Gunnar Nustad, *Gavens makt: norsk utviklingshjelp som formynderskap* (Oslo: Pax, 2003), 56–57, also in Engh, "The Nordic Model," 128.

and healthcare were prioritised since they also contributed to creating the idea of the North based on "common goodwill."[7]

And while Nordic financial support was generous, it came with an implicit assumption that the sponsored projects would also rely on Nordic technical expertise. Norwegian political scientist Terje Tvedt, coined the term "regime of goodness,"[8] to describe Nordic involvement abroad. Indeed, as Nordic specialists heavily drew from their building experience at home, they translated a Nordic version of techno-scientific modernity into a different social and political context. They often introduced sophisticated building methods based on prefabrication, modular standardisation, and computer quantification, which were rarely appropriate for the realities of the local building industry. East African politicians, on their part, often prioritised the volume of financial assistance over suitability, leading to peculiar design hybrids.

3. MANAGERIAL PASTORAL

In the summer of 1968, Denmark received a request from the Tanzanian government to discuss the possibility of providing Danish capital costs and technical assistance in establishing the new Development Management Institute (IDM) as a branch of the University of Dar es Salaam (UDSM).[9] The purpose of this new project was to complement the existing University's profile and alleviate the pressing Tanzanian need for qualified manpower in the management field.[10] Up until then, most managerial positions were occupied by expatriate staff, but Tanzania's new politics of self-reliance emphasised the "Tanzanisation" of all managerial positions. Thus, in Tanzania's Second Five-Year Plan, establishing new educational facilities for management, administration, accounting, and secretaryship became a primary focus.

In 1968, initial designs for a new managerial institute were developed, envisioning a facility of 12 classrooms for a cohort of 280 students. In January 1969, the plans were expanded upon, and a request was filed for Danish—and possibly Nordic—capital assistance.[11] Eventually, the project was moved to Mzumbe, in Morogoro Region, 130 miles from Dar es Salaam, to both capitalise on the existing infrastructure of the Institute of Public Administration and to encourage educational decentralisation. The new Institute aimed to educate Tanzanian specialists in the fields of management, accountancy, secretaryship, public administration, local government and mutual development and, ultimately, "provide social, economic and political progress for the people of Tanzania."[12]

The Nordic states were to provide financial and technical assistance for these ambitious goals. A Nordic Study Group made up of educational planners, architects, development advisers, and accountants was set up to evaluate the existing plans and cost estimates, examine construction drawings, draw up a work programme, and appraise educational programming.[13] A British architectural firm of Norman and Dawbarn, experienced in designing educational institutions in the region, was contracted to draw new teaching blocks, administrative buildings and seven hostel blocks.[14] As the Institute moved to a more rural setting, beyond 32

7. Nordiska Rådet, "Medlemförslag om samberkan ved regionala project i utviklingsländerna," *Sak A 28*, 9:e sessionen 1961, Box Xa-0009, Series RA/S-6306/X/Xa.

8. Terje Tvedt, "Det nasjonale godhetsregimet: om utviklingshjelp, fredspolitikk og det norske samfunn," in *Det Norske samfunn*, eds. Lars Alldén, Mariken Vaa, and Natalie Rogoff Ramsøy (Oslo: Gyldendal, 1986), 482–509.

9. "Referat fra møtet i Stockholm, 19 desember om Institute of Development Management i Tanzania," 23 December 1969, in Box L0313, Series RA/S-6679/E/Ea/Eea.

10. Olivier Provini, "The University of Dar Es Salaam: A Post-Nyerere Institution of Higher Education? Legacies, Continuities and Changes in an Institutional Space (1961-2012)," in *Remembering Nyerere in Tanzania: History, Memory, Legacy, ed. Marie-Aude Fouéré* (Nairobi: Africae, 2015), 279–304. "Technical Assistance to the Institute of Development Management (IDM), Report of the Nordic Study Group," 1969-70, 11, Box L0342, Series RA/S-6679/E/Ea/Eea.

11. "Project Preparation," in "Report", 3-4.

12. "The United Republic of Tanzania. The Second Five Year Development Plan, 1969-1974," in Box L0313, Series RA/S-6679/E/Ea/Eea.

13. "Mandate and Members," in "Report," 1.

14. "Institutt for lederutdanning og administrasjon," Vedlegg II, 1970, in Box L0343, Series RA/S-6679/E/Ea/Eea.

classrooms, it should provide housing for 780 students, as well as teaching and administrative staff.

According to the Nordic Group experts sent to appraise the project, the new campus was located within "extraordinary fine scenic quality mountains" at an altitude of 500 metres, on a site with a "pleasant climate" and "beautiful growth."[15] The natural setting particularly stood out for the Nordics, and the new campus layout was to rely on existing infrastructure, preserve vegetation and exploit "the brilliant possibilities" of the site location. The plan proposed by Norman and Dawbarn took into account several elongated east-west orientated 3-storey teaching wings connected with the administrative building by corridors and covered walkways. The rectangular layout created an enclosed courtyard to be used for film projections and social gatherings. The administrative building housed staff offices along with a common room for the teachers, while a separate assembly hall accommodated large university gatherings.[16]

However, as the Nordic specialists evaluated the project, they found its British-designed architecture "too formal" and "too rigid." Educational wings were too uniformly shaped without accommodating for the programmatic requirements of each department. Specialised building wings prevented the interaction of students from different departments. Instead, the Nordics suggested that the buildings should be differentiated in size and height for "functional and social advantages from an architectural point of view" and blend in more within the existing landscape.[17] Additionally, large lecture theatres were absent, as well as rooms for group and flexible work—in principle, the British-designed layout accounted only for individual classrooms. While moveable walls were proposed for some classrooms, this solution introduced acoustic problems.

The Nordics claimed extensive experience in planning "newer schools and higher education institutions in Europe," and their vision of modern university buildings differed from their British colleagues. According to the Group, the campus layout proposed by the pre-WWII-generation British architects was not flexible enough and did not respond well to the new pedagogical principles and demands of its time.[18] The Nordic Group maintained that modern education required "flexibility, possibilities for extensions and space for experimental learning."[19] Indeed, new structuralist educational buildings in Europe—for example, the Candilis-Josic-Woods Free University campus in Berlin—offered a physical form to more democratic pedagogical principles. The university campus was to serve as a microcosm of society, a model of the city, where individual study units were no longer isolated but connected through circulation spaces, which provided places for interdisciplinary encounters and overlaps. For the Nordic specialists, the new IDM project was an opportunity to experiment with a more flexible and open educational architecture.

Therefore, the Group maintained that notions of flexibility "could serve as an inspiration even in Tanzania." The Group insisted that IDM's architecture should be "a frame of construction," which would not just "contain" different

15. "Vegetation," in "Report," 41.

16. "Teaching Facilities," in "Report," 41.

17. "Remarks of the Study Group," in "Report," 46-47.

18. "Remarks of the Study Group," in "Report," 41-43.

19. "Remarks of the Study Group," in "Report," 41-43.

activities but rather "directly inspire" new educational approaches. The Group then suggested that the layout should be based on a standardised load-bearing frame to create "built-in flexibility" and avoid becoming a "strait waistcoat for teaching."[20] A physical modular skeleton structure in concrete was designed to ensure "optimal flexibility." Only staircases and bathrooms were constructed with load-bearing walls. Partitions between seminar rooms consisted of 6" by 9" concrete blocks that could be moved or removed, and windows could be adjusted with sliding glass panels. Ceilings were to be plastered and painted, while floors were to be constructed with a granolithic finish. Overall, reinforced concrete was to be left exposed, and timber constructions painted white. While the overall technical quality of the building was deemed "slightly inferior" to the buildings of the University of Dar es Salaam, the "simple style of architecture" set within a "pleasant climate," as well as the need for larger educational areas with limited economic means justified the material and design selection.

4. ARCHAEOLOGICAL LAYERS

Today, the Institute's buildings conceal the many archaeological layers behind its architectural and political decision-making. From the original Tanzanian quest for new spaces for managerial education, British-drawn "tropical modernism" designs were modified by a group of Nordic experts. The Tanzanian administration much preferred the original, down-to-earth designs by Norman and Dawbarn, as the firm had extensive experience with university designs in the former British colonial context and did a "brilliant job keeping within the estimates."[21] At the same time, Nordic project funding arrived with a set of "quality compliance," as Nordic experts attempted to translate post-1968 European educational models into the context of Tanzanian post-independence, all the while working within strict financial budgets.

As a consequence, IDM's architecture falls within the category of "unpretentious" tropical modernism, with white-washed, clean-shaped concrete buildings placed within lush, undulating tropical terrain and with some local textures and elements included in the final finishes.[22] Among the few modifications of the IDM buildings were large horizontal "tyrolean" overhangs to provide shade and a "breathing blockwork screen."[23] As a later critical Nordic report from 1974 indicated, "The design represents a typical international style where only tropical climatical conditions have been taken into consideration."[24] Throughout the 1970s, IDM underwent several expansions, also financed through Nordic assistance and was later incorporated into Mzumbe University.[25]

Therefore, the following must be asked: what are the preservation lessons for these kinds of "bread-and-butter" tropical modernism buildings? Unlike the landmark university projects, IDM represents one of the many everyday educational buildings in East Africa. This paper argues that designs of buildings like IDM go beyond the conventional narrative of "tropical modernism."[26] Driven by Tanzania's domestic economic interests and mediated with the imposed "expertise" of Nordic actors, IDM offers

20. "Remarks of the Study Group," in "Report," 41-43.

21. Ewan Harrison, Iain Jackson, "African Agency and Colonial Committees at Fourah Bay College: Architecture and planning of the new Fourah Bay College in Freetown, Sierra Leone," *Docomomo Journal* 69 (2023): 18.

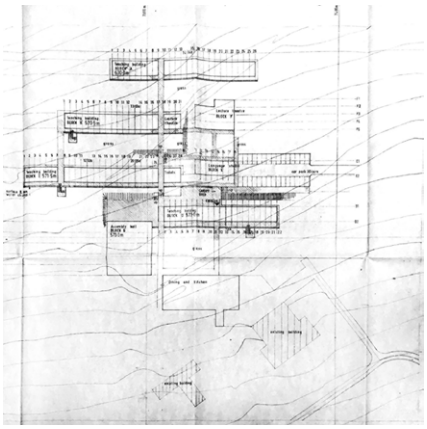
22. Hannah le Roux, "The networks of tropical architecture," *The Journal of Architecture*, 8:3 (2003): 337-354.

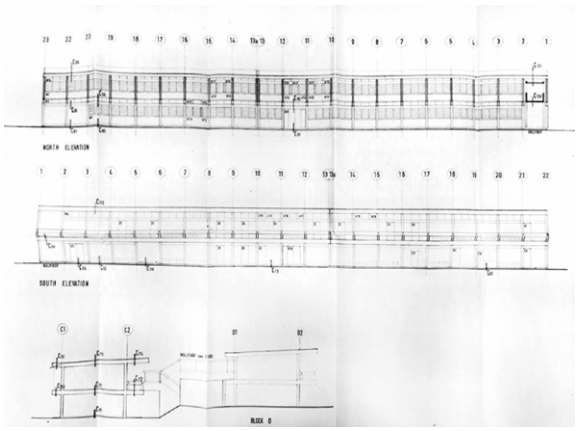
23. Drawings in Box L0315, Series RA/S-6679/E/Ea/Eea.

24. Einar Dahle and Tore Ivar Scare, "IDM Mzumbe: An Evaluation of the Local Alternative," 1974, 29, Box L0342, Series RA/S-6679/E/Ea/Eea.

25. Dahle and Scare, "IDM Mzumbe: An Evaluation of the Local Alternative," 29.

26. Le Roux, "The networks of tropical architecture," 351.





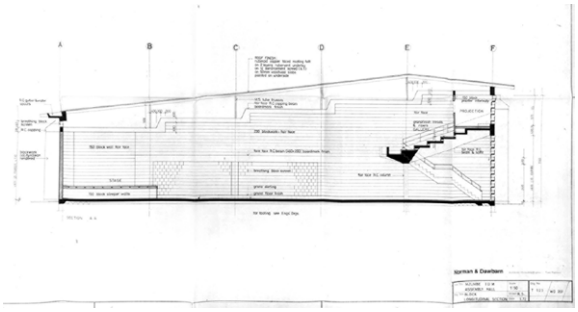


Figure 1. Norman & Dawbarn, Mzumbe IDM, Mzumbe, Tanzania, 1969-1970, project site plan. © Project drawings, Box L0315, Series RA/S-6679/E/Ea/Eea, Riskarkivet, Oslo, Norway.

Figure 2. Norman & Dawbarn, Mzumbe IDM, Mzumbe, Tanzania, 1969-1970, elevation drawings. © Project drawings, Box L0315, Series RA/S-6679/E/Ea/Eea, Riskarkivet, Oslo, Norway.

Figure 3. Norman & Dawbarn, Mzumbe IDM, Mzumbe, Tanzania, 1969-1970, Assembly Hall, longitudinal section. © Project drawings, Box L0315, Series RA/S-6679/E/Ea/Eea, Riskarkivet, Oslo, Norway.

a version of "mixed" or "hybrid" modernism embedded into the project from the outset. While the contemporary preservation approaches make a clear division between the "original" and later "additions," I argue that university projects built through networks of foreign aid forego such imposed dichotomies. Rather, projects like IDM are complex spatial hybrids, reflecting a form of "mixed modernism" from the start, originating from the interconnection between different political interests.

The historical value of such a project comes to the fore precisely in the many archaeological layers associated with its design, use and adaptation. In a 2023 *Docomomo Journal* issue, architectural scholars Babatunde Jaiyeoba and Bayo Amole advocated for the preservation of the Awolowo University campus in Nigeria not only because it was a project which reflected the "machine-age aesthetics" but also because it uniquely reflected the Israeli-Nigerian technical development relations.[27] In a similar way, the IDM campus in Mzumbe stands as a unique testament to the Nordic-Tanzanian technical development aid. Detailed construction histories of such buildings—and histories of international encounters—should guide its preservation efforts. ■

27. Babatunde Jaiyeoba, Bayo Amole, "Reviving the Modern Architecture of Arieh Sharon's Obafemi Awolo University, Ilé-Ifè, Nigeria," *Docomomo Journal* 2, no. 69 (2023): 42-43.

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POST-INDUSTRIAL LANDSCAPES: PROJECTING VALUES AND USES FOR NEW LIFE CYCLES IN THE ANTHROPOCENE

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ABSTRACT

The growth of industry in the nineteenth and twentieth centuries led to the construction of imposing buildings, using new materials and construction methods of the time. Such buildings also incorporated new elements that modified the territory and began to define a landscape in the cities, which were at the forefront of economic and industrial development. This transformation was associated with the emergence of new cultural and social values such as economy, production and progress.

The subsequent process of deindustrialisation brought with it the gradual closure of industrial complexes, which had significant economic, social, environmental and urban effects on the cities built around this activity. As a result, on the one hand, the landscape was transformed, with abandoned factories, ruined buildings, and infrastructure remnants becoming visible. On the other hand, the state of abandonment of these sites allows them to be preserved as a vestige of the past frozen in time.

In this context, ruins and abandoned sites resulting from deindustrialisation offer an opportunity for intervention and conversion, making it possible to disseminate and raise awareness of the values of post-industrial landscapes. These sites have the capacity to re-establish the link between the inhabitant and their landscape and history, and to generate a sense of belonging by preserving aspects of local culture through the evocation of an imaginary and an acute sensitivity to observation.

The conservation and enhancement of post-industrial sites allows for the transmission of a historical account of the future of the city and the territory, as well as contributing to projections of future reconversion, designing possible scenarios for new programmes and alternative life cycles in the current socio-cultural, productive and ecological context of the Anthropocene.

1. THE NOTION OF LANDSCAPE IN POST-INDUSTRIAL CONTEXTS

Our new conceptions must design landscape along with both accepted and disturbing elements, both harmonious and interrupting ones. The result is a metamorphosis of landscape without destroying existing features, an archetypal dialogue between the tame and the wild. The image of nature can be made of the 'untouched' and the 'built'.[1]

The term "post-industrial landscape" refers to the physical environment that emerges as a result of the decline or transformation of industrial activities in a region. It encompasses the spaces and structures left behind after industrialisation, such as abandoned factories, warehouses, and infrastructure, as well as the environmental impacts of industrial processes. Post-industrial landscapes often experience urban decay, economic restructuring, and environmental remediation as societies transition away from industrial economies towards service-based or knowledge-based economies. These landscapes can present both challenges, such as blight and pollution, and opportunities for redevelopment, cultural revitalisation, and sustainable urban planning.

The growth of industry in the nineteenth and twentieth centuries led to the construction of imposing buildings, using new materials and construction methods of the time. Such buildings also incorporated new elements that modified the territory and began to define a landscape in the cities, which were at the forefront of economic and industrial development. This transformation was associated with the emergence of new cultural and social values such as economy, production and progress[2 3]. Industrial architecture was regarded with fascination, as a symbol of monumentality and grandeur, and was valued for its functionality and an aesthetic model based on the machine.

The subsequent process of deindustrialisation brought with it the gradual closure of industrial complexes, which had significant economic, social, environmental and urban effects on the cities built around this activity. As a result, on the one hand, the landscape was transformed, with abandoned factories, monumental silos, deteriorated and empty, ruined remains of buildings, constructions, infrastructures and installations[4 5 6 7]. The buildings, once considered a symbol of progress, were abandoned, and no longer served their original productive purpose. Over time, this led to their transformation into ruins inserted in empty and degraded sites, making them remnants of a bygone era of past grandeur.

This context configures a new reality, where "industry, the maximum expression of progress and future, is now a symbol of the past,"[8] and post-industrial sites are now a symbol of deterioration and abandonment, which entails a risk associated with different factors, such as the footprint of ecological damage, resulting urban rubbish dumps and focal points of social insecurity. On the one hand, the state of abandonment of these sites allows them to be preserved as a vestige of the past frozen in time. However, on the other hand, ruins and abandoned sites resulting from deindustrialisation offer an opportunity for intervention and conversion, making it possible to

1. Peter Latz. "The Idea of Making Time Visible". Topos 33 (2000:95): 94-99.

2. Sarah Aillón. "La huella del carbón: procesos de decadencia y estrategias reconversión de paisajes postindustriales: el caso de Lota". Thesis. Master in Landscape Architecture, Pontificia Universidad Católica de Chile (2023) [Online]. DOI: 10.7764/tesisUC/ARQ/74417

3. Ling, C.; J. Handley, & J.Rodwell. "Restructuring the post-industrial landscape: A multifunctional approach". *Landscape Research*. 32 (2007):285-309. DOI: 10.1080/01426390701318171.

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Figure 1. Peter Latz & Partners, Duisburg Nord Landscape Park. Duisburg, Germany. A striking example of industrial reuse and urban regeneration. Originally a steelworks site, it has been transformed into a vibrant public park that artfully integrates the remains of its industrial past. ©Moreno, 2013.



Figure 2. Gilles Clement, Park in a former naval base of Saint-Nazare, France. Clément's intervention transformed the site into an innovative public park that blends nature with historical industrial elements. The park features a network of walking trails, open green areas, and natural water features, while preserving and repurposing elements of the old naval base. ©Olivetti, 2022.

Figure 3. Richard Haag, Gas Works Post-industrial Park. Seattle, USA. Landscape design transformed the site, a former gasification plant, into a public park that integrates industrial structures into a dynamic green space. Key features include preserved gasification towers and other equipment, which serve as striking architectural landmarks against a backdrop of grassy meadows, walking trails, and playgrounds. ©Aillón, 2023.

disseminate and raise awareness of the values of post-industrial landscapes. These sites have the capacity to re-establish the link between the inhabitant and their landscape and history, and to generate a sense of belonging by preserving aspects of local culture through the evocation of an imaginary and an acute sensitivity to observation.

The relationship between post-industrial landscapes and modern industrial architecture is a dynamic interplay of history, design, and social change. The rise of modern industrial architecture in the early 20th century was highly significant, as it marked a departure from traditional architectural forms and practices, introducing new materials, construction systems and design principles that prioritised functionality, efficiency and structural honesty. Today, the shift from industrial to post-industrial eras reflects broader shifts in the economy and society, with important implications for cultural heritage, sustainability, and urban development.

2. EMERGING CULTURAL, ECONOMIC, AND ECOLOGICAL VALUES IN POST-INDUSTRIAL LANDSCAPES

> *Instead of a master narrative, the emergent ecologies of ex-industrial places (…) combine fragments of planned and unplanned action, geological, human and biological agency, natural and human-made ruination. They have fragments of each, but no single one dominates.*[9]

The notion of cultural, economic, and ecological values in post-industrial landscapes encompasses the various ways in which these landscapes are perceived, utilised, and valued by individuals and communities[10 11 12 13]. It expands beyond just physical geography to include economic, cultural and environmental dimensions.

- Physical framework: This aspect refers to the actual physical environment shaped by past industrial activities. It includes abandoned factories, warehouses, industrial infrastructure, brownfield sites, and natural landscapes altered due to pollution or resource extraction. The physical landscape often bears the scars of industrialisation, such as polluted waterways or degraded soil.

- Economic dynamics: In post-industrial landscapes, there is a shift from manufacturing-based economies to service-based or knowledge-based economies. This transition leads to changes in the economic landscape, with former industrial hubs experiencing job losses, disinvestment, and economic decline. However, it can also create opportunities for new industries to emerge, such as technology, finance, or creative sectors.

- Cultural values: This aspect refers to the cultural heritage and identity of post-industrial communities. It includes the traditions, stories, and memories associated with industrialisation, as well as the cultural artifacts and landmarks left behind. Cultural landscapes in post-industrial contexts often undergo reinterpretation and repurposing, with former industrial sites transformed into cultural centres, museums, or creative spaces.

- Environmental systems: Industrial activities often result in environmental degradation, such as pollution, habitat destruction, and resource depletion. The environmental landscape in post-industrial contexts involves efforts to remediate and rehabilitate degraded ecosystems, as well as to promote sustainable development practices that mitigate future environmental impacts.

Understanding the notion of landscape in post-industrial contexts requires considering the interconnected nature of these dimensions and recognising the complex challenges and opportunities inherent in the transition away from industrial economies. It involves not only addressing the physical legacy of industrialisation but also promoting social, economic, cultural, and environmental resilience in affected communities.

3. POTENTIAL USES AND NEW LIFE CYCLES OF POST-INDUSTRIAL LANDSCAPES IN THE ANTHROPOCENE

> *"The disappearance, the threat of loss, is key to the attraction of ruins – and to their essential ambiguity"*.[14]

In the Anthropocene era, human activities have become the main drivers of environmental change, including climate change, biodiversity loss, and alterations to the planet's biogeochemical cycles. Post-industrial landscapes exemplify the profound influence humans have had on the planet, both in terms of physical infrastructure and ecological disruption[15 16 17]. These landscapes are not only characterised by their industrial relics but also by the processes of ecological succession and reclamation that occur after industrial activities cease. They represent a complex interplay between human intervention and natural processes, raising questions about sustainability, environmental remediation, and the resilience of ecosystems in the face of human-induced change.

9. Liviu Chelcea. "Postindustrial Ecologies: Industrial Rubble, Nature and the Limits of Representation". *Parcours anthropologiques*, Université Lumière Lyon 2 [Online]10. (2015:185):185-200. DOI: https://doi.org/10.4000/pa.448

10. J. Corner & A. Bick *The Landscape Imagination. The Collected Essays of James Corner 1990- 2010* (New York: Princeton Architectural Press, 2014).

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12. C. Ling; J. Handley, & J. Rodwell. "Restructuring the post-industrial landscape: A multifunctional approach". *Landscape Research*. 32 (2007):285-309. DOI: 10.1080/01426390701318171.

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14. Michael Roth. "Irresistible Decay: Ruins Reclaimed". In Roth, M. (ed.), *Irresistible Decay: Ruins Reclaimed* (Los Angeles: Getty Research Institute, 1997:2):1-23.

15. P. Oskam, & J. Mota "Design in the Anthropocene: Intentions for the Unintentional. International Conference on Design and Digital Communication". *Springer International Publishing* (2020): 269-279.

16. P.J. Crutzen & C. Schwägerl. "Living in the Anthropocene: Toward a New Global Ethos". *Yale Environment* 360 (2011).

17. Paul J. Crutzen. "Geology of mankind – The Anthropocene". *Nature* 415 (2002): 23.

Within the context of the Anthropocene, the planning and design process in post-industrial sites and landscapes are essential for grappling with the environmental challenges of the present and future, promoting cultural narratives that emerge around themes of industrial heritage, urban decay, and the new relationship between humans and the emerging ecologies[18] [19] [20]. Furthermore, they play a key role in envisioning more sustainable and resilient forms of human coexistence with the planet[21] [22].

The transformation of post-industrial landscapes gives rise to new life cycles that reflect changing societal values, environmental awareness, and economic imperatives. Here are some key aspects of these evolving life cycles:

- **Adaptive Reuse and Repurposing:** Rather than abandoning post-industrial sites, many communities are embracing adaptive reuse, repurposing old industrial buildings and infrastructure for new functions. This could involve converting factories into residential lofts, warehouses into art studios, or industrial brownfields into parks and green spaces. Such transformations breathe new life into these landscapes while preserving their historical and cultural significance.
- **Ecological Restoration and Regeneration:** In response to environmental degradation, there is an increasing emphasis on ecological restoration and regeneration of post-industrial sites. This involves rehabilitating contaminated land, restoring native habitats, and reintroducing biodiversity. By reclaiming abandoned industrial areas for nature, communities can mitigate pollution, improve air and water quality, and create valuable ecosystems within urban environments.
- **Creative and Cultural Revitalisation:** Post-industrial landscapes often become incubators for creativity and cultural revitalisation. Artists, entrepreneurs, and community organisers are drawn to the raw authenticity of these spaces, using them as canvases for artistic expression, hubs for innovation, and venues for cultural events. Through initiatives like art installations, music festivals, and pop-up markets, these landscapes foster a sense of community and inject vibrancy into formerly neglected areas.
- **Sustainable Development and Green Infrastructure:** Increasingly, post-industrial redevelopment prioritises sustainable practices and green infrastructure. This includes integrating renewable energy systems, implementing water-sensitive design, and promoting walkability and public transit. By embracing principles of sustainable development, post-industrial landscapes can minimise their environmental footprint, enhance resilience to climate change, and contribute to more liveable and equitable cities.
- **Community Engagement and Participatory Planning:** Successful revitalisation of post-industrial landscapes often hinges on community engagement and participatory planning processes. By involving local residents, businesses, and stakeholders in decision-making, projects can better reflect the needs and aspirations of the community. This collaborative approach fosters social cohesion, builds trust, and ensures that revitalisation efforts are inclusive and equitable.

18. Moreno, Osvaldo. "Del jardín a la infraestructura verde: La arquitectura del paisaje como soporte para la sustentabilidad y resiliencia del territorio"S". *Anales del Instituto de Arte Americano e Investigaciones Estéticas*. Mario J. Buschiazzo, 52 (2022): 1-19.

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Overall, the new life cycles of post-industrial landscapes reflect a shift towards more sustainable, resilient, and socially inclusive forms of development. By embracing adaptive reuse, ecological restoration, cultural revitalisation, sustainable development, and community engagement, these landscapes can be transformed into dynamic and vibrant spaces that enrich the fabric of urban life in the Anthropocene. ■

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SPRING BAY MILL; THE TRANSFORMATION OF A PECULIAR MODERN INDUSTRIAL HERITAGE SITE

ROSS BREWIN
MONASH UNIVERSITY AND GILBY BREWIN ARCHITECTURE

#16

ABSTRACT

Spring Bay Mill, located near the small regional township of Triabunna on the east coast of Australia's island state of Tasmania, is a 43-hectare site-wide repair and regeneration of a former industrial wood chipping facility into a culture and environment-oriented events venue. This paper presents a first-hand account of the architectural design and built realisation of this project with an emphasis on the critical decisions taken in relation to the retention and adaptation of existing industrial fabric. Through a discussion of four design and material actions: Retainment, Removal, Integration and Addition, it will show how the strategic reworking of the existing infrastructure was used to bring contemporary visitors into the close proximity with the vast scale of the industrial operation, it's environmental devastation and, at the same time, amplify the visceral experience of the regenerating landscape. A brief discussion of the territorial, environmental and political context in Tasmania will ground the discussion and define the project's local meaning and significance.

1. INTRODUCTION

Spring Bay Mill is located on the traditional lands of the paredareme, an original language group of the palawa (Tasmanian Aboriginal people) that are estimated to have lived in lutruwita (Tasmania) since around 40,000 years before British settlement at the turn of the 19th century. This long occupation of the land is evident on the headland of the site where remnants of an extensive seashell deposit marks the harvesting and consumption of shellfish over thousands of years. This important cultural site and similar others nearby suggests that for millennia, the area was significant place of cultural and social gathering. The long custodianship of the lands and waters of lutruwita by Aboriginal people was violently and profoundly disrupted with the arrival of sealers and British colonial settlers in the early 1800s from which point the original inhabitants were murdered, dispossessed and forcibly moved off their country to make way for the clearing, division and sale of land and the extraction of natural resources.[1]

One of the earliest industries to emerge on the island after colonisation was logging, exploiting the ancient forests for high quality construction hardwood to serve the new colony and the broader British empire. The logging industry first began expanding in the 1850's with the introduction of steam and continued to grow to become a large part of the economy over many decades following. In the early 1970s the wood chipping industry emerged and became responsible for the clear-felling of thousands of acres of ancient native forests each year to meet the insatiable demand for paper pulp in Japan. Around this time saw the rise of the Greens movement and the commencement of the so-called Forest Wars, marked by years of intense conflict between loggers and environmentalists over the destruction of native forests that was exacerbated by an historically partisan political setting.

The Triabunna Woodchip Mill was established in the late 1970s, originally to process the waste timber from harvesting forests for construction hardwood. However, over the subsequent four decades the mill instead processed countless tonnes of high-grade, old growth forest logs to meet demand, at one point becoming the largest wood chip mill operating in the southern hemisphere.

In 2011, in the context of an ailing industry unwilling to transition to a more sustainable way of operating, the mill was sold to the current owner, environmentalist philanthropist Graeme Wood who purchased the mill with the intent to cease production of woodchips and end old growth forest logging in southern Tasmania. Despite deep resistance from industry and government, this mission was eventually achieved, the backstory of which is chronicled by John Van Tiggelen in his 2014 essay called" The Destruction of the Triabunna Mill and the Fall of Tasmania's Woodchip Industry".[2]

The strategic purchase of the woodchip mill by Wood was a significant moment in the Forest Wars around the time of the signing of the 2012 Tasmanian Forest Agreement. This agreement aimed at supporting the timber industry's transition away from a reliance upon native forests and the creation of over 500,000 hectares of additional forest reserves. However,

1. For a further history of the Tasmanian Aboriginal people following colonial settlement, refer L. Ryan, *Tasmanian Aborigines: A History Since 1803* (Sydney: Allen & Unwin, 2012).

2. J. van Tiggelen, 'The destruction of the Triabunna mill and the fall of Tasmania's woodchip industry', *The Monthly*, July 2014, https://www.themonthly.com.au/issue/2014/july/1404136800/john-van-tiggelen/destruction-triabunna-mill-and-fall-tasmanias-woodchip-#mtr, accessed 13 December 2023.

despite the progress made by this agreement and recent bans in other Australian states, Tasmania still has an active native forest logging industry, one that continues to be heavily subsidised despite providing relatively little employment and one that continues to create political and social tension. Meanwhile, Tasmania's forests have become globally recognised for their unique species and conservation value and are regarded as some of the most carbon dense forests on the planet. The reduction in native forest logging since 2011 has been a major factor in the state's recent achievement of negative greenhouse emissions.[3]

2. DESIGNING THE TRANSFORMATION

Remaining on the site at the time of the acquisition by the current owner was a range of poorly maintained administration buildings, dilapidated industrial sheds, and decommissioned conveyors, cranes, and other mechanical equipment and infrastructures that once supported the mill's operation. Having made the strategic purchase of the mill, the owners were faced with the difficult question of what to do with this significantly damaged site. Following the exploration of a range of ambitious, large scale development plans for the site by a number of different designers, Gilby Brewin Architecture and horticulturalist Marcus Ragus were engaged to design a relatively modest, adaptive reuse master plan for the site. Instead of erasing what might have been regarded as not worth keeping due to associations with a damaging past, practical uselessness and perceived ugliness, the plan outlined an approach that sought to work with and to maximise the practical and aesthetic qualities of these extant structures, spaces and landscapes. This approach, whilst addressing an ethical concern to minimise waste and responding to a constrained budgetary reality, aimed to ensure that the site remained a relatively unsanitised vestige of the destructive recent past.

Over time, parts of the proposed master plan have been incrementally completed alongside an ongoing program of remediation, revegetation and upgrading of the former industrial infrastructure. These parts include the conversion of a trio of existing buildings and structures into spaces for events and gatherings, and the addition of new facilities for overnight accommodation. Rather than describe in detail each of these new parts, the following sections outline a series of strategic design approaches to what was retained, removed, integrated and added to the remnants of this former industrial facility and the critical intentions of these in relation to the broader environmental agenda of the project set by the owners.

2.1 RETAINMENT

From our first visit to the site, we were attracted to and fascinated by the remaining industrial buildings and infrastructure – in particular the unusual arrangement, proportions and materiality that has come about through having been simply designed and built for no other reason than functional necessity. The physical manifestation of these structures could only have come about in the way that they have in this place, for this particular use – a typ1.e of

3. Refer Australian Institute research in native forest logging in Tasmania https://australiainstitute.org.au/post/native-forest-logging-in-tasmania-the-facts/

pure functionalism, the kind captured so beautifully by Berndt and Hiller Becher in their typological photographs of industrial structures to which they referred to as *anonymous sculptures*. Also contributing to the sculptural quality of these remaining structures is the patina of dents, scratches and rust that marks the passage of time and the industrial processes that once took place on the site.

In the new development, as much of the existing buildings and structures as possible was retained to ensure that the industrial functionalist qualities of these are able to be experienced by visitors. On one hand this is about offering a thrill and excitement of being in and around these particular and unique industrial relics and on the other, about bringing people into direct proximity to the enormous scale of environmental destruction that this site once contributed to.

2.2 REMOVAL

To deal with the legacy of decades of environmentally damaging industrial activity on the site and be able to open it up for new public use, a large and ongoing clean-up and removal process has been undertaken. This has been primarily in the form of ground remediation of soil contamination and the removal of a large stockpile of remaining woodchips through an ongoing process of composting. This industrial scale composting process is purposely expressed and experienced via mounded forms of new landscaping located on the former hardstand and on the large hill adjacent to the amphitheatre. On one hand, these mounds are a practical way of creating new landscaping over damaged ground and on the other, they recall the stockpile mounding of wood chips that once took place on the site, subverting this once destructive action.

Some of the industrial buildings were also emptied of contents, cleaned up and repaired to help make them able to be reused. Care was taken to not remove too much in order to preserve the industrial grittiness and patina of time that characterises the site and makes the experience of these structures and spaces so compelling. In some instances, parts of the remaining industrial facility were selectively removed which was initially a result of the strategic decommissioning of the site by environmental activists[4] and later a decision driven by necessity due to the poor condition of the existing buildings.

In some areas, purposeful removal has created moments of absence that strengthens the experience of the place. For example, the former weighbridge tower that once housed record keeping archives and offices was in such poor condition that it was deemed surplus to requirements in the new use of the site. However, rather than it be completely removed, the building was stripped down to the structural steel frame over which a new native vine is grown. The roof above the frame was kept but the ceiling was replaced with mirrored stainless steel that amplifies the effect of the greenery below and creates a moment of intrigue as visitors arrive over the old weighbridge. This hollowed out folly made from the weighbridge building that was once the central control tower for the industrial operation, now serves as a symbol of the repair and regeneration at the entrance to the site.

4. Refer John Tiggelen's essay called" The Destruction of the Triabunna Mill and the Fall of Tasmania's Woodchip Industry" in the July 2014 edition of The Monthly.
This idea is derived from a prompt by Joan Ockman for a symposium in Sydney in November 2022 called Beyond Landscape, who asked "How might architecture address the frequently destructive relationships that exist in the ecological chain. How might architects and landscape architects bring these far-flung relationships to light and materialise them architecturally?".

2.3 INTEGRATION

A significant design challenge for the reoccupation of the former industrial structures and spaces with new public uses, was how to integrate the necessary infrastructure of safety and universal accessibility without impeding the thrill of experiencing the perceived 'riskiness' of the site. The design approach to this was to blend building compliance features such as accessible ramps, tactile indicators, balustrades and fences into the existing conditions as if they might have always been there.

The design of the entry and gathering spaces around the Tin Shed performance space provides an example of this design approach. In order to negotiate the level change between the hardstand parking area and the interior of the performance space, a building code compliant disabled access ramp was required. The length, linearity and gently sloping nature of this particular compliance feature were traits harnessed in the design of the new entry bridge that is designed to resemble a piece of industrial infrastructure that serves to convey people to and from the venue over a gap between the carpark and the building. The required tactile indicators at each end of the ramp were specifically selected in bright yellow to echo the industrial yellow paint used for safety signage and markings throughout the remaining industrial infrastructure. At the end of the ramp, before entering the performance space, the handrail turns the corner and becomes an unusually long, continuous element that guides people into an undercover gathering space, forming part of a new galvanised chain mesh fence used to prevent people injuring themselves on or accessing below the existing gangway structures. This type of cylindrical steel pole fencing is used throughout the existing facility, blending this new element into the existing built fabric.

The design approach to blend these typically visually obvious safety and accessibility elements into the architectural language of the existing built condition serves to preserve the so-called 'integrity' of the existing conditions and subsequently creates an uncanny sense of the abandonment of the facility.

2.4 ADDITION

Along with new parts to ensure safety and accessibility, there was also a need to add new built elements to create particular functional spaces around the site. In these cases, the aim was to try work with the existing spatial and material logics of the site to augment the existing conditions, rather than detract from them.

An example of this is the design of the Amphitheatre that is set within the now removed slew crane's concrete footing. For decades the crane slewed back and forth along a rail on top of this semi-circular footing, spewing out woodchips into a huge stockpile. Inside the remaining footing, a new circular concrete platform and set of bent timber bleachers were inserted, making an outdoor gathering and event space that makes use the wall as shelter from the prevailing wind. A new sloped lawn was also added facing into the space, the form of which also follows the circular geometry of the concrete footing. At the centre of the space, a sundial gnomon was grafted onto the

old crane pivot column, accompanied by half-hour markers set into the new concrete floor. Here the rotational action of the crane has been replaced by a registering of the earth's rotation around the sun – another symbolic gesture towards the environmental repair and regeneration of the site.

The former rotation of the crane is also made apparent in the design of the Ridge Quarters accommodation building located nearby to the Amphitheatre. The bent geometry of the building was created from extruding radiating lines from the old pivot column, notionally pulling the Ridge Quarters into the gravity of the Amphitheatre space. This gesture helps this building that is one of the few fully new parts added to the site, to form a physical relationship with the existing conditions, one that accentuates rather than takes away from it, further reinforcing for the visitor the experience of the destructive forces of the site. This design approach is reinforced in the structural and material language of this new building which is derived from the infrastructural scale and materiality of the former industrial structures on site. In this way, the new building forms part of the continuum of the site rather than something distinctively new and separate from it.

Another aspect of the design approach to adding to the site is the way that a number of the new constructed elements purposely reveal how they are made, acknowledging the contemporary industrial processes that underpin this very site's ongoing repair and regeneration. This idea is manifest in the mounded forms of the landscaping that embody the process of composting and planting, the exposed upcycled aggregates that reveal the particular composition of the concrete, the expressed saw cut marks in the timber that make evident the mechanical processing of this natural resource, and the elemental assembly of new structures that acknowledge and make legible, the method of construction. For visitors, this enables a connection to the site's layers of industrialisation: the destructive recent history as a woodchip mill; the ongoing process of environmental repair, and the forms of resource extraction and production that are an ongoing part of the contemporary building industry.

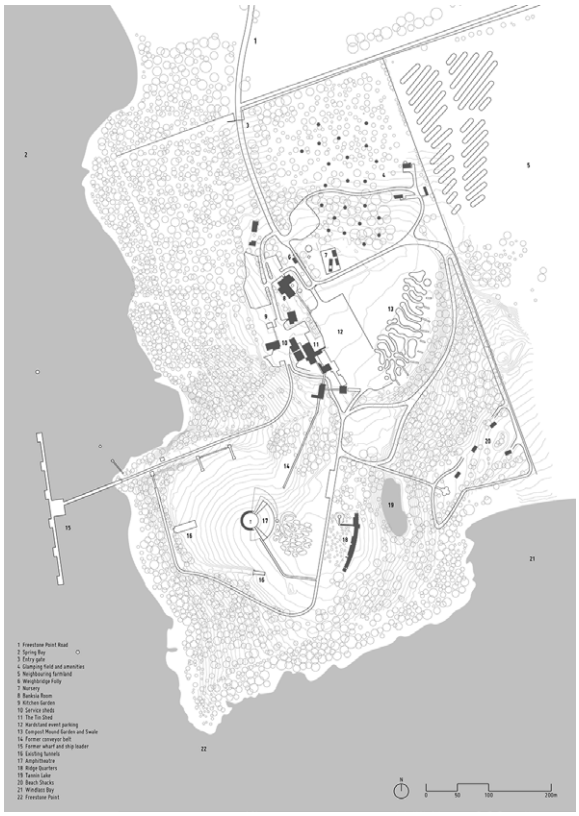
3. CONCLUSION

In the Australian context, few examples of modern post-industrial landscapes of this enormous scale exist whereby a site so deeply damaged and once damaging has been strategically acquired, remediated and opened up for new cultural and environmental uses. Unlike other examples of industrial heritage adaptive reuse projects that typically exist in Australia's major urban centres, Spring Bay Mill is peculiar in terms of the environmental political context, regional location, and landscape orientation. It is easy to understand why the site might not be regarded as precious or particularly worthy of preservation given it's remote location and the enormous scale of environmental destruction it once supported. However, the concerted effort to keep and work into the industrial remnants as described in this paper, preserves the site as an important reminder of a destructive recent past, whilst making visible and visceral, the positive example of human endeavour

Figure 1 - Gilby Brewin Architecture, Spring Bay Mill, Triabunna, Australia, Site Plan

Figure 2 - Gilby Brewin Architecture, Spring Bay Mill, Triabunna, Australia, Aerial view over the new entrance to the Tin Shed performance space with the amphitheatre and Spring Bay beyond. Photographer - Richard Jupe, 2019).

Figure 3 - Gilby Brewin Architecture, Spring Bay Mill, Triabunna, Australia, Aerial view over the Ridge Quarters accommodation towards the mounded landscaping in front of the circular Amphitheatre. Photographer - Richard Jupe, 2019).







in the form of the site's regeneration. Although it being impossible to ever return the site to a condition prior to European invasion, the Spring Bay Mill project is determinedly repairing some of the damage to, and caused by, a site that symbolises the rampant exploitation of natural resources synonymous with the Anthropocene and is once again allowing groups of people to gather in this beautiful ancient landscape. ■

BIOGRAFÍA

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MODERN PRE-EXISTING STRUCTURES AND URBAN RENEWAL: CRISTINA XAVIER'S INTERVENTION AT THE HEADQUARTERS OF O2 FILMES

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#16

ABSTRACT

This article analyses an intervention in pre-existing structures in an industrial area undergoing renovation. O2 Filmes headquarters was designed (2007-2012) by architect Cristina Xavier (FAUUSP, 1994). Located in the Vila Leopoldina neighborhood, characterized by the presence of the largest distribution center for fruits and vegetables in the São Paulo metropolitan area, it is surrounded by large warehouses and low-income houses. The announced transfer of this supply center to a more distant location has rapidly changed the local landscape. Large lots, often occupying entire blocks, have attracted strong interest from real estate investors, leading to the replacement of old warehouses with gigantic, gated apartment complexes surrounded by high walls and totally isolated from city life, distorting the original industrial landscape. This goes against desirable urban policies in terms of cultural preservation, social diversity, and sustainability.

The expansion of O2 Filmes led to the purchase of five bordering warehouses, depots, and mechanic workshops. These were large, simple constructions, whose demolition would generate a high volume of waste and eliminate an urban reference point that is present in the daily memory of workers, residents, and visitors. Although those pre

existing buildings neither had exceptional value nor were listed as heritage, the proposed intervention incorporating them has the merit of turning pre-existing structures into cultural assets. The design was based on a profound understanding of the changing industrial area, the importance of existing structures in the neighborhood, and the goal of bridging the gap between work routines and the city. It aimed to create a space where people could gather and exchange ideas.

The commitment to reshape the area while respecting its urban context, promoting sustainability by reducing waste, and improving the environment through increased green spaces can inspire new approaches to revive the collective memory of everyday life and work in the region.

1. INTRODUCTION

The headquarters of O2 Filmes, an award-winning producer of well-known Brazilian movies, were designed (2007-2012) by architect Cristina Xavier. She majored in 1994 at the School of Architecture and Urbanism of the University of São Paulo (FAUUSP) under the legacy of *Paulista* modern architecture. Accordingly, she joins the public aspect of architecture and its constructive features in designs that range from urban structures to furniture. Although she had suffered the strong influence of the *Paulista school*, as her father João Xavier had been a member of the group of young architects that were close to architect and professor João Vilanova Artigas, whose works were seen as the epitome of the school, Cristina Xavier took the necessary steps forward towards a critical reflection about the Anthropocene. Joining together diverse experiences, from the São Paulo real estate market to training workmen to use wood in the Amazon, Cristina Xavier has developed a keen critical sense of contemporary issues.

Her architectural practice has become more and more exemplary as she changes possible obstacles into design investigations. Xavier has been developing a design intelligence that has enabled her to propose innovative experiments unforeseen by the client and absent from the articulation of the problems she has been asked to solve.

> *This is not about proposing visionary solutions for the past century's problems, but about adopting unpredicted innovative practices that were not even remotely foreseen when considering a problem.*[1]

Questioning the requirements she is given and reflecting upon what is really being asked, Xavier relies on her own field of expertise, taking advantage of the design not only as the conductor of the action, but also as the means, the instrument, the structural axis of the entire creative process, considering it in its real dimension as presented by Argan:

> *Design is structure, in the most current and precise sense of the term. Tracing the guidelines according to which the existence of society will unfold and at the same time denying that these lines are predestined or prefixed, it expresses first of all the virtuality of current conditions, their implicit possibilities.*[2]

Without much fuss, but with full conviction, her designs have been stimulating important changes in São Paulo architecture. Such is the case of the housing proposal Vila 897, designed on a steep slope in a neighborhood undergoing an accelerated process of renewal. It was a turning point in the trajectory of the developers and consolidated a new standard for housing complexes. The real estate company which until then had a portfolio fully determined by the market came to understand the real role of architecture in facing the conditions of each different case. Always willing to study and interpret the regulations to build v*ilas (a group of similar houses on a secondary dead-end street, without*

1. Michael Speaks, "A inteligência do Projeto. " In SYKES, A. Krista (ed.). *O campo ampliado da arquitetura*. (São Paulo: Cosac&Naify, 2013), 163.

2. Giulio Carlo Argan, *História da Arte como História da Cidade*. (São Paulo: Martins Fontes, 1992), 51.

the character of a public place), Xavier proposed independent and carefully arranged units to create a generous common area, ensuring at the same time some privacy for each house, which model has spread throughout the city, although not with the same quality.

After this successful experience, in which all units were sold with no more than the architect's initial sketches, the company began to work with renowned São Paulo architects and Xavier understood the market's strategies and its artifices to obtain the highest profits from a mere preliminary design. Shocked by the backstage of real estate developments, Xavier ventured to propose herself a housing complex – Vila Fidalga – which valued not only the first drawings, but the whole process, including fair payment for all those involved.

The result of this undertaking is a reference in São Paulo architecture at the end of the twentieth century: six partially overlapping units integrated into a common route that connects two streets and allows independent access to each house. The flexibility of internal spaces and particularly the arrangement of the common spaces have introduced a new model for multifamily complexes in the city, breaking with usual standards and giving a new meaning to common areas, in the opposite direction of real estate market practice.

Based on this housing complex and on the partnership established with engineer Hélio Olga, responsible for all wooden elements, she had the opportunity to develop a constructive system of wooden panels for walls, floor and roof slabs, based on the use of solid wood leftovers from prefabricated houses at ITA Construtora, Olga's company. The proposal was designed to combine innovative, low-cost and easy-to-implement technology, aiming for its adoption in future demands. From a 10 cm module, it is possible to create panels from 0.20m to 3.00m wide and between 1m and 5.50m high. The sizes have been chosen to facilitate prefabrication, storage, transport, and assembly on site. This system was tested in Vila Taguaí.

Located in the outskirts of the capital and inside an environmental preservation area, the housing complex consists of eight houses, with three compact standard plans of one or two floors, located to make the best use of the topography and maintain the original conditions of the land as much as possible. The internal spaces were defined taking advantage of maximum natural lighting and ventilation. Rainwater is captured and sent to the existing stream, and sewage is treated in the underground station within the condominium itself and reused in toilets and irrigation, reducing water consumption by 30%. A solar energy system heats the water. Design and construction were in tune with contemporary environmental issues, a concern which the architect has been perfecting in each work.

2. MODERN PRE-EXISTING STRUCTURES AND URBAN RENEWAL

The design for O2 Filmes aggregates previous contributions and advances in the sense of preserving urban landscape. The analysis presented herein is based on the architect's design process beginning with the study of her drawings, from the first sketches to the detailing of each design and comparing them with the several visits to the works and its impact on the region.

Vila Leopoldina, the neighborhood where the buildings are located, is characterized by the presence of the largest supply center for fruits and vegetables in the São Paulo metropolitan area – CEAGESP. Over time, its operation has caused a concentration of large warehouses and sheds in its surroundings, interspersed with existing housing in the region, a typical occupation of the modern productive system. This very particular and intense commerce has attracted many informal workers who have settled in tenement houses and slums in the surroundings. In recent decades, given the diversification of production and the expansion of the creative sector, these warehouses have proved to be an interesting option.

On the other hand, with the growth of the city, this neighborhood, which is not very far from downtown and whose commercial and services dynamics are quite different from the standard of more central areas, has started to attract schools, universities, and public institutions. Evidently, always attentive to new possibilities of expansion, the real estate market has been promoting great changes in the area without any concern for urban context and neighborhood history. Old warehouses and sheds are being replaced by gigantic, gated communities with apartment towers, surrounded by high walls and totally isolated from the city, running counter to a desirable urban policy in terms of cultural preservation, social diversity, and sustainability. According to Kühl,

> *cultural assets are, and should be, an integral part of our daily life and are present, as they should be, in sociocultural policies and practices as well as within contemporary economic dynamics, therefore taking part in the design of the city.*[3]

These real estate investments have ignored the surroundings, forcing strange-looking buildings into the cityscape and yet refusing to participate in its daily life.

O2 Filmes has been in this neighborhood since 2007, and its expansion led the film producer to purchase six neighboring warehouses – sheds, depots, and mechanic workshops – adding 7,600 square meters to accommodate a wide program aimed at diversifying the products offered, such as TV shows, movies, feature films etc. The destruction of those simple but large structures would generate a high amount of residues and also eliminate a reference in urban occupation, present in the daily memory of workers, dwellers, and users of the area. Although the assets were of no exceptional value, let alone listed as historic heritage, this intervention, which incorporates existing edifices, has the merit of transforming pre-existing structures into cultural assets, whose value, according to Meneses

> *comes from social action. To be socialized and changed into standards, choices and options made by individuals and groups need mechanisms of identification, enculturation, and acceptance.*[4]

3. B.M. Kuhl, "O papel do patrimônio arquitetônico no projeto da cidade contemporânea. " In Retto Júnior, Adalberto da Silva (eds.). *Coleção Primeiras Aulas*. (Tupã: ANAP, 2019), 42.

4. Ulpiano Toledo Bezerra de Meneses, *Os usos culturais da cultura. Contribuição para uma abordagem crítica das práticas e políticas culturais. Turismo: espaço, paisagem e cultura*. (São Paulo: Hucitec, 1996), 92.

The purchased structures had to be integrated to the building currently being used by the film producer so as to constitute an integrated complex and not mere outbuildings.

The design developed from an understanding of that factory territory in a process of transformation, of the meaning of pre existing structures in the block and in the neighborhood, and from a concern to establish a dialogue between the work routine and the city. Its goals were to create an environment where people could get together and exchange ideas, to expand the permeable areas and introduce green areas (for which landscape architect Ciça de Souza was hired), and also, as much as possible, to avoid residue generation, thus contributing to sustainability. Rearranging the space of the six warehouses could not obstruct the daily activities of the film producer which was going to remain in place during the intervention. This forced a simultaneous work of design and construction, a situation until then unprecedented in the architect's history, that required a careful strategy for the construction site, the office, and the fees, since the length and time of the work were unpredictable.

On the basis of a preliminary idea of the entire process, including a plan of all stages of the work, the fees proposed by the architect and agreed to by the client were divided between a fixed amount for the conceptual design and monthly payments for the whole team's work hours. Aiming to optimize costs, the budget included the use of the producer's own resources and employees, including scenography and lighting teams to execute the furniture and lighting. The company technicians' participation in the implementation of the project ended up creating a positive connection among the entire team, minimizing any resistance to disturbances during the works. To coordinate the complexity of the simultaneous design and construction, and to harmonize with the company's staff that kept up their usual work regime, Cristina Xavier set up her office in the construction site from which she controlled the entire drawing and execution processes. Between the first visit and the inauguration of the project, there were five years of intense coexistence between the design team, the construction company, and the client.

The work unfolded in line with the following stages: survey of all warehouses and their respective maintenance conditions; analyses of the client's work dynamics and demands during the construction period; study of the proposed brief; layout of both design and execution works, anticipating the gradual move of several sectors of the company's team.

Making the most of what was already there and reinforcing structures, roofs, and concrete floors, zenithal and side light spots and drainage floors were introduced. With self-supporting wooden structures created by the architect in partnership with Hélio Olga's Ita Construtora, different blocks were created to accommodate the brief, such as casting test studios, production offices, costumes and art work areas, finance/ administrative rooms, and a projection room in the central area.

Furniture, fixtures, and the support for electrical installations were designed according to the specifics of each environment and executed by the building company's locksmiths alongside the film producer's scenography and lighting

technicians. Partitions, wheeled screens, curtain-like fabrics, cabinets, shelves, iron legged work tables with wooden tops, wheeled side tables, plywood benches, and cushions were created on site. Conceived like a citadel, the space resulting from the integration of all warehouses was organized into a main street crossed by a series of secondary streets from which squares and alleys sneakily emerge. The latter join together the several work environments, each one with its own specifics: auditorium, common areas with different scales and motivations – rest area, coffee area, conversation area, gatherings area – even a certain amount of unpredictability that only public spaces allow. The workers' bicycles parked along the paths reinforce a continuity with usual urban dynamics. At the same time, the design did not neglect the necessary privacy and safety of some sectors, such as post production areas, with sophisticated equipment requiring high doses of concentration at work, the dressing-rooms for casting selection, or the administrative sector, but always preserving freedom of communication within the entire complex. Interaction between the company personnel and shared projects among several sectors – important aspects of the film producer's identity – took on a prominent role in determining the fluidity of the space, lending daily activities a fundamental aesthetic component, either related to the internal environment or to its relationship with the city. The internal perspectives generated by the different volumes, which were strategically implemented to see to the functions spelled out in the brief, are enriched by people coming and going and getting together in the open canteen, by discussions at the work stations or by resting in the hammock area, resulting in a dynamic visual composition in constant renewal – a notion of beauty that is not restricted to the balance of proportions.

Likewise, the showcase with dolls, masks, and costumes from the films establishes a good-humored dialogue with the city, bringing passers-by closer to the film production company's universe. The wall set aside for graffiti incorporates and values the artistic expression of the local community.

The O2 headquarters has become a very intense urban phenomenon. Xavier managed to transform grim abandonment into collective life and street desires into reality, configuring a new territory, as defined by Milton Santos

> *The territory is the ground plus the people, i.e. an identity, the fact and the feeling of belonging to what belongs to us. The territory is the basis for working, for living, for material and spiritual exchanges, and for life itself, upon which it has influence. When you talk about territory, you should readily understand you are talking about a territory that is used, utilized by a given population.*[5]

The original industrial landscape can still be identified by the presence of many other warehouses that can be rehabilitated, following the example of O2. The maintenance of workspace reinforces the original character of the industrial landscape and avoids its spectacularization, a strong contemporary trend. Pre existence structures transformed into a cultural asset, not by the brief, but by the quality of their design.

5. Milton Santos, *Por uma outra globalização: do pensamento único à consciência universal*. (Rio de Janeiro: Record, 2008), 96.



Fig. 1 - O2 Filmes. Main entrance Photo by Cristiano Mascaro. 2012 Side entrance. ©João Xavier. 2012.

Fig. 2 – Vila Leopoldina neighborhood (google map) and O2 warehouses model ©Cristina Xavier.

Fig. 3 O2 Filmes – before and after the intervention. ©João Xavier. 2012.

3. FINAL REMARKS

This intervention brings in many elements that stimulate a reflection on the complex conditions of contemporary world and how to face them for a more harmonic future between society and environment, without neglecting the past in the transformations of each time. This is an architecture that knows how to deal with the changes not fighting them but working with them.

The O2 Filmes headquarters are the result of a refined reflection on an industrial landscape faced by the Anthropocene's impact. An understanding of a cultural asset, a respect for pre-existence, a revitalization of the territory respecting its urban scale; a reduction of residues, contributing to sustainability; an increase of permeable areas by the introduction of vegetation in favor of the environment – all these are factors that can induce a new standard for urban interventions that seeks to invigorate the memory of a landscape built up by everyday life and work, . The modest presence in the urban context and the use of simple materials do not take away its importance in transforming the neighborhood, on the contrary, the beauty of its architecture lies precisely in bringing dignity to everyday life. ■

BIOGRAPHY

Mônica Junqueira de Camargo, architect, associate professor at the FAUUSP, advisor to the Historical Heritage Council of the Municipality of São Paulo CONPRESP (2004- 2007; 2018-2020); director of the USP Cultural Preservation Center - CPC/USP (2014-2018), head of the Department of History and Aesthetics of Design (2019-2023). Deputy Coordinator of the Docomomo SP (2020-2022), member of the Observatory of Contemporary Latin American Architecture (2008-). Coordinator of the São Paulo Architectural Culture Reference Center Research Group at CNPQ. Researchs modern and contemporary Brazilian architecture, with published articles and books, and Curator of special rooms for the São Paulo International Architecture Biennial.

WORKING ON THE LANDSCAPES OF LABOUR BETWEEN ANCIENT AND MODERN: PIN-POINT PROJECTS FOR INDUSTRIAL ARCHAEOLOGY IN TIVOLI

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ABSTRACT

In the context of a broad framework of urban-historical, technological, and industrial archaeology studies conducted by the authors and focused on Tivoli's historic manufacturing areas, the paper illustrates the research tools in favour of a methodology for designing the landscape of work that derives from long industrial and pre- and proto-industrial processes. The paper reports the main elements of meta-design underlying the redevelopment of an entire historically productive urban neighbourhood and discusses the design application of a specific case within a systemic vision.

The methodology is fundamentally based on the specificities of historic urban and industrial heritage: sites, areas and intangible elements that recall the foundations of contemporary humanity. Upstream of the proposition of the intervention methodologies were the inventory of the artifacts, the survey of the complex water/city system, the reading of the processual building fabric, and the reading of the morphology expressed in the current open spaces.

Within these systems, with their reasons for memory and urban resources, is the history of the Amicucci-Parmeggiani Paper Mill, built in the 19th century and connected to the medieval city and pre-existing Roman archaeological remains.

This is a true case of multiple archaeology in which the specificities of labour architecture need to be highlighted and its ability to be supportive of a new social and cultural sustainability needs to be grasped. The final stages of the process involve the transfer of technology from the university to the community through the star-tup BEST design, which finally implemented the architectural project according to the aforementioned value principles.

In view of the next steps, the proposition of a rigorous methodology shows the possibility of surgically operating on a modern element of an industrial landscape with an awareness of contemporary values, even when a new use is not even strongly characterized.

1. INTRODUCTION

An intense productive and industrial history has left its mark of modernity on the edges of the middle age city urban fabric of Tivoli downstream. There, the numerous canals, after moving oil mills, paper mills, tanneries, and ironworks, having exhausted their useful function, released the waters in a famous complex of waterfalls and cascades that are part of the beauty sought in Tivoli by Grand Tour travellers during 18th and 19th cc. New construction and production technologies have been prominent in this fringe of the city since as early as the late 19th century, massive industrial realizations have left a new built-up area edge that has decisively challenged the ancient landscape relations between city, land and river. There is a clear need for an action to regenerate Tivoli through the recognition of the values witnessed by the oldest and most recent presences, in order to place them at the basis of an overall rethinking of the area.

As part of the collaboration of the authors with the VaVE Institute of the Ministry of Cultural Heritage and the Municipality of Tivoli, the paper outlines, in particular, the research tools in favour of a methodology for designing the landscape of labour resulting from long industrial and pre- and proto-industrial processes. In particular, the paper outlines the elements of meta-design underpinning the redevelopment of an entire historically productive urban neighbourhood is an approach definable, in words of other times, as metaplanning. The design application on one of the largest old mills, the "Amicucci-Parmeggiani Paper Mill," acquired by the City of Tivoli as part of a recovery strategy to be identified for the entire area, is also explained in the final section.

2. THE METHODOLOGY

The article reports a methodology based on the specifics of industrial heritage: sites, areas and intangible elements reminiscent of the foundations of contemporary humankind. Methodological invariants are postulated related to the inventory of artifacts, the survey of the complex water/city system, the reading of the processual building fabric, and the reading of the morphology of current open spaces. Then typical modern values and fragilities related to modern use of materials, typological and constructive experimentation, and functional adherence are highlighted.[1]

Within these systems, with their reasons of memory and urban resources, lies the story of the Amicucci-Parmeggiani Paper Mill, built in the 19th century and connected to the medieval city and the pre-existing Roman archaeological remains. Values elements traceable to the Nizhny Tagil Charter and the Joint TICCIH-Icomos Dubline Principles were highlighted in the industrial asset. It is a true case of multiple archaeologies in which we need to highlight the specificities of modern industrial heritage and grasp its ability to be supportive of new social and cultural sustainability. This resulted in a process of technology transfer from the university to the community through the BEST design start-up, which finally realized the architectural design according to the principles of industrial archaeology and adaptive re-use.

1. Edoardo Currà, "Fragilità," in *Patrimonio Industriale Del Ventesimo Secolo: Fragilità, Risorsa, Progetto, Messa in Valore Alla Luce Del PNRR*, ed. Edoardo Currà, Cristina Natoli, and Manuel Ramello (Firenze: Edifir, 2022), 16–27.

3. INDUSTRIAL ARCHAEOLOGY IN TIVOLI CONTEST AND VALUES

The medieval urban fabric of Tivoli is permeated by numerous ancient and modern canals, and, at least since the 1500s, there are many paper mills, ironworks, and tannery moved by the water. The transition to modernity is punctuated by two major events with impressive hydraulic works at their centre.

The first was after the disastrous flood of 1826, when the papal government entrusted engineer Clemente Folchi with a definitive hazard mitigation project. Folchi builds a basin to collect river waters upstream of the city, the St. John's Basin, and a tunnel in Mount Catillo, which from the basin conveys river waters directly downstream of the city, generating the new Gregorian Waterfall that adds new value to the landscape.[2] The intervention as a whole preserved and improved the industrial functionality of the river and provided new productive plants.[3]

The second major technological and entrepreneurial dive was due to the initiative of a Roman engineer, Raffaele Canevari, who founded the "Società per le Forze Idrauliche" in 1884.

Conveying the waters that, thanks to Folchi's work, flowed steadily into the Vesta Valley, Canevari settled the Vesta power plant in 1886 and built a new canal, called the Canevari Canal. This new canal allowed the settlement, in the area of the Shrine of Hercules Vincitor, of the Segrè paper mill, the Pantanella pasta factory, a wire drawing mill and a hardware store, a second power plant, called Acquoria, from 1892, the first European power plant to carry alternating current electricity for 25 km from Tivoli to Rome.[4]

The 20th century is marked by the effects of the establishment of such a favourable environment. Huge industrial structures, mainly made of reinforced concrete, rise on old sites, expanding, elevating, replacing. What emerges is the context visible in the **Fig 1** and **Fig 2**, of a medieval city that has a walled edge in historic concrete industrial structures.

Some of them retain only the values of labour, memories of intangible data; others soar as unintended monuments from the intriguing forms of industry's reinforced concrete; still others, finally, enclose some technological or scientific novelty, such as power plants or cutting-edge architectural construction solutions.

There are many elements for heritagization, but also critical environmental and conservation issues. Neglect has led to collapses and serious degradation phenomena, but some operations of renovation, although animated by the most laudable intentions, have already led to the loss of architectural elements of considerable value, such as, for example, the metal vaults made by engineer Gino Covre for the Tiburtina paper mill[5].

4. THE URBAN CONTEST AND A STRATEGY BASED ON TWO CULTURAL PATHS.

Following an initial census of disused or surviving industrial presences, surveys of a significant number of industrial facilities, particularly paper mills, have been conducted over the years. From the perspective of regeneration, knowledge and representation of processes is imperative.

2. Francesco Massimo, *Relazione Storica Del Traforo Nel Monte Catillo in Tivoli per l'inalveazione Del Fiume Aniene* (Roma: Stamperia Camerale, 1838).

3. Luciano Nasto, "Tivoli, La Ferriera Di Villa Mecenate," *Atti e Memorie Della Società Tiburtina Di Storia e d'Arte, Già Accademia Degli Agevoli e Colonia Di Arcadi Sibillini* 70 (1997): 89–107.

4. Angelo Banti, "Il Trasporto Di Energia Elettrica Da Tivoli a Roma," *L'elettricista* II (1893): 282–94.

5. Edoardo Currà et al., "Autarky Metal Roofing at the Mecenate Paper Mill in Tivoli, an Unseen Application of Gino Covre's Patents," *TEMA: Technologies Engineering Materials Architecture* 9, no. 2 (2023): 19–32, https://doi.org/10.30682/tema0902.

Therefore, the surveys, in a vast interweaving of engineering, architectures and histories, have been critically guided by a meta-design intent.

Three main systems are considered as intrinsic references of any design hypothesis:

- Industrial compounds, with terracing and building arrangements dictated by the rugged orographic nature of the slope and the numerous archaeological presences;
- Hydraulic works that innervate the city;
- Urban and open spaces.

In particular, with reference to the latter, the geography of the paper mills is linked to two open space structures, one consisting of the ancient via del Colle with the Vesta valley, the other that of the modern via degli Stabilimenti.

The relationships between these streets and the surrounding industrial and non-industrial buildings, along with historical-economic events, highlight two potential cultural paths of industrial archaeology. Via del Colle emerges as a key infrastructure of historical industriousness, interwoven with canals and artisanal or proto-industrial sites. It represents a cultural route of urban manufacturing and mills, reflecting the evolution of contemporary paper mills.[6]

The valley path is the via degli Stabilimenti, which for a good stretch runs over the Canevari Canal and is configured as a cultural route of the urban industrial district of the contemporary age. The route breaks off from Via del Colle, past Porta del Colle, and, after serving the Mecenate paper mill, runs from west to east and, having encountered the Graziosi-Carlucci and Marziale paper mills, enters the Società per le Forze Idrauliche tunnel built under the rocky spur on which the Amicucci-Parmeggiani paper mill rests. Past the tunnel, it skirts the Vanni paper and woolen mill, the power plant and the Vesta paper mill and then bends in a 'U' shape, ascends the Vesta valley with the Ranzi-Sibilla, Tani, Arato-Boratto paper mills and rejoins, through the Vesta and Rinserraglio streets, at the other end of Via del Colle.

Therefore, a spindle is formed between the two tracks, which gathers almost all the industrial estates and is characterized by considerable enclosure toward the city.

The industrial enclosures form impermeable urban blocks of excessive size for pedestrian-oriented urban use and an enhancement of them suggests a strategy of "crossings."

Making traversable and usable the current closed enclosures of industrial realities is a credible part of any strategy, based also on a mixite of new uses. The renewal is the opportunity to bring out and enhance the phases and vicissitudes of the complexes, integrated with the water paths of industrial processes.

5. THE AMICUCCI-PARMEGGIANI PAPER MILL, A PROJECT CASE STUDY

5.1 HISTORICAL EVOLUTION OF PAPER MILL

The Amicucci-Parmegiani paper mill is characterized by a continuous evolutionary development over time that began around the 1920s and

6. Fulvio Cairoli Giuliani, *Forma Italiae, Regio I, Vol. VI, Tibur, Pars Prima* (Rome: De Luca, 1970); Michele Zampilli et al., "Formazione e Trasformazione Della Struttura Urbana Di Tivoli 3. Dalle Prime Fasi Di Insediamento Al Rinascimento," in *Tivoli, Un Laboratorio Urbano. Ieri, Oggi, Domani* (Roma: Roma TrE-Press© Roma, 2019), 168–69.

then ended during the 1960s. The evolution has been recorded in a 4D HBIM **(Fig 3)**.

Phase 1: In the early 1920s, Cav. Giuseppe Amicucci purchased Cincinelli land and constructed the first building, replacing an old barn. By 1925, the paper mill expanded eastward, adding a new section towards a nearby alley.

Phase 2: Between 1934 and 1938, a driveable courtyard with a gatehouse and loading deck was built on the north side of Piazza Tani. Additionally, a boiler room and a new building for setting up were constructed in the eastern part of the courtyard.

Phase 3: From 1940 to 1946, significant expansion occurred to the north of existing structures. Buildings were allocated for both main and ancillary functions, including technical rooms and production facilities.

Phase 4: In 1947, the downstream building was extended eastward to accommodate the first continuous machine line. Another smaller building was added for processing with a Hollander beater. Further extensions were made to the central building and the boiler room in 1949.

Phase 5: By 1951, the original building was expanded with a large canopy, and the courtyard was reorganized for raw material unloading. The boiler room was widened westward, and a new warehouse was constructed in the northwest, partly on ancient Roman ruins.

Phase 6: In 1952, a significant expansion took place, enlarging the continuous machine building to install a second line with an annexed workshop. This extension also included two upper floors for straw storage.

Phase 7: In the early 1960s, the paper mill expanded further with the construction of a new production line building in the northwest, involving the demolition of existing structures. Simultaneously, offices adjacent to Piazza Tani were demolished and reconstructed to improve raw material unloading maneuvers.

Phase 8: In 2009, a partial collapse occurred at the paper mill. Subsequent interventions included the reclamation of the eternit roof section in 2014 and the partial demolition of the courtyard canopy in 2016. The final intervention in 2019 aimed to secure the collapsed portion of the mill.

5.2 ARCHITECTURAL DESIGN STRATEGIES AND CRITERIA

The project proposal suggests removing the top floor of the existing paper mill to improve the view from Piazza Tani and along Via Maria SS. di Quintiliolo. Despite focusing on conserving the perimeter of the paper mill complex, the design identifies two significant urban themes:

1. Landscape redesign of the North and North-West fronts along Via degli Stabilimenti.
2. Development of urban connections between Piazza Tani and a new elevated area, potentially the site of a future auditorium or belvedere square.
3. A key project constraint is that the maximum summit height should not exceed the level of Piazza Tani, allowing for an extension of the square and panoramic views of the valley and Roman countryside. The

redevelopment aims to maximize the area's panoramic views while enhancing the urban fabric and architectural features.

The functional reorganization of the paper includes selective preservation and demolition of non-essential parts, emphasizing the preservation of historically significant elements.

Two connection systems are proposed:

1. A public external route along Vicolo del Riserraglio, leading to a new public terrace at level +204,00 m., connecting to a future "low belvedere" square at level +199,00 m..
2. An internal system within the building complex providing vertical connections between various levels.

The strategy presents a new spine for the complex, the layout of which is set through the planimetric alignment with the medieval tower of the convent of Santa Caterina, accommodates the entrance to the service areas of the museum, and the lift block and new staircase between the 209.00 elevation, the two main levels of the museum-purpose building: 204 and 201.00 m.a.s.l., a level in direct relation with the new 'low' square.

The functional organisation of the interior spaces pursues the objective of defining a promenade and the definition of a route adherent to the original production process. In this direction, the proposal envisages defining a main exhibition area at elevation 204.00 with an annular path around the kettles' aisles that, through a system of walkways, allows views of both the external landscape and the extraordinary double-height spaces of the former paper mill,

On level - 3, at a height of approximately 197.05, a multifunctional space for events and public demonstrations is planned below the 'kettle aisle': a longitudinal space of remarkable quality that can host events and collective activities for approximately 100 people.

5.3 THE ADAPTIVE-REUSE PROJECT

The intended uses are outlined as part of an overall function of museum space dedicated to the fundamental segment of Tivoli's industrial history, complementary and integrated with the functions of cultural centre, civic pole for the city and exhibition space for contemporary art.

The reference musealisation model is that typical of alternative spaces - as places for rethinking the relationship between the observer and the work of art - which emphasise the relationships that can be established between the visitor, the work of art, the exhibited document and the industrial structure. An important element of the project consists in the attempt to integrate the pre-existing buildings subject to constraint (artefacts at the entrance to the former paper mill and the wall along vicolo del Riserraglio, with the new redevelopment work) through an overwriting operation. In addition to the recovery and restoration of the small constrained artefacts at elevation 208.00, the project envisages the maintenance and restoration of the wall along vicolo del Riserraglio, whose height defines the altimetric limit of the

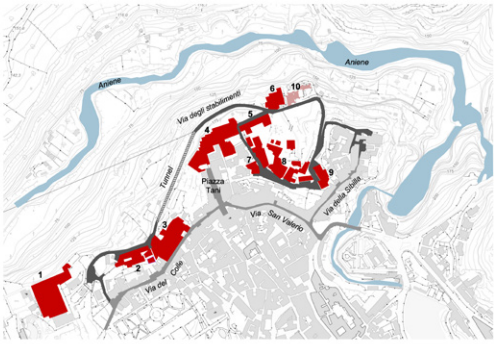


Fig.1 Tivoli's edge to the Aniene valley and major industrial presences. Regeneration is an opportunity for a more sensitive interaction between modern and ancient. © Credits (Currà, Bomanore).

Fig.1 Tivoli's canals restored and made constant thanks to Folchi's intervention ©Massimo 1838

Fig. 3 Representative BIM model of the historical phases of the Amicucci Parmeggiani paper mill (above) and BIM of the machines in the production process @Andrea Bonamore, Edoardo Currà.

Fig. 4 Design for Industrial Heritage. Perspective sections comparing the project before and after, Tivoli, Italy, 2023. ©BEST Design, Spartaco Paris, Antonio Landa, Carlo Vannini, 2023.

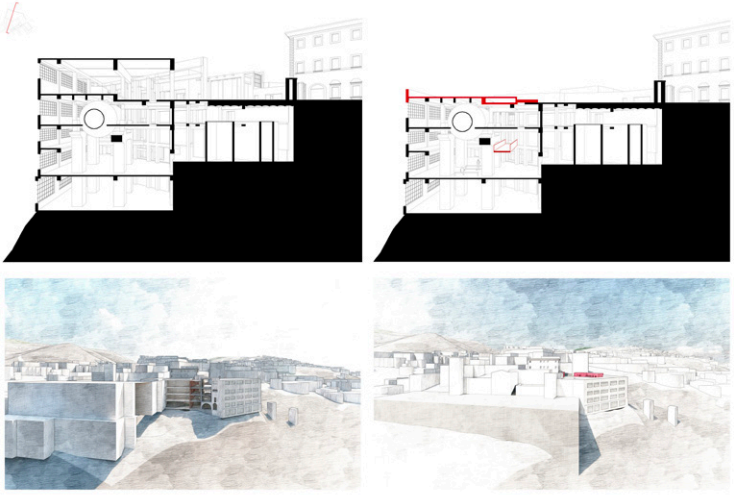
Paper mills
1. Paper mill Mecenate
2. Paper mill Graziosi-Carlucci
3. Paper mill Marziale
4. Paper mill Amicucci-Parmegiani
5. Paper mill and wool mill Vanni
6. Paper mill Vesta
7. Paper mill Arati-Boratto
8. Paper mill Tani
9. Paper mill Ranzi-Sibilla

Other industrial building
10. Hydroelectric power plant Vesta

Road system
New industrial road
Historic road







new artefact, characterised by a lower height than the existing wall and a similar horizontal profile of the planned new artefact.

6. CONCLUSIONS

The case study highlights a *positive anomaly* in the application of protection to a listed modern complex of historical and artistic interest[7]. This anomaly

affects the redevelopment of a disused industrial site and the integration of a public building value chain, enhancing urban life quality. The anomaly stems from the protection imposed by Italy's highest institutional body for protecting cultural assets. This constraint establishes gradual transformation levels for different building portions, leading to the partial demolition of certain artifacts – an unusual practice in protecting such assets.

This selective protection arises from a specific hierarchy of values attributed to the paper mill complex. The primary value recognized prioritizes the extraordinary site of the original building nucleus, located within a remarkably valuable landscape overlooking the Aniene waterway and the Sanctuary of SS. Maria of Quintiliolo. This value has been chosen over preserving the industrial artifacts, reflecting a shift towards recognizing the landscape's significance.

These principles informed the overarching criteria for the transformation and revitalization of the area, as outlined in the design guidelines for the *Design Competition for the construction of an auditorium*. They were also reflected in the general proposal of the winning project.

Beyond specifying the program of uses and delineating areas for demolition versus preservation involved considering visual connections both towards and from the valley system of the former paper mills, extending to the Sanctuary of Hercules Winner, as well as the opposite slope, where the Sanctuary of SS. Maria of Quintiliolo is situated.

At the urban level, the retrofitting and recovery project of the former paper mill covered the creation and organization of three new public spaces for revitalize the urban significance of this remarkable landmark in the city of Tivoli. This ambitious undertaking is currently underway, and its impact will be assessed in the coming years to gauge its effectiveness in transforming disused modern industrial assets into enduring public values and integrating them with historic assets. ■

7. Spartaco Paris, "Riflessioni Sul Progetto Di Riqualificazione Del Costruito Moderno: Esigenza, Necessità e/o Opportunità per Ripensare per Ripensare e Rinnovare l'abitare," in *Ri-Abitare Il Moderno*, ed. Spartaco Paris and Roberto Bianchi (Quodlibet, 2018), 19–51.

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Andrea Bonamore. MSc Degree in Building Engineering and Architecture, Sapienza University of Rome, 2023; Contributor to graphic content and exhibit design for the exhibition "Inside the Factory, Machines and Processes of Tivoli's Pre- and Post-Industrial Landscapes" (in progress).

MODERNISM ON THE POST-INDUSTRIAL RIVERFRONT: HERITAGE SITE OR OBSOLETE RELIC?

ELIZABETH M. KESLACY
VIRGINIA TECH

#16

ABSTRACT

In the 1970s, major cities in the American Rust Belt heavily invested in their river- and lakefronts, initiating a transformation from primarily private, industrial uses to landscapes for public recreation. In cities like Detroit, Cincinnati, Dayton, and Flint, municipalities constructed parks, plazas, amphitheaters, and fountains in raw concrete. The designs utilized a Brutalist idiom—commonly associated with the landscape architect Lawrence Halprin—to facilitate new public access to, and enjoyment of, the water's edge. These projects occurred largely under the aegis of the cities' first Black mayors who rose to political power on the heels of white flight, controversial urban renewal strategies, and myriad crises that plagued them in the wake of mass suburbanization.

Fifty years on, the age of these landscapes is currently forcing cities to reckon with their future, to decide whether their design, condition, use levels, history, and public affection have transformed them into valuable heritage sites to be restored or obsolete relics to be cleared away. In this paper, I examine case studies that span the range of municipal assessment and response to better understand the factors and the political calculus with which they evaluate the heritage value of late Modernist landscapes. In particular, I discuss three projects. First, I examine the recent renovation of the Isamu Noguchi-designed Hart Plaza at the center of Detroit's Civic Center. Second, I discuss Cincinnati's unsympathetic renovation and neglect of its Concourse Fountain at Yeatman's Cove. Finally, I unpack Flint, Michigan's partial demolition of its very own Halprin-designed Riverbank Park mandated by its 2010 Riverfront Restoration Plan. Situating these projects within their historical and contemporary racial politics, I elaborate on both the difficulties and opportunities in the preservation of Late Modern landscapes of the post-industrial riverfront.

1. INTRODUCTION

In the 1970s, major cities in the American Rust Belt heavily invested in their river- and lakefronts, initiating a transformation from industrial uses to public recreation. In cities like Detroit, Cincinnati, Dayton, and Flint, municipalities constructed parks, plazas, amphitheaters, and fountains in raw concrete. The designs utilized a Brutalist idiom—commonly associated with the landscape architect Lawrence Halprin—to facilitate new public access to the water's edge. These projects occurred largely under the aegis of the cities' first Black mayors who rose to political power on the heels of white flight, controversial urban renewal strategies, and myriad financial crises that plagued them in the wake of mass suburbanization.

Fifty years on, the age of these landscapes is currently forcing cities to reckon with their future—to decide whether their design, condition, use, history, and public affection have transformed them into valuable heritage sites or obsolete relics. Heritage scholars and landscape preservationists have noted the difficulties inherent in preserving cultural landscapes. But what factors influence cities' decisions to treat them as heritage at all? What other values do cities recognize in addition to heritage? In this paper, I examine three riverfront urban landscapes that span the range of municipal assessment and response to better understand how cities evaluate the heritage value of their late Modernist landscapes: the Isamu Noguchi-designed Hart Plaza in Detroit, Cincinnati's Concourse Fountain designed by Louis Sauer, and Flint, Michigan's Lawrence Halprin-designed Riverbank Park. In so doing, we will see how cities negotiate the competing values of historic or heritage value, life-safety risk and accessibility, and environmental resilience.

Heritage designations, such as listing on the National Register in the United States or being named as a UNESCO World Heritage Site, confers a great deal of value. And yet, such designations also confer obligations that private owners and governments can be hesitant to assume. The landscapes treated here, completed in the mid- to late-1970s, are all within their fourth decade of life and will soon reach the 50-year mark that makes them eligible for listing on the National Register of Historic Places.

In the early 1990s, the National Park Service (NPS) issued a typology of cultural landscapes that outlined the categories of sites that could be listed. They include historic vernacular landscape, historic sites, ethnographic landscapes, and historic designed landscapes.[1] In all but the ethnographic landscape, the NPS emphasises the historicity of the site, and the four treatments that the NPS recommends in order to maintain their National Register eligibility privilege the preservation of historical elements: preservation, rehabilitation, restoration, and reconstruction.[2] While rehabilitation allows for the most contemporary flexibility, the *Guidelines* privilege historical conditions over present-day need.

Modern landscapes in particular have been ill-served in the past by both the National Register's formulations of value and the inherent difficulties of preserving such landscapes. Laurie Olin has pointed out that landscapes are "less stable" than buildings or artworks because of their size, cost and

1. Charles A. Birnbaum and Christine Capella Peters, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Washington, D.C.: U.S. Dept. of the Interior, 1996), 4-5.

2. Birnnaum and Capella, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, 3.

value.[3] As populations grow, he argued, open space attracts dreams of development while the resources needed to maintain them stretch ever-shrinking municipal budgets.

2. DETROIT'S HART PLAZA

Designed by the famed sculptor and landscape designer Isamu Noguchi, Hart Plaza is the centerpiece of Detroit's Civic Center, serving as the primary ceremonial and event space in the symbolic center of the city. Hart Plaza is a large, irregularly shaped hardscaped plaza featuring the Dodge Fountain, a metal torus held aloft by diagonal arms, and a larger sunken round amphitheater with below-grade service facilities. Drawing on his earlier landscape and playground designs, Noguchi included a monumental aluminum pylon, a stepped concrete pyramid facing a second amphitheater, and two smaller abstract concrete sculptural forms.

For years, Hart Plaza was home to the city's ethnic festivals, and it continues to host major music festivals. Although it functions well in that capacity, visitors seeking passive recreation have long complained about its austerity, including its lack of shade, bathrooms or permanent vendors. In 2003, the Detroit Riverfront Conservancy began its work to develop the RiverWalk, a recreational, pedestrian path along five-and-a-half miles along the Detroit River, linking a series of existing and new parks. As their work progressed to include the edge along Hart Plaza, increased visitor traffic drew attention to the non-working fountain, crumbling concrete walls, and broken granite paving.

In 2020, the City of Detroit Parks and Recreation Department hired Detroit-based architecture and urban planning firm Rosetti to study the assets of the city's East Riverfront [ERAS] as a part of its quinquennial update of its Strategic Plan, making recommendations for Hart Plaza improvements.4 The study pointed out that Hart Plaza was in the process of being nominated for the National Register of Historic Places as a cultural landscape on the basis of its original features designed by Isamu Noguchi. As such, its recommendations emphasized preserving those features to retain the integrity of the site.[5]

Community feedback collected as part of the study coalesced around desires to see the Dodge Fountain restored to daily operation, to improve landscape and amenities to encourage everyday use, and to attend to the plaza's backlog of deferred maintenance. Building upon this feedback, Rosetti established a framework of four objectives that guided their final design proposal. Any investment in the site should enhance public accessibility, reinvigorate the plaza with activity, preserve and maintain historical and cultural monuments on the site, and improve event management and operations.

The City of Detroit received an $826.7 million grant from the American Rescue Plan Act [ARPA] and they committed $9 million to Hart Plaza improvements. While the city was not able to address all of the Study's recommendations, in 2023 the city solicited bids for adjustments to the Grand Stair, restoration of the Dodge Fountain, repair of the amphitheater

3. Laurie Olin, "Preserve Some, Yes, but Also Improve, Add to, and Let Some Go," in ibid., 17-18.

4. Rossetti, "East Riverfront Asset Study," (Detroit, MI: City of Detroit Parks and Recreation, 2022), 5.

5. The Mannik & Smith Group, Inc., *East Riverfront Asset Study: Condition Assessment & Seawall Shoreline Investigation*, September 13, 2021. Included in note 2.

seating and stairs, as well as other upgrades to fire prevention, plumbing and security systems.[6] While the fountain repair and plaza improvements generally approached the project as a restoration, the design brief called for more significant changes to the Grand Stairs and adjacent River Terrace green space. The primary goal is to improve handicap accessibility between the RiverWalk and Plaza, and to an Underground Railroad memorial that sits on a landing halfway down the Grand Stairs, and as such is inaccessible to the mobility-impaired.

The decision to modify the Plaza's edge while maintaining the originality of its core is an attempt to balance support for the Plaza's National Register nomination with the goals of the ongoing RiverWalk project. The NPS' *Guidelines for the Treatment of Cultural Landscapes* acknowledges the need to modify landscapes for accessibility code compliance."[7] More importantly, increasing access to the monument and strengthening the connection between plaza and river develops the "social value" of the plaza. Posing an alternative to the limited notions of value proffered by the National Register, the Getty Conservation Institute outlined a broader typology of heritage values that included both socio-cultural and economic values.[8] "The social values of heritage enable and facilitate social connections," and "might include the use of a site for social gatherings (…)—activities that do not necessarily capitalize directly on the historical values of the site but, rather, on the public-space, shared-space qualities."[9] Creating barrier-free access to the RiverWalk strengthens Hart Plaza's already strong social value. However, the City's commitment to the social value of the Plaza is circumscribed by the economic and prestige value of the National Register listing, leading Parks and Recreation officials to avoid changes (such as the addition of trees or benches) that would respond to present-day community preferences but degrade the integrity of the site.

3. FLINT'S RIVERBANK PARK

The Flint Riverbank Park, located in Flint, Michigan, was designed in 1975-6 and completed in 1979 by Lawrence Halprin Associates. The project was first conceived in the late 1960s when the Army Corps of Engineers [ACE] was called in to help address the regular flooding of the Flint River. After the ACE proposed channelizing the river, the city and citizen groups demanded a riverside park they hoped could reverse the fortunes of Flint's declining downtown.[10]

Riverbank Park utilized a raw concrete Brutalist idiom to create a variety of passive recreation and event spaces. The park was constructed on both sides of the Flint River along the edge of Flint's central business district. The designers activated the southern two blocks with program: market stalls, concession stands, and an amphitheater. A shallow canal cut through the site and could be traversed by a series of elevated walkways. At the eastern end of the northern block, an Archimedes screw drew water up from the river to flow down a long flume. This water fed the Water Wall block, which featured an artificial waterfall set behind a path of concrete block steppingstones that

6. City of Detroit Office of Contracting and Procurement, ARPA Request for Proposals No. 183600 and No. 183497 (2022).

7. *The Secretary of the Interior's Standards*. 12.

8. Randall Mason, "Assessing Values in Conservation Planning: Methodological Issues and Choices," in *Assessing the Values of Cultural Heritage: Research Report*, ed. Marta De la Torre (Los Angeles: Getty Conservation Institute, 2002), 10.

9. Mason, "Assessing Values in Conservation Planning: Methodological Issues and Choices," 12.

10. For an account of Flint's decline in the 1970s and 1980s, see Chapter 10, Andrew R. Highsmith, *The Fall of Flint* (University of Chicago Press, 2015).

allowed visitors to traverse the riverfront. The spectacular north-westernmost Grand Fountain block featured a massive fountain designed as a series of rooms carved into the riverbank.

As the Park underwent construction, the city of Flint experienced urban crises typical of the era. The city experienced decline when retail business was siphoned off by the Genesee Valley Mall, and with the impending closure of its major automotive factories. Upon its opening, Riverbank Park was programmed with summer festivals and musical performances. In more recent years, it has continued to play host to the annual Flint Jazz Festival and Flint Pride celebrations. Despite this, the Grand Fountain has run dry since 1992, and the parks have accrued years of deferred maintenance.

While the city has already made some changes to the park, larger changes are planned for both the park and its interface with the Flint River. A 2009 study of Riverbank Park proposed a comprehensive set of improvements to the park in to make it more usable, accessible, and safe.[11] In 2010, the Flint Riverfront Restoration Plan added environmental concerns to the existing urbanistic goals of recreation, urban connectivity, and economic development.[12] The Plan promoted the "naturalization" of the river, dissolving its hard edges into something more permeable, naturalistic, and hospitable to aquatic and riverine life. The centerpiece of the plan involves the replacement of two existing dams them with a series of navigable rock rapids drop structures, which will intersect with the edges of Riverbank Park, replacing its seawall with large boulders and plantings.

The changes to Riverbank Park that flow from those improvements suggest that the integrity of the park as an historic designed landscape is less important culturally than its larger environmental context. In *The Value of Life* (1996), Stephen Kellert established a typology of relationships that humans maintain with the natural world.[13] Riverbank Park, and the channelization of the Flint River that preceded it, reflect utilitarian and dominionistic values: the river was approached as a problem to be solved, a resource to be exploited and controlled. Halprin's design extends this impulse by imposing a totalizing hardscape along the river's edge. The forthcoming changes to the river, by contrast, suggest naturalistic, aesthetic, and humanistic values. The design encourages haptic experience, it returns the beauty of nature to the site, and it seeks to reestablish connection to the community.

11. Rowe Professional Services Company and Project for Public Spaces, "Illuminating a Path to the River: Conceptual Design Guidelines for Connecting Riverbank Park & Downtown," (Flint, MI: Flint Downtown Development Authority, 2009).

12. Wade Trim, "Flint Riverfront Restoration Plan," (Flint: City of Flint, 2010), 2.

13. Kellert's schema is summarized in Theresa Satterfield, "Numbness and Sensitivity in the Elicitation of Environmental Values," in *Assessing the Values of Cultural Heritage: Research Report*, ed. Marta De la Torre (Los Angeles: Getty Conservation Institute, 2002), 82.

4. CINCINNATI'S CONCOURSE FOUNTAIN

Cincinnati built the Concourse Fountain as a gateway to Yeatman's Cove, the first park of many built along the Ohio river that, together with the Riverfront Stadium (1970) and the Riverfront Coliseum (1975), transformed a flood-prone industrial landscape into a recreation and entertainment destination. It was designed by Philadelphia architect Louis Sauer to be a theatrical space, consisting of a large, 13" deep rectangular pool flanked by two wedge-shaped stepped forms—one dry, and the other slicked by a cascade of water. Visitors could take in the whole basin-like space and watch the throngs of children frolicking in the water by standing atop either set of steps, or on







Figure 1. Isamu Noguchi, Hart Plaza, Detroit, MI, USA (1976), Photographer: Tony Spina. ©Walter P. Reuther Library, Archives of Labor and Urban Affairs, Wayne State University.

Figure 2. Grand Fountain in Lawrence Halprin and Associates, Riverbank Park, Flint, MI, USA (1979). ©The Sloan Museum Archives Photograph Collection, Parks-Riverbank, 2000.1.27

Figure 3. Louis Sauer, Concourse Fountain, Yeatman's Cove, Cincinnati, OH, USA (1976), ©Robert Lautman.

the terrace separating the fountain from a residential tower. The fountain's most spectacular feature were the water jets mounted to a 30' tall concrete pier that shot streams of water down into the fountain below.

The new Simpkinson Bridge over the freeway transformed the Concourse Fountain into the primary gateway by which Cincinnatians accessed Yeatman's Cove. The park quickly became a popular recreation area, in the summer months it hosted events that could draw upwards of 300,000 people.[14] The fountain served as a cool respite from the shadeless park. It was so popular with residents during its first decade that in 1985 the *Cincinnati Enquirer* declared the fountain the most exciting place in the city.[15]

After an incident in which a man fell between the pool wall and a concrete pylon, the fountain underwent an unsympathetic renovation in 2007 that was motivated by a new consciousness of risk.[16] Many aspects of the fountain did not meet life safety codes, and new city regulations reclassified the fountain as a pool, requiring lifeguards. To avoid such costs, the Parks Department transformed ten existing city pools, including the Concourse Fountain, into "spraygrounds"—depthless, danger-free, environments of water jets and sprinklers.[17]

Moreover, the wet steps' fiberglass surface had deteriorated into sharp fissures, and new life-safety codes required a railing along any vertical drop

14. John Eckberg, "Summertime Takes a Bow at Riverside," *The Cincinnati Enquirer*, September 6, 1981.

15. Steven Rosen, "The Tristate's Most Boring and Exciting Spots," *The Cincinnati Enquirer*, July 14, 1985.

16. "Man Injured in Mishap at Councourse Fountain," *The Cincinnati Enquirer* June 28, 1990.

17. Dan Jones, Cincinnati Recreation Commission, Planning & Development Engineering/Tech Services Supervisor, telephone conversation with the author, June 5, 2019.

greater than two feet. The city installed copious black commercial fencing along the wet steps and the front edge of the pool, degrading the vista once framed only by concrete and water. The fountain's use has dwindled as the city opened new park spaces closer to the riverfront stadia and new commercial developments. In particular, the 45-acre Smale Park designed by Sasaki features no less than three spraygrounds, a playground, gardens, and a carousel.

The Concourse Fountain was not the only site of its kind to be modified in response to safety concerns. The water level in the Philip Johnson-designed Forth Worth Water Gardens (1974) was lowered a few years after four people drowned in one of its pools. Cleveland's Chester Commons (1972) was designed with depressions and vertical elements that blocked the view in from the street, making policing difficult. After a shooting took place there in 2009, the park was demolished and its topography flattened. In all three examples, the respective municipalities adjusted or removed the landscape to mitigate the risk of injury or death to visitors, and the legal and financial liability of such possibilities. In his essay "Risk Design," Johnathan Massey outlined the ways in which "risk management" shaped the design of 30 St Mary Axe (2004) in London. There, Foster and Partners mitigated the risk (or its appearance) of climate change, terrorism, and financial globalization through a series of design decisions.[18] We can similarly understand the changes to the Concourse Fountain as a form of risk management. The city came to take on a greater consciousness of risk as its building codes and municipal regulations reflected the city's duty to prevent harm in public spaces. Heritage sites or cultural landscapes often produce no net income for its owners, but in this case the aesthetic and social value of the site declined in the face of the risk of liability, sliding its economic value into the negative.

5. CONCLUSION

As late modern urban landscapes approach their fiftieth birthday and become eligible for the National Register, they also begin to show signs of aging, functional obsolescence, and a decline in use due to changing populations or cultural preferences. Cities are confronted with a dilemma in which they may be able to restore the site and maintain integrity, or alter it in a way that aligns with contemporary needs and goals. In this paper, I surveyed three such cases to elucidate how factors like accessibility, ecological concerns, and the desire to mitigate risk and comply can amplify or detract from the city's heritage valuation of their cultural landscapes. ■

18. Jonathan Massey, "Risk Design," *Grey Room*, no. 54 (2014), 9.

BIOGRAPHY

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THE SOCIAL CONSTRUCTION OF POST-INDUSTRIAL HERITAGE VALUES IN POBLENOU: NEW URBAN LANDSCAPE VISIONS

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ABSTRACT.

Since deindustrialization began in the second half of the 20th century in Western countries, communities and labour organizations have been actively using post-industrial heritage to reflect on the past, reconsider the present, and construct alternative scenarios for the future. Over the last twenty years, alternative social approaches to this form of heritage have questioned its assessments by experts and public institutions and challenged post-industrial areas' urban transformation planning—usually defined by 'institutionalised' private agencies. These alternative visions have facilitated investigations into heritage-valuing processes and their spatial impact on the built environment at a more empirical level. Drawing on dialogical approaches to heritage and by focusing on how post-industrial heritage values are socially constructed nowadays, this paper reflects on the urban implications and principles within design strategies dealing with this built legacy.

This investigation explores two intertwined cases, Taula Eix Pere IV and Can Picò in Poblenou, the most industrialized area of Spain in the 19th and 20th centuries. This area in the northeast of Barcelona constitutes a paradigmatic example of social claims for the preservation of its industrial past and innovative place-based community regeneration strategies since the 1970s when its transformation towards the tertiary sector economic model began. The two spatial practices analysed share a common principle: the use value of industrial spaces for solving social needs and halting the neoliberal path that the area's urban development took since the 1990s.

The conclusions will raise issues related to the urban impact resulting from the social alliances around post-industrial heritage and the associated values, which have started to envision alternative futures for Poblenou. Finally, the paper argues for the need to understand post-industrial heritage preservation as the result of mutable interventions at a small scale that consider a medium- and large-scale development vision in their conception rather than searching for timeless solution.

1. INTRODUCTION

Over the past two decades, the concept of 'value' has played a central role in assessing heritage and guiding conservation practices in Western countries. In the context of heritage preservation, 'value' refers to the positive or negative characteristics, meanings, and qualities that individuals or groups assign to objects or sites.[1] This value-based approach is crucial in decision-making regarding cultural heritage resources, as it involves identifying, assessing, and prioritizing the diverse types of values associated with these assets. It goes beyond merely considering the physical attributes and recognises that heritage objects or sites hold various forms of significance, such as historical, cultural, social, aesthetic, and economic values. Poulios,[2] Walter[3] and Fouseki et al.[4] advocate moving away from the traditional value-based framework that simplifies heritage significance into specific categories. They propose methodologies more adapted to the daily lives of communities, reflecting their identities, beliefs, and social practices. Fredheim and Kalhaf[5] argue that identifying something as heritage inherently involves appreciating existing values, which leads to recognizing that 'thing' as worthy of preservation. Regardless of its origin, nature, or political context, the concept of value is intrinsically linked to the valorization of heritage.

The relationship between values and heritage is intricate due to their political significance, as they influence practices that have an impact on the built environment and, consequently, social life. It is widely accepted that all values are intangible and that heritage, rather than a product, is a process of social construction, the role of materiality in this process remains ambiguous, opening a gap between heritage theory and practice.

Harrison's dialogical approach to heritage[6] is a significant contribution to the ongoing debates on redefining heritage practices to better address the changing needs of heritage and society. Drawing from Actor-Network and Assemblage theories, as well as various social scientific methodologies that recognise the social and worldly elements as part of continually evolving networks of relationships, Harrison advocates for a 'dialogical' perspective on heritage. According to this approach, heritage is understood to arise from the relationship between a range of human and non-human actors and their environments.[7] This perspective emphasizes the dynamic and interconnected nature of heritage, highlighting the importance of various interactions in its formation and evolution. Furthermore, Harrison highlights that neglecting any participants, including the material dimension, diminishes the perceived value of heritage. Hence, valuing heritage goes beyond attributing worth to objects; rather, values emerge intrinsically from these interactions.

Lefebvre argues that analysing the landscapes of industrial decay brings attention to the idea that spatial dimensions are socially constructed, and the social sphere is inherently spatial.[8] Industrial landscapes demonstrate a dialogue between the physical elements—the industrial landscape itself—and the social and human interactions with that landscape, including its uses and the emotional responses it evokes. Moreover, since the beginning of deindustrialization, communities and labor organisations have increasingly

1. Randall F. Mason, "Assessing Values in Conserving Planning: Methodological Issues and Choices" in: *Assessing the Values of Cultural Heritage*, M. de la Torre, ed, (Los Angeles, The Getty Conservation Institute, 2002), 5.

2. Ioannis Poulios, "Moving Beyond a Values-Based Approach to Heritage Conservation." *Conservation and Management of Archaeological Sites*, no. 2 (January,2010): 170-85.

3. Nigel Walter, "From values to narrative: a new foundation for the conservation of historic buildings", *International Journal of Heritage Studies*, 20(6), (2014): 634-650.

4. K. Fouseki, J. Taylor, M. Diaz-Andreu, S. van der Linde, and A. Pereira-Roders, "Locating heritage value" in *Locating Value*, S. Saville & G. Hoskins (Eds.), (2019. Routledge. doi:10.4324/9781315723686-3) : 37-50.

5. L. H. Fredheim, and M. Khalaf, "The significance of values: heritage value typologies reexamined". *International Journal of Heritage Studies*, 22(6), (2016):466-481. Available at: https://doi.org/10.1080/13527258.2016.1171247

6. Rodney Harrison, *Heritage:critical approaches*. Milton Park, Abingdon ; New York, Routledge,2013.

7. Rodney Harrison, *Heritage:critical approaches*. Milton Park, Abingdon ; New York, Routledge,(2013):204.

8. Henri Lefebvre, *The Production of Space*, translated by Donald Nicolson-Smith, Oxford: Blackwell,(1991): 148.

used post-industrial heritage to reflect on the past, reassess the present, and envision alternative futures. These landscapes embody the memories, stories, and socio-economic fabric of the communities that once occupied them, offering insights into the aspirations and struggles of those times. However, these sites are not merely static historical markers; they are dynamic entities characterised by cycles of use and obsolescence. They reflect ongoing changes and adapt to new realities, as seen in Poblenou (Barcelona) during the global crisis of 2006 and the subsequent burst of the real estate bubble in Spain in 2008. This context opened new avenues for alternative understandings of heritage and for research into the origins and evolution of its values, as discussed in the subsequent sections of this paper.

2. POBLENOU

In the second half of the19th century, the city of Barcelona initiated a transformative period marked by the implementation of the iconic Ildefons Cerdà's Eixample urban planning project. This process involved breaking with the historical dominance of military-led urban planning by a profound trust in the growing industrial model. The new Barcelona's formal evolution aimed at establishing itself as a prominent center in both the Spanish and European contexts. Since then, Barcelona's historical trajectory has been closely intertwined with fluctuations in industrial activity, experiencing both periods of growth and decline. This includes the process of deindustrialization that commenced in the late 1970s with the advent of the nation's democratic era. These transformations were particularly noticeable in the new expansion areas of the city that emerged when the industries initially located in the city centre started requiring more space. One of these new areas was Poblenou, the most industrialized district in Spain during the 19th and 20th centuries, situated in the north of Barcelona.

The original rural character of Poblenou, which can still be observed in certain aspects of its urban fabric, began to undergo transformation during the First Industrial Revolution (1846-1861). Initially, the area was home to steam-powered textile and chemical industries, which were later replaced by the metal industry with the introduction of electric power.[9] By the mid-1970s, the service sector in Barcelona experienced a significant growth and a substantial portion of industrial production shifted to the outskirts of the city, leading to many factories in Poblenou became vacant or repurposed as parking lots and storage warehouses.

Poblenou's economic decline experienced a slight reversal in the 1990s when 32% of the investment for the Olympic Games was directed to the area. However, this process and the subsequent urban transformation involved significant destruction of the post-industrial buildings and infrastructure to make way for new constructions, triggering a process of land revaluation that attracted private real estate investment. But this extensive demolition also marked a turning point, sparking local demands and spatial practices against aggressive urban politics, including those derived from the most recent urban planning, the '22@', which has been in

9. Taffunel Nadal, *Sant Martí de Provençals Pulmo Industrial de Barcelona(1847-1992)*, Barcelona: Columna, (1992), 24.

force since 2000, and resulted in a social revaluation of the significance of this form of heritage in the area.

Today, the urban reality of Poblenou and its post-industrial heritage is complex. In addition to successful conservation practices, there are also generic designs, neglected or abandoned spaces, and scattered industrial remnants all of which obscure the contentious politics surrounding housing and tertiary sector services. This poses a significant threat to the preservation of the area's industrial urban legacy. In light of this, and within the global post-crisis economy of 2006, local associations and social platforms have advocated for the protection of their industrial heritage, opposing the urban densification proposed by authorities and private developers, particularly prior to the burst of the real estate bubble in 2008.

During a personal interview conducted by the author of this paper, Salva Claròs, the former president of the neighborhood association of Poblenou stated, *"The industrial heritage and social capital were the primary resources for reshaping our reality."* Consequently, local groups began their efforts to shape their reality by focusing on Eix Pere IV, the main industrial axis of Barcelona during the industrial era, which was undergoing a regeneration process marked by generic proposals under the 22@ urban planning initiative.

3. THE CONSTRUCTION OF HERITAGE VALUES IN THE EIX PERE IV AND ITS URBAN IMPACT

Bandarin proposes that contemporary heritage conservation is founded on two fundamental principles. Firstly, to ensure that heritage is acknowledged and appreciated, it must be at the core of community life. Secondly, active community participation is crucial for effective preservation.[10] Expanding on Harrison's dialogical approach to heritage construction, this section explores two distinct yet interconnected socio-spatial practices that highlight the collaborative efforts of the community to reassess the significance of post-industrial heritage in Poblenou: Taula Eix Pere IV and Can Picò. While the former focuses on the revitalization of Eix Pere IV, the latter, an old factory dating back to the early 20th century located along this axis, raises questions about intangible elements associated with post-industrial structures, such as the workforce, to shape the ongoing urban transformation of Poblenou.

3.1 TAULA EIX PERE IV

Recognising the absence of a comprehensive strategy for the conservation of Eix Pere IV within the 22@ Plan, the neighborhood Association of Poblenou created the Taula Eix Pere IV social platform in May 2014. This collaborative effort brought together local associations, cooperatives, and scholars with expertise in heritage conservation and urban regenerationl. The Taula, which means 'roundtable' in Catalan, focused on devising strategies for the recovery of post-industrial heritage that would address social, cultural, and economic dimensions, aiming to safeguard and revitalise the axis.

The interventions conceived by the Taula were organized around three core principles. The first principle emphasized the social potential of heritage,

10. Francesco Bandarin, and Ana Pereira Roders. *Reshaping Urban Conservation : The Historic Urban Landscape Approach in Action*. 1st ed. Singapore: Springer Singapore : Imprint: Springer, 2019. https://doi.org/10.1007/978-981-10-8887-2

particularly along the Eix Pere IV, exploring its connection to the area's historical evolution before its segmentation into two different areas in 2005 due to new urban policies, and its significance to the diverse contemporary population of Poblenou. The second principle focused on addressing local needs, while the third advocated for adopting a circular economy model.

United by a commitment to the social aspects of urban and architectural design, these principles foreground values such as cooperation, innovation, communication, solidarity, and care. These values underpin the Taula's vision for fostering a novel approach to urban development, aiming to construct a cityscape that is both socially vibrant and sustainably designed. Since the creation of the Taula, different activities have been undertaken within former factories and related infrastructures.

To date, the Taula, oversees different spaces located in the Eix provided by the city council. The first of them, Passatge Trullàs, is in the eastern part of the axis. Originally a pre-industrial rural path, it has been transformed into a public space for temporary activities related to tactical urbanism and citizen participation. In the same node, the Taula, in collaboration with the artists association P9Artiu i Fundiciò del Poblenou, manages a space in the Canela i Puig del lívol factory. This space, known locally as 'Can Tiana', has been a site for textile machinery production since the late 19th century. This space was identified for its connection to the artistic heritage of the neighbourhood and its potential for fostering collaboration between local residents and artists[11].

The second node is Can Ricart, a 19th-century textile industry that serves as the physical centerpiece of the axis. Furthermore, it symbolizes the social movement advocating for the preservation of Poblenou's industrial legacy. Its planned demolition by the 22@ urban planning sparked significant social claims and efforts to preserve the industrial heritage of the area. Since 2015, the Taula, has managed a space in Can Ricart provided by the city council, as well as a second renovated space dedicated to the youth of the area, managed by La Xemeneia, a local youth association. These two spaces, have hosted diverse activities aimed at raising awareness about the industrial heritage of the area, particularly focusing on Pere IV.

Lastly, the Taula has been managing a third node since 2017, which is located in the western part of the axis. This node serves as an intergenerational hub for neighbourhood activities, including workshops and cultural events. Its aim is to support new projects related to the social and solidarity economy. The current space, known as Casal de Ca l'lsidret, is built on the site of a 19th-century industrial complex called Ca l'Isidret. Although the original complex was demolished in the 1960s and replaced with a new building, the name was kept to honour the collective memory of the place's history. This preservation of history is also evident in Can Picó, as well as in the other places managed by the Taula, which are redefining the landscape of Poblenou.

3.2 CAN PICÒ

Can Picò is an industrial building situated at the western end of the Eix Pere IV. Constructed in 1907 in the neoclassical style, the building has served

11. Maribel Rossello, Taula "Eix Pere IV: revitalizar desde la cohesión social y la economía solidaria el patrimonio industrial de Poblenou de Barcelona". in *Jornadas Internacionales de Patrimonio Industrial*. "Resiliencia, innovación y sostenibilidad en el patrimonio industrial" , 125-146, CICEES, 201.

various industrial purposes over the years until it was ultimately abandoned in the 1990s. Although the Barcelona council acquired ownership of Can Picó in 2007, its deterioration continued until 2015 when it was handed over to the cooperative Biciclot, a founding member of the Taula Eix Pere IV.

The conservation project was funded by the city council, which provided 40% of the total cost. Biciclot contributed an additional 37%, with the remaining 23% covered by a cooperative financial service[12]. The design strategies were guided by the building's original spatial flexibility and its historical requirements for vertical physical and visual connections due to industrial activities. The project also considered the building's public significance by integrating it into the Eix Pere IV through the transformation of the warehouse entrance into an open space known as 'Bikes Square', which has now become a bustling meeting point within the Eix.

However, the regeneration strategy of Can Picò not only involved repurposing an obsolete industrial infrastructure to accommodate new activities but also encompassed the general reuse of materials to advance circular economy principles and promote cultural sustainability. While this program had a forward-looking vision for the development of the building and the area, it also recalled one of Poblenou's industrial periods, particularly in the 1980s when numerous workshops and warehouses, including Can Picò, were primarily engaged in scrap metal recycling

In 2016, Biciclot experienced growth and launched the 'BiciHub' project, a think-tank consisting of 23 cooperatives and social entities, including the Poblenou neighbourhood association and the Taula Eix Pere IV. The main objective of this initiative was to explore new projects and proposals that would contribute to sustainable mobility, foster the cooperative movement, and address the social needs of Poblenou.

Within this project, Can Picò became a fundamental asset, providing significant value to the initiative. Firstly, the building represented an important period in the history of Poblenou and Barcelona, and therefore, its preservation would enhance the visibility of BiciHub. Secondly, BiciHub's core values of inclusivity, equality, the common good, knowledge, co-responsibility, and self-management aligned with the cooperative principles linked to the industrial legacy of Poblenou and sites such as Can Picò, thus promoting social cohesion and the urban identity of the neighbourhood.

The impact of BiciHub on the urban landscape of Poblenou is evident. One notable accomplishment is the establishment of an alternative transport network known as 'Bici Sense Edat,' which is specifically designed for local residents with special needs and older generations. This network, operated by 48 volunteers on tricycles, promotes intergenerational interactions and contributes to the revitalization and appreciation of past spatial experiences. These experiences include meeting points and local shopping areas, which have been mapped out by elderly residents, many of whom were former workers in Poblenou industries.

In 2018, the Taula Eix Pere IV released the inaugural edition of "The Social Map," offering a comprehensive overview of the cooperatives and

12. According to the semi-structured interview with Xavi Pratt conducted by the author in 2018.

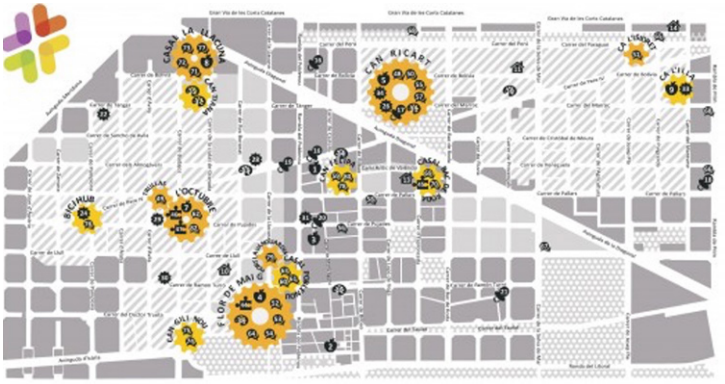






Fig.1 Poblenou's urban landscape reality, 2016, ©Melina Guirnaldos,2016

Fig.2 Bikes Square, Poblenou, Barcelona, 2018 ©Melina Guirnaldos,2016

Fig. 3: The Social Map of Poblenou, 2018, Available at: https://eixpereiv.org/mapa-social-del-poblenou/, ©Taula Eix Pere IV.

associations in Poblenou. The publication unveiled that out of the 82 groups, 46 were situated in repurposed industrial buildings and other spaces closely linked to the neighborhood's industrial legacy. Within a year, this figure rose to 66, underscoring the substantial territorial influence of the emerging values associated with post-industrial heritage via these alternative social and economic networks.

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4. CONCLUSIONS

This paper has explored how the global crisis of 2006 presented new opportunities for neighborhood associations and local groups in Poblenou to re-assess the value of their post-industrial built legacy. These opportunities enabled them to advocate for its preservation against aggressive urban development policies, such as those initiated by the 22@ Plan, and to assert their rights to shape and manage these former industrial sites. The analysis has delved into the operations of Taula Eix Pere IV and Can Picò, which function at different scales within the area for the regeneration and reuse of post-industrial heritage. It has also revealed how the new values associated with Eix Pere IV and Can Picò emerge from interactions between a range of human and non-human actors and their environments, encompassing diverse stakeholders and the political, economic, and social contexts, as well as the material manifestations aligned with Harrison's dialogical approach to heritage construction. Moreover, the study illustrates how this model, initially based on small-scale interventions, has evolved into broader urban systems, extending to other post-industrial spaces in the area through the formation of new alliances with additional networks. This expansion illustrates a vision for a more inclusive urban development in Poblenou, which not only preserves but also continues to build upon its industrial legacy. ■

BIOGRAPHY

Dr. Melina Guirnaldos Díaz is a qualified architect and MSc in Architectural Restoration and Urban Recovery. Since 2021 she is Lecturer in Architecture Design and Year 1 chair at the Welsh School of Architecture. She is also founding partner of W+G Architects, where she has led projects such as the Landscape Intervention and Restoration of the Palace of the Emperor Susenyos and the Jesuit cathedral in Ethiopia, and the restoration of the Oratory of the Partal mosque in the Alhambra. The latter was awarded the prestigious Grand Prix Europa Nostra 2019 and Europa Nostra 2019 Award.

RADICAL ROOF GARDENS: DREAM SPACES OF SOCIAL COHESION AND PRIVATE RETREAT

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ABSTRACT

This session examines modern roof gardens as sites of social cohesion, private retreat, experimentation, and aspiration. As ostensibly "natural" spaces that are lifted into the sky by human endeavor, they are fertile grounds for cultural, social, technological, or other meaning. Instead of proposing a single definition of what a modern roof garden is, we explore a range of possibilities embodied within these elevated landscapes. While we take the inclusion of roof gardens as one of Le Corbusier's "five points" as a starting point for our explorations, we do not confine our interests of the twentieth-century European avant-garde; neither do we limit our inquiry to any particular region, though we do aim to build on the work of scholars such as Luis E. Carranza and Fernando Luiz Lara, in *Modern Architecture in Latin America*, and Valerie Fraser, in "Cannibalizing Le Corbusier," who have discussed roof gardens in Latin American contexts. By taking a broader approach that carries us across several continents, socioeconomic and geopolitical contexts, and the better part of the nineteenth and twentieth centuries, we aim to address the following questions: what promises did rooftop terraces make as spaces of radical potential? Which have they kept or broken? How did roof gardens carry forward older dreams and aspirations—including, potentially, indigenous traditions—into the modernist period? What new meanings and objectives did they acquire? What might have been lost? How did they strengthen and/or problematize modernism's historically complex relationships with energy and ecology? How did the radical potential of roof gardens help to resist, reinforce, or propose alternatives to pre-existing social, economic, and racial divisions?

1. INTRODUCTION

Of Le Corbusier's "Five Points of a New Architecture," perhaps the most suggestive of utopian possibility was the roof garden terrace. Initially, he presented their possibilities in largely practical terms. A layer of plants and soil over a building's flat roof would help insulate it from climatic fluctuations. Moreover, these layers would limit runoff during a downpour. Because of the "highly luxurious vegetation" this substrate would support, however, "the roof garden will become the favourite part of the house."[1] This pivot from an entirely pragmatic rationale for roof gardens to their potential to revolutionize domestic life did not end with individual buildings; the implications would be urban, or even regional in scale: "In general, the roof garden means that a city can win back for itself the whole built-up area." Indeed, Le Corbusier argued that, together with the ground plane that was left open by pilotis, roof gardens would actually increase the amount of inhabitable earth available before building to 111 percent, although this required his readers to ignore the vast highways and airstrips that he laced through his city—an omission Jan Woudstra described as a "deception."[2] In any case, Le Corbusier found ample opportunities to put this theoretical "point" into practice. The solarium atop the 1928–31 Villa Savoye outside Paris is perhaps the most famous, but the way that the Casa Curutchet in La Plata, Argentina, weaves outdoor spaces around an existing tree growing through the house while also offering expansive vistas of a nearby park is at least as committed to the ethos of the elevated garden. That the largest communal space of the Unité d'Habitation in Marseilles is on its roof speaks to the social and urban potential Le Corbusier attached to roof gardens. Across these varied scales and contexts, roof gardens asserted modernism's technological exuberance and commitment to new perspectives and liberating reforms, while also, as Woudstra argued, testifying to the impulse to exert architectural control over entire landscapes and even distant vistas.

2. NOTHING NEW UNDER THE SUN

It is somewhat ironic then, that, roof gardens were also the least novel of Le Corbusier's "five points." They are expressive of a perennial longing to reconcile the city with the garden that is evident in the utopian visions of Plato and the biblical prophecies of the New Jerusalem, among other places. As an architectural typology, roof gardens have a deep antiquity stretching back to the Hanging Gardens of Babylon, enduringly famous spaces of imperial power and sensuality that were well-known in Le Corbusier's day. These had been imagined and depicted in drawings, paintings, and engravings with increasing frequency since the Renaissance, and in the 1800s, as travel accounts of the Middle East were published in Europe, thoughtful speculation on the original architectural composition of the Hanging Gardens gave them a new tangibility **(Fig. 1)**.[3]

A very different example is offered by the Gardens of Adonis. At the height of summer, the women of ancient Athens would set small baskets and pots of quick-growing herbs and grains on the flat rooftops of their

1. Le Corbusier and Pierre Jeanneret, "Five Points of a New Architecture" (1927), in Tim and Charlotte Benton, eds, *Architecture and Design: 1890–1930, An International Anthology of Original Articles* (New York: Whitney Library of Design, 1975), 155.

2. Jan Woudstra, "The Corbusian Landscape: Arcadia or No Man's Land?," *Garden History*, vol. 28, no. 1 (Summer 2000), 142.

3. Ferdinand Hoefer, *Chaldée, Assyrie, Médie, Babylonie, Mésopotamie, Phenicie, Palmyrène* (Paris: Firmin Didot Frères, 1852), 201–33, 453.

houses. In a "botanical re-enactment" of the untimely death of the youthful Adonis, the plants would sprout and immediately wither and die under the blistering Mediterranean sun. These short-lived roof gardens would then become sites of ritualized grieving and excessive drinking before the dead plants, along with an effigy of the god, were carried through the streets and cast into the sea. If the Hanging Gardens of Babylon suggest an approach to roof gardens as monumental, permanent, and legitimized through their associations with power, the Gardens of Adonis were small, ephemeral, and nonconformist. They served as a "more playful or even subversive" analog to the Thesmophoria, the official agricultural festival held in autumn, inspiring contemporary scholars to rethink the origins of farming and histories of sexuality and gender, among other things.[4] The Gardens of Adonis and their associated rituals were also described and depicted in the 1800s, as in the 1888 painting by John Reinhard Weguelin, cueing Victorians to imagine a *polis* transformed by collective elevated gardening, however briefly.

Roof gardens entered early modern architecture in several forms, both real and utopian. Pope Pius II built a small roof garden over his stables in Pienza in the 1400s. When Filarete imagined a roof garden on a palace near his imaginary city of Sforzinda in the first modern treatise on architecture **(Fig. 2)**, he described it as a "garden built in a new manner....high and all on columns."[5] By the late 1700s, roof gardens were firmly established as a utopian staple; Louis-Sébastien Mercier's influential science-fiction novel of 1771, *L'An 2440*, described them as covering a reformed modern Paris.[6] This joyful prophecy seemed more imminent when, little more than a decade later, the Parisian Jean d'Etienne announced that he had developed a new waterproof cement and used it to build a garden atop his house on the fringe of Paris.[7] His architect was Jacques-Guillaume Legrand, who would help design the glass dome over the Parisian grain market, and thus established d'Etienne's new roof garden as one node among others in the emerging modern city.

Modernist calls for a coherent, socially conscious, liberating architecture were partially prefigured in 1871 by the British writer Charles Reade when he launched a tirade against the "million blunders" of Victorian architecture.[8] Among his many targets was the "conical roof" of traditional houses, which he insisted "robs the family of a whole floor, and gives it to cats and sparrows," stealing from the urban worker "his country view." A "rational roof," Reade insisted, would be flat and serve as a family gathering space, and be especially useful as a "playground in a purer air for children that cannot get to the parks." His call was echoed in newspapers and books around the world, including by the women leading the urban Reform Movement in the United States, such as Lucia True Ames Mead, who called for rooftop playgrounds on model tenements in New York in her 1889 book *Memoirs of a Millionaire*.[9] Her work presaged the Unité de Habitation by decades. Hundreds of roof gardens were actually built in these years, atop libraries, apartment buildings, hotels, theaters, hospitals, sanitariums, prisons, factories, department stores, private homes, social clubs, and other

4. Marcel Detienne, *The Gardens of Adonis: Spices in Greek Mythology*, 2nd edition, trans. by Janet Lloyd (Princeton: Princeton University Press, 1994), and David Graeber and David Wengrow, *The Dawn of Everything: A New History of Humanity* (New York: Farrar, Straus and Giroux, 2021), 210-11.

5. Filarete (Antonio di Piero Averlino), *Treatise on Architecture*, trans. John R. Spencer (New Haven: Yale University Press, 1965), 209.

6. Louis-Sebastien Mercier, *Memoirs of the Year Two Thousand Five Hundred*, trans. W. Hooper (Philadelphia: Thomas Dobson, 1795), 34.

7. M. d'Etienne, *Mémoire sur la Découverte d'un Ciment Impénétrable a l'Eau* (Paris: Ph.-D. Pierres, 1782).

8. Charles Reade, "A Million Blunders," *The Building News*, June 9, 1871, 449, and June 16, 1871, 469.

9. Lucia True Ames [Mead], *Memoirs of a Millionaire* (Boston, MA: Houghton, Mifflin and Company, 1889), 159.

structures, especially in great urban centers such as New York, Tokyo, Mexico City, and Berlin.

Le Corbusier's famous Dom-ino scheme of 1914-15, which treats the roof terrace as an inevitable consequence of rational construction, has been described by scholars as both the origin of his "five points" and as the culmination of his study of classical Mediterranean and modern European architectures.[10] With the ancient and modern roof garden precedents cited above in mind, it might be fair to describe his elevated terraces as the Hanging Gardens of Babylon planted upon a model working-class flat. None of this was new, but it was perhaps still radical, particularly when amplified to the scale he imagined.

At no point was Le Corbusier the only visionary tending these elevated gardens. Already in 1922, artist Hugh Ferriss imagined "hanging gardens" as integral to life of the near future in Manhattan's "upper strata."[11] Throughout the 1920s, Harvey Wiley Corbett, who would help design Rockefeller Center in New York, proposed remaking the city with multilevel streets, often including upper terrace gardens.[12] Le Corbusier was no doubt influenced by these visions. Another influence was an early 1920s project for a ring of apartment towers connected by elevated gardens on the outskirts of Paris by Auguste Perret. This was published in 1922 with a visualization by architect Jacques Lambert.[13] Because Perret's and Le Corbusier's urban visions were informed by an earlier era of urban development in the U.S., the circulation of these ideas might be best understood as a kind of critical feedback loop, in which imported ideas were tested, transformed, and repurposed to suit local needs and desires. Perhaps the most intriguing example of this is Roberto Burle Marx's garden atop the *Ministerio da Educação e da Saúde* (Ministry of Education and Health) in Rio de Janeiro, built from 1936-42. His sinuous forms and native plantings drew selectively from modern European influences even as they also incorporated local perspectives and practices, a form of "cannibalizing" the European avant garde, as Valerie Fraser as put it in her study.[14] Whatever the local cultural milieux within which such gardens blossomed, however, their international reputation is attested to by the English-language name—"Roof Garden"—of a magnificent cabaret and restaurant that crowned the Cerro San Cristóbal in Santiago de Chile in the 1930s, designed by leading Chilean architect Luciano Kulczewski García.

One ambitious example was the network of gardens planned for the upper levels of Rockefeller Center in Midtown Manhattan in the 1930s. The most spectacular version of these plans, published in *Architectural Forum*, featured rooftops envisioned as a sprawling botanical garden suspended 140 feet above street level **(Fig. 3)**. These rooftops would have housed a sculpture gallery, amphitheater, restaurant, marionette theater, and conservatory, woven together by fountains, pools, flower beds, hedgerows, and small trees, and connected by pedestrian bridges spanning the streets. This would have been at once a "semi-philanthropic" public amenity, an additional source of revenue, and an opportunity to beautify the views from upper-level offices. In the end, regulatory restrictions and

10. Eleanor Gregh, "The Dom-ino Idea," *Oppositions*, vol. 15/16 (Winter/Spring 1979), 61–87.

11. Hugh Ferriss, "The New Architecture," *New York Times Book Review and Magazine*, March 19, 1922, 9.

12. Harvey Wiley Corbett, "Do We Want Three-Level Streets?," in *Housing Problems in America: Proceedings of the Tenth National Conference on Housing* (New York: National Housing Association, 1929), 239-49.

13. Raymond M. Hood, "A 'Tower City' Plan to Relieve Traffic," New York Times, February 13, 1927, RE2, and Jean Labadié, "Les cathédrales de la cité modern," *L'Illustration*, vol. 160, no. 4145 (August 12, 1922), 133.

14. Valerie Fraser, "Cannibalizing Le Corbusier: The MES Gardens of Roberto Burle Marx," *Journal of the Society of Architectural Historians*, vol. 59, no. 2 (June 2000), 180-93.

budgetary concerns caused these plans to be scaled back, resulting in the more modest and largely inaccessible formal gardens atop the Center's buildings.[15] New York, for all of its roof gardens, never achieved the vision that Le Corbusier articulated as a whole city lifting verdure into the sky. When the seasons changed and roof gardens entered the second half of the twentieth century, they did so alongside the other four points of modern architecture, even as they became the least common of them.

3. THE VIEW FROM ABOVE

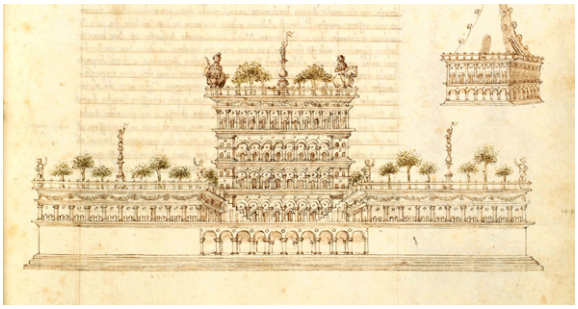
The history of roof gardens, ancient and modern, offers a wide range of examples that support an equally wide range of social, cultural, and economic visions. With the other papers in this session in mind, it is perhaps worthwhile to offer some clarification on what we mean by the term "roof garden" and how it might differ from other spatial types. As opposed to roof terraces or green roofs, we understand roof gardens to be planted surfaces on generally flat rooftops which people are expected to inhabit. The plantings of roof gardens vary widely, from lush, immersive groves of trees to sparse ensembles of pots harboring succulents. Green roofs, on the other hand, may be planted but are not truly occupiable.

Roof gardens hold unique potential that is not always found in more conventional domestic, ground-level gardens, parks, plazas, and other civic landscapes. Beyond the unique structural considerations that differentiate ground-level versus rooftop gardens, the physical distance separating ground and roof has encouraged greater experimentation, whether in terms of social and cultural configurations or spatial and visual forms. There is, on a rooftop, a sense of miraculous seclusion, akin to a *hortus conclusus,* with vistas of privilege and pleasure. Roof gardens are distinct from other roofscapes, and they are also different from other gardens. Their utopian qualities arise from this unique combination of spatial, structural, and sociocultural conditions.

The papers in this session share some of Le Corbusier's combination of technical and social concerns, but they ultimately seek to answer a broader range of questions. Among them: how do roof gardens combine local ecology and landscape with the global aspirations and culture of modernism? How do they maintain ancient longings and fears while also asserting the revolutionary spirit of the new? How necessary is their redemptive, Edenic language to the potentially apocalyptic spirit of the modern *carte blanch*? Do they crown the ideal city, or are they the first stop on the path to suburban exodus? Do they represent a seed for sustainability that may sprout, at this late stage, from the cracks in the concrete of the modern movement? How did the radical potential of roof gardens help to resist, reinforce, or propose alternatives to pre-existing social divisions? Have they ever, even for one moment, brought us closer to paradise or utopia, or will the dreams they represent whither, like the Gardens of Adonis, under an increasingly merciless sun? ■

15. Raymond M. Hood, "The Design of Rockefeller City," *Architectural Forum*, vol. 56, no. 1 (January 1932), 1-12, and Merle Crowell, "The Story of Rockefeller Center: VII. A Question Answered," *Architectural Forum*, vol. 56, no. 5 (May 1932), 425-30.





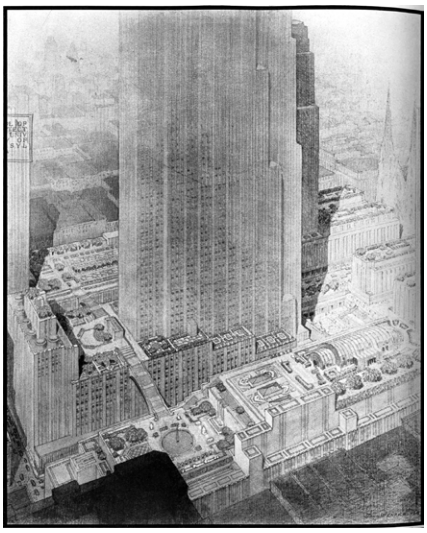


Figure 1. Albert Lenoir Lemaitre, reconstruction of the Hanging Gardens of Babylon [*Restitution des jardins de Babylon*]. © Published in Ferdinand Hoefer, Chaldée, Assyrie, Médie, Babylonie, Mésopotamie, Phénicie, Palmyrène (Paris: Firmin Didot frères, 1852). Public domain.

Figure 2. Filarete (Antonio di Piero Averlino), drawing of roof gardens on a princely palace from his *Trattato di Architettura*, Italian, ca. 1462. © Public domain for non-commercial purposes, courtesy of the National Central Library of Florence, via Archive.org.

Figure 3. The Associated Architects (Corbett, Harrison & MacMurray, Hood & Fouilhoux, and Reinhard & Hofmeister), Rockefeller Center, New York, New York, USA, preliminary scheme, early 1932, showing the complex's roof gardens as originally planned. © Published in Merle Crowell, "A Question Answered," *Architectural Forum* 56, no. 5 (May 1932). Public domain.

BIOGRAPHIES

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CAIPIRAS' ROOF GARDENS IN RIO DE JANEIRO

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ABSTRACT

The first Corbusian-influenced apartment blocks in Rio de Janeiro were usually not occupied by Roof Gardens for communal use. The *Barão de Gravatá* building belongs to the group of these first modern residential blocks developed in the early 1950s. It was designed by the architect Sergio Bernardes and foresaw the realization of the "Five Points", where part of the rooftop terrace served as a communal space and part was an apartment owned then by the Brazilian writer Rubem Braga. Braga informally took over the entire space of the terrace for himself. There he cultivated specimens of fauna and flora from different parts of Brazil. The alterations to architects' projects configured a process of appropriation and adaptation to the environment and to the society of Rio de Janeiro. It is proposed that Braga's rude and stern behavior is a legacy of the *caipira* culture. Such cultural heritage guides the taste of urban inhabitants to crave aspects of Brazilian rural life.

Caipira is a term of *Tupi* origin that describes a type of social and cultural character associated with rural life in the Brazilian Southeast, as described by sociologist Antonio Candido. The *caipira* culture developed from the fusion of elements of colonial Portuguese and indigenous culture. We conclude that the phenomenon of the *Caipiras*' Roof Gardens is mainly not about reflecting "cannibalization of modern" in a political sense to assert identity and seek foreign recognition. It represents the desire to experience the informality and itinerancy of spaces and relationships associated with the search for acclimatization to the tropical environment. Braga's roof garden shares the contradictory aspects of modern architecture as implemented by Brazilian developmentalist politics and expresses the wish to reconnect with a rural past.

1. INTRODUCTION

The *Barão de Gravatá* building by Sergio Bernardes belongs to the group of first Corbusian-influenced residential blocks developed in the early 1950s in Rio de Janeiro that foresaw the realization of the "*Five Points*". The writer Rubem Braga, who bought the penthouse apartment, informally took over the communal space of the terrace-garden for himself and threatened to receive his neighbors there armed. He transformed the modernist terrace into a fertile soil with an area shaded by treetops and a balcony, where he received his bohemian friends in an intimate sociability. It is proposed that Braga's rude and stern behavior is a legacy of the *caipira* culture, as described by sociologist Antonio Candido. This work analyzes what can be described as a transplant of the *caipira* Rubem Braga in the modern building, considering the flourishing cultural climate of Ipanema and its conflicting landscape of favela, nature and rapid urbanization. We conclude that the *caipira* terrace-garden did not serve to cultivate the spirit according to the Corbusian hygienist notion of *Unité d'Habitation*[1]. Braga's roof garden shares the contradictory aspects of modern architecture as implemented by Brazilian developmentalist politics and expresses the desire to reconnect with the writer's rural past. *Capira*'s nostalgia and urban melancholy meet.

2. HISTORICAL CONTEXT: METROPOLIZATION, BOSSA NOVA AND INDUSTRIAL ARCHITECTURE

2.2 THE BRAZILIAN METROPOLIS AND THE FAVELAS

The city of Rio de Janeiro was the capital of Brazil from 1763 to 1960, maintaining the status of an economic and cultural metropolis that it had since colonial times. It was the most populous city in the country until the mid-1950s, when it was overtaken by São Paulo. In 1872, it had 274,972 inhabitants, while São Paulo had 31,385. In 1950, the city of Rio de Janeiro had 2,377,451 and São Paulo, 2,198,098. In 1960, RJ had 3,281,908 and SP, 3,781,446. The explosive population growth was due to the drop in mortality, immigration, and the integration of the Brazilian space through roads. Such integration made possible the rural exodus on a national scale in the direction of the two cities that were evolving more rapidly. Until the early 1960s, Brazil was a predominantly rural country[2]. However, the issue of urban housing had already worsened in the capitals since the end of the nineteenth century, without the state considering action until the 1930s[3]. The national-populist policy of this period considered the favelas as provisional elements of the Brazilian development process. Favelas were formed in undervalued regions, close to work opportunities. They emphasized the political priority given to reproduction of cheap labor, so that the country could be competitively inserted in the international economic scenario, to the detriment of social equity. The development of modern architecture in Rio corresponded to the time of the shift from the political power of the agrarian oligarchies to the industrial and financial power in the 1930s. This change, however, did not substantially affect the way in which the housing issue was handled, although it fostered a broad debate and important initiatives.

1. Le Corbusier, *Planejamento Urbano* (São Paulo: Perspectiva, 2004), 65-72.

2. Milton Santos, *A Urbanização Brasileira* (São Paulo: Edusp, 2028), 23-34.

3. Nabil Bonduki, *Origins of social housing in Brazil: modern architecture, tenancy law and diffusion of home ownership* (São Paulo: Estação Liberdade, 2004)

The pioneering modern architecture reflected the contradictions of Brazilian politics by focusing on the development of representative and corporate buildings at the expense of social housing. The result was a contrasting metropolitan landscape of formal buildings and Favelas.

2.2 RIO DE JANEIRO, CULTURAL CAPITAL

As the country industrialized, the initial mixed-use occupation of the city, which was concentrated in the port region, was dispersed due to the division of urban space according to function and social classes. Industry and workers were dispersed to remote suburban regions, where housing infrastructure was scarce and state housing policy was unable to cover their precariousness, increasing the growth of slums. In the waterfront regions towards the southern part of the city, elite residential neighborhoods developed. The neighborhood of Ipanema in the city's South Zone, where Rubem Braga's penthouse is located, had slower infrastructure development than other upscale neighborhoods. Since it was isolated by hills, sea and lagoon. It developed, therefore, in the mainstay of Copacabana's growth, which was quite vertical and functioned as a subcenter with commerce and entertainment. Ipanema kept its distance from the formal work environment in downtown and the hustle and bustle of Copacabana. Neighborhood relations and the quiet life of the seaside resort were maintained since the neighborhood did not radically verticalize in the following decades. It was in the still serene environment of the 1950s that Bossa-Nova emerged and where groups of bohemian intellectuals and artists also gathered, illustrating the *carioca* life of the time.

2.3 SÃO PAULO, ECONOMIC CAPITAL

From the 1950s onwards, São Paulo became the most important Brazilian city from an economic point of view due to the concentration of industries in the state. The São Paulo International Biennials, in 1951 and 1953, brought together modern architects and artists from all over the world and awarded, contrary to the French-speaking carioca taste, two figures linked to the Bauhaus: Max Bill and Walter Gropius respectively. The Swiss architect and artist, Max Bill, then wrote about his visit to Brazil in the 1950s: *"We are facing the supreme of anarchy in construction, of virgin forest in the worst sense."*[4] The architect Sergio Bernardes was at that time a recent graduate and had already accumulated many commissions and some awards. He worked with Oscar Niemeyer and demonstrated some influence of his plastic virtuosity. Bernardes, however, was more interested in the technological innovations brought about by the industrial development that was taking place in São Paulo. In the work of Sergio Bernardes, one can see abstract austerity combined with a visionary spirit and a tendency towards monumental scale.

3. THE BARÃO DE GRAVATÁ BUILDING.

3.1 THE BRAZILIANIZED *UNITÉ D'HABITATION*

In Rio de Janeiro, the first Corbusian-influenced apartment blocks were not occupied by Rooftop Gardens and corresponded to social housing programs.

4. Alberto Xavier [org], *Testimonial of a Generation* (São Paulo: Cosac Naify, 2003), 161.

Due to the cost of weatherproofing the slabs, rooftops used to be covered with tiles. In the *Gávea Residential Complex* (1952), designed by Affonso Reidy as social housing, the roof terrace is occupied by a collective laundry room with tanks in series and clotheslines for drying. Reidy's project was an exception, most social housing projects were just functional spaces that were inaccessible to communal use.

The *Barão de Gravatá* building follows the typology of the *Unité d'Habitation* as adapted by Lucio Costa in the *Guinle Park Complex* (1945-1953). Costa promotes an acclimatization of the architectural details and the program according to the physical and social context of the Brazilian elite. Like the buildings of *Parque Guinle, Barão de Gravatá* does not have an intermediate floor of services and commerce[5] and its Rooftop has an apartment with a private terrace. All apartments have rooms for domestic servants. The *Barão de Gravatá* building was inaugurated in 1960, when the Ipanema neighborhood was already an elite residential neighborhood, although punctuated by favelas. From the beginning of the building's project, designed by Sergio Bernardes in 1952, to the occupation of the penthouse by the writer Rubem Braga, the population of the neighborhood almost doubled in formal and informal housing. The *Barão de Gravatá* belongs to the group of the first modern and tallest residential blocks developed in Ipanema. It has 12 floors plus the duplex penthouse placed in a plateau above the garage. Two side ramps and a central staircase, intermediated by landscaped areas, give access to the building. On this high level, the maintenance services, the elevator hall and the common leisure equipment are located. The accesses to the two side garages, parallel to the pedestrian entrances, are at street level. Its rustic stone walls act as a plinth for the building. The main façade (South), less sunny, is composed of continuous wood single-hung windows that extend in part of the side facades, drawing an abstract grid. The north façade and part of the side facades have windows in the sealing walls. The building is set freely into the landscape, oriented according to the course of the sun and supported on inclined pilotis. The tilting play of the pilotis is the greatest reference to the plastic exuberance of Rio de Janeiro's modern architecture, contrasting with the scale of the block and the homogeneous treatment of the main façade.

3.2 RUBEM BRAGA'S PENTHOUSE

The duplex penthouse apartment initially belonged to the engineer responsible for the construction of this building and works in Brasilia, engineer Juca Chaves. He was also the owner of Juca's Bar in the traditional Ambassador Hotel in the city center. Chaves facilitated the sale of the penthouse in 1964 to his bohemian companion and friend Rubem Braga. Thus, the bar life was prolonged in the Braga penthouse for some of his friends, who did not need to be invited to show up there and have a whiskey. The neighbors eventually accepted the rooftop appropriation by the grumpy writer. Today there is a plaque in his honor at the entrance of the building.

In the 1960s, Rubem Braga's penthouse had a view of the sea and a back view of the Cantagalo hill, whose green space was already being gradually

5. One of the blocks of the complex has commerce on the ground floor facing the street.

taken over by the favela. Braga commissioned several alterations to the architectural and landscaping projects to execute what was described by the writer Paulo Mendes Campos as a "farm in the air". The changes in the architects' projects configure a process of appropriation and adaptation to the environment and to Rio de Janeiro's society. First, he ordered the placement of an iron rod railing, covered with plants, which obscured the view of the favela at the back. He hired landscape architect Burle Marx to develop a project for the garden. From a certain point on, he himself conducts the engineering works to contain 40 cm of soil and the growth of tree roots: double waterproofed slabs overlapped by aluminum trays. He ordered a vegetable garden and an orchard. The Rooftop Garden is thus formed by two green areas lateral to the volume of the penthouse and another narrow at the bottom. There he cultivated vegetation and fauna from different parts of Brazil. Small vases are scattered everywhere. The front part of the penthouse corresponds to a balcony area with a rustic ceramic floor and a roof with a metal structure and a white corrugated roof. There was Rubem Braga's hammock and the varied seats for visitors. The undulating roof was calculated by an engineer not to be carried away by strong winds. The trees also required constant pruning because they attract lightning on stormy days, which are very common in Rio de Janeiro.

3.3 THE TRANSPLANTED CAIPIRA

Rubem Braga was born in the state of Espírito Santo in 1913 and had a comfortable childhood, spent between his home in Cachoeiro, his grandparents' farms and holidays on the beach. Braga left his hometown early because of a fight with a high school teacher and came to Rio de Janeiro for studies and work. The neighborhood of Ipanema made it possible to live informally, in contact with nature and to experience the cultural life of a metropolis. In addition, the work of a columnist could be done from home. His close relationship with nature led him to study the interaction between plants and birds, which he commissioned from various regions of Brazil and the world. He used to guide his guests through the terrace garden and introduce them to plants and animals. In this way, he returned the common space taken for himself to the collective use of the various species.

Except for the maid and a chauffeur, Braga lived alone. The writer was unmarried and had a son, but those who frequented the Rooftop Garden were his bohemian friends and artists. He kept the doors open to his friends, as well as lending them the guest room for furtive love encounters. His muses were often their wives. Due to nightmares about the Second World War, in which Braga participated as a correspondent, he did not sleep well at night. Thus, he took short naps in his hammock throughout the day, interrupted by some visit, reading, writing and contemplation of nature. Visitors sat on wooden benches, as those found in the squares. Braga liked to look at the sea through a spyglass and at the birds in the garden, which were attracted by the various fruit trees in the orchard. His writing is marked by lyricism and references to nature. It describes the Metropolis through his eyes of country boy fascinated with modern innovations and as an adult desolated

with Brazilian urban contradictions. Despite the quiet sociability offered in his penthouse, he was introverted and melancholy.

His biographer José Castello describes him as a *Caipira* transplanted into an avant-garde penthouse. *Caipira* is a term of Tupi origin that was used by sociologist Antonio Candido to express a way of being associated with a certain group that occupied the rural area of the Southeast region of Brazil. The group was formed from the encounter of the colonizer Portuguese with the aborigine at the time of the pioneer expansion into the interior of the country in the sixteenth and seventeenth centuries. This context of formation determined the quality of the relationships that would tend to be established with the occupied environment and among the members of the group. The tendency towards nomadism determined the taste for the temporary of the adventure, defining the characteristics of its dispersed dwelling. Isolation implied the development of rude, silent, and suspicious behavior. It is proposed that Braga's rude and stern behavior is a legacy of the *Caipira Culture*. Since Brazil has become a mostly urban country up the 1960s, most urban inhabitants have some rural reference. However, the desire to participate in modernity means that this aspect of Brazilian culture remains sublimated.

Many Carioca Rooftop Gardens reflect the *caipira* taste regardless of the architectural language developed in the rest of the building, as attested by the Guinle family's luxurious penthouse in the *Tucuman building* (1941) in Rio de Janeiro. The Guinle penthouse has two floors in classic French-style and is topped by a *caipira* Rooftop Garden. The abstract simplicity of the *Barão de Gravata*'s building must have pleased Rubem Braga, who had an aversion to pomp. He decorated the rooftop, however, with a profusion of eclectic objects: books, important modern artist paintings, classical sculptures, figurative modern sculptures, a collection of stones, bird cages. These disparate objects, taken together, lost their aura. They became banal, but they remained full of history. His garden's mix of species also allows him to reminisce about his own rural past and want to share.

4. CONCLUSION

We conclude that the phenomenon of *Caipira*'s Rooftop does not so much reflect a political sense of cannibalization of the modern to assert national identity and seek foreign recognition and approval. It corresponds to the feeling of nostalgia, resulting from the uprooting experienced in the process of accelerated urbanization and represents the desire to experience the informality and itinerancy of interpersonal and social spaces and relationships on a more personal and intimate scale. The *Caipira*'s Rooftop works as a spiritual retreat in relation to the rhythm of life in the city. The cult of bohemia in Rubem Braga's Penthouse implies an inversion of the ideal of health and cult of the body reserved for the terrace of the Corbusian *Unité d'Habitation*.[6] Despite Rubem Braga's speech in favor of simplicity, his garden was full of plant and fauna specimens, statues and vases. Such elements refer to the accumulation that is typical of urban life and that Le Corbusier criticized so much. For Rubem Braga, however, it was a way

6. Le Corbusier, *Os Três Estabelecimentos Humanos* (São Paulo: Perspectiva, 1979), 28-50.

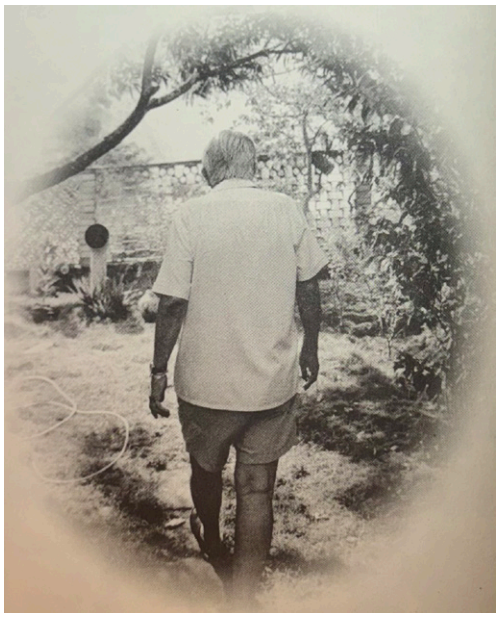




Figure 1. Sergio Bernardes, Barão de Gravatá building, Rio de Janeiro, Brasil, no date, Picture of the writer walking on his Roof Garden. © Picture from the book "Na Cobertura de Rubem Braga", Editora José Olympo, 1996.

Figure 2. Sergio Bernardes, Barão de Gravatá Building, Rio de Janeiro, Brasil, 1952, Picture of the Barão de Gravatá building with Rubem Braga's Roof Garden's view. © Photo by the author, 2024.

to stay connected with his rural past and to connect with his urban guests. Braga establishes an approximate relationship with the nature he has planted, unlike the *Unité* Rooftop that offers nature to be seen from a distance and few garden spaces on the terrace. ■

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BIOGRAPHY

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THE ITAMARATY PALACE ROOF GARDEN AND A POSSIBLE IMAGE OF BRAZIL

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#17

ABSTRACT

This presentation will discuss the ingenious articulation between architecture, landscape design, and the environment through the roof garden of the Itamaraty Palace, by Oscar Niemeyer and Burle Marx, in Brasilia. Through the re-signification of the Corbusian plastic repertoire (especially the *jardin-suspendu*) and his understanding of nature, this paper will emphasize the ambiguities and complexities of this space and the constant confrontation between nature (*cerrado* landscape) and culture (materialized in the architecture and landscape design). This *jardin-suspendu*, used for the Ministry's receptions, with exuberant plants, establishes, on one hand, a kind of representation of a modern country, and seems to reflect the paradoxical modernity established in Brazil.

1. A BUILDING OF MULTIPLE COLLABORATIONS

The Itamaraty Palace (1959-70), the headquarters of the Ministry of Foreign Affairs, is one of the most striking buildings designed by Oscar Niemeyer in Brasilia. This distinction is due to its formal and structural qualities, but above all to its spatial attributes, the result of a complex combination of architecture and gardens. Roberto Burle Marx played a key role in this.

Located on the Ministries Esplanade, on the Monumental Axis set out in Lucio Costa's Brasilia Plan (1957), the Itamaraty plays an important representative role alongside the other ministries and agencies, and makes an equally symbolic transition to the Three Powers Square, where the Presidential Palace, the Federal Supreme Court, and the National Congress are located.

Inaugurated in 1970, 10 years after Brasilia's official inauguration, this long period reflects the complex process of negotiations and collaborations[1] between all those involved and the political and institutional commitment to making the image of a modern Brazil triumph.

Rather than dealing with this intricate and fascinating process, this paper will focus specifically on the intrinsic relationship established between Lucio Costa's Brasilia plan, Niemeyer's architectural solution, and Burle Marx's landscape design in the roof garden of the Itamaraty Palace, reflecting on the paradoxical and ambiguous relationship between nature and culture in Brazilian modernity.

This precise cut allows us to problematize the reinvention of the roof garden (specifically its variation, the *jardin-suspendu*), a recurring technical-functional device in the Corbusian repertoire, beyond its formal and spatial qualities, incorporating historical and symbolic ones. In this space, the presence of exuberant plants, including the positive and expressive Burle Marx's landscape design, and the lyrical[2] relationship with the dominant *cerrado* landscape (Costa's contribution), allow the image of a modern country to be projected the rest of the world.

2. GARDENS FOR A PALACE OR A PALACE FOR THE GARDENS

Contrary to what one might expect, Burle Marx did not play an effective role in the new capital. He developed a few isolated gardens[3], showing his fragmentary role in Brasilia. However, Itamaraty's gardens stand out for their great landscape value and the complete integration between the architecture, the landscape design, and the surrounding landscape.

Burle Marx created three gardens for the Palace: one on the access, one in the hall of the first floor, and one suspended in the noble hall on the terrace. The access garden (1965) is a water garden with small islands of regular geometric shapes, rounded edges, and masses of tropical plants of varying heights and textures. Its calm waters – an important humidity regulator for Brasília's dry climate and a counterpoint to its arid landscape – are home to various species of nymphs and the Bruno Giorgi's *Meteoro* sculpture (1966).

Niemeyer's building floats above the water *parterre*, reflecting its arcades and its immediate surroundings, such as the *buritis*[4] grove in the background,

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1. Oscar Niemeyer's architecture design (1959 first study – 1963 final version with Milton Ramos), Burle Marx's landscape design (1962 first study - 1965/66 final version), Joaquim Cardozo's structure (1963), without mentioning the many collaborations for works of art and furniture design. This network is mapped by Claudio Brandão, "Com quantos arcos se faz um palácio? A arquitetura do Itamaraty em processo" (PhD diss., Universidade Federal do Rio de Janeiro, 2023).

2. According to Telles, Costa gives a lyrical sense to the landscape, as his plan seems to reiterate the memory of colonial Brazil by maintaining the rarefied presence of the urban scale in the *planalto's* geography. Sophia Telles, "Lucio Costa: monumentalidade e intimismo [1989]" in *Textos fundamentais sobre história da arquitetura moderna brasileira*, ed. Abílio Guerra (São Paulo: Romano Guerra, 2010), 173-206.

3. Itamaraty Palace (1965/66), Ministry of Justice (1970), Federal Court of Auditors (1973), Crystal Square (1970), Jaburu Palace (1975), Superquadra 308-Sul (1972), Claudio Santoro Theater (1976) and Pithon Farias Park (1976).

generating graphic but also symbolic effects. According to Flávio Motta, "here, the reflection draws uncovered roots on the surface of the undulating water. It's a kind of magic mirror, with allusions to the exiled."[5]

The water mirror and the geometric language of the garden that surrounds the palace invade its interior through the arcades, as a continuation of the exterior, generating the double-height internal garden in the first-floor hall, where diplomatic ceremonies and receptions begin. It symbolically evokes the "exuberant nature of the country"; it creates a humid *cerrado*[6] microclimate and an effect of light and shade among the foliage, typical of the rainforest. The result of the verticality of the trunks of tropical species is further exacerbated by the concrete totems surrounded by undulating *philodendrons*, *anthuriums*, and other epiphytics plants, which propel the gaze upwards, like the honor staircase that leads to the upper floor.

The solution given to the hall garden – a continuation of the exterior that expands onto the mezzanine – seems to introduce the spatial experience reserved for the roof garden. It is on this highest level of the building that the Palace's noble hall is located, used for receptions and government parties. From here, guests can enjoy a wide view of the young city through Niemeyer's arcades. It is also here that the most expressive force of Burle Marx's gardens in the Palace is felt.

This elevated garden – like an elevated *varanda*[7], a "completely open living room"[8] – is partially covered by a concrete pergola, making it an enclosed, controlled, and sheltered garden, unlike the access gardens, which are open, uncovered, and continuous. This solution protects users from the hot and dry climate of *Planalto Central*[9] and allows diplomatic celebrations to be held, almost in the open air.[10]

This garden adopts the same geometric language with rounded edges flowerbeds. It is characterized by the existence of contrasts: volumes, textures, and colors of the foliage of the plants, the surfaces of the coverings, and the works of art[11] located there. The light coming through the pergola and the arcades plays an important intermediary role between the strength of the structure and the ephemerality of the vegetation. With these spatial strategies, Burle Marx's garden is not passive in relation to the plans of the architectural construction itself[12]: it can redefine the spaces, giving new meaning to the architecture and its surroundings.

The Palace is a kind of "oasis" in the *Planalto Central*. Isolated from the continuity of the territory by the water mirrors that surround it, it is integrated into the environment by its large *varanda* that opens onto the city. From there, we can contemplate the expanse of the *cerrado* landscape and the possibilities opening up on the horizon of the newly created capital: the promise of a prosperous future.[13]

3. BRASILIA'S *JARDIN SUSPENDU*: A SPATIAL GENESIS

The Itamaraty Palace is the result of the articulation of two architectural volumes: inside, a closed glass box (discreet and secluded), and outside,

4. *Buriti* is a tree species typical of the *cerrado*.

5. Motta refers to the workers who built the capital: migrants from Northeast of Brazil, who were subjected to terrible working conditions and were banished to satellite cities. Flavio Motta. *Roberto Burle Marx e a nova visão da paisagem* (São Paulo: Nobel, 1983), 21.

6. *Cerrado* is a Brazilian biome, equivalent to the savannah.

7. The *varanda* is a traditional element in Brazilian architecture; it is configured as an access area, a pleasant place to be, especially due to the tropical climate.

8. According to Costa, the *varanda* is the best place in the house to stay, the completely open living room. Lucio Costa. "Documentação Necessária [1938]" in *Lucio Costa, registro de uma vivência* (São Paulo: Empresa da Artes, 1995), 460.

9. *Planalto Central* is the geographical region that covers Brasilia.

10. As in the previous headquarters in Rio de Janeiro.

11. *Canto da Noite* by Maria Martins (1969), *Duas Irmãs* by Alfredo Ceschiatti (1967-68), *Três Jovens* by Lasar Segall (1939), *Nu Deitado* by Victor Brecheret (1940).

12. Mario Pedrosa. "O Paisagista Burle Marx [1958]" in *Arquitetura: Ensaios Críticos*, ed. Guilherme Wisnik (São Paulo: Cosac Naify, 2015), 109.

13. Margareth Pereira. "A utopia e a história. Brasília: entre a certeza da forma e a dúvida da imagem [1992]" in *Textos fundamentais sobre história da arquitetura moderna brasileira*, ed. Abílio Guerra, (São Paulo: Romano Guerra, 2010), 25.

a hollowed-out box formed by sequential arcades that surround it, configuring a kind of permeable closure (solemn and representative).

The interstitial space resulting from this manipulation is transformed, through the cooperation of architecture and landscape design, into an elevated *varanda* (a suspended garden, the Corbusian *jardin-suspendu*). It is a semi-open and semi-covered space where the pergola allows a relationship with the blue sky, and the arcades allow a total opening to the reddish and immense landscape of the surroundings. In this relational space, the tensions between the interior (the regulated and contained space of controlled sociability) and the exterior (the continuous horizontality of the *Planalto Central*) – constantly activate the spatial transitions and ambiguities that result from them.

The Corbusian *jardin-suspendu*[14] is the result of experimentation with the technical-formal possibilities generated by the Dom-ino system (1914-1917). In tectonic terms, the transformation of the roof slabs into habitable spaces enables a spatial relationship between the interior and exterior at an above-ground level. In addition, the Corbusian *jardin-suspendu* acts as a portion of air in the mass of the building[15], transforming the limits of the façade, expanding its boundaries and tensioning the dichotomies between public and private, inside and outside, architecture and city: "the sun penetrates everywhere, and so does the air (...) the table is set sheltered from the rains (…) we eat, we talk, we rest in the air."[16] It becomes a completely ambiguous space: it is both a visual link and a physical limitation in relation to its surroundings; after all, it is protected from the chaotic nature of the site by the ordering gesture of the architecture.

If, on the one hand, the Corbusian roof garden – through the mastery of technique – provided an intense experience of nature by promoting a relationship with the sky, the sun, and the surrounding environment, it also reflected an understanding of the order and harmony implicit in nature itself. In this way, the roof garden would be a mystical element[17] of modern architecture for the utopian dream of the future city.

The elevated garden would be different from the garden on the ground: it is the noblest, sometimes sacred garden because it rose to the heavens and carries the implicit fascination of the idea of *terra nullius*, a place untouched by human hands and left to nature[18]. It would be a counterpoint to the order imposed by technique: vegetation should be planted irregularly and the terrace garden should be left to its processes of biological succession, the restoration of nature in its pure state: "plants and shrubs orient and establish themselves as they wish, according to their needs. Nature reclaimed its rights. Since then, the garden has been left to its own devices...."[19]

At this point, we must return to the Itamaraty's *jardin-suspendu*. If, on the one hand, the paradoxes of this space are the result of Niemeyer's interpretation and manipulation of the Corbusian architectural repertoire, on the other hand, the solution of the landscape project seems to oppose Corbusier's vision, after all, Burle Marx's garden has nothing spontaneous

14. The *Jardin-suspendu* is the antecedent of the roof garden, initially used by Corbusier in the 1920s and perfected in the Indian experiments of the 1950s.

15. María Candela Suárez. "The Corbusian suspended garden: A fragment of nature converted into architecture" *Sebentas d'Arquitectura, n. 7* (November 2014): 57-65.

16. Le Corbusier. *Urbanismo* [originally published in 1924] (São Paulo: Martins Fontes, 1992), 195.

17. "Poetically, the gardens of Semíramis have come to us; they are achievable and realized; they astonish and delight; they are useful and beautiful." Le Corbusier. *Urbanismo*, 218.

18. Tim Benton. "The miracle of Le Corbusier's roof terrace" in: *L'Architrave, le Plancher, la Plate-forme: Nouvelle Histoire de la Construction*, ed. Roberto Gargiani (Lausanne: Presses Polytechniques et Universitaires Romandes, 2012), 710-718.

19. Le Corbusier & Willy Boesiger. "Reportage sur um toit-jardin [1945]" in: *Le Corbusier, Volume 4: Oeuvre Complète 1938-1946* (Zurich: Les Édition Girsberger, 1955), 140-141. In his text, Le Corbusier reinforces this worldview by presenting photos of his terrace garden - "a place full of poetry".



Figure 1. Oscar Niemeyer and Roberto Burle Marx Itamaraty Palace and gardens, Brasilia, Brazil, 1959-70. © Lauro Rocha, 2019).



Figure 2. The concrete pergola and the elevated garden. © Lauro Rocha, 2019.



Figure 3. The garden and the *varanda* view of Monumental Axis set out in Lucio Costa's Pilot Plan for Brasilia. © Lauro Rocha, 2019.



Figure 4. The Burle Marx's *Jardin-suspendu*. © Lauro Rocha, 2019.

or natural about it. In this sense, the abstract Corbusian *in-between* space gains materiality with Burle Marx's garden, and becomes a positive, artificially manipulated space, capable of representing the true noble area of the building. By incorporating plastic research, the garden overcomes its functionalist tendency and emerges as the engine of modern living. There is a true reinvention of the Franco-Swiss architect's method, or in other terms, a "cannibalization"[20] of Le Corbusier by Niemeyer and Burle Marx.

The exuberant tropical plants combined with the concrete pergola form the atmosphere of an *Ombrophilous Forest* on the terrace, contrasting plastically with the harsh landscape of the *cerrado*. A vision of a "lost paradise" is constructed; the utopic city that was the fruit of reason and desire.[21] This manipulation tensions the opposites: myths and reality, dryness and humidity, interior and exterior, relaxation and formality, exuberance and infinite horizontality, the domesticated and the uncontrollable. Opposites that can be summed up, in the case of Brasilia, in the constant clash between nature and the culture established on the basis of the representation of a modern country.

20. Fraser suggests that Burle Marx had incorporated the forms of South American natural landscape (like noted by Corbusier) into the gardens for the new Ministry of Education building (1936) in Rio de Janeiro. Valerie Fraser, "Canibalizando Le Corbusier: os jardins do MES de Burle Marx [2000]" in: *Roberto Burle Marx: a permanência do instável, 100 anos*, ed. Lauro Cavalcanti & Fares El Dahdah (Rio de Janeiro: Rocco, 2009), 210-229.

21. Pereira, *A utopia e a história*. Brasília, 15.

4. THE AVAILABILITY OF CONCILIATION: SOME (IN)CONCLUSIVE NOTES

The Itamaraty *jardin-suspendu* was used here to demonstrate the many paradoxes inherent in Brazilian modernity. It shows, on the one hand, the constant tensions between nature and culture, based on the work of Burle Marx, Niemeyer, and Costa, and, on the other, the establishment of a complex network of collaborations, resulting in a conciliatory vision capable of harmonizing apparently irreconcilable and antagonistic parameters. Finally, it shows how ideas (internal and external) were accommodated, generating a possibility of modernity in Brazil.

The natural disposition towards conciliation was highlighted by the German philosopher Max Bense when he visited Brazil in the 1960s. For him, the intrinsic tropical spirit (organic, vital, moving) and the inherited Cartesian spirit (analytical, logical, clear) were not in opposition, but in dialectic; and therein lay the hope of renewal, the construction of a "progressing essence" of man.[22] Thus, the "modern rational Brazilian form" was based on these constant contrasts perceived by Bense: joy and melancholy, nature and intelligence, improvisation and design, inertia and mobility.

All the possible tensions presented by Bense (and expressed in Itamaraty) are based on the modern constructive mentality that reflects the Brazilian historical and social process. The certainty and incisive gesture of design (characteristic of the 1950s culture) is a way of responding to a supposedly amorphous country, where order is implanted by disorder, after all, it is dominated by contingency. A country that "gave shape" to Brasilia, through a colonial gesture of "taking possession"[23] of an immense territory of reddish earth.

Itamaraty's *jardin-suspendu* is the legitimate space to contemplate Brasilia as the land of future promise, a project of modernity that had been sketched out since the 1930s and, to quote Pedrosa[24] again, condemned to the modern. ■

22. Max Bense, *Inteligência Brasileira* (São Paulo: Cosac Naify, 2009), 102.

23. Costa said 20 years after inaugurating Brasilia "I found the *planalto*, that limitless, excessively vast horizon. It's out of scale - like an ocean with immense clouds moving over it. By placing the city in the middle of it, we could be creating a landscape. In Brazil, what makes the landscape are the architectural masses, because most of the country is desert." Alex Schoumatoff. "The Capital of hope" *Profiles*. The New Yorker (November 1980): 94.

24. Mario Pedrosa. "Reflexões em torno da nova capital [1957]" in: *Arquitetura: Ensaios Críticos*, ed. Guilherme Wisnik (São Paulo: Cosac Naify, 2015),132.

BIOGRAPHY

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ONE THOUSAND AND ONE FLIGHTS: A ROOFTOP AIRPORT OASIS IN THE ARABIAN DESERT

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ABSTRACT

As the economic downturn of the 1970s deepened, U.S.-based architects looked abroad for commissions to keep their design practices afloat—among them, the Detroit-based office of Minoru Yamasaki and Associates (MYA). After the petroleum-fueled economy of Saudi Arabia outgrew MYA's modest 1964 Dhahran Civil Air Terminal—a project popular among the Saudi Royal Family and governmental officials—the firm proposed its replacement over the course of three decades, in partnership with including Bechtel Engineering and the Ralph M. Parsons Corporation. One design consideration was the way airports in the desert needed to demarcate the space while creating a sense of "place" where little existed other than wind, sand, and sky. In each of the firm's proposals, variations on the roof garden were leveraged as a central part of the infrastructure of placemaking, offering passengers and airport workers a respite from the midday sun, while offering the Kingdom an international gateway. Such gardens were frequently placed at the center of the airport terminal designs, serving as a link between programmatic elements and often placed atop parking structures to help mitigate the significant heat load such buildings would attract. Although it might seem anachronistic next to the sleek lines of modern jet travel, the roof garden has a storied history of imperialism, power, and decadence. This paper situates the airport roof garden within larger disciplinary trajectories of the late modern period and transnational exchange, joining scholarship focused on the rise of large architecture and engineering corporations working in tandem with smaller, design-focused architecture firms such as MYA and The Architects Collaborative (TAC) on projects throughout the Arabian Gulf region. Such projects signaled an exportation of Euro-American political and economic ideals through modern architecture and infrastructure, and further clarifies the ongoing development of relationships between architect and engineer in the postwar period.

1. INTRODUCTION

As the economic downturn of the 1970s deepened, U.S.-based architects looked abroad for commissions to keep their design practices afloat—among them, the Detroit-based office of Minoru Yamasaki and Associates (MYA). After the petroleum-fueled economy of Saudi Arabia outgrew MYA's modest 1964 Dhahran Civil Air Terminal—a project popular among the Saudi Royal Family and governmental officials—the firm found itself proposing its replacement over the course of three decades and in partnership with large-scale architecture and engineering firms working in the region, including Bechtel Engineering and the Ralph M. Parsons Corporation. One important design consideration was the way in which these airports in the desert needed to demarcate the space of the air terminal and its ancillary programmatic needs, while creating a sense of "place" where little existed other than wind, sand, and sky. In each of the firm's proposals, variations on the roof garden were leveraged as a central part of the infrastructure of placemaking, offering passengers and airport workers a respite from the midday sun, while offering the Kingdom a gateway worthy of the world stage. Such gardens were frequently placed at the center of the airport terminal designs, serving as a link between programmatic elements and often placed atop parking structures to help mitigate the significant heat load such buildings would attract.

Although it might seem anachronistic next to the sleek lines of modern jet travel, the roof garden has a storied history of imperialism, power, and decadence that renders the airport an obvious extension of its narrative into the late modern period as an ongoing symbol of opulence and excess. This paper situates the development of the airport roof garden within larger disciplinary trajectories of the late modern period and transnational exchange, joining scholarship focused on the rise of large architecture and engineering corporations working in tandem with smaller, design-focused architecture firms such as MYA and The Architects Collaborative (TAC) on projects throughout the Arabian Gulf region. Such projects signaled an exportation of Euro-American political and economic ideals through modern architecture and infrastructure, and further clarifies the ongoing development of relationships between architect and engineer in the postwar period.[1] The role of the architect within a larger service model marks a shift in disciplinary tactics. As historian Arindam Dutta has suggested, in this new world order, "the architect is merely a boutique reliant upon—if not nestled within—a much larger global delivery operation to service its clients."[2] In many cases throughout the Gulf Region, the projects were effectively large-scale infrastructure—the airport grounds and environs—combined with boutique architecture—the passenger-focused air terminals and their many associated amenities, chief among them an unlikely trio: the roof garden, the mosque, and the parking deck.

2. A NEW FRONTIER FOR ARCHITECTS

After World War II, private corporations such as Standard Oil of New Jersey, Standard Oil of California, and Texaco funded and constructed oil pipelines throughout Africa and the Persian Gulf region as the importance

1. Eva Franch I. Gilabert, et al, *OfficeUS Atlas* (Zurich: Lars Müller Publishers, 2015), 13.

2. Arindam Dutta, "Marginality and Metaengineering: Keynes and Arup," in Aggregate, *Governing by Design: Architecture, Economy, and Politics in the Twentieth Century* (Pittsburgh: University of Pittsburgh Press, 2012), 238.

of the extraction economy came into focus.[3] To support these efforts, large-scale architecture and engineering firms such as Bechtel Engineering master planned and designed entirely new cities in the deserts across the Arabian Peninsula, centered around massive shipping ports and large-scale airports constructed to serve growing international trade networks fueled by the sale and export of oil. Corporate investment was motivated by the skyrocketing global demands for fossil fuels, which in turn radically reconfigured international relations.[4] This was especially true in Saudi Arabia, where oil became the bedrock of Saudi Arabia's modernization efforts, and which motivated significant foreign investment. In turn, key outside investors—particularly those from the United States, Western Europe, and Japan—built up Saudi Arabia's airports and infrastructure to serve their growing business needs in the Kingdom and the region. Increased private investment in Saudi Arabia and the Persian Gulf meant that corporations were eager to enter an expanding market, building airports, hotels, and office parks to serve the agents of international trade as well as a burgeoning tourist market and Hajj pilgrimages to Mecca. U.S.-based architects jumped at the chance to take on large-scale commissions for corporations and governmental entities in Saudi Arabia, including Minoru Yamasaki and Associates (MYA), Edward Durell Stone (EDS), and Bechtel Engineering, among many others.

This project presents an interesting case and a difficult one to decipher; from initial design to final construction, the airport took nearly three decades to complete. The lengthy design development process was due to a variety of factors, including the changing landscape of air travel, the growth of the international oil export economy, and the instability in the region caused by the Iran-Iraq war from 1980 to 1988. KFIA was, in a word, complex. It needed to operate as a major international airport, a regional transit hub, and provide extensive program supporting the needs of residents, including a large-scale mosque and landscaped plazas for leisure and recreation. In other words, a kind of roof garden, in part to help mitigate the intensely high temperatures of the desert's midday sun. The designers at MYA were architectural image makers as much as they were architects. It appears that the power brokers of the Kingdom of Saudi Arabia recognized this quality in the Dhahran Civil Air Terminal (1964) and thus retained MYA for the larger KFIA project a few decades later.

3. 3. AN AIRPORT IN THE DESERT

The project officially began in 1974, and to help organize the overall plan, Yamasaki recommended hiring Tippets-Abbott-McCarthy-Stratton (TAMS) as the aviation engineering consultant of record due to their successes at the Dallas/Ft. Worth Airport and a large portfolio of projects in Africa and the Middle East.[5] Under this arrangement, MYA would be the lead architect for the project, responsible for the overall master plan, the terminal, and any ancillary structures, and TAMS would be responsible for the technical consultations, civil engineering, and the development of paved areas such as runways, taxiways, and the aircraft apron.[6] As evinced by an Executive

3. The concept of extractivism has been in use since the end of the 20th century to focus on economies based on extracting natural resources from the earth. Refer to Christopher W. Chagnon, Francesco Durante, et al, "From Extractivism to Global Extractivism: The Evolution of an Organizing Concept, *The Journal of Peasant Studies* 49:4 (2022): 760-792

4. In his 2011 book, *Carbon Democracy: Political Power in the Age of Oil*, Timothy Mitchell suggests that "Fossil fuels helped create both the possibility of modern democracy and its limits." Refer to Timothy Mitchell, Carbon Democracy: Political Power in the Age of Oil (London, UK: Verso Editions, 2011), 1.

5. Minoru Yamasaki, Letter to M. Mahdi, 1974. "Minoru Yamasaki Papers," Box 27, Folder 18, Walter P. Reuther Library, Archive of Labor and Urban Affairs, Wayne State University.

6. Yamasaki, Letter to M. Mahdi.

Summary sent from Bechtel Engineering's Civil & Minerals department to Minoru Yamasaki on February 22, 1985, King Fahd International Airport was the result of a complex development and construction process.[7] The firm completed an initial master plan for the Eastern Province International Airport (EPIA) in 1977, proposing to connect a centrally planned terminal to remote satellites via automated people movers.[8] This form is strikingly similar to the design of the Tampa International Airport, completed in 1971 by Cuban American architect Carlos Alfonso, Sr. According to MYA's design team, the goal was to create an "oasis from [the] 800 square kilometer site of virgin desert which is characterized by stationary and traveling sand dunes, an occasional palm tree and scrub-type vegetation."[9]

The passenger terminal was sited at the center of the project, and as with the original terminal, the design team concocted what might best be described as a new Islamic tradition in its formal ambition: "The buildings are modern in structure and design, with a distinct Arabic influence compatible with the desert environment."[10] The architects continued their description, suggesting that the proportions employed in the design aimed to make them "elegant and graceful" and that it "will be a national landmark, full of visual interest and designed to reflect both the tradition and progress in Saudi Arabia."[11] The overall experience was particularly important to the team considering that widespread air travel in Saudi Arabia was relatively new and that the project needed to incorporate a larger social program for people to enjoy "recreational, educational, and religious pursuits," which was at least in part related to the roof garden and oasis design.[12] As with the earlier Dhahran Civil Air terminal, why was it assumed the Detroit-based architects, many of whom had never visited Saudi Arabia, were capable of producing an "image" of the Saudis own culture? The formal aspect of the project appears to reference general allusions to architectural details from mosques—mihrabs, niches, elaborate grillwork—but taken entirely out of their functional or even symbolic context.

The existing Dhahran airport and facilities would be converted to a dedicated military and air force facility and the twenty-seven square miles of land that had initially been acquired for the airport's expansion would be used for other developments. The new location also afforded an expanded opportunity to serve the growing cities of Dammam, Alkhobar, Abqaiq, along with Bechtel Engineering's newly planned city of Jubail.[13] The initial proposal included a pair of large, vaulted shells spanning a distance of 360 feet between the two terminals and each covering an area of 450 by 900 feet.[14] From a practical standpoint, the shells shielded passengers and airport employees from the hot sun. But the dramatic shells would also act as a formally-unifying agent in the project that the architects described as "a symbolic gateway to the entire eastern region of Saudi Arabia and [one that would] signify the importance of one of the major entrances to the country; [the shells] represent the greatness and progressive aspirations to which the leaders of Saudi Arabia are so devoted."[15]

Sited in the middle of the desert, the view of the airport and its sweeping concrete shells was designed to be enjoyed from the air by arriving and

7. Bechtel Engineering to Minoru Yamasaki, "Executive Summary, EPIA," February 22, 1985. Minoru Yamasaki Collections, Archives of Michigan, Lansing, MI.

8. Bechtel, "Executive Summary."

9. "Award Submittal to the Detroit AIA Chapter," 15 October 1987, "Minoru Yamasaki Papers," Box 27, Folder 18, Walter P. Reuther Library, Archive of Labor and Urban Affairs, Wayne State University.

10. "Award Submittal to the Detroit AIA Chapter."

11. Bechtel, "Executive Summary."

12. Bechtel, "Executive Summary."

13. Yamasaki, A Life in Architecture, 180. MYA was not the only American player in the development of Saudi Arabia's Eastern Province. In addition to working with Yamasaki and his team, Bechtel Engineering also developed the country's massive oil production, and helped construct what was at the time called "the world's largest civil engineering project." For more, refer to "Update on Jubail," Bechtel Briefs, November 1980, 4.

14. Yamasaki, A Life in Architecture, 180.

15. Yamasaki, A Life in Architecture, 180.

departing passengers: "With their large scale and long-distance visibility, the great shells of the terminal will be the focus for the entire eastern region of Saudi Arabia."[16] The airport was to become a kind of oasis in the desert, welcoming arriving passengers to a fast-growing region and center of the burgeoning oil industry. Once the site for the new airport had been finalized the firm settled on a general design scheme, a satellite concept with two core terminal buildings and four smaller satellites serving domestic and international flights. A core aim was to reduce lengthy distances passengers must walk, a revision to the "seemingly endless concourses" of airports like Tokyo-Haneda and Chicago-O'Hare, with which Yamasaki was familiar due to his grueling travel schedule.[17]

Even at this stage, Saudi officials were not yet convinced by the satellite concept, and in 1981, tasked MYA and Bechtel Engineering with another revision to the master plan. By August, it was agreed that three basic design configurations—satellite, line, and pier—would be the primary focus of the firm's investigation, evaluated on the basis of technical, economic, and architectural criteria.[18] Over the course of the following three and a half years, MYA produced hundreds of drawings, schematic layouts, and diagrams while finding a solution appropriate to the desert climate, the airport's programmatic demands, and the client's desires for opulence and grandeur. By October 1981, a meeting was convened with representatives from the International Airports Projects (IAP), Saudia employees (the national airline of Saudi Arabia), the Portland Cement Association (PCA), and members of MYA's architectural design team.[19]

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During the initial development phase of KFIA, several other major airports in Saudi Arabia had opened for service, and as such, provided useful feedback about the importance of aesthetics and the appeal to a wide public across the Kingdom. Having opened in Riyadh in 1983, the King Khalid International Airport (KKIA), a joint project between Bechtel and HOK—was overwhelmingly well-received by the general public, in part due to its "large open spaces accommodating major fountain structures and flower displays."[20] Nothing of the sort had been considered at KFIA, with those involved instead focusing on producing an "extremely functional" building while still "providing attractive architecture." Given the success of a central gathering area at KKIA, the design team was once again tasked with coming up with schemes that included a "central visual feature," whose purpose was "to provide the terminal visitor and both the arriving and departing passenger a chance to experience a landscaped water display within an exciting spatial environment."[21] In other words, the committee wanted to add architectural spectacle to the terminal's design. This seemingly small change led to several radical redesigns throughout the building and landscaping.

4. AT LONG LAST, KING FAHD INTERNATIONAL

After many years of design development and extensive negotiations between client, architect, and consultants, construction finally began. As built, the airport encompassed 3.5 million square feet in the terminal and

16. Yamasaki, A Life in Architecture, 180.

17. amasaki, A Life in Architecture, 180.

18. Bechtel, "Executive Summary."

19. While this group is not identified in the document beyond the acronym PCA, the Portland Cement Association was founded in 1916 in the United States, and provided major assistance in the development of reinforced concrete aprons that would withstand the high temperatures in Saudi Arabia, as well as frequent use by heavy aircraft due to join the Saudi Arabian Airlines fleet. Refer to M. G. Arora, et al, "Portland Cement Concrete Apron Pavement Design Study for King Fahd International Airport in Saudi Arabia," in Jim. W. Hall, ed., *Airport Pavement Innovations: Theory to Practice* (New York: American Society of Civil Engineers, 1993), 216-32.

20. Bechtel, "Executive Summary," 9.

21. Bechtel, "Executive Summary," 9.

concourses alone, similar in size to Dallas/Fort Worth when it opened in 1974. In addition, the airport's ancillary structures included a 44,800 square foot control tower, a thirty thousand square foot on-airport mosque, and a large royal reception pavilion for the Royal Saudi family. The final design had two side-by-side terminals accessed by a multi-level roadway. The interior of the ticketing lobby of each terminal features an open plan, with airline baggage check-in desks as "island" counters floating in the spacious area. One of the striking elements is the highly articulated ceiling, which featured a repeating geometric pattern reminiscent of a *muqarnas* and not dissimilar to decorative elements in the firm's previous terminal. The entire complex was surrounded by lushly landscaped gardens—much like the oasis in the earlier Dhahran project—and further underscores the regal nature of a roof garden in the Arabian context. King Fahd International was one part of a major infrastructural push by the Kingdom of Saudi Arabia in the 1970s and 1980s, which saw the opening of King Abdulazziz International Airport in Jeddah (KAIA) in 1981, followed by King Khaled International Airport (KKIA) in 1983.[22] When KFIA finally opened, the project had morphed from a regional airport into a terminal befitting of a global transportation hub, reflecting the changing landscape of the Kingdom through architectural design. ■

22. "KFIA construction well under way for end-of-decade opening," *Airport Forum* (March 1988): 27.

BIOGRAPHY

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A NOCTURNAL ROOF GARDEN FOR SPECTACLES. THE LUMINOUS SHIP BY CARLES BUÏGAS

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ABSTRACT

The Luminous Ship was an unbuilt project by the Catalan engineer Carles Buïgas, conceived in 1930 and reformulated several times until the year before his death in 1979. It consisted of a floating universal exhibition that was to travel around the world, with a large luminous garden on its deck with a synchronised display of water, light, colour, perfume, and music. For Buïgas, this project was more than just an engineering endeavour. To "climb" onto the deck of this ship, bringing the Good News of Salvation, was for him to enter a paradise on earth, materialised as a garden of luminous water. If the ship was the 20th century's utopian image of the architecture, the paradisiacal deck of this nocturnal ship was the utopia of an engineer convinced that he could improve humanity only by means of water, light and music.

1. INTRODUCTION

Carles Buïgas (1898-1979) was the Catalan engineer in charge of the lighting systems at the Barcelona International Exhibition (1929), a fair best known in architectural historiography thanks to the German Pavilion, the building designed by Mies van der Rohe with Lilly Reich. The exhibition was the second universal exhibition held in the city, following the first one in 1888, and reflected early Catalan efforts to position the city on the map of international capital cities.

One of the greatest successes of the event was, along with the Pueblo Español, the so-called Magic Fountain (the large central fountain) and the various water and light displays spread throughout the Montjuïc mountain designed by Buïgas. The young engineer was so fascinated by the night spectacle and convinced of the redeeming power of luminous water for the masses, that he devised a project called the "Luminous Ship" (1931) **(Fig. 1)**[1]. Since not everyone was able to visit the Barcelona fair, the engineer invented this ship to bring the exhibition —the water displays— to the crowds. This is how he explained the origin of the project. Its interior contained an exhibition of Hispanic art, along with a great set of luminous fountains on the deck. In other words, it was a mobile world's fair that had to travel the world always making its triumphant entry at night to bring the art of "water-light" ("agualuz") to the masses.

The deck was a large mineral garden of avenues with fountains transformed at night using light, music, colour, gas, temperature, and perfumes **(Fig. 2)**. This avenue culminates in the colossal magical fountain. The engineer worked from 1930 to the 1970s on this idea, creating nine preliminary designs and even writing a novel, inspired by Jules Verne, published in 1960 when he was aware that his project would hardly materialise[2].

In parallel to his ideal projects, it is estimated that the engineer created more than five hundred illuminated fountains throughout his career, in Spain and Portugal, France and Belgium, Morocco, the Dominican Republic, Puerto Rico, Venezuela, or Dubai[3]. He even had a notable participation in the Santo Domingo Peace Fair (1954) with the design and construction of the Agua-Luz Theatre[4], and was responsible for other projects such as the Peace Exhibition (1946) or the Total Water-Light-Music Theatre (1960) for Barcelona[5]. However, the Luminous Ship project accompanied him throughout his life, since he gave it a special transcendent meaning, a moral role of redemption for humanity.

2. SAVING HUMANITY

From the beginning, Buïgas endowed the project with a transcendental dimension. He saw the ship as a representation of The Good News of Salvation. For Buïgas, "Going up" to the deck of this ship symbolised redemption; accessing paradise on earth, a garden made only of water and light. What does the will to improve the emotional life of the masses suggest to us culturally, thanks to a luminous ship that we see arriving as our Salvation?

1. Carlos Buïgas, "Proyecto de Exposición Flotante," *Mercurio: Revista comercial Ibero-americana*, XXXI, no. 643 (April 9, 1931).

2. Carlos Buïgas, *La Nave Luminosa* (Barcelona: Editorial Barna, 1960).

3. David Caralt, *Agualuz* (Madrid: Siruela, 2010), 134.

4. Barry Bergdoll, Carlos Eduardo Comas, Jorge Francisco Liernur, Patricio Del Real, *Latin America in Construction* (NY: The Museum of Modern Art, 2015), 154.

5. Carlos Buïgas, *Hechos, ideas y proyectos* (Barcelona: Ediciones Unidas, 1973).

In Christian iconography, the journey of life is often represented by the image of the church as a ship. It is Noah's ark that leads to salvation amidst a stormy sea. The ship also symbolises a sacred island, in the sense that it preserves its conditions within well-defined limits facing the "amorphous and assaulting" sea which alludes to the hectic outside world. The navigator must face the "sea of passions" until reaching paradise, and therefore also, "the conquest of a great peace is figured in the form of a navigation."[6]

Light and water have always had symbolic associations with mystical and spiritual processes. For example, the Temple of Solomon is described in the Old Testament as a structure of gold and water that, combining to create an entire universe of mirages. Islamic art also utilised rich decorative elements and refined treatments of light and water, creating fantastic architectural combinations. Crystals, precious stones, gold, are all equivalents that allude to spiritual transcendence. Such mystical associations are decisive, for example, in the stained-glass windows of Gothic cathedrals. The German expressionists' utopias of glass architecture and the cathedrals of light at the beginning of the 20th century also alluded to such meanings in which the brilliant colours would restore joy to the citizens of the great grey city[7]. In some way, the light spectacles of the 19th and 20th centuries incorporating precise light design and luminous fountains, often referred to as "magic," could evoke certain emotions with transcendent nuances similar to those awakened by sacred architecture over centuries.

In the engraving on the cover of Francis Bacon's *Novum Organum* (1620), ships are seen setting sail with the inscription: "Many will make their way home, and science will develop." The foundation of modern experience is not found in "land" but on the deck of ships, and in the back-and-forth movement. Captain Nemo's motto, *Mobilis in mobili*, perfectly encapsulates the motif of the anonymous modern individual, who navigates everywhere without being fixed in one place. As Peter Sloterdijk explains, the ship is an absolute palace-habitation-world, and represents, in its early modern form of adaptation to the high seas, the paradigm of the resolved contradiction between housing and adventure. It also symbolises a dream machine and a "great mother," a piece of homeland that goes sailing[8].

The avant-garde of the early 20th century regarded machines particularly the ship, as a paradigm of functional beauty. In one of the most influential architectural books of the 20th century, *Vers une architecture* (1923), Le Corbusier presented the ocean liners as the best example of mechanical purity, associating them with beauty and sincerity[9]. The ship is the utopian representation of metropolis architecture.

3. THE LUMINOUS SHIP PROJECTS

Although Buïgas had delivered public lectures in Barcelona and Madrid since 1931, the Luminous Ship project was first published in the magazine Mercurio in 1933. It was precisely a publication that promoted Ibero-American trade relations.

In June 1933, the Ministry of Agriculture, Industry and Commerce declared the project a "work of national interest" and published a brochure

6. Juan Eduardo Cirlot, *A Dictionary of Symbols* (NY: Dover Publications), 342.

7. Dietrich Neumann, *Architecture of the Night* (Munich: Prestel, 2002), 36-37.

8. Peter Sloterdijk, *In the World Interior of Capital* (London: John Wiley & Sons, 2014), 122-123.

9. Le Corbusier, *Toward an Architecture* (LA: Getty Research Institute), 149.

entitled “La Nave Luminosa: Exposición de los mares organizada por España” (The Luminous Ship: Exhibition of the Seas organised by Spain). This official brochure from the Ministry contained a brief by Buïgas explaining the project and an estimated budget. The opening sentence is clear: “To transform a large ocean liner into a fantasy palace which, at nightfall, would radiate the sparkles of an absolutely original and grandiose vision.”[10]

The deck would feature the “Great Theatre of rhythm” on a 100x25 metre platform. Two lateral facades of illuminated water with 1,000 jets moving to the beat of the rhythms, as well as crystalline terraces of contemplation framed by glass columns. Inside there would be the Festival Hall, the Theatre, an Aquarium, and the Water labyrinth. As part of the interior visit, visitors would see the installations and machinery of “Spanish engineering” that made the water-light displays work.

The ship was to set sail from the port of Barcelona alongside the Columbus Monument was designed by his father, the architect Gaietà Buïgas (1851-1919), for the Universal Exhibition of 1888. This detail reflects both the desire to internationalise the city and Buïgas’ marked romanticism.

The ship was scheduled to visit the world’s main maritime cities although it was not specified which ones. It would make stops at 127 ports a year, reaching some 90 million people. And the itinerary would be adjusted to take advantage of the best weather conditions in each place. According to Buïgas, the stay in the ports would be brief: “The novelty and grandeur of the project, together with a short stay, will ensure public success.”

Another of the principles that always sustained Buïgas’ project was that of a (Spanish) “pacifist mission.” The ship would be an instrument of “propaganda for greater harmony in international relations and universal economic collaboration.” This came at a time of growing political tension in Europe.

The primary disadvantage of the project was always the budget. The first project had an initial investment cost of approximately 150 million pesetas at the time. In February 1936, Buïgas presented another “improved” project[11], but the beginning of the Spanish Civil War (1936-1939) put it on hold for a long time.

After the Second World War, Buïgas designed a project for a World Peace Exhibition (1946) that was to be placed on a floating island with great illuminated fountains as the main elements. However, the context was not very favourable for optimistic and expensive exhibition projects.

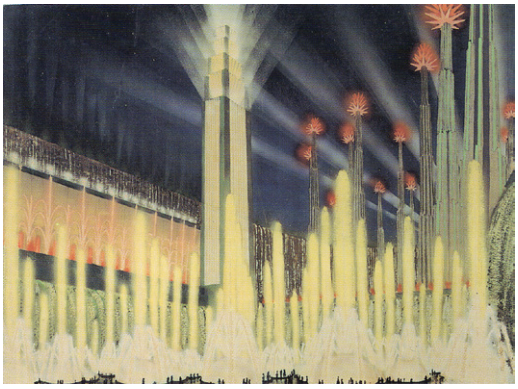
The Luminous Ship reappeared in 1953. The new project contained a museum and Spanish export products inside. It now included an auditorium for 800 people at the bow of the deck, whose backdrop behind the orchestra could be opened and communicate the stage with the large avenue flanked by illuminated fountains **(Fig. 3)**. The dimensions of the first ship project were 320 meters in length, 60 in beam (or width) and 18 in depth (or height), making it larger than the famous ocean liner Aquitania, presented by Le Corbusier as the perfect machine in his book, measuring 275 metres in length, 29 in beam and 11 in depth. However, now the ship was 112 metres in length, 36 in beam and 16 in depth[12]. The dimensions of the ship had now been considerably reduced.

10. Carlos Buïgas, *La Nave Luminosa. Exposición de los mares organizada por España* (Madrid: Ministerio de Agricultura, Industria y Comercio, 1933), 2.

11. Carlos Buïgas, *Exposición de los mares: La Nave de España* (Madrid, 1936).

12. Manuel Vigil, “La Nave Luminosa: Una exposición flotante iberoamericana,” *Mundo Hispánico*, IV, no. 67 (octubre 1953), 44.





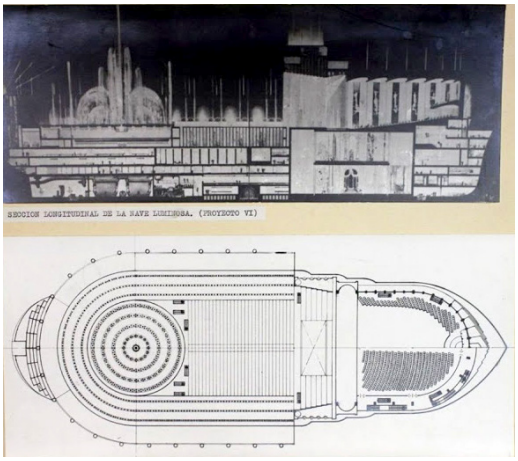




Figure 1. La Nave Luminosa (the Luminous Ship) by Carles Buïgas. © Museu d'Art de Cerdanyola, Catalonia, Spain.

Figure 2. The deck of the Ship. (Note human figures' dimension). © Carles Buïgas 1931.

Figure 3. The Luminous Ship. Project no. VI. © Carles Buïgas 1973.

Figure 4. The Luminous Ship arriving at Rio de Janeiro. © Illustration included in the novel *La Nave luminosa* (1960) by Carles Buïgas.

During a disappointing period immediately after the war, as the engineer sensed that his utopia would never be realised, he decided to write the novel *The Luminous Ship*. This was completed in 1951 and published in 1960[13]. In it, he describes what he imagined could be the ecstasy of the masses during the ship's arrival at night **(Fig. 4)**. He details the shouts of joy, hugs and even tears of emotion. A fairy tale.

13. Buïgas was also a fantasy writer. He published 6 novels.

4. THE LUMINOUS SHIP, THE PROJECT OF A LIFETIME

The history of the Ship project was marked by a cycle of hope and disenchantment, and it would occupy Buïgas' time for forty-five years, during which he produced a total of nine preliminary projects. How could one person persist in the same project for so long?

Perhaps one answer lies in the fact that it was a deep childhood desire. In fact, since he was a child, he had dreamed of building the most beautiful ship that ever sailed the seas. According to Buïgas, the seed began to grow when he was a child living in Uruguay and observed the impressive ocean liners arriving to the River Plate from different nations with the exception of his own. In explaining his first project, Buïgas stated, "If Spain cannot compete with the fleets of the Italian, French, German or English navies, it could compensate with originality and wide scope of propaganda action. Building something new and sensational."[14]

In the last project report dated 1971, there is a brief timeline of events:

> *In 1930, the Berenguer Government intended to carry out project No. 2, but resigned prematurely. Then, on four occasions, the successive projects, 3, 4, and 5, were about to come into fruition. But the changes in Government came before. It was declared a work of 'National Interest'. Personally, I have not stopped promoting it since 1929 – with only two parentheses: the one imposed by our war and a period between 1956 and 1966. During such a long promotion, I have designed nine preliminary projects, of which four turned into very complete and detailed projects. All of this absorbed me sums that, in today's pesetas, would exceed six million. I quote this to demonstrate to what extent I am convinced of the great benefit, moral and material, that the work would bring to our country.*[15]

Moral and material? For Buïgas, this was undoubtedly more than just an engineering project. It was a mission, a way to give meaning to life, and an opportunity to improve humanity.

In late 1974, the Riba brothers, who were the directors of the Scala nightclub in Barcelona, showed interest in financing the project. An office was set up in Cerdanyola, a town very near to Barcelona, to develop the project. However, just as everything was ready to begin work, on January 15, 1978, an attack occurred that burned down and destroyed the Scala club, and with it, the last opportunity for the Luminous Ship. Very weakened, Buïgas died the following year.

Even though some emblematic ships from the 20th century, considered pieces of floating architecture, used their respective decks for musical performances, such as the boat designed in 1976 by Louis Kahn, the Teatro del Mondo by Aldo Rossi in 1979, and the dramatic and heroic *Fitzcarraldo* in 1982 none of them envisioned a scenario where an array of illuminated fountains scattered across the deck would dance to the music and possibly save humanity. ■

14. Buïgas, *La Nave Luminosa. Exposición de los mares*, 4.

15. Carlos Buïgas, "La Nave Luminosa – Anteproyecto IX (escrito en 1971)", in Buïgas, *Hechos*, 408.

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BIOGRAPHY

David Caralt is an Associate Professor and researcher at the School of Architecture of Universidad San Sebastián, Chile. His research focuses mainly on urban night-time. He received a MArch and a BArch from the Polytechnic University of Catalonia, Barcelona. He is the author of *Agualuz* (Siruela, 2010) on Carles Buïgas' fantastic engineering projects, and his recent publications include the issue of the indexed journal *Materia Arquitectura* 24 "Urban Nocturne" (2023), and the books *An Accidental Masterpiece: Mies van der Rohe's: Barcelona Pavilion* (Birkhäuser, 2020) and *The Barcelona Pavilion: One Hundred Texts since 1929* (Birkhäuser, 2020), with Dietrich Neumann.

MODERN HERITAGE AND URBAN PRODUCTION

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ABSTRACT:

This essay explores the intertwined evolution of modern heritage and urban development from the 20th century, emphasising the transformative impact of modernist architecture and urban planning. It argues that the modern movement addressed critical urban challenges —such as reconstruction, housing deficits, and decentralisation— by introducing functional zoning and innovative design principles. The principles advocated by the Congrès Internationaux d'Architecture Moderne (CIAM), including the separation of urban functions and the prioritisation of human needs, shaped the "functional city" paradigm. Despite facing criticism in later years, the modernist approach significantly influenced urban forms and policies, promoting public housing and urban renewal. The article highlights the need for a nuanced understanding of modern heritage's cultural and historical significance in contemporary urban development. It suggests employing innovative strategies like adaptive reuse and heritage-led regeneration to balance the preservation of modernist legacies with the demands of present-day urban environments, ultimately aiming for sustainable and inclusive urban futures.

1. INTRODUCTION

Modern heritage and city production are closely intertwined throughout the 20th century, representing a dynamic and evolving urban phenomenon of immense value and current interest. As is well known, the modernist legacy includes buildings, landscapes, and urban plans that collectively transformed urban environments and configurations, promoting a vision of orderly and efficiently designed cities to meet the needs of modern life. Modern architecture has offered diverse strategies tailored to various historical contexts and circumstances, significantly influencing urban production by introducing innovative principles and approaches that reshaped cities and urban regions. At its core, modern heritage introduced a city-building methodology of intrinsic value, meriting acknowledgment in both theoretical and historiographical discourse.[1]

The Modern Movement emerged at a critical moment for architecture, urban design, and urban planning, attempting to provide answers to the major challenges that cities and urban regions faced at the end of the first half of the century. In the context of a welfare state that assumed the tasks of urban and territorial planning as a public function, in what has been called the "age of spatial Keynesianism,"[2] these challenges included reconstruction, urban renewal, and the housing deficit, alongside the massification of new construction technologies, including the automobile, and decentralisation through satellite cities as an alternative to the industrial city.

The intertwined history of built modern heritage and urban development throughout the 20th century uncovers various efforts by architects, urbanists, and planners to address the ongoing tension between preservation and modernisation.[3] In the first place, the modern movement is a key contribution to the model of the functional city, also known as the "scientific city."[4] Functional zoning exemplifies the impact of functionalist urbanism after the Second World War. Modernist urban planning emphasised the separation of urban functions into distinct zones, such as residential, commercial, and industrial areas, aiming to improve efficiency and organisation within cities. The CIAM laid down principles for modern urban planning, advocating for functional cities that catered to human needs, including adequate housing, workspaces, recreation areas, and transportation.[5] The CIAM Sarraz Declaration (1928) stated that "in urban planning the first place is reserved for the classification of functions: a) housing, b) work; c) recreation," and "the means for the fulfillment of these functions are: a) zoning, b) traffic regulation, and c) legislation,"[6] for land use legal control and as an instrument for the design of the urban plan (compositional-formal aspects of the city).

Functional zoning officially entered the debate with the CIAM Charter of Athens (1933), which defined it as "a system of local authority regulations considered quite justifiable" and that "a reformed type of zoning must be set up that can bring the key functions of the city into a harmonious relationship and develop connections between them."[7] It also

1. Horacio Torrent, "El patrimonio moderno en la construcción del país urbano: Dialécticas entre arquitectura y ciudad en Chile 1930-1970," *AUS [Arquitectura / Urbanismo / Sustentabilidad]*, no. 17 (2017): 11-17, https://doi.org/10.4206/aus.2015.n17-03.

2. Daniel Galland and John Harrison, "Conceptualising Metropolitan Regions: How Institutions, Policies, Spatial Imaginaries and Planning Are Influencing Metropolitan Development," In: Karsten Zimmermann, Daniel Galland, and John (eds.) *Metropolitan Regions, Planning and Governance*, Harrison Cham: Springer, 2020: 1-21.

3. Plácido González Martínez, "Built Heritage Conservation and Contemporary Urban Development: The Contribution of Architectural Practice to the Challenges of Modernisation," *Built Heritage* 1 (1), 2017: 14-25.

4. Peter Hall, *Cities of Tomorrow: An Intellectual History of Urban Planning and Design Since 1880*. Hoboken, NJ: John Wiley & Sons, 2014.

5. Javier Monclús and Carmen Díez Medina, "Modern Urban Planning and Modernist Urbanism (1930–1950)," in Carmen Díez Medina and Javier Monclús (eds.) *Urban Visions*. Cham: Springer, 2018. https://doi.org/10.1007/978-3-319-59047-9_4.

6. Congrès Internationaux d'Architecture Moderne (CIAM), *Declaración de La Sarraz* (La Sarraz, Suiza: 1928).

7. Le Corbusier, *La Carta de Atenas*. IV Congreso Internacional de Arquitectura Moderna [CIAM], 1942, https://portal.uur.cz/pdf/charty-deklarace/charter-of-athens-1933.pdf.

considered that "the four keys to urban planning are the four functions of the city: dwelling, work, recreation (use of leisure time), transportation."[8]

Architectural innovation through design that prioritised functionality, simplicity, and the use of new materials like steel and glass led to the development of iconic structures and urban forms that emphasised clean lines and open spaces that would shape the built environment for decades to come. The modernist ethos embraced the principles of standardisation and mass production, which influenced the construction of housing and infrastructure. This approach aimed to provide affordable and efficient solutions to urban housing shortages. Thus, the modern movement strongly promoted the idea of urban renewal of deteriorated urban centres as a public housing policy, often involving the demolition of older, congested areas to make way for new, planned developments. This was seen as a way to address the problems of industrial cities and create more liveable urban environments.[9]

From the totalising idea of a modern city that could embody a specific ideological or political framework in its form, space, and image, to specific architectural interventions and urban art operations oriented to the establishment of a communicative code between politicians, planners, and the population,[10] from cutting-edge expressions to traditions, and from architectural autonomy to urban integration, modern heritage has played a major role in the creation, transformation, and management of urban spaces.

Modernist urban planning has often been the subject of criticism that, following in the footsteps of the postmodern orientation, focused its attention on the negative conditions of abstraction, and mainly on its development during the second half of the twentieth century. However, as stated by Manuel de Solá Morales, insofar as the concept of urbanity during the early modern period was characterised by regularity and repetition, it led to urban forms that, despite their flaws, have resulted in the largest volume of new urban construction ever witnessed globally.[11]

The principles of modern architecture incorporated clear visions of a new type of city, which assumed that the urban plan would define the relationships between architectural works and the proposed urban fabric. Such exemplary heritage ensembles were born from the dialectic between urban planning and building design through episodes in which the architectural and urban dimensions were considered a unitary whole.[12] This relationship and synergy of scales is perhaps the main contribution of modern heritage to urban production.

In conclusion, the modernist paradigm had a significant impact on urban development from the 1920s to the 1970s. This was evident on the one hand, through urban planning, public institutional architecture, and large-scale public housing that sought to renovate cities devastated by WWII in Europe or in modernist efforts that sought to bring growth and developmentalism to the global south and Latin American cities. On the other hand, legal and regulatory frameworks and the very logic of

8. Le Corbusier, *La Carta de Atenas,* 1942.

9. Murray, Martin J. *The Urbanism of Exception*: The Dynamics of Global City Building in the Twenty-First Century. Cambridge: Cambridge University Press, 2017.

10. Torrent, Horacio. "Minor Cities and Development: Correlations between Morphology and Urban Planning in Arica between 1950 and 1980." In: Alessia Allegri, Angélica Benatti Alvim, Eunice Helena Abascal, Joaquín Sabaté, João Pedro Costa, María Cristina Schicchi (eds.) *Research Tracks in Urbanism: Dynamics, Planning and Design in Contemporary Urban Territories*. London: CRC Press, 2021.

11. De Solá-Morales i Rubió, Manuel, *De Cosas Urbanas*. Barcelona: Gustavo Gili, 2008.

12. Torrent, "El patrimonio moderno en la construcción del país urbano." 2017

economic, political, and social values of city production in each territorial context have determined how the legacy of the modern movement materialised over time. Consequently, preserving modern heritage requires a nuanced understanding of its historical, cultural, and architectural significance. At the same time, urban production must address the needs of contemporary society while respecting and integrating heritage assets, by adopting innovative approaches such as adaptive reuse, infill development, and heritage-led regeneration. ■

BIOGRAPHY

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ADDRESSING THE MODERNIST LEGACY THROUGH THE HISTORICAL TOWNSCAPE: RE-EVALUATING PUBLIC ARCHITECTURE OF THE 1970S-1980S IN GHENT (BELGIUM)

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#18

ABSTRACT

In Flanders (the northern part of Belgium) the 1970's and 1980's are often described in architectural historiography as a period of crisis, referring not only to the economy but also to the poor architecture in general, with the exception of some small-scale, private initiatives. This paper goes against this view and highlights the heritage value of the public architecture from this period, focusing on three public projects in the city of Ghent, in which architect Jan Tanghe was involved. More specifically we want to demonstrate how these projects were influenced by the modernist legacy, as well as by the specific historical context of Ghent.

From the late 1960's onwards public architecture in Flanders – as elsewhere – increasingly diversified. Though functional modernism remained the frame of reference – most designers of public buildings in the 1970's-1980's started out their career as modernists or were educated in that idiom – several buildings showcase interesting departures from the modernist paradigm. Particularly revealing are some largescale projects with a long building history that show the gradual metamorphosis of modernism into new tendencies such as structuralism.

Closely related to this departure from modernism is the reference to the historical townscape. This reference includes formal aspects such as materiality, spatial siting, volumetry and proportions. Though some projects still imply a blunt tabular rasa, often associated with functional modernism, several buildings show different strategies to dialogue with the existing urban fabric: from a disappearing act over a symbolic reply to a delicate balance between architectural autonomy and urban integration . Furthermore, a remarkable number of valuable buildings from the 1970's and 1980's already include the adaptive reuse and repurpose of the existing building stock. Finally many projects not only referred formalistically to the historical town, they also contributed to the functional urban renewal of Ghent.

1. INTRODUCTION

Recently the Flanders Heritage agency conducted a documentation and protection of post-war built heritage in the city of Ghent, Flanders (the northern part of Belgium). While the project started with an explicit focus on modernism, it soon became clear that the research period (1945-1985) offered a much more diverse heritage, including the modern classicism of the 1940s-1950s and a wide array of postmodern tendencies from the 1970's and 1980's. This more recent period, from the mid-1970's until the mid-1980's, is often described as a period of decline in the architectural historiography of Flanders, referring to the economic crisis but also to the poor architectural quality.

In the Ghent project we aimed at an unprejudiced evaluation of the building stock from these more recent periods, regardless of personal or more general taste. To achieve this, it proved crucial to supplement the canonized, architectural historiography with bottom up research: field work, interviews with original clients and designers, archival documents and contemporary local publications and documents, such as the 1988 Ghent exhibition and publication "*Architectuur als Buur*" (Architecture as Neighbour), as well as recent websites and social media accounts on postwar architecture.

The result is an architecturally very diverse selection wherein buildings from the mid-1970's till the mid-1980's prove remarkably well represented. 62 buildings from that decade were added to the inventory of immovable heritage on a total of some 200 or approximately one third. And of the 20 protected monuments five date from that recent decade, one quarter. Even more remarkable is the large share of public buildings in this selection of young heritage, given the overall negative perception of this type of architecture amongst architectural critics of the period, as well as recently.[1]

The cause for this so-called malaise in public architecture is found in the increased political interference in the choice of architects (based on political affiliation, rather than competence) and in the insufficient financing, resulting in the endless delay and reworking of projects. One example of this negative perception in Ghent is the Belgacom tower **(Fig. 1)**, realized between 1971 and 1980, right in the historical town centre. Although there's recently a growing appreciation for this type of brutalism, it was still voted as the most ugly building of Ghent a couple of years ago. It is indeed a late and very blunt example of large scale modernism. Furthermore the realisation had an air of fraud and inappropriate political interference as the contractor was appointed without public tender and the competent minister Edward Anseele jr. had to resign because of it.[2]

However, the focus on cases like this conceals a much more varied palette of public projects, realised in the historical town centre of Ghent during the 1970's and 1980's. Stylistically the disappearance of functional modernism as a leading tendency in the late 1960's opened up a broad architectural spectrum, ranging from architectural movements such as structuralism and postmodernism, to a more general plea for small-scale interventions, user participation and the conservation of the historical urban fabric. In many cases

1. Francis Strauven, "De negatie van de eigen bouwcultuur. Het opdrachtenbeleid van de Belgische en Vlaamse overheid," *Archis*, no. 9 (1987), 12-17; Marc Dubois, "1980-1990 Fragmenten van architectuur in België," *Openbaar Kunstbezit in Vlaanderen*, no. 3 (1991), 82-100; Maarten Liefooghe and Maarten Van Den Driessche, *Open oproep: 20 jaar architectuur in publieke opdracht* (Brussel: Team Vlaams Bouwmeester, 2019), 3;

2. Marc Dubois, *Architectuur en telefonie*, (Brussel: AAM - CIVA, 2019), 45.

this change is visible in the oeuvre of individual architects and even in the realisation process of larger projects such as public buildings.

To highlight the characteristics and the qualities of this recent public architecture this paper will discuss three projects in which architect Jan Tanghe was involved. As a founding member of the multidisciplinary design firm Planning (later: Group Planning) he is one of the most influential architects in Belgium of the second half of the twentieth century. However, his trajectory and realisations in Ghent are also quite representative for many other architects.

2. A SLOW AND CO-CREATIVE PROCESS

The first project, the Provincial Trade and Language Institute **(Fig. 2)**, is located just outside the historical town centre, close to the medieval Bijloke hospital.[3] It was built on a swampy terrain, next to the river, on the site of a former cement tile industry. The complex was designed by Jan Tanghe (1929-2003) in cooperation with Francis Serck (1929-2020). Both were trained at the Saint-Lukes architectural school in Ghent between 1948 and 1953, at a moment when the international modernist style made its appearance in the school program. After graduating Jan Tanghe did internships at the office of Paul Felix and Peter Callebout, two of the most influential modernist architects in postwar Flanders. Francis Serck did his internship at the Paris architectural firm of none other than architect Auguste Perret.

Serck and Tanghe received the commission for the Provincial Trade and Language Institute in 1960 after winning a national architectural competition but the final building of the complex wasn't inaugurated until 1985, 25 years later. During those 25 years the project was built in three large phases. Unsurprisingly, their initial design and the first building phase (1966-1969) show a strong influence by postwar modernism and specifically by Arne Jacobsen, for example his town hall of Rodovre (1952-1956). The complex consists of a simple orthogonal composition of rectangular horizontal volumes, each assigned a specific function, arranged around a courtyard and built on pilotis with a skeleton construction allowing for a free plan. Long curtain walls in combination with completely enclosed end façades, carefully designed stairs and long canopies that form a transition from outside to the interior, are other modernist features.

During the second phase (1977-1978) and the third phase (1981-1985) certain formal and technical aspects of this modernism were retained, for example the concrete skeleton construction and the curtain wall. Yet the overall setup and the formal elaboration of the complex deviated increasingly from the original design plans, due to the evolving needs of the school and as a response to the changing architectural climate. For the third phase the architects were deeply influenced by the brutalist aesthetic of buildings like the Boston town hall by Gerhard Kallmann and Michael Mc Kinnell (1963-1968) and the structuralist theories of the Dutch architects Aldo Van Eyck and Herman Hertzberger. The first influence translates in a bold and complex, brutalist volumetry with cantilever parts on the outside. The structuralist

3. "Provinciaal Handels- en Taalinstituut", INVENTARIS ONROEREND ERFGOED, accessed May 1, 2024, https://id.erfgoed.net/erfgoedobjecten/306487 and Evert Vandeweghe, "Jong geleerd is oud gedaan. Het Provinciaal Handels- en Taalinstituut in Gent (1960-1984)," *Monumenten & Landschappen (M&L)* no. 39.2 (2020): 26-43.

emphasis on user perspective influenced the very open and diverse interiors of the buildings with loosely defined, non-hierarchical spaces that could be claimed by the users at their discretion.

Though one can deplore that the initial modernist design was not fully realised, what took its place is at least as interesting. As such the endless reworking of the plans is not simply to be judged as unfortunate. It gave the designers the opportunity to respond to the changing needs of the program and to look beyond the issues of the day, creating a durable whole. Similarly, budgetary constraints cannot automatically be associated with a limited creativity or quality, on the contrary. The fact that two freshly graduated architects were assigned such a large scale project with a radical modernist design in the first place, was probably due to financial aspects, at least partially. Given the more conservative view of the client (the Province) and the competition program a more traditional design would have been expected.[4] However, the jury report on the Tanghe-Serck design stated that the extremely sober architecture and the simple construction would undoubtedly influence the cost in a positive way. Also when reworking the third phase of the complex, the client was probably less impressed by the structuralist theories of user perspective and the brutalist aesthetic than by arguments of time and cost efficiency that were made by the architects. The cantilevered floors of the main building for example were justified by financial arguments (allowing to save on blinds and air conditioning) as well as the use of concrete bricks instead of traditional ones in the interior.

Did these young architects receive this important commission because of their competence and quality of design, or because of (political) connections? Irrespective of the answer to this question, this project also illustrates that the architect is only one cog in the machine. Apart from budgetary restraints made by the client and the influence of several administrations on such a public project, many actors intervened. For this projects we can refer to specialists like the stability engineer who – during the third phase – was responsible for defining aspects like the cantilever parts on the outside and the pillars with stairways on the inside. Equally important are executive firms like Chamebel and La Brugeoise & Nivelles who designed and executed the curtain wall, a dominant feature that groups the different buildings phases into a unified whole. Exactly this idea of architecture as a co-creative process would become the base of Jan Tanghes later practice with (Groep) Planning, one of the first multidisciplinary firms in Belgium.

3. A SUBTLE BRUTALISM

A second public building that was designed by Jan Tanghe (Groep Planning) and Francis Serck in Ghent is an administrative wing for the province, realised between 1968 and 1971, right in the historical city centre, next to the representative province house **(Fig. 3)**.[5] Whereas the province house was delivered only a decade earlier in a pronounced historicist language, Tanghe and Serck opted for an outspoken contemporary façade architecture that can only be described as brutalist: a so-called honest use of materials

4. The competition programme asked for a distinguished, serious and sober architecture, avoiding fantastic, transient fashions ("*een streven naar voornaamheid, ernst en soberheid; zij zullen zoveel mogelijk fantasistische (sic) formules die veeleer de expressie zijn van een voorbijgaande mode weren*") at a moment when the Province put her new, traditionalist main building into service **(Fig. 3)**.

5. "Administratiegebouw van de provincie", INVENTARIS ONROEREND ERFGOED, accessed May 1, 2024, https://id.erfgoed.net/erfgoedobjecten/24741.

with repetitive prefabricated concrete beams and T-shaped columns, framing simple wooden window panes, a bold, expressive façade, compared to the more flat and immaterial curtain walls of modernism.

Yet despite this brutalist features the building is elegantly integrated in its historical surroundings. Respecting the façade silhouette and building line, making use of traditional architectural compositional elements such as a clear bay structure, customized corner bays with protruding, staircase turrets as a transition to the adjacent buildings, and a classic three-part structure with a socle, middle part and a (originally reclusive) roof floor. Moreover, the prefabricated concrete elements seem to communicate with the blue limestone bosse portal of the province house across the street.

Perhaps even more telling than the building itself are plans that remained unexecuted, made by the same architects in 1973-1974. These plans relate to a second building phase that would expand the complex up to the next street, with a similar brutalist façade architecture. However, these plans were finally discarded because it was decided that the existing buildings (19th-century neoclassicist houses) were worth keeping. Instead the adjacent house was incorporated in the existing complex. Again the phasing and the long term of the project yielded new insights, in this case a heritage-reflex.

4. (RE)BUILDING THE CITY

The third and last public building that was realised in Gent following a design by Jan Tanghe (this time in cooperation with Paul Lievevrouw) consists of a police station **(Fig. 4)**, situated in the dense fabric of a historical living quarter.[6] Designed in 1981 and delivered in 1996 this project again has a long building history. The building lot – a complete building block in between four streets – was historically the site of a 17th century monastery that was largely rebuilt in the 19th century. In recent decades it had been repurposed as police barracks with little respect for the historical architecture, for example by providing parking lots.[7] Hence it was decided to completely demolish the existing buildings and replace them with a new construction.

The architecture can be seen as typical for postmodernism in Flanders (and by extension in Belgium).[8] It blends in with the 19th-century neoclassicist bourgeois architecture of the surroundings with two or three floors (depending on the street), hipped roofs, a plastered façade on a socle in blue limestone, a horizontal structuring of the façades with cornices and strings, vertical structuring with pilaster strips and simple columns, carefully worked out corner solutions, traditional wooden window panes and decorative metal fencing. Yet at the same time the architecture is clearly contemporary through the unusual use of colour and the detailing. Despite the large scale and architectural variety, the complex is also clearly recognizable as a whole, in the first place because of the strong symmetrical lay out, which also contributes to a certain formality or monumentality, befitting the function as a police station.

In a nutshell the architecture successfully balances between urban integration and architectural autonomy. On a larger scale the complex restored the historical building block that had been compromised the previous

6. "Rijkswachtkazerne", INVENTARIS ONROEREND ERFGOED, accessed May 1, 2024, https://id.erfgoed.net/erfgoedobjecten/307187.

7. "Klooster der Ursulinen", INVENTARIS ONROEREND ERFGOED, accessed May 1, 2024, https://id.erfgoed.net/erfgoedobjecten/25706.

8. Hilde Heynen, "Het postmodernisme en de Vlaamse architectuur," *Vlaanderen*, no. 44 (1995): 341-346.









Fig. 1. Geo and Dirk Bontinck, Belgacom Tower, Ghent, Belgium, 1971-1980. © Evert Vandeweghe, 2024.

Fig. 2. Jan Tanghe and Francis Serck, Provincial Trade and Language Institute, Ghent, Belgium, 1960-1985, with first phase (1966-1969) on the right and third phase (1981-1985) on the left. © Evert Vandeweghe, 2024.

Fig. 3. Jan Tanghe and Francis Serck, provincial administrative building, Ghent, Belgium, 1968-1971, with the traditionalist province house (1945-1960) on the left. © Evert Vandeweghe, 2024.

Fig. 4. Jan Tanghe and Paul Lievevrouw (Groep Planning), police barracks and housing, 1981-1996. © Evert Vandeweghe, 2024.

decades. A few small setbacks from the building line provide space for some greenery, privacy, light and variety. Equally important as the architectural form and town planning is the interaction between private, semi-public and public space, mainly with see-throughs and a courtyard.[9] Finally the program is also worth mentioning, as this complex combines the function as a police station with some 14 dwellings, as such contributing to the urban renewal, treating the city as a work space as well as a living space.

5. CONCLUSION

The three case studies that were dealt with in this paper confirm that public building projects during the 1970's and 1980's were often marked by long execution periods, phased executions, changes and budgetary restraints. However, these factors weren't solely detrimental but could also contribute to the quality, public support and sustainability of these projects. By looking beyond the issues of the day the projects proved forward-looking. An obvious example is the administrative building of the province where the plans for the expansion of the brutalist building were abandoned in favour of adaptive reuse and repurpose of the existing building stock, anno 2024 more relevant than ever.

It is clear that public architecture from this recent period is all too often reviled on the base of a few notorious building projects. Behind these oversized failures a lot of projects were realized that demonstrate an adaption to the human scale and to the context of the historical town. Apart from their formal appearance, be it modernist, brutalist or postmodern, they often contributed to the urban renewal, turning Ghent in a few decades from a place of decay and high vacancy rate into one of the most sought-after living environments of Flanders.

9. This attention for the private, public and semi-public sphere is also present in the Provincial Trade and Language Institute as this complex functions as a crossing between two streets, and offers an enclosed but publicly accessible courtyard.

Internationally this type of government architecture is increasingly recognised as heritage, for example in the Netherlands. Although the planning and political context there is quite different from Belgium, some similar heritage can be detected.[10] One example is the National Service for Archaeological Research in Amersfoort (1976-1987): a complex that is perfectly integrated in the historical town centre in siting and volumetry but clearly contemporary in the concrete façade architecture (strongly resembling the administrative province building in Ghent). This building is on a list of some 16 government buildings from the period 1963-1990 that were already in 2004 designated as "inspiring" by the Chief Government Architect of the Netherlands. Twenty years later none of these buildings have yet been designated as a national monument but most have become local monuments and – most importantly – none have been demolished.

The three buildings which are discussed in this paper have recently been recognized as inventoried immovable heritage, as were 60 other buildings from the mid 1970's till the mid 1980's in Ghent. The Provincial Language and Trade Institute is also protected as a monument. A future research project on similar architecture in smaller towns and villages in Flanders will hopefully further our understanding and appreciation of this recent heritage.[11] ■

10. This paragraph is based on: S.N., *Inspirerende bouwkunst Ons wereldbeeld in de architectuur van na 1965* (Den Haag – Amersfoort: Atelier Rijksbouwmeester – Rijksdienst voor het cultureel erfgoed, 2021).

11. "Bouwkundige beschermingsthema's", INVENTARIS ONROEREND ERFGOED, accessed

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BIOGRAPHY

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MODERN URBAN LANDSCAPE: TRACES OF IDENTITY, VECTORS OF SUSTAINABILITY. THE CASE OF THE MATTHEI NEIGHBOURHOOD IN OSORNO.

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#18

ABSTRACT

The study aims to collaborate on constructing urban knowledge with cultural belonging. It seeks to identify and characterise the current state and usage of spaces and architectural types in the Matthei neighbourhood, a modern heritage urban landscape. The goal is to understand the role of said landscape in constructing a sense of belonging to generate knowledge that guides recommendations for improvement aimed at reinforcing aspects of uniqueness and identity and promoting sustainable updates.

The methodology included fieldwork, consisting of tours to identify, delimit, and gather information on the current state and usage of spaces and intentional photographic records focusing on public areas and modern architectural types. In addition, it involved analysis through observation and critical interpretation of the visual content and the development of a plan for the current state of space and modern structures. Sociology played a role through the creation and application of participatory cartographies and interviews to gather perceptions and assessments from neighbourhood residents. Results of the preliminary tour showed that the urban layout began as a garden neighbourhood, equipped with tree-lined public spaces and curved streets that created a particular spatiality with a marked sense of interiority. This novel urban configuration facilitated the practice of modern ways of life. Several houses adopted new stressed architectural forms, blending modern aesthetics with local factors.

However, this peculiar landscape is undergoing numerous transformation processes: Public spaces are deteriorating due to poor maintenance, and inadequate treatment is jeopardising the integrity of these assets. The single-family housing complex is changing its function and its overall characteristic appearance. Establishing commercial uses alters the modern spaces and structures within the neighbourhood, affecting its dynamics and residential way of life.

1. PROBLEMATIC OF THE TOPIC

The landscape, which encompasses both the tangible and intangible dimensions of culture, is presented as a "heritage bearing past significations"[1] and as an integrative synthesis of the interventions made within an environment.[2] This project investigates the residential urban landscapes of local modernity, using the Matthei neighbourhood in Osorno as a case study. It seeks to observe their spatial and architectural components, and the meanings and cultural values assigned to them by their inhabitants, which help define habitat and shape its identity.[3]

2. STUDY RELEVANCE

The proposal addresses a research area pertinent to understanding the complexities of inhabiting contemporary urban landscapes. It is relevant as it contributes to enhancing our understanding of the landscape as a construct of identity and a bearer of a sense of belonging, which are crucial aspects in achieving sustainable urban evolution.[4] Modern residential landscapes, as cultural phenomena, constitute essential elements in forming identity[5] since they provide individuals with components of self-recognition, fostering a sense of belonging within a community.[6] These landscapes are both material and immaterial constructs where the specific practices of their communities have been "sedimented" and manifested.[7] Studying these landscapes yields insights into "individual and community identity needs,"[8] enhancing quality of life and promoting contemporary social sustainability.

3. OSORNO MODERN LANDSCAPE

Since the beginning of the 20th century, Osorno has been regarded as a paradigm of regional progress, with its inhabitants pioneering "the future direction of the region and of Osorno as a modern city."[9] This dynamic, which was most pronounced between the 1930s and 1950s, facilitated the early stages of modern urbanisation, characterised by a collaborative effort between architecture and landscape architecture under the regulatory framework of the Osorno Transformation Plan. This plan, developed between 1929 and 1930 by the German landscape architect Oscar Albert Prager, had various impacts through its partial implementation. Its focus on landscape design significantly influenced the development of public spaces in Osorno, as evidenced by the fact that 10 out of 16 plans within the Transformation Plan were landscaping proposals for public spaces.

Prager's vision for urban development was rooted in the principles of Civic Art, an urban discipline influenced by the Arts and Crafts movement and Camilo Sitte's artistic urbanism. This approach enabled him to modernize while respecting the lifestyle aspirations of a local cultural group, considering "the manifestation of the moral and aesthetic truths of the classical tradition, along with the rational incorporation of modern needs within our cultural heritage."[10] Within this context, the Matthei neighbourhood emerged as a modern garden suburb for the small city of Osorno, which had fewer than 20,000 inhabitants at that time.

1. Lisa Diedrich, "Pensar el sitio," in *Paisaje y patrimonio*, ed. Javier Maderuelo (Huesca: Abada Editors, 2010).

2. Amador Ferrer I Aixala, "La valoración y gestión del paisaje urbano: estrategias de actuación," in *Paisaje y ordenación del territorio*, ed. Florencio Zoido Naranjo y Carmen Venegas Moreno, 2000, 269-275.

3. ICHAP, Carta Chilena del Paisaje, 2011.

4. ECLAC, *Superar la pobreza mediante la inclusión social* (Santiago: CEPAL, 2008). Accessed July 2024. https://www.cepal.org/es/publicaciones/21390-superar-la-pobreza-mediante-la-inclusion-social.

5. Jorge Larraín, *Identidad chilena* (Santiago: LOM, 2001).

6. Larraín, *Identidad chilena*.

7. Ramón Gutiérrez, "Una mirada crítica a la arquitectura latinoamericana del siglo XX. De las realidades a los desafíos," in *1810-1910-2010. Independencias dependientes. Art and national identities in Latin América*. (Dresden: Technische Universität Dresden, 2012).

8. Francisco González, "Lugarización, globalización y gestión local." *Journal documentación social* no. 133, (2004): 11-30.

9. S. Fernández, D. Francke, and K. Osses, *Osorno, la ciudad moderna del sur de Chile. Salubridad, sociabilidad y discursos* (Osorno: Universidad de los Lagos, 2016).

10. Gordon Simmons, "The American Vitruvius: An Architect's Handbook of Civic Art. Werner Hegemann , Elbert Peets , Alan J. Plattus," *Winterthur Portfolio* 26, no.1 (Spring 1991): 99.

Today, a century after the inception of Osorno's modern urban landscape, the remnants of these modern constructs are still discernible, and many remain in active use. These elements form part of the ongoing local process of continuity and change, or "renewed continuity." [11] Intertwined with remnants of preceding and succeeding urban landscapes, these traces contribute to the rich diversity of Osorno's landscapes, including the Matthei neighbourhood.

4. OBJECTIVES

By approaching the study of the Matthei neighbourhood from a landscape perspective, we aspire to generate urban knowledge with cultural relevance and valuable information to support the updating of this local landscape. Our goal is to understand "how the community accepts the habitat that sustains it and sees itself reflected in it."[12] We consider this approach to the local urban landscape as an exploratory proposal to identify some defining attributes of the Matthei neighbourhood. This focus renders it a subject of study that has yet to be explored.

The expected objectives include:

a) Identifying and delineating the modern residential urban landscape unit corresponding to the Matthei neighbourhood;

b) Conducting an intentional photographic record of its spaces and modern architectural types;

c) Characterising the configurations of spaces and architectural types, their current state, and uses;

d) Observing the role of the landscape in constructing a sense of belonging;

e) Generating recommendations to reinforce aspects of identity and uniqueness, promoting the sustainable updating of the neighbourhood; and

f) Refining the modern landscape study technique for future applications.

Some questions raised include: What physical characteristics does the landscape of the Matthei neighbourhood present as a built, in-use trace of local modernity? Is it possible to view the modern landscape of the Matthei neighbourhood as a vector of identity and contemporary sustainability? What role does it play in building a sense of belonging, local quality of life, and sustainable urban evolution? How could it contribute to Osorno's identity projection?

A current problem we foresee is the increasing speed of its transformation processes and the consequential mutation of the neighbourhood from a purely residential area to one where commercial and service activities have gradually been established. This shift leads to the arrival of non-residential inhabitants whose commercial activities alter daily life and the original built landscape, transforming properties for new purposes and thereby affecting the built structure, social network, identity, and sense of belonging.

5. METHODOLOGY

The exploratory methodology of spaces and architectures of the Matthei neighbourhood consists of fieldwork. It includes carrying out urban exploration tours to identify and delimit this landscape unit and gather information about

11. Ignacio Español, "La recuperación del valor del paisaje urbano," *Journal Ingeniería y territorio*. no. 75 (2006), 10-17

12. Hugo Weibel, "¿Alguien se apuntó a la ruptura? Osorno siglo XX. Expresiones de continuidad renovada." Primer congreso Vivir la ciudad. Patrimonio, diversidad cultural e identidad en la ciudad contemporánea. Posadas, Argentina, October 2018, 60-67.

its condition and current uses. At the same time, the execution of intentional photographic records focused on public spaces and modern architectural types is taking place. The sampling considered recording the diversity and wealth of the information. These tasks are, to date, what we have begun to carry out. Subsequently, the method contemplates organising the collected material to proceed with its critical interpretation through observation of the visual content. The methodology also considers the development of a plan for the arrangement and links of modern architecture and public spaces, the plan of modern built footprints. Sociology plays a part through the application of participatory cartographies and interviews with the neighbourhood's inhabitants regarding the meanings and valuation of modern traces.

6. PRELIMINARY EXPLORATORY TOUR

Having only part of the work to hand, some observations can be made. Based on the information gathered from tours and preliminary photographic records, it can be observed that, unlike the checkerboard layout of the historic centre of Osorno, the layout of the Matthei neighbourhood features wide streets and tree-lined curved paths. Its spatial design is characterised by a free geometry that determines a marked sense of interiority that identifies and sets its spatial experience apart from surrounding sectors. This characteristic, added to the fact that this subdivision only admitted plots for isolated single-family housing with a front garden and large public spaces for circulation and permanence, including three squares, gives it a unique identity.

6.1 HYBRID SINGLE-FAMILY HOME

The novelty of this urban configuration soon became a scene for the practice of modern lifestyles, and as such, many of the single-family homes built incorporated new architectural forms while also taking local factors into account. The author observed that modernisation processes and local architectural traditions have been superimposed on these houses, resulting in a particular form of local modern expression. Along with reflecting the reality of our Latin American cities, in which "traditions have not gone away, and modernity has not just arrived,"[13] the southern context has also influenced them resulting in architectural expressions marked by new dialogues and synthesis **(Fig. 1)**. This heritage legacy, still in effect, became an architectural identity in conflict with tradition and modernity, whose tensioned or hybrid forms have made use, in each case, of a pool of available architectural elements, modern and traditional, used flexibly to design the architectural expression of these homes.

6.2 PUBLIC SPACE

The constituent elements of the Matthei neighbourhood's public space make up a spatial network of circulations including roads and sidewalks, and permanences consisting of squares and neighbourhood squares, whose sense of unity is verified in a continuous network of public spaces linked and visually integrated into the front gardens of the homes.

13. Néstor García Canclini, *Culturas híbridas. Estrategias para entrar y salir de la modernidad* (México: Grijalbo, 1990).

This plot or public "green system" included, as spaces of permanence, a small square, known today as the Plazoleta del Obispado, and originally as Miraflores and two neighbourhood squares, the first of which is called Prager square, originally Argentina **(Fig. 2)** and the second called Suiza square, originally Adolfo Matthei **(Fig. 3)**. These spaces are strategically located, positioned at the ends of the neighborhood, and feature a notable plant collection, highlighting the landscape presence of various large tree species. The experiences of space are different in each plaza. Square Prager's design considered the topography, which slopes gently towards the east. The space was organised based on an extensive plane of grass surrounded by a peripheral paved circuit that assumes said topography. This circuit not only allows access to the free link with the vast interior grass space, but also links with two other relevant systems. On the one hand, the small perimeter squares are arranged in corners and on each side of the square, whose particularity is that, when facing away from the square, they connect with the neighbourhood.

On the other hand, the circuit is related to a system of unpaved paths that zigzags into the square, intersecting with the trees. Finally, the trees do not seem to follow an apparent geometric pattern. However, they are all arranged close to the edges, leaving the central space clear, thus configuring a central void and a clear boundary. Due to the arrangement and relationship of these elements, the interior space of this square manages to block out the city noise.

Another way of conceiving the central open space was tested in Suiza square. The longitudinal proportion of its space gave rise to the design of a built central axis, running the length of the entire square, incorporating elements such as a staircase and a rotonda. The space is cleared on both sides of this longitudinal axis, like a *vert tepis*. All three species are arranged around the perimeter, defining and enclosing it. On the contrary, there are no trees planted at the ends of the square as the neighbouring housing complexes constitute the visual boundary. Finally, similarly to Prager square, a peripheral paved ring is designed, linking the square with the surrounding neighbourhood.

The Plazoleta del Obispado, triangular in shape, uses similar design files. It is also organised by a perimeter pavement strip surrounding a grass plane. In addition, it presents an unpaved circulation system that enters the green centre from each side, joining the centre, where it makes up a living space. This circulatory system's seats are oriented towards the square's interior. All trees are arranged on the grass plane, close to perimeter areas. A vertical conifer planted at the southern vertex of the square stands out, marking its triangular shape. Currently, the replacement of tree species with shrubs can be observed.

In addition to these squares, the public "green system" included wide pedestrian sidewalks that link them. The subdivision defined proportions, location, and modes of relationship between sidewalks and green strips and the tree planting location (sometimes implemented with specimens of foreign origin), which characterised the streets of this new residential sector as a notably greener space than other sectors. Prager announced in the text of the Osorno Transformation Plan that "By making the plantations with a certain art, amazing effects are obtained, similar to a park."[14]

14. Prager, "La Prensa" newspaper, Osorno, February 22, 1930.







Figure 1: Osorno, Chile, Hybrid single-family home. ©Dr. Hugo Weibel F. Archive, Hugo Weibel, 2020.

Figure 2 Osorno Chile, Plaza Prager. Arborisation, grass plan, and unpaved interior walks. ©Dr. Hugo Weibel F. Archive, Hugo Weibel, 2024.

Figure 3 Osorno Chile, Plaza Suiza, Tree planting, roundabout, and paved perimeter path. ©Dr. Hugo Weibel F. Archive, Hugo Weibel, 2024.

7. AFTER PRELIMINARY EXPLORATION

We have observed that the particular urban landscape of the Matthei neighbourhood would be of interest as an identity construct. This particularity is at risk given the current processes of change and degradation to which the neighbourhood has not been immune.

Along with the particularities observed in architecture and public space, it has also been observed that the neighbourhood has begun to suffer from the processes of transformation and deterioration. Due to aging or poor maintenance, the squares, small squares, and street profiles deteriorate. Trees have been mutilated or cut down because they have pathogenic processes. The poor treatment and lack of prevention have put the integrity of such assets at risk. For its part, the housing complex has progressively mutated its function and, with it, also its characteristic overall image. The installation of commercial premises has visibly affected the neighbourhood's structures and spaces, their way of residential life, and neighbourhood dynamics. However, this group of homes still collaborates in the configuration of this particular stressed modern urban landscape, leveraging the local identity image and preserving the modern historical memory of Osorno.[15] Maintaining their residential use, these homes continue to foster a sense of belonging and social sustainability.

We have yet to obtain meanings and valuations regarding this modern landscape by its inhabitants. In doing so, we will have the information necessary to allow us to make recommendations for improving this local landscape, reinforcing aspects of uniqueness, identity, and quality of life that promote its sustainable updating. Given the state of the Matthei neighbourhood, the study and assessment of its local modern architecture and spaces is urgent. ■

15. Hugo Weibel, "Patrimonio moderno, hábitat sustentable y sentido de pertenencia. El caso de la Plaza de Armas de Osorno," in *Actas XX Congreso Arquisur 2016* (Concepción: Universidad del Bío-Bío, 2017), 222-229, 10.

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SUN, SPACE, GREENERY AND GLOBAL WARMING. THE POTENTIAL OF THE MODERN HOUSING LANDSCAPE IN CLIMATE CHANGE MITIGATION

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ABSTRACT

Walking through some modern mid-century housing complexes, a recurring pattern can be observed. Regardless of their shape, size and location in the world, the following is repeated: blocks surrounded by large areas of permeable soil and, on top, vegetation-covered paths and squares leading to intercommunal avenues. Both features, from an Urban Ecosystem Services (UES) approach, hold instrumental value in climate change, as both attributes are the basis for reducing urban heat islands and flood risk. Unfortunately, the lack of research demonstrating this in such housing developments has led to overlooking this capacity and a lack of solid arguments for its conservation.

Through the combination of remote sensing instruments LST, NDVI, and fieldwork, this paper will demonstrate how the maximum temperatures are lower inside than outside their perimeters and the role played by urban morphology for this to occur. The case study includes a group of nine modern architecture housing complexes made up of isolated blocks in the municipality of Ñuñoa, Santiago (Chile). It is possible to establish a causal relationship between the large areas of permeable soil, the fragments of continuous vegetation between the buildings, and the lower surface temperatures.

1. INTRODUCTION

Numerous modern architecture housing complexes are recognised as heritage sites worldwide, valued for their tangible and intangible attributes. Unlike most heritage built before the 20th century, these complexes' significant attributes lie not in their buildings but in the spaces between them, specifically their public spaces and green areas with permeable soil. An essential aspect of their authenticity lies in the environmental considerations embedded in their designs. Revisiting the concept of authenticity and modernity through ecological, feminist, and postcolonial lenses offers a nuanced understanding of modern architecture.

Technological advancements now allow us to quantify the environmental considerations in these designs, emphasising their relevance in the context of climate change. Examining the modernist approach to sustainability allows us to appreciate and preserve the instrumental value of these architectural works in addressing current environmental challenges. However, preserving this "green heritage," a term used to describe the unique and irreplaceable green spaces within these modern architectural housing complexes, presents challenges due to three primary issues. First, there is a lack of knowledge on preserving these green spaces amid climate change. Second, maintaining the intricate mix of vegetation in public and private areas requires significant resources. Third, climate change effects, such as rising temperatures, drought, and floods, complicate preservation efforts. These green spaces, as they are living entities, they have rapid life cycles and swift deterioration, underscoring their fragility compared to buildings.

Despite these challenges, ongoing vegetation and permeable soil lessen global warming effects, such as urban heat islands and flood risks. This article suggests that demonstrating the instrumental value of these green spaces in tackling climate change can aid their preservation. By emphasising their ability to reduce maximum temperatures, strategies can be developed to conserve their vegetation and the environmental benefits they provide.

This paper combines remote sensing instruments NDVI, LST, and field measurements to show how maximum temperatures within these housing complexes are lower than outside their perimeters, influenced by urban morphology. The case study examines nine modern housing complexes in Ñuñoa, Santiago (Chile), demonstrating how lower surface temperatures relate to building groupings and surrounding vegetation. The study also identifies how to adapt existing vegetation to enhance ecosystem services and benefits that nature provides, such as clean air, water, and food, contributing to human well-being in these complexes.

The article is divided into three sections: 1) Introduction, 2) Permeable soil, continuous vegetation, and lower temperatures: The ecosystemic potential of modern housing complexes, and 3) Conclusions.

2. PERMEABLE SOIL, CONTINUOUS VEGETATION AND LOWER TEMPERATURES IN MODERN HOUSING COMPLEXES

It is well known that there are two responses to counteract the impacts of climate change: mitigation and adaptation. Among the adaptations, one

of the most important is the creation of urban green infrastructure, such as parks and biological corridors, as they contribute to improving air quality,[1] mitigate the impact of heat waves[2] and reduce the risk of flooding by absorbing rainwater.[3] The latter corresponds to ecosystem services of climate regulation. Ecosystem Services is an anthropocentric and relatively recent concept, referring to the direct and indirect benefits people obtain from nature's processes in urban contexts.[4] In this sense, it does not hide the interest of instrumentalising that ""something" for material or immaterial human benefit. It refers to the instrumental value based on its usefulness or capacity to achieve specific desired results.[5] This concept places human needs and preferences at the centre of the ecological universe, measuring the health of ecosystems in terms of their capacity to benefit humans, and thus, we understand them as "services."[6]

It is important to note that regulating SEUs is closely related to the soil cover in a given area. It refers to the different types of vegetation, permeable surfaces (able to absorb water), and impermeable surfaces (soil sealed by concrete, asphalt or other, which prevents water from penetrating the subsoil).[7] On the latter, walkways, streets, buildings and parking lots directly affect the soil's capacity to absorb water and regulate the hydrological cycle, and, consequently, areas with a high proportion of impervious surfaces can give rise to flooding and runoff problems, negatively affecting the provision of regulating ecosystem services. In this sense, scientific evidence amply supports the importance of permeable soils in urban contexts. Furthermore, vegetation in urban forests, parks, squares or large green areas also plays a vital role in the provision of regulating services. In this sense, the size, spatial distribution and accessibility of trees determine the quantity and quality of ecosystem services they provide,[8] since they provide habitats for fauna, promote biodiversity and pollination,[9] and facilitate ecological processes essential for the functioning of the ecosystem.[10]

One of the most effective ways to reveal the presence of Ecosystem Services is by using satellite remote sensing tools. This technique has been widely used to calculate surface temperatures, location and vegetation health and to identify the planet's different land covers. Thus, for this research, two remote sensing tools used, the LST index and NDVI. The first one refers to the temperature of the earth's surface in a specific geographic area. For the case of Santiago, Chile, the seasonal average of the last summer, from 12/21/2022 to 03/20/2023, was obtained. The second one is an indicator of photosynthetically active biomass, which allows one to locate vegetation spatially, quantify its density, and determine its forms of clustering or fragmentation.

In line with the above, large areas of permeable soil and continuous vegetation can be distinguished in numerous housing complexes typical of the Modern Movement built in the mid-twentieth century. Despite the diversity of their shapes, sizes, and locations worldwide, it is possible to identify extensive areas of permeable soil and vegetation comprising grass, shrubs, and trees of various sizes and species immediately surrounding their buildings. These characteristics warn that, beyond the scenic beauty caused

1. Emma Corredor, Jorge Fonseca, and Edwin Páez, "Los Servicios Ecosistémicos de Regulación: Tendencias e Impacto En el Bienestar Humano," *Revista de Investigación Agraria y Ambiental* 3, no. 1 (2012): 77–83.

2. Chao Fan, Soe W. Myint, and Baojuan Zheng, "Measuring the Spatial Arrangement of Urban Vegetation and Its Impacts on Seasonal Surface Temperatures," *Progress in Physical Geography* 39, no. 2 (2015): 199–219the impacts of the spatial arrangement (e.g. clustered or dispersed.

3. EEA, *Green Infrastructure and Territorial Cohesion, Tecnical Report (Number 18)*, 2011; Aleksandra Kazmierczak and Jeremy Carter, "Adaptation to Climate Change Using Green and Blue Infrastructure A Database of Case Studies," University of Manchester, 2010, 182.

4. Temanord, "Kulturarv Og Økosystemtjenester. Sammenhenger, Muligheter Og Begrensninger" (København: Nordisk Ministerråd, 2015); Alexis Vasquez, "Infraestructura Verde, Servicios Ecosistémicos y Sus Aportes Para Enfrentar El Cambio Climático En Ciudades", *Rev. geogr. Norte Gd*., n° 63 (2016): 63-86.

5. Chan, "Repensar Los Servicios de Los Ecosistemas Para Abordar y Navegar Mejor Los Valores Culturales", *Economía Ecológica* 74 (2012): 8–18; Emma, Corredor, Jorge Fonseca, and Edwin Páez, "Los Servicios Ecosistémicos de Regulación: Tendencias e Impacto En El Bienestar Humano," *Revista de Investigación Agraria y Ambiental* 3, no. 1 (2012): 77–83.

6. Tally Katz-Gerro and Daniel E. Orenstein, "Environmental Tastes, Opinions and Behaviors: Social Sciences in the Service of Cultural Ecosystem Service Assessment," *Ecology and Society* 20, no. 3 (2015)

by the abundant vegetation, it is possible to hypothesise about the presence of Ecosystem Services of climate regulation thanks to the abundance of permeable soil and continuous vegetation in each of the cases.

In various municipalities in Santiago, Chile, numerous medium-rise housing complexes were built from 1936 by the Caja de Habitación Popular and the Corporación de la Vivienda (CORVI). Particularly in the municipality of Ñuñoa, located in the eastern sector of the capital, there is a group of 9 housing complexes made up of semi-detached houses and isolated blocks of 4 and 5 floors along Grecia Avenue. This area is part of a large-scale urban project typical of 20th-century modernity. It corresponds to the expansion of urban areas towards the eastern periphery on agricultural farms. Consequently, it represents both an urban planning and architectural endeavour, in which it is possible to compare different projects carried out by different architects and therefore, different forms of both their buildings and their arrangements within an area built in a similar period.

Under the LST, it is possible to observe three phenomena related to surface temperature. Firstly, within all the blank polygons, which indicate the typology of isolated blocks, the temperature is lower than outside them. These differences between inside and outside vary; for example, they are more explicit in the right sector of the frame than in the left sector. It is also observed that these lower temperatures exceed the limits towards the sectors constituted by semi-detached houses (a).

Secondly, it is also observed that in all the selected assemblages, there are continuous fragments of lower temperatures along their perimeter avenues, especially in the right sector of the frame, mainly along the diagonal avenues (b) and along Irrarázaval Avenue and sector 1 of Villa Frei (c). Third, and conversely, the highest temperatures are observed as isolated fragments of varying sizes. The largest fragment is located near the National Stadium (d), while the smallest fragments appear as isolated fragments in supermarkets, shopping centres, warehouses and minor industries (e).

Figure 2 below shows the same frame with isolated pixels between 30° and 36°. This reveals another striking phenomenon. In some cases, the masses of lower temperatures seem to originate from within the polygons of isolated blocks, from which their temperature radiates (fragments 2, 3 and 5). In others, the masses of lower temperatures originate externally and encompass the sectors of isolated blocks (fragments 1 and 4). In addition, it can be seen that the green fragments (between 30° and 35° C) form distinct continuous temperature masses over sectors comprising buildings of different shapes and heights in fragments 1, 2, 3, 4 and 5. For example, the temperature range is the same in fragment 5, consisting of the 5-storey Villa Olímpica and a sector of 8 towers, measuring 22 storeys in height in the upper left corner (6). This is also the case in the upper right corner of fragment 1. Moreover, along Irarrazaval Avenue, there are numerous buildings up to 25 storeys high with very little green space, as the spectral classification model will show in the next section. Interestingly, along this fragment, the Villa Frei sector, made up of blocks and high-rise towers, has the lowest surface temperature within its context (7).

7. T. Elmqvist et al., "Benefits of Restoring Ecosystem Services in Urban Areas," *Current Opinion in Environmental Sustainability* 14 (2015): 101–8, https://doi.org/10.1016/j.cosust.2015.05.001; Ignacio Fernández, "Dime Qué Tipo de Vegetación Tienes y Te Diré En Qué Comuna Vives", *Revista de Geografía Norte Grande* 208, no. 82 (2022healthy and resilient cities (e.g. adaptation to climate change effects): 193–208. https://doi.org/10.4067/s0718-34022022000200193

8. Katherine N. Irvine et al., "Chapter 10 Ecological and Psychological Value of Urban Green Space," in *Dimensions of the Sustainable City*, 2010, 288.

9. Amélie Y. Davis et al., "Enhancing Pollination Supply in an Urban Ecosystem through Landscape Modifications," *Landscape and Urban Planning* 162 (2017): 157–66

10. Elmqvist et al., "Benefits of Restoring Ecosystem Services in Urban Areas", *Current Opinion in Environmental Sustainability* 14 (2015): 101–8. https://doi.org/10.1016/j.cosust.2015.05.001; Hyun Woo Kim et al., "Exploring the Impact of Green Space Health on Runoff Reduction Using NDVI," *Urban Forestry and Urban Greening* 28, no. October (2017): 81–87.



Figure 1. 1) Villa Canadá; 2) Población EMPART Salvador Sur (1948); 3) Villa Olímpica (1962); 4) Población Lo Valdivieso North and South (1963, known today as Villas México, Alemana (5) and Yugoslavia (4); 7) Villa Los Presidentes (1968); 8) Villa los Jardines; 9) Villa Frei. © Elaborated by author.

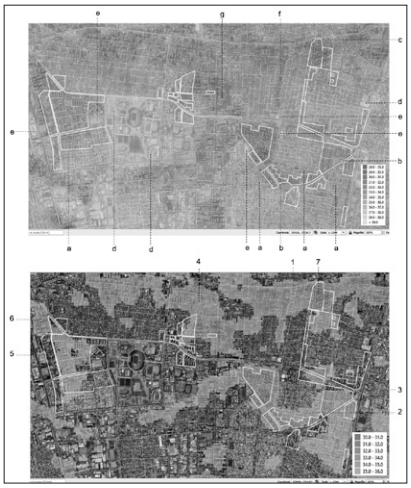


Figure 2. Top image shows LST index on 9 case studies in white polygons. Bottom image, LST index highlights temperatures between 30°C and 36 °C. © Elaborated by author.

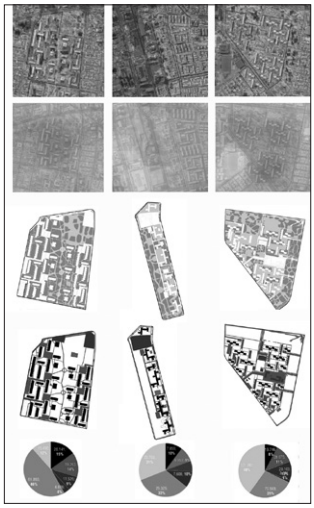


Figure 3. A comparative table between the NDVI index (top line), LST index, and permeable and sealed ground cover maps in Villa Frei, Villa Canada, and Villa Los Presidentes. © Elaborated by author.

When assessing the same sector under the NDVI vegetation index (as seen in the upper images), three housing developments showed higher indices of photosynthetically active vegetation: Villa Canadá (VC), Villa Los Presidentes (VLP) and Villa Frei (VF). As discussed above, the composition of the soil cover could play a direct role in these indices. For this reason, a field study is carried out to categorise the 3 scenarios into 2 groups: sealed soils (residential buildings, footpaths, streets, car parks, and equipment) and permeable soils (pasture and soil and Marcello).

In all 3 cases, the permeable soil surface is more significant than that of the sealed soil. In addition, almost all of the soil immediately surrounding the blocks is permeable and continuous and is only interrupted by the access paths to the blocks. Regarding the type of permeable soil cover, VF has the highest amount of grass cover (46%), and the lowest percentage is found in VLP (28%). While in VF, 100% of the ground cover surrounding the blocks is grass and in the other cases, this proportion decreases to less than half, as shown in the surveys. In terms of sealed ground cover within the total area, VF has the highest percentage (42%), followed by VC (36%) and VLP (32%). The same decreasing proportion is observed in the area covered by buildings: VF 15%, 10% VC and 8% in VLP.

However, when comparing the LST for each case, a correlation is evident between the lower temperatures and the permeable soil surfaces, particularly where the wooded and pasture surfaces are located. However,

it is striking how, in VLP, there are higher minimum temperatures despite having smaller areas of pasture and larger areas of nude soil. One possible answer is the spatial clustering of the blocks.

3. CONCLUSIONS

This study uncovers a causal relationship in modern housing complexes between permeable soil surfaces, continuous vegetation and lower surface temperatures. The spatial structure of these groups promotes significant environmental benefits, especially in mitigating the effects of climate change, such as lower temperatures. This phenomenon arises from large areas of permeable soil surrounding the buildings, which allow vegetation to form continuous fragments from the empty spaces between buildings to surrounding avenues.

Furthermore, the shape of the buildings influences the amount of surrounding vegetation, while the more significant the discontinuity in the plan, the greater the amount of green areas generated.

Considering the global nature of climate change challenges, it is essential to recognise the importance of these solutions, which are already available but often overlooked due to a lack of knowledge. Therefore, highlighting the value of these green spaces involves safeguarding their individual components and raising awareness of their instrumental role in the context of climate change. ■

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URBAN VALUES HERITAGE: GILBERTO GATTO SOBRAL'S MODERN ARCHITECTURE IN CUENCA, ECUADOR

PAOLA PRETI
UNIVERSIDAD NACIONAL DE LA PLATA

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ABSTRACT

Modernity emerges in Ecuador as a result of urban and developmental needs. At first, it is presented as an imposition, which has led to several debates and is also reflected in the devaluation of this architecture. Only in recent decades has the valuation of modern architecture as heritage in Ecuador become relevant, driven by policies aimed at the identification, protection and conservation of international modern heritage.

Although modernity in Latin America may be understood as a cultural imposition, this research seeks to analyse modern heritage in Ecuador as a locally produced phenomenon. The analysis focuses on the work of the architect Gilberto Gatto Sobral in Cuenca and recognises its values from a heritage perspective that looks beyond its architectural character as a modern project. In this sense, the study addresses the aesthetic value of the building from a heritage standpoint to demonstrate that the value does not lie solely in the architectural decisions but in its unique blend of tradition and avant-garde elements. It also proposes that the historical value of the works studied is directly tied to the construction of the city's history and is an example of local artisanal and traditional production. Finally, it reflects on the importance of the symbolic value that is linked to the sense of appropriation and belonging; and without which the concept of heritage could not exist.

1. INTRODUCTION

The appreciation of modern architecture as heritage in Ecuador has only gained significance in recent decades, driven by the identification, protection, and conservation policies of international modern heritage. In the country, architectural heritage has a conception strongly linked to the history of colonial and republican architecture. However, examining the configuration of our cities, the thrust for the study of Ecuadorian modernity has acquired greater importance.[1] Much of the documentation of modern heritage in Ecuador is predominantly focused on the architectural production of the capital, Quito.[2] Nonetheless, this void has been a starting point for many researchers who are currently writing about the modern heritage of other cities in the country such as Guayaquil, Cuenca, Loja, among others.

Ecuador embraced modernity in the 1930s, initially through urban planning. The professionals responsible for these first steps were foreign architects fleeing the political and military crisis in Europe at that time, or whose circumstances were related to this historical event.[3] These pioneers were followed by the first Ecuadorian professionals who could study abroad, as there were no architecture schools in the country at the time. Consequently, this led to the creation of local architecture schools and allowed for professional education within the country.

However, education abroad did not inhibit the development of a social conscience about the value of "one's own." In the works to be analysed here, it is revealed that the modern values acquired are the source to influence the environment and solve a need with their constructive processes. It is tangible evidence, therefore, of the duality of tradition and avant-garde.

MODERNITY AND MODERN URBANISM

Modernity, as a phenomenon that transforms the social, economic, and political structures of a city[4] beyond an architectural term, represents, for the city of Cuenca an impulse towards territorial restructuring. In 1947, Gilberto Gatto Sobral developed the First Territorial Master Plan based on the general guidelines of what modern urbanism had promulgated up to that point, primarily addressing the city's growth, its road communication systems, and the sectoring of commercial, industrial, and residential zones.

This had great repercussions in a social aspect for Cuenca, since even after the liberal revolution, it remained morphologically almost unchanged from colonial times, with a highly conservative and traditionalist society. For the new modernising influences, integrating into this context would not be an easy task.

Gilberto Gatto Sobral, in addition to the Territorial Master Plan in 1947, designed the city's main administrative building, Palacio Municipal, in 1954 and the local cultural building named La Casa de la Cultura in 1955, making these two the only buildings from his work that are inserted in a historic centre.

2. MODERN HERITAGE VALUES IN CUENCA

Various authors in Ecuador have studied the works of Gatto Sobral.[5] However, much of this research focuses on the unique aspects of his

1. "Within the collective culture of Ecuador's citizens, the concept of heritage is associated with historic centres and the eclectic-historicist styles they contain. However, several years ago, a number of specialised spheres began to recover the spirit of modern architecture in the configuration of our cities and in the identity of our architecture" Rosero Verónica, *Movimiento Moderno y patrimonio en el hábitat*. (Quito: Trama Ediciones, 2021).

2. "For many historians who have focused their work on Quito, the architecture and historical research of Ecuador arises and is exhausted in the capital, as they consider that what happens in the rest of the country is marginal or anecdotal." Florencio Compte *"Modernos sin modernidad. Arquitectura de Guayaquil 1930 – 1948."* (PhD diss., Universidad de Palermo, 2020).

3. Paola Preti, *"Conservación y Restauración del patrimonio moderno en Ecuador. El caso de Gatto Sobral en Cuenca."* (Master's degree, Universidad Nacional de la Plata 2023), 62.

4. Paola Preti, *"Conservación y Restauración…"*, 92.

5. To name a few researchers: Nelson Muy, Mónica Rivera, Gabriela Moyano, Carlos Villagómez, María Paula Auquilla, Paula Rodas, Vicente Mogrovejo, among others

work, highlighting inherent modern values while often neglecting the symbolic and social dimensions that contribute to the broader recognition and valuation of heritage. This article aims to shed new light on these overlooked aspects.

Gilberto Gatto Sobral's work in Cuenca and the country is an evident representation of the modern project as an urban episode, characterised by architectural and urban systematisation.[6] Gatto Sobral takes on the challenge of inserting a new way of designing in a historic city, where the recognition of the urban and built environment is his main tool.

The first connection between the two buildings is the site where they are located, Central Park. In addition, certain aspects of the urban project's design language are evident: volumetrically, the buildings consist of interconnected blocks that are easily distinguishable, separated from the pre-existences by a "breathing space" that, in turn, in both cases, allows the passage of light to the lateral edges.

The direct relationship with the street and the sensitivity towards the built environment allows Gatto Sobral to make decisions that contribute to this condition: like nearby republican architecture buildings, he creates generous portals for the Palacio Municipal, fostering a communal transition space into the building's interior.

For the Casa de la Cultura he utilises the foyer as an opportunity for a collective space within the building that provokes a direct relationship with the entrance hall of the theatre. In addition, the bridging volume that connects the two lots in which it is located, also creates a large portal on the street that divides them. In both instances, the use of these urban-scale resources allows for the pedestrian to claim the streets and relish the vivid experience of the colonial environment.

The respect for the historic environment is seemingly revealed in the way the volumes are implemented. One of the characteristics of the traditional housing typology in Cuenca is the use of internal courtyards. Gatto Sobral also implements this resource in his works creating large empty spaces inside the buildings. In the Palacio Municipal, he designs a large internal courtyard to illuminate the inner blocks adjacent to the street, while in La Casa de la Cultura, he creates such spaces both in the foyer of the theatre and the space that shelters beneath the bridge.

In addition, these volumetric decisions are not simple geometries, but results of intense constructive relationships. For example, the selection of carpentry and specific materials that accentuate the verticality or longitudinality intended by the author. This fact favours a clear reading of the buildings; for Gatto Sobral, the opportunity to insert himself as an architect in a city's historic centre and harmonise his designs with timeless architecture was a challenge, and therefore, his decisions required acute sensitivity.

On the other hand, there is an intentional artistic expression present in the constructive solutions that are part of its building language. The link between tradition and avant-garde is evident from the implementation to the construction involving local crafts, such as carpentry and blacksmithing.

6. Helio Piñón defines the modern project as an urban episode where "it is not enough to identify continuities but it is necessary to perceive relationships through visual judgments that are irreducible to the common eye". Helio Piñon Org. Teoría del Proyecto. Escritos y Conferencias. (January, 2024) https://helio-pinon.org/escritos_y_conferencias/det-teoria_del_proyecto_i58447

3. TRADITION, CULTURE AND HERITAGE

One of the main issues identified in safeguarding modern Ecuadorian heritage is its lack of recognition. Therefore, applying the concepts of conservation to it is difficult, even though its value as cultural heritage is only understood through these concepts.

This deficiency in the social perception of modern heritage is based on the idea that it is viewed solely as a value associated with the preceding architecture, and this fact is reflected even in the instructions for the registration and inventory of heritage assets of the National Institute of Heritage and Culture. Within the characterisation of the different typologies that are contemplated, modern architecture is referred to as "style" or "modernist style"[7] These labels are framed within a Eurocentric perspective that overlooks the authenticity of local production.

Regarding the local context's heritage valuation, the heritage inventory of Cuenca's protection area defines the Municipal Palace as "without architectural value" while La Casa de la Cultura is catalogued as "Architectural Value B".[8] In the first case, this cataloguing allows for transformations or alterations without any regulation, while in the second case, different conservation actions are allowed that do not modify the building in an aesthetic sense due to its contribution to the urban structure.

Why is the Casa de la Cultura known for its formal values and the Palacio Municipal is not? Both buildings have a public function, are located a hundred metres apart, were designed by the same architect under the same design strategies, and retain their original use to this day. The difference lies, perhaps, in the social appropriation of each of them, which is what gives them a real sense of heritage.

For society, La Casa de la Cultura has traditionally served as a space that nurtures and preserves Ecuadorian culture and all its forms of expression, fostering a sense of belonging. In contrast, the Municipal Palace, built to meet governmental needs, may have been perceived as an imposition, making it harder for a conservative society to accept. **(Fig. 3)**.

Until the mid-twentieth century, Cuenca remained very traditional in its ideals, religion, and customs. Civic, governmental, and commercial activities were limited to the area around the Plaza Mayor, now Central Park, and its surroundings, like any other colonial city. However, with the advent of modernity, it has been modified by new progressive trends that bring with them a new way of life, thoughts, and architecture within a strong traditionalist context. This fact could well denote a cultural imposition.

The lack of valuation makes these assets vulnerable to the constant danger of unjustified interventions, alterations lacking sensitivity, serious modifications to their aesthetic integrity, and even their demolition. This also influences the disarticulation of their context, preventing a complete understanding of the work. It is precisely at this point where its main value is found from the perspective of the modern project.

In this sense, paradoxically, although La Casa de la Cultura is formally "valued" by the national regulatory entity, its autonomous character has not

7. "It is the set of architectural currents or styles developed throughout the twentieth century. In Ecuador, modern architecture could be considered from 1950 onwards. Modern architecture has been characterised by the simplification of forms, absence of ornamentation, rationalism and functionality..." Ordenanza que determina y regula el uso y ocupación del suelo en el área del Ejido (June 2010)

8. Buildings of Architectural Value B (VarB): These are buildings that respond to a relationship with the urban fabric and are an example of culture and identity. Ordenanza que determina y regula el uso y ocupación del suelo en el área del Ejido. (June 2010)

made major interventions possible due to a lack of funds. On the other hand, the Palacio Municipal has been significantly altered, assaulted, and transformed over the years for the new uses and requirements of different mayors.

These two highlighted cases clearly demonstrate how social awareness and cultural apprehension about a building's value generate acceptance or profound rejection. This duality is strongly linked to the buildings' use and the physical and social context in which they are inserted.

Examining the heritage value of modern works from a broader perspective, it is deduced that their main value is found in the conceptualisation of the modern project. Here, the author's intention is present in each of the project's decisions and in how they relate to each other, from the programme, the facade, the distribution, zoning, construction details, formal details and most importantly, the environment.

Only by this method can we grasp the particularities of each work, which makes it unique and universal. For the modern project, the materialisation of the work makes the intention clear.[9] Therefore, considering the aforementioned, it is obvious to analyse modern heritage using the same values and attributes of modern architecture.

The aesthetic value of the building from a heritage perspective does not lie solely in these architectural decisions which we will call "attributes." Instead, its unique value lies in how these attributes merge to demonstrate the artist's intention, as "for modern or contemporary art authenticity no longer resides in the original material, but in the idea, in the intention with which it was created".[10]

The historical value is directly related to the construction of the city's history as a sample of the development, craft, and traditional practices present. The works of Gatto Sobral on display attest to a cultural exchange and its adaptability. For this reason, this value is closely linked to the symbolic value that has to do with the sense of appropriation and belonging and without which, the concept of heritage could not exist. In this way, the axes of valuation of modern heritage and the information they contain are no different to the values of the heritage that precede it but are adapted and reinterpreted.

4. CONCLUDING REMARKS

This research presents an alternative approach: understanding that modern architecture changes its condition when it is understood as heritage. Its aesthetic values move beyond mere formality and are transformed through a sense of appropriation by the culture to understand the true value of the building. By analysing their heritage characteristics, it has been possible to propose a re-interpretation of Gatto Sobral's works in the city.

However, it should be emphasised that this is not the endpoint of categorisation, but a way of redefining identity and generating a debate on modernity's heritage as a continuous part of the city's history that ought to be part of the sense of cultural appropriation. It is essential to broaden perspectives, reconsider stigmas, and reassess the terminology that has been linked with modernity and contributes to its devaluation.

9. In the words of Helio Piñon "the construction is a way of conceiving, not a technique to solve, it should not determine any solution, but propitiate decisions whose meaning must necessarily transcend it"

10. Paola Preti, *"Conservación y Restauración…"* 13.









Figure 1: Location of the Palacio Municipal and La Casa de la Cultura buildings on the 1947 Territorial Regulatory Plan Map, Cuenca, Ecuador. © Credits (Vicente Mogrovejo, 2008).

Figure 2: Aerial image of the urban environment of the Municipal Palace (right) and La Casa de la Cultura (left). At the bottom centre of the image: the Central Plaza of Cuenca, Ecuador. © Credits (Guilherme Chalhoub, 2023).

Figure 3: Architectural draft. In the left column: the proposal for the Municipal Palace; In the right column: the proposal for La Casa de la Cultura. © Credits (Vicente Mogrovejo, 2008).

It is important to demonstrate the ability to build a quality architecture within a given environment, using the materials available, applying and developing the techniques learned, regardless of their origin. It also means validating an architectural process that we have observed and that has contributed to shaping our cities and cultural identity beyond a purely formal approach.

This reveals one of the most fundamental values of our modernity, which is intrinsic to its historical and cultural values and is closely linked to and enhances its formal, material, and scientific values; that is "universality." This concept is understood as far from being a prescriptive model, but rather the individual, local, and cultural development of global architecture. ■

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ARCHITECTURE OF THE 'PROPERTY STATE': PUBLIC OWNERSHIP OF LAND & THE PRODUCTION OF THE BUILT ENVIRONMENT IN POST-INDEPENDENCE SINGAPORE

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#18

ABSTRACT

Singapore is well-known for its commercial city-centre and successful public housing system, accommodating upwards of 75% of the resident population. Less well understood, however, is the programme of systematic 'land reform' upon which these developments were realised. Singapore constitutes what Haila famously described as a 'property state', referring to a large proportion of public land ownership, collection of land rents as public revenue, and high levels of state control of physical development. To achieve this, the state embarked on a programme of sweeping land acquisition following independence in 1965. Today over 90% of land is in public ownership. However, the spatial impact of this programme on the physical landscape has not been systematically analysed. To bridge the gap between hitherto siloed social scientific scholarship on land and post-independence architectural histories, this paper seeks to ask: how may we foreground 'land reform' as an agent in the production of Singapore's post-independence built environment? The paper begins by recounting the political roots of land reform in Singapore and its legislative basis in the sweeping Land Acquisition Act of 1966. Subsequently, it is argued that two dominant uses of state-owned land in the post-independence period, mass public housing development and public-private urban renewal projects, each embody different conceptions of land's 'value' – as public good and source of public revenue, respectively. Two case studies are highlighted, the Toa Payoh New Town and the 'Golden Shoe' financial district, to illustrate that the varied values ascribed to publicly owned land informed differing models of architectural production, including centrally planned homogeneous mass-housing and decentralised heterogeneous commercial development. In conclusion, a wider appeal is made for the analysis of land as a dominant system of social relations to elucidate myriad social, economic, and politics forces that shape the production of the built environment.

1. INTRODUCTION – THE ROLE OF LAND

Singapore's rapid urban development since its independence in 1965 is a story well chronicled. Once a colonial port city characterised by an eclectic commercial core, districts of dense shophouses, and informal kampong village settlements, by the late-20th century the country had emerged as the modernist city *par excellence*. Images of Singapore during this period invariably show rows of modernist public housing blocks and a financial centre of International Style 'podium-and-tower' skyscrapers.

Less well-known than accounts of Singapore's rapid social, economic and physical development is the programme of 'land reform' through which they were realised. Between the mid-1960s and the early-2000s, the state had acquired upwards of 90% of the land in the city-state, through a combination of inherited British Crown Land, forcible acquisition, and land reclamation[1]. Recent literature has concentrated on the significance of land reform from the perspective of urban studies and economics, seminal among which is Anne Haila's 2015 book *Urban Land Rent: Singapore as a Property State*. Haila coined the term 'property state' to describe Singapore's large proportion of public land ownership, collection of land rents as public revenue, and high levels of state control of urban development, as near-utopian, albeit *sui generis*, institutions of equitable governance[2].

Despite the incisive nature of Haila's and others' accounts of the role of public ownership of land in Singapore's development, land reform's systemic spatial impact upon the physical landscape has not received detailed attention. This absence is particularly conspicuous given that, as architectural historian Chang Jiat-Hwee and others have noted, land acquisition "empowered state agencies … to remake Singapore into a comprehensive planned modernist built environment"[3].

In recognition of the fundamental role state ownership of land played in the formation of Singapore's modernist built landscape, this paper thus poses the question: how may we foreground 'land reform' as an agent in the production of Singapore's post-independence built environment? In attempting to elucidate this relationship, the political, ideological and legislative roots of land reform in post-independence Singapore will first be briefly recounted. Following this, two modes of 'valuing' public land – for subsidised public housing and for revenue-maximising commercial development – will be illustrated through the case studies of Toa Payoh New Town and the 'Golden Shoe' financial district, respectively. In each case, it will be shown that the acquisition and specific valuation of publicly owned land had its corollary in distinct forms of urban and architectural production.

2. THE ROOTS OF LAND REFORM IN SINGAPORE

When the socialist-leaning People's Action Party (PAP) acquired full internal self-government from the British in 1959, it was elected on a platform of affordable mass housing construction, industrialisation, and economic redistribution. At the time, property ownership was concentrated among a small number of absentee landholders, comprising less than 10% of the

1. Sock-Yong Phang, *Policy Innovations for Affordable Housing in Singapore* (London: Palgrave Macmillan, 2018), 13.

2. Haila, *Urban Land Rent*, 15-25.

3. Jiat-Hwee Chang, Justin Zhuang, Darren Soh, *Everyday Modernism: Architecture & Society in Singapore* (Singapore: NUS Press, 2023), 72.

population[4]. Existing colonial-era eminent domain law, particularly the Land Acquisition Ordinance introduced in 1920, was seen as insufficient and legally onerous, given accommodation for legal contestation[5]. As such, radical changes to the management of land were enacted following Singapore's independence: the amendment of the constitution to exclude the "constitutional right to property" in 1965, and the enactment of the Land Acquisition Act in 1966, which together gave the state sweeping powers to acquire large tracts of private land at below-market prices[6].

The strength of these reforms lay in the wide scope for acquisition "for any public purpose"; "by any person, corporation or statutory board, for any work or an undertaking which, in the opinion of the Minister, is of public benefit or of public utility or in the public interest". Further, any contestation of acquisition was handled by a quasi-legal Appeals Board, whose limited scope meant that the act of acquisition itself could not be legally challenged[7].

Conscious of the potential for speculation driven by large-scale acquisition, the government stated that "no private landowner should benefit from development which had taken place at public expense" and "that the price paid on the acquisition for public purposes should not be higher than what the land would have been worth had the Government not contemplated development generally in the area"[8]. To achieve this, land acquisition costs were pegged at a statutory date, whereby, for example, land acquired any time between 1973 and 1986 would be pegged to 1973 prices. These principles, while controversial, laid the ground for acquisition at below-market cost while highlighting the ideological conception of any uplift in land values as created by, and therefore rightfully accruing to the state for public redistribution.

Both scholars and politicians have recognised this system as a direct infringement upon liberal private property rights, an act justified in the name of the redistributive 'greater good' and the exigencies of nation-building[9]. In defending Singapore's severe land acquisition laws, Lee Kuan Yew, founding Prime Minister and a British-educated lawyer by training, explained:

> When we were confronted with an enormous problem of bad housing, no development, overcrowding, we decided that unless drastic measures were taken to break the law, break the rules, we would never solve it. We therefore took overriding powers to acquire land at low cost, which was in breach of one of the fundamentals of British constitutional law — the sanctity of property[10].

A final key component of Singapore's 'land regime' was the separation between ownership and use. To ensure the state remained the effective owner of acquired lands, it was decided in 1968 that all land 'sold' to statutory boards, developers, or private owners would be on the basis of long-term leaseholds lasting a maximum of 99-years, after which the land would revert to the state[11]. Paired with public land ownership, the 99-year leasehold system created sufficient incentive for private development, curtailed intergenerational accumulation of wealth through property,

4. Centre for Liveable Cities, *Urban Systems Studies – Land Acquisition & Resettlement: Securing Resources for Development* (Singapore: Centre for Liveable Cities, 2014), 8.

5. Kong Chong Ho, "Land and Housing: Three Conversations with Anne Haila", *American Journal of Economics & Sociology* 80, no. 2 (March 2021): 336.

6. Rachel Phang, ""Takings" and "Givings" in Singapore: Land Law and Policy in Search for Justice", *Fordham Urban Law Journal* 51, no. 2 (2023): 421.

7. Centre for Liveable Cities, *Land Acquisition*, 14.

8. Bryan Chew et al., "Compulsory Acquisition of Land in Singapore: A Fair Regime?", *Singapore Academy of Law Journal* 22, (2010): 168-9.

9. Beng Huat Chua, "Disrupting Private Property Rights: National Public Housing Programme", in *Liberalism Disavowed: Communitarianism & State Capitalism in Singapore* (Singapore: NUS Press, 2017): 74-97.

10. Centre for Liveable Cities, *Urban Systems Studies – Urban Redevelopment: From Urban Squalor to Global City* (Singapore: Centre for Liveable Cities, 2016), 10.

11. Phang, *Policy Innovations*, 21.

provided a recurrent form of public revenue, and ensured long-term planning flexibility.

3. PUBLIC HOUSING – COMPREHENSIVE ACQUISITION FOR 'NEW TOWNS'

In 1959, Singapore faced a chronic housing shortage. *Laissez faire* planning by the British, absentee landlords, and a handicapped colonial public housing programme had created squalid living conditions for a large proportion of the population. Many lived in overcrowded and subdivided shophouses in the city-centre, while other lived in city-fringe *kampong* villages of freestanding timber dwellings. The PAP viewed these conditions as impediments to both moral and physical health[12].

Deeming housing "one of the gravest and most pressing problems" faced by the new nation, the Housing & Development Board (HDB) was founded in 1960[13]. Uniquely, the Housing & Development Board Act of 1959 vested in the HDB the total scope of public housing provision short of actual construction (undertaken by private contractors), including land acquisition, clearance and resettlement, town planning, housing design, estate management, and the provision of home financing[14] – an elevation of 'built environment professionals' to central roles in spatial policy characteristic of post-war welfare states[15].

In its first 'five-year plan', the HDB focused on emergency housing provision, completing 54,430 units by 1965[16]. By the end of its second five-year plan in 1970, 36% of the population lived in 117,000 HDB flats, a figure that had risen to over 80% by the mid-1980s[17]. As scholar Chua Beng Huat has argued, the HDB had by this point formed an effective monopoly and become the de-facto universal housing provider[18].

This mass provision of public housing was underwritten by comprehensive acquisition of land. Between 1959 and 1984 177km^2, or approximately 30% of Singapore's total land area was acquired by the state, of which half was used for public housing[19]. As Haila notes, large-scale public housing provision is contingent on the availability of affordable land and a commitment to using state-owned land for the 'public good'[20]. In the case of Singapore, state land for housing was not treated as a speculative asset for profit-maximisation, but a collective asset deployed toward direct provision of shelter for the resident population.

While early housing construction was undertaken on land already owned by the colonial government, inherited Crown Land, or acquired from fire sites, large-scale provision of housing and transformation of the built landscape began in earnest with the construction of centrally planned 'New Towns' on large tracts of land newly acquired by the state[21]. In Toa Payoh, Singapore's first post-independence New Town constructed between 1966-70, 35,000 flats housing up to 200,000 people were envisaged for a 600 acre site acquired and cleared of by *kampongs*, squatters and farmers[22] **(Fig.1)**.

In physical terms, comprehensive land acquisition enabled the state to undertake sweeping top-down redevelopment and author a total modernist

12. Centre for Liveable Cities, *Urban Redevelopment*, 10.

13. Centre for Liveable Cities, *Urban Redevelopment*, 6.

14. Beng Huat Chua, *Public Subsidy / Private Accumulation: The Political Economy of Singapore's Public Housing* (Singapore: NUS Press, 2024): 20.

15. Mark Swenarton, Tom Avermaete, Dirk van den Heuvel eds., "Introduction", *Architecture and the Welfare State* (New York: Routledge, 2015), 14.

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19. Centre for Liveable Cities, *Urban Systems Studies – Resettling Communities: Creating Space of Nation Building* (Singapore: Centre for Liveable Cities, 2019), 12.

20. Haila, *Urban Land Rent,* 87.

21. Centre for Liveable Cities, *Resettling Communities*, 12.

22. Housing and Development Board, *First Decade in Public Housing: 1960–69* (Singapore: HDB, 1970): 7.

environment at all scales. The smallest 'cell' of urban form – the individual plot, shophouse unit, or freestanding *kampong* dwelling; products of fragmented private property ownership – had been amalgamated into the overtly collective modernist 'block'. This replacement of private dwellings with public housing blocks as the dominant 'figure' in the 'figure-ground' relationship of new towns was revealing of the shift toward centrally planned state (rather than individual) authorship of the built environment, contingent upon state ownership of land. Architecturally, this central authorship, together with an ethos of cost-efficient construction through economies of scale, led to a homogenous landscape of austere modernist slabs.

The creation of a top-down total modernist environment, enabled by state ownership of land, extended to the urban scale. The historically unplanned rural landscape, composed of clusters of freestanding buildings, agricultural lots, and swampland, was wholly erased and rationalised. Out of this, a new 'single urban entity' was created through the organisation of the 'New Town' as comprising a main 'town centre' and subsidiary 'neighbourhood centres', while roads, schools, amenities, public transportation, and workplaces were centrally planned and constructed by the state[23]. Thus, by facilitating sweeping powers of state authorship, land reform enabled the complete spatial restructuring of a large proportion of Singapore's built landscape, replacing fractured forms of private property with a modernist New Towns.

4. URBAN RENEWAL – PIECEMEAL ACQUISITION FOR PUBLIC-PRIVATE DEVELOPMENT

In contrast with the use of land for the 'public good' of state-provided housing, urban renewal was conceived of as a mixed public-private venture to support economic growth, project Singapore's image as a 'global city', and generate revenue. The development of state-owned land in city centre through urban renewal thus entailed heterogenous physical transformations as a product of both public and private authorship.

At independence, Singapore's urban core comprised a dense mix of low-rise shophouses, mid-rise offices, and colonial-era institutional buildings. In its most overcrowded quarters, many lived in cubicles within subdivided shophouse units with highly fragmented land ownership. Notably, post-war rent control had disincentivized upkeep and maintenance of buildings, causing a significant proportion of urban building stock to fall into disrepair[24]. After accounting for the most pressing housing needs through New Town construction, the state thus embarked on its city-centre 'urban renewal' programme, through the formation of the Urban Renewal Unit (later Urban Renewal Department; Urban Redevelopment Authority) in 1964.

The Urban Renewal Department's (URD) modus operandi involved piecemeal acquisition of sites, resettlement, amalgamation of plots to create more efficient parcels, clearance of existing buildings, and packaging sites for sale of leaseholds to private developers through public tender – a process known as the Sale of Sites and later Government Land Sales (GLS) programme[25] **(Fig. 2)**. Zoning, development intensity, and design

23. Chang, Zhuang, Soh, *Everyday Modernism*, 86-87.

24. Centre for Liveable Cities, *Urban Redevelopment*, 58.

25. Centre for Liveable Cities, *The Government Land Sales Programme: Turning Plans into Reality* (Singapore: Centre for Liveable Cities, 2021): 41.

guidelines were stipulated by the state as tender conditions, while numerous incentives were provided to encourage participation from Singapore's nascent development sector, including tax breaks and in-house government designs for direct adoption[26].

As Haila has noted, 'sales' of leaseholds involve the state acting as an effective landlord, to which developers pay long-term market-determined land rents[27]. In Singapore, these revenues are channelled into the national reserves, which are in turn managed by Singapore's sovereign wealth funds, whose returns are partially used for public expenditure. Scholars have assessed this system as an approximation of the equity-generating 'single tax' form of land value capture proposed by social reformer Henry George[28]. As a testament to this, some estimate that land-related sources comprise upwards of 50% of total annual government revenue[29].

Unlike comprehensive acquisition for public housing, piecemeal state acquisition and sale of land for urban renewal produced diverse urban and architectural outcomes. For example, in the 'Golden Shoe' – comprising Singapore's financial district – numerous sites were acquired by the state and parcelled for sale throughout the 1960s-80s **(Fig. 3)**. These were purchased by private developers, each of whom enlisted emergent local architectural practices such as Tay Joo Teck Architect, Yan Tai Tye Architects and K K Tan & Associates, who in turn each grew extensive portfolios of Sale of Sites projects[30]. Notably, state land ownership was also used as a direct 'design control' mechanism, employed by the state to regulate these private architects and cultivate a specific 'global city' image[31]. Tenders for GLS sites thus considered design merit in a 'two envelope' process – through which 'design excellence' could lead to the realisation of lower-bidding projects – while conditions of land sales featured requirements to standardise architectural character through the adoption of a standardised 'podium-and-slab' typology and alignment of street-frontage height[32].

The product of these relations was an urban landscape that was heterogeneous, albeit invariably modernist, at the building-level but highly regulated at the urban scale through state control of plot sizes and design controls enabled by state ownership of land. These developments can thus be understood as products of complex authorship, with state land reform creating the *conditions* for large-scale development, while private sector actors (developers and architects) *realised* these projects within the bounds set by the state.

5. CONCLUSION – LAND AS METHOD

This paper set out to assess the role of land reform as an agent in the production of Singapore's post-independence built environment. In doing so, it was argued that the authorial role of state ownership of land was contingent upon the values ascribed to land, which in turn produced varied physical outcomes. Where land was seen as a collective asset for the direct provision of the subsidised housing by the state as a public good, land reform facilitated top-down design and planning of homogeneous total modernist

26. Kah-Wee Lee, "Regulating design in Singapore: a survey of the Government Land Sales (GLS) programme", *Environment and Planning C: Government and Policy* 28, no. 1 (2010), 145-64.

27. Haila, *Urban Land Rent*, 216-7.

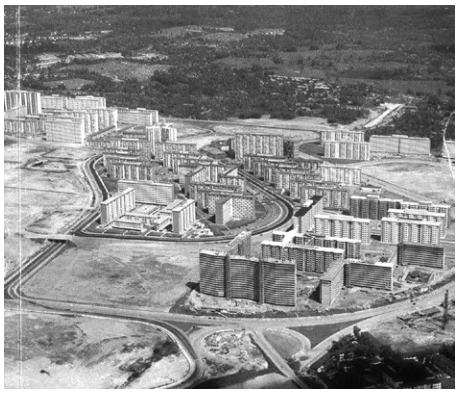
28. Phang, Sock-Yong. "Economic Development the Distribution of Land Rents in Singapore: A Georgist Implementation". *The American Journal of Economics and Sociology* 55, no. 4 (October 1996): 489-501.

29. Purves, "Economic Rent", 202.

30. Urban Redevelopment Authority, *Chronicle of Sale of Sites: A Pictorial Chronology of the Sale of Sites Programme for Private Development* (Singapore: Urban Redevelopment Authority, 1983).

31. Lee, "Regulating design in Singapore", 145-64.

32. Chua, *The Golden Shoe*, 72.







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Figure 1. Housing & Development Board (HDB), Toa Payoh New Town, Singapore, 1968. © Housing & Development Board. *Housing & Development Board Annual Report 1968.*

Figure 2. Urban Redevelopment Authority (URA), Advertisement for State Land Sale Sites. © Urban Redevelopment Authority. *Urban Redevelopment Authority Annual Report 1978-9.*

Figure 3. Aerial View of Shenton Way, Singapore, c.1975. © Housing & Development Board. *Housing & Development Board Annual Report 1974-5.*

environments in the form of HDB new towns. Conversely, where land was seen as a revenue-generating asset for privately led urban renewal, state land sales functioned in a complex authorial relationship with private developers and architects to produce a new scale of modernist urban development that was both heterogeneous but regulated by state 'design controls'.

It is hoped that by highlighting the unique case of Singapore, this paper may illustrate the need for further work in understanding the relationship between land – as the dominant system of social relations that govern our collective engagement with the physical world – and its effects on the production of the built environment. As both the physical and social 'ground' upon which architecture is constructed, there is a strong need to reclaim land as the object of both historical study and architectural practice. In recognising the agency of land, we may be able to better understand, as well as act upon, the myriad social, economic, and political forces that produce the built landscape. ■

BIOGRAPHY

Jacob Meyers works at the intersection of conservation, research, and advocacy, with a specific focus on 20th-century modernism in Singapore. He a Research & Documentation Volunteer with Docomomo Singapore and was previously an Associate Architectural Conservation Consultant at Singapore's only architectural conservation and research practice Studio Lapis. As an independent researcher, he is interested in Singaporean urban and architectural history, critical heritage, and the political economy of the built environment. He is currently pursuing his Master of Science in Architecture at TU Delft as a recipient of the Justus & Louise van Effen Excellence Scholarship.

MODERNISM AND DIPLOMACY: PAYING IT FORWARD AT U.S. EMBASSIES

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#19

ABSTRACT

This paper examines the vital contribution of the U.S. Department of State's Bureau of Overseas Buildings Operations (OBO) to integrating cultural heritage into America's diplomatic missions. It underscores OBO's stewardship of culturally significant U.S. properties abroad and highlights how cultural heritage diplomacy bolsters international relations. The paper elucidates OBO's mission in ensuring these properties are not just functional and secure but also embody American values and architectural excellence, thereby serving as symbols of U.S. innovation and commitment to cultural heritage.

1. INTRODUCTION

OBO is essential in managing and preserving U.S. diplomatic facilities globally, ensuring their safety, security, and resilience while also safeguarding cultural heritage. This paper examines OBO's role in cultural heritage diplomacy and its support for the broader diplomatic mission of the U.S. Department of State.

2. OBO AND ITS CULTURAL HERITAGE MISSION

2.1 HISTORICAL CONTEXT: THE SHIFT TOWARDS GOVERNMENT SUPPORT

2.1.1 EARLY DIPLOMATIC ENDEAVORS

The inception of U.S. diplomacy lacked governmental funding, relying on the personal wealth of diplomats to fulfill their missions. This began to change at the turn of the 20th century, notably with the 1896 call for Congress to furnish diplomatic residences and the Lowden Act of 1911 that initiated the construction of embassies abroad. Despite these efforts, the focus on enhancing the cultural and architectural aspects of diplomatic facilities was minimal until after World War II.

2.1.2 POST-WAR EXPANSION AND CULTURAL APPRECIATION

The aftermath of World War II proclaimed a significant expansion of the U.S. diplomatic presence globally, accompanied by the acquisition of properties and the establishment of vast collections of art and historical artifacts. These collections, often acquired through war credits, began to embody the expanding cultural footprint of the United States overseas, though initially, their cultural value was underappreciated.

2.1.3 THE ROLE OF AMBASSADORS AND ADVOCATES

The late 20th century witnessed a flourishing awareness of the intrinsic cultural value of these assets, spurred by ambassadors and their spouses who undertook significant projects to restore and enhance their residences with historical and artistic treasures. This era underscored the critical need for a more structured approach to preserving these cultural legacies.

2.2 THE BUREAU OF OVERSEAS BUILDINGS OPERATIONS: A HISTORICAL PERSPECTIVE

OBO serves as the real estate and facilities management arm of the U.S. Department of State, with a mission that encompasses far more than the design, construction, and operation of buildings. OBO's history and development are deeply intertwined with the evolution of American diplomacy, reflecting shifts in architectural styles, diplomatic security concerns, and the U.S. government's approach to representing its values and presence abroad.

2.2.1 OBO FOUNDING AND EARLY YEARS

OBO traces its origins to the early 20th century, a time when the United States began to establish a more significant diplomatic presence around the world. Prior to this period, U.S. diplomatic missions often leased properties or occupied buildings that did not adequately represent the nation's growing

stature on the world stage. The need for a more coordinated approach to managing these properties led to the creation of the Foreign Service Buildings Commission in 1926, following the passage of the Foreign Service Buildings Act. This act was a pivotal moment, marking the first time Congress appropriated funds for the acquisition, construction, and maintenance of diplomatic facilities abroad.

2.2.2 OBO EXPANSION AND ARCHITECTURAL INNOVATION

The post-World War II era marked a significant expansion of the U.S. diplomatic footprint, fueled by the geopolitical realities of the Cold War and the Marshall Plan. During this time, the U.S. government seized the opportunity to acquire properties and construct embassies that would reflect American values and architectural innovation. Notable architects, including Eero Saarinen and Walter Gropius, were commissioned to design buildings that embodied the principles of modernism and represented a departure from traditional embassy architecture. This period saw the creation of iconic structures such as the U.S. embassy in New Delhi and the U.S. embassy in Athens, which combined functional design with aesthetic appeal.

2.2.3 THE EVOLUTION OF DESIGN EXCELLENCE IN U.S. DIPLOMACY: FROM THE ARCHITECTURAL ADVISORY BOARD TO THE INDUSTRY ADVISORY GROUP

The creation of the Architectural Advisory Board (AAB) in 1954 marked a transformative period in U.S. diplomatic architecture, aiming to integrate cultural sensitivity and design excellence into embassy construction. This was a response to the inadequacies of early post-war modernist designs that failed to consider the cultural and operational contexts of host countries. Under the leadership of Director Leland King, the Foreign Buildings Office (now the Bureau of Overseas Buildings Operations or OBO) established the AAB, which included notable architects like Henry Shepley, Ralph Walker, and Pietro Belluschi. The AAB's mission was to ensure that U.S. embassies were both functional and representative of U.S. cultural and architectural innovation, mindful of local traditions.

The AAB's work led to internationally recognized U.S. embassy projects in cities like New Delhi, London, and Athens, setting new standards for diplomatic architecture that were secure yet welcoming and respectful of host countries.

Building on the AAB's foundation, OBO later introduced the Industry Advisory Group (IAG) under the Federal Advisory Committee Act. The IAG, consisting of up to 35 experts in fields such as architecture and engineering, continues to guide OBO in integrating the latest architectural innovations and sustainable practices into embassy designs. This group meets annually in Washington, D.C., to discuss and enhance the design and functionality of U.S. diplomatic facilities, ensuring they meet high security and architectural standards. The evolution from the AAB to the IAG reflects OBO's ongoing commitment to architectural excellence, enabling U.S. foreign policy objectives through innovative building designs that embrace sustainability, art, and culture. This ongoing effort not only honors the rich

history of U.S. diplomatic architecture but also looks forward to the future, adapting to the evolving needs and challenges of global diplomacy.

2.2.4 OBO'S SECURITY AND RESILIENCE: AN EVOLVING CHALLENGE

Security has been a critical focus for the Bureau of Overseas Buildings Operations (OBO) given the high number of attacks on U.S. facilities from 1975 to 1985, highlighting the need for enhanced security measures. The 1983 Beirut embassy bombing was particularly instrumental, prompting the establishment of an Advisory Panel on Overseas Security to overhaul U.S. diplomatic security protocols.

Responding to escalating security challenges, in 1998, Congress significantly increased funding for embassy security, leading to a comprehensive capital construction program to upgrade and ensure new facilities met high security standards. The 1999 Secure Embassy Construction and Counterterrorism Act (SECCA) and the 2010 Embassy Design and Security Act established stringent security standards for embassy construction, embedding robust security measures into the infrastructure.

Today, OBO's commitment to security and resilience remains unwavering, with the Bureau continuously adapting to the evolving security landscape. Through rigorous implementation of SECCA, OSPB standards, and the principles outlined in the Embassy Design and Security Act, OBO ensures that U.S. diplomatic facilities worldwide are not just functional and aesthetically pleasing, but also secure fortresses that safeguard American personnel and interests abroad.

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2.2.5 OBO'S PRESENT AND FUTURE DIRECTIONS

Today, OBO continues to balance the dual imperatives of security and diplomacy in its operations. Its portfolio includes not only embassies and consulates but also residences, schools, and recreational facilities that support the U.S. diplomatic community worldwide. OBO's current mission emphasizes sustainability, resilience, and the integration of advanced technology into facility management and construction. Programs like the Excellence in Diplomatic Facilities initiative highlight OBO's commitment to creating facilities that are secure, sustainable, and reflective of the United States' diplomatic goals and values.

The history of OBO is a testament to the United States' evolving approach to diplomacy and international presence. From its early years focusing on establishing a global network of diplomatic facilities, through periods of architectural innovation and heightened security concerns, to its current focus on sustainability and technological integration, OBO has played a crucial role in shaping the physical landscape of U.S. diplomacy.

3. U.S. CULTURAL SIGNIFICANT PROPERTIES

3.1 U.S. CULTURALLY SIGNIFICANT PROPERTIES ABROAD: A LEGACY OF DIPLOMACY AND DESIGN

The U.S. Department of State oversees a unique and rich portfolio of properties around the globe, under the stewardship of the Bureau of Overseas Buildings Operations. These properties, encompassing embassies, consulates, official residences, and more, stand as living testaments to the United States'

architectural ingenuity and historical legacy. Central to the management and preservation of these properties is the Secretary of State's Register of Culturally Significant Properties, ensuring these landmarks continue to serve diplomatic missions while being preserved for future generations.

3.2 THE REGISTER'S FOUNDATION AND PURPOSE

Established in 2000 as a White House Millennium Project, the Secretary of State's Register of Culturally Significant Property plays a crucial role comparable to the National Register of Historic Places maintained by the Secretary of the Interior for domestic U.S. properties. This honorific listing includes a broad array of important diplomatic architecture and property that holds a significant place in the United States' international heritage, such as chanceries, official residences, office buildings, a museum, a national cemetery, and guest homes.

The creation of the Register is instrumental in promoting the preservation of U.S. history and architecture on a global scale. It underscores the Department's commitment to professional stewardship, preservation, and maintenance of buildings that are not only unique in their architectural significance but also pivotal in representing U.S. values and diplomatic efforts abroad. Through the Register, the Department commemorates and promotes U.S. architectural heritage and history, ensuring these symbols of U.S. presence continue to engage and inspire.

3.3 NOMINATIONS AND SELECTIONS

Nominations for the U.S. Department of State's Register of Culturally Significant Properties come from U.S. missions abroad and are supported by the Bureau of Overseas Buildings Operations' Office of Cultural Heritage. This selection process reflects the United States' commitment to cultural diplomacy and historical preservation, adhering to the principles of the National Historic Preservation Act of 1966.

The criteria for inclusion mirror those of the National Register of Historic Places, requiring properties to be:

A. At least 50 years old, commemorating international heritage;
B. Connected to historically significant events;
C. Linked to notable individuals locally or globally;
D. Representative of a specific architectural style or period, or possessing high artistic values;
E. Potentially informative about history or prehistory.

Properties meeting any of these criteria are acknowledged for their cultural and diplomatic importance. Inclusion in the Register mandates a review of any changes to these properties by the Office of Cultural Heritage, ensuring their integrity and continued representation of U.S. values abroad.

3.4 ARCHITECTURAL DIVERSITY AND DIPLOMATIC SIGNIFICANCE

The properties listed on the Secretary of State's Register of Culturally Significant Property represent a broad spectrum of architectural styles, from

the neoclassical to the modern, reflecting the United States' diverse cultural and historical influences. For instance, the U.S. embassy in Athens, designed by the renowned architect Walter Gropius, is a testament to modernist architecture, symbolizing democracy at its birthplace. Meanwhile, the U.S. Ambassador's Residence in London stands as a notable example of Georgian-style architecture, emphasizing grace and elegance adjacent to Regent's Park.

These buildings are not merely structures but symbols of U.S. values and diplomacy. The Palazzo Margherita in Rome, housing the U.S. embassy, and Villa Taverna, the U.S. Ambassador's residence, underscore the deep historical ties between the United States and Italy. Similarly, in the Asia-Pacific, the U.S. embassy in Manila, designed by Juan M. de Guzman Arellano, is a physical testament to the United States' commitment to the Philippines' independence.

3.5 HISTORICAL MOMENTS AND CULTURAL EXCHANGE

These properties not only have architectural significance but also historical importance, playing key roles in international relations. Villa Montfeld in Algiers was crucial during the Tehran hostage crisis, demonstrating how these locations support high-level diplomacy. Similarly, the former U.S. consulate in Alexandria, Egypt, and Villa Mirador in Casablanca, Morocco, illustrate the U.S.'s strategic presence in the Middle East and North Africa.

Truman Hall in Belgium, the U.S. Ambassador's residence, has hosted significant diplomatic events, including talks that bolstered NATO's peace and security efforts in Europe, emphasizing the importance of such properties in fostering diplomatic relations and maintaining international stability.

Cultural exchanges are another vital aspect of these properties. Hosting events and programs like exhibitions and dialogues, they enhance mutual understanding and strengthen ties between the U.S. and host countries. The George C. Marshall Center in Paris and Truman Hall in Belgium have been instrumental in advancing cultural and educational exchanges, thereby strengthening diplomatic bonds.

3.6 PRESERVATION EFFORTS AND FUTURE CHALLENGES

The stewardship of these properties involves continuous efforts to maintain their historical integrity while adapting them to contemporary diplomatic needs. This balance between preservation and functionality presents ongoing challenges, particularly in the face of environmental threats, urban development pressures, and the evolving requirements of diplomatic missions. The renovation and expansion of the Athens Chancery and the adaptive reuse of Palazzo Corpi in Istanbul into a hotel and conference center exemplify innovative approaches to preserving these buildings' cultural significance while ensuring they continue to serve diplomatic and community purposes.

3.7 CONCLUSION

The Secretary of State's Register of Culturally Significant Property highlights the U.S. Department of State's dedication to preserving America's architectural and historical heritage overseas. These properties represent

more than diplomatic venues; they symbolize U.S. ideals and serve as platforms for global engagement and cultural preservation. Essential to U.S. diplomacy, they embody the nation's values and history on the world stage. The key challenge remains ensuring these properties are maintained for future generations, continuing their role in diplomacy and cultural exchange.

4. CULTURAL HERITAGE DIPLOMACY & STEWARDSHIP

THE OFFICE OF CULTURAL HERITAGE: A COMPREHENSIVE APPROACH

4.1 LAUNCH AND MISSION

The Office of Cultural Heritage emerged as a pivotal initiative in the late 20th century, dedicated to preserving the architectural marvels and vast cultural collections housed within U.S. embassies and official residences worldwide. This marked a significant shift from earlier practices where diplomats like Thomas Jefferson, Benjamin Franklin, and John Adams were self-funded, highlighting a gradual but transformative approach towards supporting U.S. diplomacy through cultural preservation.

Established in 2015, The Office of Cultural Heritage, operating under the Bureau of Overseas Buildings Operations (OBO/OPS/CH), is tasked with a critical mission: to develop and implement stewardship programs for the care of the Department of State's culturally, historically, and architecturally significant properties and collections. This mission encompasses a wide range of activities, including research, conservation, educational programs, exhibit design, and the development of maintenance protocols, aimed at preserving both movable and immovable heritage assets of significant historic, cultural, architectural, archaeological, and ethnographic interest.

4.2 POLICY FRAMEWORK AND OPERATIONAL SCOPE

The policy framework guiding the Office of Cultural Heritage extends to all heritage properties and assets under the State Department's purview. This includes not only physical structures and items such as archaeological sites, buildings, and artworks but also intangible cultural heritage such as practices, rituals, and traditions valued by host nations. The guiding authorities for this office include several U.S. Code sections, executive orders, and the Vienna Convention on Diplomatic Relations, ensuring a comprehensive approach to heritage preservation that respects both U.S. standards and host country laws.

4.3 HISTORIC PRESERVATION AND STEWARDSHIP INITIATIVES

A cornerstone of the Office's work is the management and protection of significant U.S. government properties abroad, ensuring any work on these properties—from maintenance to new construction—adheres to the Secretary of the Interior's Standards for the Treatment of Historic Properties. This involves rigorous identification and documentation processes, maintaining a List of Significant Properties, and implementing stewardship programs aligned with international conservation standards.

The Office also plays a pivotal role in overseeing the impact of capital construction projects and major renovations on culturally significant

properties, emphasizing the need for mitigating adverse effects and ensuring compatibility with preservation standards.

4.4 EDUCATIONAL PROGRAMS AND COMMUNITY ENGAGEMENT

Central to the Office's mission is the development of educational programs and initiatives that engage both U.S. diplomatic personnel and host country communities. These programs aim to raise awareness about the value of cultural preservation and promote best practices in the stewardship of heritage assets. By fostering a deeper understanding of the role of cultural heritage in diplomacy, the Office contributes to the United States' soft power and strengthens international relations.

4.5 A PILLAR OF CULTURAL DIPLOMACY

The detailed responsibilities and activities of OBO's Office of Cultural Heritage highlight its integral role in the intersection of architecture, cultural heritage, and diplomacy. Through its stewardship of culturally significant properties and collections, the Office not only preserves important symbols of the United States' architectural and diplomatic legacy but also showcases the nation's dedication to cultural diplomacy and international cooperation. This enhanced understanding underscores the Office's contribution to leveraging cultural heritage as a powerful tool for diplomacy, building bridges between the United States and nations worldwide.

4.6 SECURING AMERICA'S DIPLOMATIC AND CULTURAL LEGACY

The Cultural Heritage Program stands as a testament to the United States' commitment to preserving its diplomatic history and fostering international cultural appreciation. By safeguarding these treasures, the United States not only honors its past but also strengthens its diplomatic relationships through shared cultural heritage, ensuring that the legacy of U.S. diplomacy continues to inspire and resonate globally for future generations. ■

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BIOGRAPHY

Jorge Salcedo, a Historical Architect with a decade of federal government service, is a committed advocate for preserving the United States Department of State's heritage resources abroad. He specializes in selecting the most sensitive treatment for historic properties, ensuring strict adherence to preservation standards. Jorge advocates for using videography, photography, and virtual reality to engage a global audience and promote the U.S. Department of State's cultural heritage. His immersive virtual tours, featured on various platforms, effectively showcase exceptional craftsmanship and bolster U.S. cultural diplomacy. His dedicated work safeguards the past, strengthens cultural ties, and ensures the enduring legacy of the United States for future generations.

CASE STUDY: THE MAJOR REHABILITATION AND EXPANSION OF THE U.S. EMBASSY IN ATHENS GREECE, ORIGINALLY DESIGNED BY WALTER GROPIUS (1959-1961).

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ABSTRACT

This paper will provide supporting information and context related to the Major Rehabilitation and Expansion of the U.S. Embassy in Athens, Greece, originally designed by Walter Gropius, U.S. Embassy Athens, Greece (1959-1961). This project ties directly to the influential Bauhaus School, with Walter Gropius as a key figure in its development. After World War II, the U.S. Department of State launched a program to promote diplomacy through the design of its new embassy buildings. The program, administered through the Foreign Buildings Office (FBO), tasked U.S. architects to design buildings that would relate to the conditions, culture, and customs of the host country but also establish a distinctly 'American' presence to the world; promoting the tenets of Modernism, democracy, and the values of freedom and openness. Several embassies were constructed in this period, designed by notable architects, including Edward Durrell Stone (New Delhi), Eero Saarinen (London), and Walter Gropius (Athens). Inspired by the architecture of the Parthenon, Walter Gropius' design for the Embassy in Athens, Greece, established a modern, welcoming, and inviting presence for the United States at its completion on July 4, 1961. Over the last 50 years, changes to the political climate and the resulting need for increased security resulted in several renovations, expansions, and new buildings added to the original compound, many of which interfere with Gropius' original vision. In 2014, Ann Beha Architects, now Annum Architects, was selected by the Department of State, Bureau of Overseas Buildings Operations, to consider this building, now listed on the Secretary of State's Register of Culturally Significant Property, for a major rehabilitation. Also proposed was an expansion designed to serve the needs of the State Department for the next century. While security was of primary importance, other project goals were to preserve the ideals of the famed landmark, its role in the local community, and its role in diplomacy. It is this balance between security, symbolism, and preservation that will define it as a landmark for the next generation.

This paper, and the supporting roundtable, will delve into specific aspects of the design that restore Gropius' vision, while expanding the Mission in a decidedly contemporary way.

1. VISION

GROPIUS' ORIGINAL VISION

Walter Gropius wanted the embassy in Athens to reflect Greek culture, with a design that "should abide by the classical 'spiritus loci'...but in contemporary...terms."[1] His selected materials included Pentelic marble from the same quarry as the stone used to build the Parthenon, and he modernized traditional Greek forms with a unique structural system that allowed the floors to float above grade. This approach created openness and permeability around the sides of the square-shaped building. The public could approach and access it from all directions, creating an embassy that was a welcoming symbol of not only U.S. culture and values, but the Greek foundations of democracy. The building, known as the Athens Chancery, is the main U.S. embassy building in Greece. **(Fig. 2)**.

Over the years, growth and security concerns required several renovations to the Chancery that undermined the original design aspirations. They restricted access to the site, relocated programs, and changed the circulation and flow of staff and visitors on the compound. **(Fig. 3)**.

As the mission in Athens continued to grow, an expansion in 2007 brought new buildings onto a newly expanded site. Staff were more spread out, working in different office buildings on the same compound, which reduced interaction and resulted in "siloed" workplaces. A lack of a clear main entrance to the compound stood out as a key deficiency for both employees and visitors.

2. DESIGN GOALS

PRESERVE AND AMPLIFY THE ORIGINAL VISION

In 2014, Ann Beha Architects, now Annum Architects, was selected by the Bureau of Overseas Buildings Operations (OBO) to consider this building, now listed on the Secretary of State's Register of Culturally Significant Property, for a major rehabilitation. Also proposed was an expansion designed to serve the needs of the State Department for the next century. While security was of the utmost importance, other key project goals were to preserve the ideals of the famed landmark, its role in the local community, and its role in diplomacy. It is this balance between security, symbolism, and preservation that will define it as a landmark for the next generation.

The third Boston-based architect to work on the embassy's structures, Annum considered ways to simplify an already complex, constrained urban site, seeking strategies for cohesiveness to regain the spirit of the original design while addressing today's concerns. Annum's design balances the scale of the Modernist 1961 building and the 2007 expansion project by Kallman McKinnell & Wood.

1. N.A., "The Unites States Embassy Office Building Athens," *Architectural Record* (December 1957): 161.

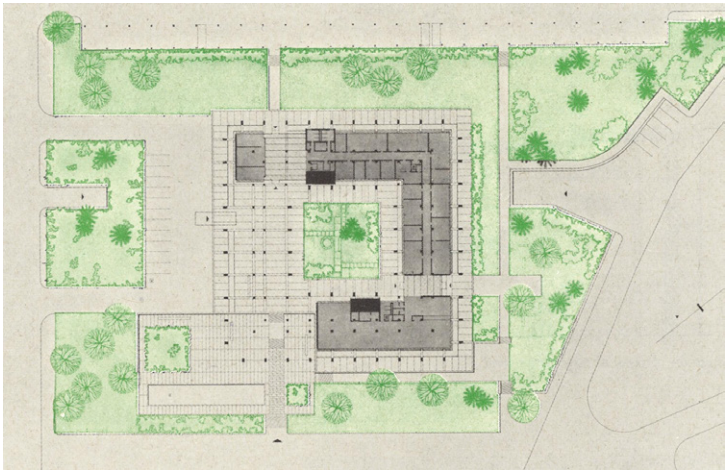


Figure 1. Walter Gropius, Athens Chancery, Athens, Greece. Original site plan of Chancery. © U.S. Department of State, Bureau of Overseas Buildings Operations, approx. 1956. Image as published in Architectural Record, December 1957: 161.



Figure 2. Walter Gropius, Athens Chancery, Athens, Greece. Photo of Chancery soon after embassy completion. © U.S. Department of State, Bureau of Overseas Buildings Operations, approx. 1961.



Figure 3. Walter Gropius, Athens Chancery, Athens, Greece. Photo of exterior prior to start of work on the Chancery. © Annum Architects, 2022.

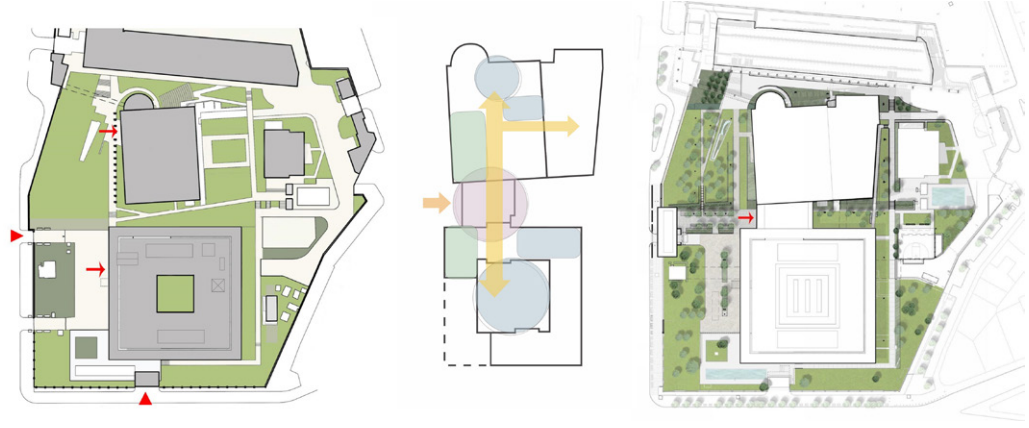


Figure 4. Diagrams of site. From (L) Site in 2014 (R) Site plan of major rehab and expansion project. (C) Diagram of Annum's conceptual approach to unify the compound.

3. KEY DESIGN MOVES

IMPROVE ACCESS AND CONNECTIVITY

Insights gained from archival research informed design concepts and site organization, improved staff connectivity, and created a new community space for the mission, restoring Gropius' concept in a decidedly contemporary way. A careful study of the entire site resulted in simplification and the reestablishment of order to circulation. A new main access pavilion, on axis with a new unifying entrance, allows for accessible entry by both pedestrians and select vehicles. The new main entrance connects the Gropius building to the recent 2007 Office Annex, allowing for clear passage for staff between the two. To those approaching the embassy from the outside, this configuration, signals connectivity with the community and promotes openness and interaction for users and visitors. **(Figure 4)**.

BUILD COMMUNITY

To restore Gropius' approach to cultivating community, Annum enclosed the central courtyard, converting it to an indoor gathering and community space. Programs for staff are now centrally located, with a community space that can accommodate larger events. The connector at the new entry makes it easy to navigate to the revitalized courtyard from workspace in either office building because of the new entry/connector. The courtyard now serves a hub, connecting staff from the ancillary areas on compound. Open workspaces and perimeter circulation optimize the narrow building floor plate, restoring daylight to the interior, and creating strong visual connections to the courtyard.

RETAIN KEY HISTORIC FEATURES

As part of the major rehabilitation project, several aspects of the building required upgrades to meet current seismic codes and OBO security requirements. Annum and its subconsultant team prepared a Historic Preservation Matrix that identified each historically significant component in the building (exterior and interior), and designated each with a level of significance, and condition. Each item was then evaluated for the most appropriate treatment, factoring in all requirements, the items condition, and the overall project goals.

One of these items is the exterior marble cladding that comprises the exterior of the building. The Pentelic marble, originally sourced from the same quarry as the Parthenon, was not available to the project for restoration efforts, as all marble from the quarry is reserved for ongoing Parthenon restoration efforts. Several columns required strengthening to meet current seismic codes, and a careful strategy was developed to remove the existing panels (approximately 4' x 8', and just over 1" thick), add the necessary strengthening with a thin fiber-wrap, and then replace the marble panels in their original position. OBO committed to testing this approach in the design phase, and a mock-up was done on site, to ensure that the work could be completed with local restoration workers, and without damage to the original marble. The strategy was successful and allowed for a large portion of the historic material to be maintained, with a building that will now meet current code requirements.

A second example that required mitigation of the historic material is at the exterior curtainwall. The single glazed original curtainwall required improvements to meet current security needs; as a critical aesthetic component of the original design, it was necessary for the new curtainwall to match the appearance of the historic to the greatest extent possible. The design creates a new dual-glazed system, with the security glazing behind, allowing for the exterior of the building to retain its original appearance. Where feasible, the original glazing is restored elsewhere in the building.

This highly technical and mindful approach to restoration results in design interventions that are fully reversible, meeting the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties. The approach and treatment plan resulted in an expansion that makes the property functional for the U.S. Government to remain in place in downtown Athens as a long-term strategy and demonstrates the U.S. Government's commitment to Athens and the original design.

4. CONCLUSION

When the opportunity to consider a comprehensive renovation of a historic building arises, how does the designer evaluate prior renovations and additions while addressing program goals and future needs? It calls for stepping back, researching the history behind the original design intent, and a thoughtful consideration of how those original goals may inform contemporary design thinking. For the U.S. Embassy in Athens, many of the goals for the major rehabilitation and expansion project remain aligned with the ambitions in 1961, including balancing an open and welcoming political philosophy with security needs for a highly functional mission. Contemporary design interventions must go beyond simply addressing a practical problem; in this instance, they need to preserve the character of the historic building and move toward a higher goal of amplifying Gropius' vision for what he hoped would become an iconic landmark. ■

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BIOGRAPHY

Katie Gerner is an Architect and Associate Principal at Annum Architects (formerly Ann Beha Architects), based in Boston, MA. She holds Bachelor of Architecture and Master of Architecture degrees from Tulane University. Her leadership includes a comprehensive project focus on contemporary design and its relationships to existing buildings and context, working with mission-based organizations in historically significant settings, with a commitment and investment in renewal, aligning clients' goals with their resources. She led several projects for the Bureau of Overseas Buildings Operations (OBO), including the US Embassy in Athens. Her work at Saieh Hall/University of Chicago transformed the former Chicago Theological Seminary and the surrounding city block.

A CASE STUDY IN MODERNISM AND DIPLOMACY: THE MAJOR REHABILITATION AND RESTORATION OF THE BRUTALIST U.S. EMBASSY IN MONTEVIDEO, URUGUAY, ORIGINALLY DESIGNED BY I.M. PEI (1959-1969).

TROY THOMPSON
AIA, LEED AP, SMITHGROUP

#19

ABSTRACT

This paper will provide context for understanding the Rehabilitation and Modernization of the U.S. embassy in Montevideo, Uruguay. The embassy, designed by I.M. Pei, opened in November 1969 and SmithGroup's renovation will be complete in late 2024.

The embassy was built during the Cold War and completed near the end of the U.S. Department of State's mid-century embassy building program. The new embassies of this era were intended to introduce the United States' democratic ideals through architecture. While Pei did not initially acknowledge it as his work due to design changes made during construction, the embassy's prominent site and brutalist style were clearly serving the goals of the embassy design program and representing the aesthetics of the era.

This paper will illustrate how the SmithGroup's team integrated necessary life-safety, accessibility, and security upgrades, including a holistic renovation of the HVAC, electrical and plumbing systems, while modernizing the workplace and preserving the original character of the building. Discussion will also include the challenges of working across continents and over a lengthy period of time while maintaining occupancy during construction.

Pei's embassy, along with the other embassies in this panel, highlight several preservation solutions for mid-century buildings that share a common cultural philosophy while existing in quite different physical contexts.

1. THE EMBASSY BUILDING AND SITE

LOCATION AND ARCHITECTURE

Two of the goals of the U.S. Department of State during the post-World War II building boom were to use architecture as a "billboard for democracy" while locating and integrating new embassies into the existing urban fabric of the communities where they were built. The embassy in Montevideo does these two things very powerfully and these aspects defined the challenges and opportunities of modernizing such a building. **(Fig 1)**

The embassy is located along the Rambla on the Atlantic coastline of Montevideo. It anchors the western end of park that also runs along the oceanfront of the city and the southern and western views from within the embassy are of the ocean and palm trees. The other sides front the surrounding neighborhood and face mid-century apartment buildings. The original grounds of the embassy were not protected by the current wall and security perimeter, so the embassy was very much a part of the urban greenspace.

The brutalist architectural style was a progressive style of the 1960's and 1970's and affirmed the hopeful ideas of democracy while breaking from a century of stylistic revivals. It promised a more modern future. Brutalism often also utilized local building materials and substantial amounts of local construction labor.

1.2 HISTORIC SIGNIFICANCE

While the embassy was not officially on the Secretary of State's Registry of Culturally Significant Properties, working with Kevin Sarring, a Historical Architect at the Bureau of Overseas Buildings Operations (OBO), our team determined it was eligible for the registry and should therefore be treated as a historic structure. We then utilized standard U.S. practices for assessing significance, building condition and recommendations for treatments. The building did not have local landmark status but is considered a significant building in the architectural history of Montevideo. The building is also visible from the heritage district defined by the waterfront and therefore the citizens of Montevideo would be concerned with our efforts that would be visible.

Our team determined that the building was significant because of the global importance of its designer I.M. Pei; because it is an excellent example of Brutalist architecture; and, because it was designed and constructed as part of the Department of States' focus in the cold war era on the cultural and political role of diplomatic architecture.

1.4 BUILDING CONDITION

The physical condition of the embassy is, historically, very well preserved, and its character-defining features largely intact. Understandable alterations to the site and the building have occurred to improve the protection and safety of embassy staff and expansion of the buildings systems. Documentation indicates that these changes can be identified and treated appropriately during the renovation. There were changes made during construction that altered the original design intent of the embassy—mostly

cheaper and less natural materials like plaster substituted for wood, concrete for granite. Additionally, there are no changes or significant alterations that are not original that contribute to the significance of the building.

The final step was understanding the character-defining features and establishing preservation zones to determine the types of treatments for the site/setting and throughout the building. We utilized the U.S. National Park Service definition of zones: Restoration, Preservation, and Rehabilitation. Fortunately, the important features of the building mapped well with security needs and building use patterns so that the restoration and preservation zones largely occurred in the public portions of the building and the entire site. The primary character-defining features were the building exterior, site, the building atrium, and the public circulation areas within the building.

While the building was not officially recognized as a cultural property, Overseas Building Operations team concurred it should be treated as such, and the application of standard preservation practices has continued to shape decisions throughout the design and construction of the project.

2. SCOPE OF THIS MODERNIZATION

One of the most difficult challenges was that the building would remain occupied and functional during construction and that the construction would need to be phased. This also meant that additional swing space and building services would be needed on site and physically connected to portions of the embassy throughout construction which posed a particularly difficult problem for a brutalist concrete building. The phased construction thus affected every aspect of the design and in some cases was determinative of the chosen design solution.

Unique to cast-in-place buildings, the material palettes were often very minimal and the building systems for plumbing and electrical were often cast into the structure of the building. This creates a very difficult modernization and preservation situation because there aren't attics, plenums or other interstitial spaces to run infrastructure. The concrete is the structure, it is the ceiling, and it was the facades and many interior walls.

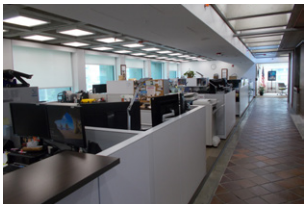
Figure 1. Pei, I.M., US Embassy, Montevideo, Uruguay, unknown, View of Embassy and Rambla, accessed via website of The Foundation for Art and Preservation in Embassies Montevideo-2 — Foundation for Art & Preservation in Embassies | FAPE (fapeculturaldiplomacy.org).

Figure 2. Pei, I.M. and SmithGroup, US Embassy, Montevideo, Uruguay, 2023, Typical view of renovated offices areas showing bulkhead reinforcing historic corridor, replace lighting in waffle slab matching original lighting, preserved finishes. © SmithGroup.

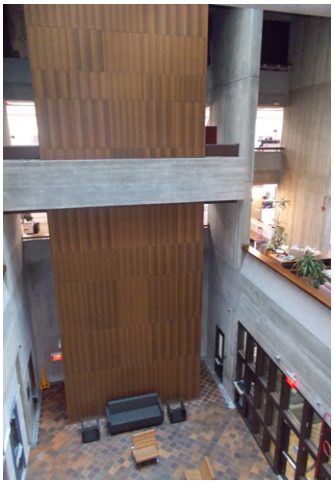
Figure 3. Pei, I.M. and SmithGroup, US Embassy, Montevideo, Uruguay, 2023, View of new stair tower integrated into brutalist atrium. © SmithGroup.

Figure 4. SmithGroup, US Embassy, Montevideo, Uruguay, 2023, Design study for stair towner located external to the existing embassy building. © SmithGroup.









2.1 ARCHITECTURE, INTERIOR DESIGN, HISTORIC PRESERVATION & LEED

This modernization project involved extensive renovations of the office areas throughout the building. A new utility building was located away from the main building at the Northeast corner of the site in a visually discrete location. The design of swings space was accommodated by temporarily enclosing the ground floor arcade that encircles the building.

The remainder of the architectural renovations were driven by the integration of new building systems and in addressing life safety needs or the preservation of major interior spaces the building facades.

The building was in exceptionally good condition with regards to the exterior facades and the condition of the concrete. There was a notable lack of the typical types of concrete deterioration often found on cast-in-place concrete. Likely this quality was testament to Pei's understanding of how to design and construct brutalist architecture.

2.2 BUILDING SYSTEMS

As with most concrete brutalist buildings, most of the mechanical system infrastructure is cast into the building structure. The primary mechanical system originally was fan coil units under each window with the pre-cast will sill hiding the outdoor louvers of each unit. Given that all the conduits and pipes were in the concrete, the team could not fully assess the re-use of those systems, so all new systems needed to be designed according to meet new security and energy performance needs.

The original building was not sprinklered and fire & life safety codes have changed a great deal since the building was originally constructed. A new fire egress stair was required to meet code requirements in a way that also met security requirements for the building.

3. GREATEST DESIGN & PRESERVATION CHALLENGES

By far the greatest challenge of modernization was the concrete brutalist design of the original building. The limitations and inability to alter much of the building structure and walls made integration of new systems a particularly challenging effort.

3.1 INTEGRATING MECHANICAL, ELECTRICAL, PLUMBING

To accommodate the new systems, the design team creates two "plenums" where none had existed before. First, a new bulkhead was installed that runs along the current corridors and was carefully coordinated to be the width of a ceiling coffer. Its location reinforces the original corridor circling the building and minimized the need for vertical shafts and additional bulkheads. The other distribution systems accommodated by removing a floor topping layer everywhere except where the historic clay tile flooring marked the original corridor. A raised floor was then installed that allows various building systems to be routed horizontally under the office areas.

To accommodate new offices standards, daylighting, and flexibility needs, most of the walls around the atrium corridors were removed.

Since they were not originally made of wood as Pei intended, it was determined that removing them from a Restoration Zone was acceptable as they were not character defining features of the space the way they were intended. The only corridor walls that remained were those that defined the historically significant Ambassador's office suite. **(Fig. 2)**

3.2 FIRE PROTECTION & LIFE SAFETY

After extensive crawling around in the building and investigating every nook and cranny, the new sprinkler systems were installed via the new bulkheads and existing vertical shafts with minimal exposed piping and alteration of the concrete interiors.

The single most intrusive interior design element was meeting the need for an additional fire egress stair. The primary public space is a beautiful atrium that is open to every floor on three sides in the office area of the building. There are layers of concrete structure, planters, railings, and balconies that create a complex three-dimensional space. The atrium is then covered by a gridded series of skylights. The new stairs needed to serve this end of the building.

In the spirit of the brutalist aesthetic, the first studies focused on creating a new stair tower outside and a bit away from the current building – a standalone object or a campanile of sorts in the plaza. This would minimize impact on the atrium space and would be easier to build as part of the phasing. Several options were studied **(Fig. 4)**. In the end, primarily due to cost, the final solution became a new stair integrated into the atrium.

One of the design changes that Pei was not happy with was the elimination of wood paneling along all the corridors that would have brought warmth and a natural material into the atrium. The design of thew new stair reintroduced a significant portion of natural wood finish into the atrium that added a level of warmth that was deleted from Pei's original design vision. The new wooden stair tower also reinforces the complexity of the atrium by slipping behind and through the concrete structure of the space. **(Fig. 3)**.

3.3 DECADE-LONG PROJECT A CONTINENT AWAY

The process of working with embassies is a unique experience. These projects have requirements and design parameters unique to the client and typology that require much more significant coordinate of often competing criteria: building program, historic significance, security, availability of products and materials, differences in trade skills & means and methods, and on.

One aspect of this modernization was the unexpected additional soiling on the exterior concrete. As noted above, when the project started, the facades were in particularly good physical condition with a variety of superficial dirt, bird detritus, and algae. The conditions also varied by orientation. After over seven years of construction the degree of soiling on the facades presented the need for significantly different building cleaning regiment than originally planned.

This caused the need for much more testing and more extensive mock-ups utilizing a wider range of cleaning methods and materials. It has also necessitated the need to collaborate closely with local conservators and

preservation architects to assist with the additional effort to understand the conditions and to develop contractor training programs for the variety cleaning methods now needed.

4. IDEAS CONSERVED FROM THE EMBASSY PROGRAM OF THE COLD WAR ERA

In many cases, the ability to preserve the character of the original building was simplified by the lack of interventions and major renovations or alterations since the building was opened in 1969. This condition made it easier to focus the efforts on preserving what remained of the building's interiors and exterior, while integrating all the new systems and programmatic requirements.

Unfortunately, the setting and architecture worked very well together to integrate the original embassy and grounds into the surrounding urban environment. The arcaded first floor really made the embassy feel accessible and open to the community and was a successful design example of integrating landscape and architecture. The world has changed since the cold war ended and security has become a larger concern. The grounds were eventually enclosed by physical barriers that significantly altered the intended openness and integration of the stie into the Rambla public space and oceanfront.

So, the progressive image of the U.S. Department of State and their embassy building program are intact through the preservation of the embassy building and its architectural style. The project, when considered with the other embassies in the panel, provides an example of role historic preservation can play in preserving goals and missions of the client beyond that extend beyond simply protecting any one object as art. ■

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BIOGRAPHY

Troy Thompson is a managing partner at the integrated design firm SmithGroup. Troy received Architecture and Philosophy degrees from Ball State University and an M.A. in American History from George Mason University. His career has focused on historic preservation, design of cultural facilities and the conservation of archaeological sites. Projects include the White House Visitor Center, National September 11 Memorial Museum Pavilion at the World Trade Center Site, and the Robert E Lee Memorial Arlington House in Arlington National Cemetery. Troy has been designing protective shelters, walkways, and interpretive signage at Harvard University's Archaeological Exploration of Sardis since 1988.

CASE STUDY: HISTORIC INTENT AND THE RENOVATION OF EDUARDO CATALANO'S U.S. EMBASSY IN BUENOS AIRES

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#19

ABSTRACT

The Argentine-born architect, Eduardo Catalano (1917 – 2010), operated out of Cambridge, Massachusetts, from 1956 through 1977 and was entrenched in the academic discourse which defined a certain type of brutalist modernism characterized by exposed concrete and overt structural expression. His 1972 design for the U.S. embassy in Buenos Aires drew on his principle to design flexible and long-lasting buildings that would endure, and not based on "individual whims".[1] After 50 years of continuous operation his thesis on longevity is being tested with a new renovation driven by the need to replace aged mechanical and electrical systems intertwined throughout a fully occupied embassy building.

This paper will first explore the context of Catalano's Cambridge-based practice, to better understand the rationale for the design of the Buenos Aires Embassy. The building's existing structural logic will be discussed and used to define the physical framework for the renovation designed by Krueck Sexton Partners in 2024. Catalano's concept for designing a building that would endure and avoid obsolescence was formed around the principle of designing for "constants", the permanent needs of the building, and understanding and deliberately avoiding over-designing for "variables", or those functions or components which are subject to change. By studying the structure and systems, the renovation design found opportunities for planning layout, systems design, and materials in careful dialog with the building and to allow for 50 more years of use.

1. CATALANO'S (AND MY) CAMBRIDGE

Every morning during my first year in graduate school I bicycled down Cambridge Avenue seeing the Cambridge Rindge and Latin High School campus. It was hard to miss because it was one hundred meters from my destination, and the building formed an unusual marriage of contrasting styles. I only learned this year that the addition was designed by Eduardo Catalano, the architect who originally designed the U.S. embassy in Buenos Aires, which Krueck Sexton Partners was tasked with renovating as a selective improvements project for Bureau of Overseas Building Operations (which manages U.S. governmental diplomatic and consular property outside of the country). The Catalano building marked the formal merger of the Latin school with the Rindge (trade) school. As the third oldest high school in the United States established in 1648 by the Harvard College president, it was a significant commission for Catalano. What is striking about the addition is that the brutalist building sat both independent and conjoined to a 1932 limestone-clad structure. Its trapezoidal, glazed connector bridge created a prominent gateway to the campus and the adjacent public library and park, effectively marrying multiple stylistic periods through deliberately connected yet separated structures.[2] At the time, I had not seen a brutalist building that left preceding buildings intact and minimally disturbed while making the contrasting styles profoundly apparent. The school was one of Catalano's last commissions prior to retirement from teaching in 1977.

#19

1.1 LEARNING AND TEACHING

Catalano moved from Argentina to pursue post-graduate studies at the University of Pennsylvania and Harvard University in Cambridge, Massachusetts – earning degrees from each in 1944 and 1945 respectively. While at Harvard he studied with the modernist masters Walter Gropius and Marcel Breuer.[3] Gropius was well known as the founder of the Bauhaus and would later be one of the first architects to work with the U.S. Government's Architectural Advisory Board (AAG), to design the U.S. embassy in Athens.

Catalano moved back to Argentina briefly, only to make his way back to academia in 1950, to teach at the Architectural Association (AA) in London. One year later, he was appointed professor at the architecture school at North Carolina State College (now North Carolina University, which now houses his archive of work), and within 5 years became head of the program. During his tenure, the design for his own residence known as the Raleigh House, was well published and named "House of the Decade", by House and Home Magazine, because of its massive 28m long hyperbolic paraboloid, post-stressed roof shell described as "potato chip" in shape.[3] [4]

1.2 A SMALL WORLD, A SMALLER CAMBRIDGE

Catalano returned to Cambridge in 1956, at the invitation of Pietro Belluschi, Dean of the School of Architecture at the Massachusetts Institute of Technology in Cambridge. Catalano's Raleigh House demonstrated his ideas on creating architecture that would avoid redundancy by moving away

1. Eduardo Catalano, "Excerpts from a lecture given at the School of Architecture" University of Kentucky, 1968 quoted in *Eduardo Catalano, Camillo Gubitosi, and Alberto Izzo, Eduardo Catalano: buildings and projects* (Rome, Italy: Officina Edizioni 1978), 25.

2. "CAMBRIDGE RINDGE AND LATIN HIGH SCHOOL," SAH Archipedia, accessed April 02, 2024, https://sah-archipedia.org/buildings/MA-01-CS23.

3. "Eduardo Catalano Papers 1940-2017", NC State University Libraries, accessed April 02, 2024, https://www.lib.ncsu.edu/findingaids/mc00625.

4. "Most Talked About House of the Year", *House and Home*, Volume VIII, no. 2 (August 1955), 94-101.

from "skin and bones" architecture to a type of structural logic where the shell would serve as both façade and structure – as he demonstrated with this own house.[4] In Cambridge, Catalano was surrounded by like-minded contemporaries such as Walter Gropius, Josep Lluis Sert, Paul Rudolph, Marcel Breuer, and others exploring similar ideas through exposed concrete structures where skin and bone are one.[5] [6]

No contemporary architect of the time was more influential than the Swiss-French architect Le Corbusier, who came to Cambridge in 1959 for early meetings to discuss the Carpenter Center for Visual Arts on the Harvard Campus – his only building in North America. There is not a clear record of whether Catalano and Corbusier met. But Catalano was certainly familiar with Corbusier's concrete details. Corbusier's continuous, horizontal "ribbon" window appear in many of Catalano's municipal-scale buildings including the U.S. embassy in Buenos Aires. Corbusier's only other project in the western Hemisphere, Casa Curutchet, was in La Plata, Argentina. While Corbusier never went to La Plata, his local collaborator, Argentinean architect Amancio Williams, acted as his eyes and ears during the houses construction. Williams would visit Harvard at Gropius's invitation in 1951 and 1955, just missing Catalano's Cambridge return.

With two major graduate schools and internationally practicing architects coming and going, the small town of Cambridge was a hub of global architectural discourse, where Catalano was deeply entrenched.

1.3 A PORTEÑO-AMERICAN ARCHITECT

Catalano was born in Buenos Aires –a Porteño as the citizens of the port city refer to themselves. In hindsight, the decision to hire Catalano to design the U.S. embassy seems almost predestined. He was an able Architect working on ever-more complex projects such as the Stratton Student Center (1962) at MIT (which is currently being renovated and slated to open later this year). But Pietro Belluschi, who earlier recruited Catalano to teach at MIT, was part of the U.S. Government's Architectural Advisory Board (AAG), and this group was charged with "setting a new direction towards integrating cultural sensitivity and design excellence in the construction of U.S. embassies abroad".[7] Hiring a Buenos Aires born architect skilled in working with complex U.S. government projects was not only logical under the AAG's clear directive but a diplomatic win.

2. U.S. EMBASSY, BUENOS AIRES

While Argentina and the United States officially established diplomatic relationships in 1823, a U.S. embassy did not exist until 1915. An embassy contains mostly office space. Work at embassies has evolved similarly to that in the corporate world, with comparable requirements for open versus closed office space, conference and meeting space, computer and networking infrastructure, and amenities such as staff cafeterias and fitness centers. Embassy staff have conventional office schedules, and most staff are locals who are long-term hires who work in the embassy buildings for years. Just like

5. Catalano was certainly aware of his work as Rudolph actively designed major buildings in and around Boston including the Government Center Complex, and the Jewett Arts Center at Wesleyan.

6. Breuer and Catalano collaborated on a small project in Argentina, circa 1947. "Parador Ariston," *Nuestra Arquitectura*, no. 225 (April, 1948), 110-116.

7. Jorge Salcedo, "OBO And Its Cultural Heritage Mission," (Submitted for Docomomo Publication, pending), page 3, 2024.

in the corporate business office, the reliance on paper output, and the amount of required individual work-space has changed, making the modernization of embassies an ever-evolving process. The primary difference between an embassy and a typical office are rigorous security protocols to keep embassy staff safe. Most embassy buildings of the 1960's and 1970's were intentionally designed to be culturally contextual (although not necessarily by style) driven by President Kennedy's 1962 Ad Hoc Committee on Federal Architecture to "ensure that such architecture continued to represent American ideals—from dignity, stability and vigor to embodying the finest architecture of its time."[8]

2.1 SITE AND LOCATION

The site for the U.S. embassy in Buenos Aires, was originally part of the "Tres de Febrero" Parks and directly north of the La Rural Exposition center. The southwest quadrant of the park was ceded to the United States in 1963 by the Argentine government, which created a triangular site whose apex pointed north toward the network of urban parks that make up the 400 hectare Palermo Woods. At the time of the land acquisition, the Palermo neighborhood was already urbanistically dense, and with the proximity to the historic U.S. Ambassador's residence at the Park's northwest corner, the centrally located site was a boon for supporting the diplomatic mission. The building faces the park and its ceremonial, brick-paved entry piazza became an extension of the landscape.

2.2 STRUCTURAL FRAMEWORK

From the exterior, the embassy building forms a heroic cantilevered form whose floor plates increase in footprint as the building ascends (top-left, **Fig. 1**). The sides are flanked by exposed concrete fin-walls to conceal the sectional changes and emphasizing the frontality of the building (top-right, **Fig. 1**). The structural framework supporting the cantilever incorporates a series of deep, one-way beams to minimize the number of columns in the office interior (bottom-left, **Fig. 1**). In the original design the interior structural expression was exposed only at the three building entries, and the remaining one-way spans were concealed from view above ceiling tiles. The building's central core is composed of elevators, restrooms, and the main mechanical riser located to the rear of the building. This rear zone incorporates a tighter column spacing to eliminate beams allowing for the primary duct branches to run east and west from the core to the offices (bottom-right, **Fig. 1**).

Catalano studied planning concepts to address his concern over the long term use of large buildings, stating that "even today, when cultural, social, and economic forces lead to the rehabilitation of existing buildings, the new ones are being designed as inflexible as those of the past."[9] The structure of the embassy embodies Catalano's concept of buildings becoming "infrastructures", allowing for "societies time to master change".[10] He developed a planning principle where the building would emphasize "constants" based on performance needs and allowing for "adaptability

8. "Constructive Diplomacy: The US Department of State's Overseas Building Program," Council of American Ambassadors, accessed April 02, 2024, https://www.americanambassadors.org/publications/ambassadors-review/spring-2011/constructive-diplomacy-the-us-department-of-state-s-overseas-building-program.

9. Catalano, "Excerpts from a lecture given at the School of Architecture," 20.

10. Eduardo Catalano, Camillo Gubitosi, and Alberto Izzo, *Eduardo Catalano: buildings and projects* (Rome, Italy: Officina Edizioni 1978), 20.

of use" and sought to eliminate or reduce "variables" such as custom construction that would only be used once and diminish function.[10]

2.3 MECHANICAL REALITIES

The structural principle was well developed for the architectural layouts, but the mechanical systems were much less flexible than Catalano's planning principles would suggest. The main mechanical room is within the sub-basement housing both air-handling units and the building's main electrical gear. A secondary mechanical penthouse located at the top of the building housed units serving upper floor levels. While the bifurcated (bottom and top) mechanical rooms were seemingly logical in their zoning, the actual installed network of ducts was not clearly defined, and the duct distribution entangled across floors. This distribution would impact any future system upgrades. A significant quirk of the original mechanical system is the air intake strategy. The building incorporated three discrete air snorkels (a term the renovation architect and engineering team coined) to describe the approximately four-meter-tall concrete, triangular-peaked towers located behind the building which allowed for make-up air into the building (his once-mentor Gropius employed similar details for his 1966 JFK Building in Boston). The snorkels were a clever way to allow for fresh-air into the building, and since the back alley included parking spaces – by raising the air entry above the car level avoid having vehicle exhaust polluting the building. The snorkels however, incorporated a circuitous path into the building, directing air through tunnels under the alley and into the sub-basement.

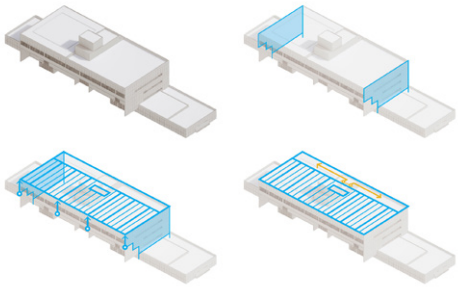
3. REDEVELOPING AN OCCUPIED BUILDING

The renovation scope was defined after a years-long building and functional-program assessment by the U.S. Government aided by a large team of subject-matter-experts led by Krueck Sexton Partners.[11] The primary driver for the extent of work is driven by critical electro-mechanical systems updates tempered by budgetary constraints precluding a full renovation. The original air-handling and electrical equipment had reached the end of their service life, requiring a holistic replacement of the patchwork improvements and repairs common for a building with fifty years of continuous use. Because of externally-dictated logistical requirements, the building occupants could not be moved out of the building requiring a phased renovation. Since the building would be continually occupied during construction, the original mechanical and electrical systems could only be removed once new systems were in place and operational.

3.1 MECHANICAL SYSTEMS AS DRIVERS

The sub-basement mechanical units require replacement but cannot be removed until new systems are installed (since the building will remain in use, equipment must continue to serve occupants). The phasing is to be performed incrementally from top to bottom, where in the final phase the lower-level mechanical equipment can be decommissioned. To accommodate this incremental replacement, a new penthouse houses replacement equipment.

11. The embassy project included a large team including: OBO team Claire Bedat, Cindy Chow, Curtis Clay, Lisa Kim, Douglas Noumbissi. A/E team leader, architect Krueck Sexton Partners with team members Michael Johnson, Jason Roberts (Project Manager), Gabe Vidal-Hallet, Juan M. Villafañe (Partner in Charge), Sarah Weiss; structural engineer Thornton Tomasetti with Timothy Mekaru, Nate Sosin; MEP engineer by WSP with Lisa-Marie Golja Tekovic (MEP Team Leader), Richard Siwek, Keith French; IT by Wiley Wilson with Jared McCoig. Local Architect BCG, Maria Paula Baez and Eduardo Carena.



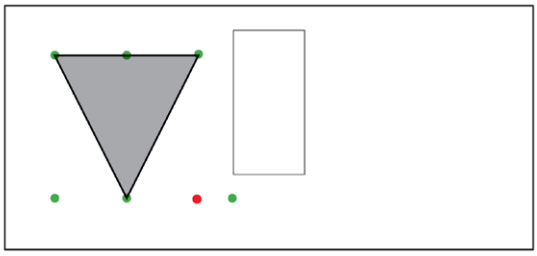




Figure 1. U.S. Embassy Building, Buenos Aires originally designed by Eduardo Catalano, Argentina, 2024, Diagram of Building, Structure, Mechanical Systems (Krueck Sexton Partners).

Figure 2. U.S. Embassy Building Roof Plan, Buenos Aires, Argentina, 2024, Diagram of New Mechanical Penthouse and Existing Columns (Krueck Sexton Partners).

Figure 3. US Embassy Building, Buenos Aires, Argentina, 2024, Rendering of Interior Renovation showing exposed beams. (Krueck Sexton Partners, prepared by Filippo Bolognese).

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Although the existing roof had been cluttered with a mix of small additions from earlier work, the client and design team were concerned with introducing another mass to the roof structure, and how such a structure would read from the street. The design team considered two strategies to reduce the impact of the penthouse on the building – controlling setback distances and a screening element to conceal the mass. The only viable location for the penthouse is east of the original penthouse. However, a new rectangular structure would compete with the original symmetrical massing, and the existing structural grid had eliminated a structural column making one of the bearing points over an existing beam (instead of over a column). The project structural engineer, Thornton Tomasetti, evaluated the existing beam, which although deep in profile, was highly efficient meaning it could not carry additional load. This observation was true of many of the brutalist features on the building which were both highly efficient but with little redundancy to allow for modification.

The design team settled on the idea of creating a triangular-plan structure, which rationally connected-the-dots of structure down to existing columns (Refer to **Fig. 2**). A form generated by need and constraints, in line with Catalano's intent. The triangle reduced the visual mass from the street level, obviating the need for a screen. The form referenced the original air-snorkels and created an intentional and legible differentiation between the new and original massing.

3.2 SELECTIVE IMPROVEMENTS

Although the building is iconic from the exterior, most of the interior spaces were disconnected from the strong logic of Catalano's structure. The combination of the existing continuous ribbon windows which do not allow a lot of daylight into the building and the low (2.16m) ceiling height makes the space dark and feel compressed. The replacement of the electro-mechanical systems was an opportunity to reconsider how the building's infrastructure could be utilized not only for conveying services, but to take advantage of the volume of space for its occupants. The building mechanical engineer (WSP) proposed a distribution of overhead fan-coil units (FCU) to replace the original centralized Air-Handling Units (AHU's) allowing for more flexibility in the construction and affording an opportunity to reduce the number and volumetric density of ducts.

A conventional AHU system requires moving huge volumes of air from centralized units to the occupants, whereas fan-coils utilize chilled water distribution bringing relatively small cold and hot water pipes to distributed units which condition smaller volumes of air. The FCU system is not typical for OBO, but because of the reduced duct quantity creates flexibility.

With the large ducts out of the way, dropped ceilings could be selectively eliminated to open the volume and express the linear, concrete beams to occupants and fulfilling Catalano's vision of eliminating the distinction between skin and bones (Refer to **Fig. 3**).

3.3 ANOTHER 50 YEARS OF OCCUPANCY

Many of the significant brutalist buildings built in Cambridge during Catalano's life have gone through major renovations in the last decade – including Sert's Science Center and Holyoke Center at Harvard. Catalano's MIT Stratton Center is currently undergoing renovation with expected opening fall of 2024. His high school building was painted stark white during its 2011 renovation, removing its hallmark tactility. The Embassy was also painted by an earlier facilities manager - a beige color homogenizing the concrete mottling that once made the building part of its environment. Building mechanical system service life ranges from 25 to 50 years making the need for upgrades inevitable. An industry wide focus on building performance improvements along with building technology trending toward higher efficiency, means that renovations often require a reconsideration of their systems' original strategy. But if we believe Catalano's thesis on "constants" and "variables" these changes are not only expected but hoped for, in order to avoid creating "frozen buildings, without flexibility for growth and change". ■

BIOGRAPHY

Juan M. Villafañe, AIA, is a practicing architect and partner at Krueck Sexton Partners in Chicago. His career began as a custom metal fabricator, fostering a technical rigor grounded in making. This background informs his work which expresses craft to create tactile spaces. Juan is an active member of the Urban Land Institute where he currently co-chairs ULI Chicago's Public Policy committee. His experience working on architectural projects in Singapore, Buenos Aires, and Sri Lanka informs his approach to find the specificity of place.

MAINTAINING CULTURAL HISTORY AND MEETING 21ST CENTURY EXPECTATIONS – EMBASSY IN MONTEVIDEO AS EXAMPLE FOR MAJOR DIPLOMATIC RENOVATIONS

FREDERICK J POEHLER
U.S. DEPARTMENT OF STATE, OVERSEAS BUILDING OPERATIONS

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ABSTRACT.

For the U.S. State Department, it is a significant challenge maintaining our culturally significant buildings and places while continuing to make them relevant for their intended diplomatic contemporary uses. In the case of US Embassy Montevideo, how do we take a structure successfully built to its intended diplomatic representational function, standards, program, and expectations from the 1960s and turn it into a 21st century diplomatic representational facility that equally successfully meets the functions, standards, program, and expectations of the 21st century US State Department. A generic answer is 'carefully', 'diligently', 'gently', and/or any other word that implies a sensitive and protective approach. But the challenge is larger, complex, and more demanding.

1. INTRODUCTION

Around the world, maintaining our culturally significant buildings and places while continuing to make them relevant for their intended contemporary uses is a considerable challenge. In the case of U.S. Embassy Montevideo, how do we take a structure successfully built to its intended diplomatic representational function, standards, program, and expectations from the 1960s and turn it into a 21st-century diplomatic representational facility that equally successfully meets the functions, standards, program, and expectations of the 21st century U.S. State Department? A generic answer is 'carefully,' 'diligently,' 'gently,' and/or any other word that implies a sensitive and protective approach. But the challenge is larger, complex, and more challenging. If these challenges could not be addressed adequately, then the U.S. State Department would have departed this property and its historic architecture.

2. U.S. EMBASSY MONTEVIDEO

While there are accepted guidelines for best protecting and conserving our cultural architecture treasures, they often do not reflect how to make the structure meet its new program expectations. At the start of many cultural or historical preservation projects:

- We often know how to protect buildings and places, clean sensitive materials, repair damaged materials, restore or recreate lost history, and insert new materials. The toolbox of techniques is common knowledge among architecture historians and restorers. This is not to say that this work is easy. It does note that we often know the challenge we are facing.
- However, we regularly do not know how to re-program the building to give it a vibrant contemporary function while protecting its history. There is no standard toolbox. This has to be learned and determined on a building-by-building basis.

For Embassy Montevideo, we:

- Knew the structure as constructed met its intended functions, standards, program, and expectations of the 1960s.
- Mostly knew how to address and protect its materiality, primary spaces, and character. Furthermore, we know the level of effort would be significant.
- Had new functions, standards, programs, and expectations to meet without a path forward.
- Created a unique path to accomplish all our new functions and program goals while addressing our cultural history preservation goals.
- Made sure Embassy Montevideo's cultural and diplomatically important architecture continues with its new 21st century program.

3. U.S. EMBASSY MONTEVIDEO 21ST CENTURY CHALLENGES

What are the new functions, programs, standards, and expectations? There are many (too many to list here). But we can group them to gain a general understanding.

- Public Representational. At embassy opening, Embassy Montevideo represented the best of modern architecture from the 1960s. It is a brutalist structure, with the influence of Corbusier, a dynamic atrium, efficient floor layouts, natural light and views, located on major promenade, and warmed by local wood and clay material product. Diplomatically, it represented the confidence, optimism, technology, strength, and more of the United States.

    a. 2024. Modern brutalist architecture is only sometimes appreciated as initially intended by everyone. But the architecture of Embassy Montevideo remains appreciated. Its representational spaces now reflect the optimism of the 1960s with 21st-century updates. Its dynamic atrium, natural light and views, prominent location, and use of warm clay and wood are appreciated by all who work here and visit.

- Security. In the past and present, everyone expects a safe place to reside, work, socialize, etc. All expect a safe embassy to work at and visit. Security is a always a priority. How it is provided has changed significantly over time.

    a. Physical security. At the time of construction, a robust concrete brutalist structure, surrounded by a perimeter wall and fence, with secure doors and hardware, and with local police and guard force, was considered adequate.

        i. 2024. The original design remains valuable. However, physical security threats have evolved and are now more robust. To the original design, we have added bollards, glazing, stricter space segregation, and more robust doors and hardware. Physically, the security of the embassy has improved.

    b. Technical security. At the time of construction, technical security (in relation to today) was in its infancy. Phone and radio communication was common. Cameras were only selectively used.

        i. 2024. Technical security is now robust and constantly evolving. Cameras are standard everywhere and are continuously monitored. Communication takes place in many areas, including phones, radios, sensors, etc.

- Staff and Program. The staff and program that serve any U.S. diplomatic mission are not static. Their numbers, tasks, and talents change year to year. Embassy Montevideo's renovation effort included a staff program reset that informed our design team on how best to revise its interior spaces.

- Utility infrastructure. While many technological advances include devices growing physically smaller, the infrastructure to support technological advances continues to grow larger and more complex. The embassy's original utility infrastructure was close to what was typical of an office building of its time. It included conduits, pipes, ducts, and chases for typical utility services of this time - electrical, phone, heating, cooling, etc.

a. 2024. Since the embassy's inception, the technology that serves it has evolved, grown, and started new. It reaches every employee and visitor in more ways and has a higher volume yearly. To provide all the latest technologies, the embassy has to host more space, power, data, plumbing, heating, and cooling to support them. Furthermore, it needs to host them within an existing brutalist concrete architecture shell and framework that we wish to protect and highlight. In short, we provided more utility infrastructure space without losing diplomatic, representational, or staff space.

- Energy. Energy use and efficiency were rarely concerns in the original lives of most culturally significant properties. Embassy Montevideo did not likely open with significant energy use concerns, but they are a top concern now. When the embassy opened it was plugged into the local energy infrastructure. Concerns about heating and cooling costs are minimal. Efficient heating, cooling, lighting, etc was not a priority. Renewables were almost unknown.

a. 2024. The embassy remains plugged into the local energy infrastructure. But now, we monitor efficient heating, cooling, lighting, etc., along with our heating and cooling energy bills. All ME HVAC systems have been revised to maximize efficiency while providing individual comfort.

b. The U.S. State Department is embracing renewable energy everywhere possible. At present, the Embassy Montevideo site does not lend itself easily to renewable energy. But as technology evolves, renewable energy could easily be part of the embassy's future.

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- Environment and resiliency. In the past and present, most people want a clean environment, safety, and reliable utilities. In the past, this was often taken for granted. But today, it is an active priority. One can posit that this embassy was constructed for diplomacy and people, with some environmental benefits derived from local natural circumstances, while also positing that environmental protection was not a priority. Embassy Montevideo was born with some natural advantages. From its start it always had strong natural light and views. Being near the ocean along a major river, it always had clean air nearby, though maybe not always in the whole building interior. However, the embassy at this time paid little attention to water use, stormwater, and healthy interior air. Stormwater was discharged from the site, as was common practice. The embassy was plugged into the local water supply, and water was readily available for all uses. Healthy air was highly dependent upon how much exterior air made it to the interior spaces, including the subgrade levels.

a. 2024. The environment is now a priority for general living and is part of our diplomatic efforts. Natural light now enters more interior spaces while strong views remain. Healthy air is provided throughout the structure with new ME systems that bring regular air changes to all parts

of the embassy. While remaining plugged into the local stormwater system, we now also store and reuse stormwater on site. Water use is now monitored and metered. Embassy Montevideo is now more cost-effective to run while being diplomatically friendly to the host country.

b. Resilience. Resilience is a word gaining importance worldwide as we face our environmental issues. Resilience is also now a primary driver of our worldwide embassy new construction, renovation construction, and maintenance efforts. As our world becomes hotter, wetter, dryer, stormier, etc., with bigger weather events, we need to create embassies that can withstand these developments. Resilience was of little concern when this embassy opened. However, its ability to withstand unplanned droughts, floods, power shortages, etc., will be a part of the embassy's life from now on.

- Life safety. Life safety, whether intentionally or not, is always a human concern. Over time, our expectations regarding life safety (protecting lives and property) have grown and continue to grow. At the time of construction, Embassy Montevideo contained all the life safety requirements of its time.

a. 2024. By today's contemporary life-safety standards, the original design has many shortcomings that need attention.

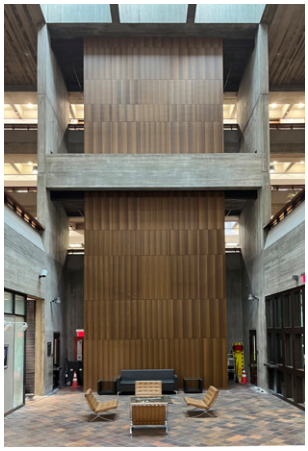
i. The most significant new requirement was a second enclosed fire stair. New stairs in existing structures are always challenging, but a new fire stair in an existing culturally important embassy takes on extra importance. In this case, our design team found a way to provide it with only minimal impact on the atrium. The dynamic quality of the atrium remains, and the scale of the stairs fits well and sensitively within it. Life safety has been improved, and this element meets our present requirements. While it would have been nice not to have to do this, overall, it should be considered a success story.

ii. The remainder of the life-safety systems required an overhaul that included new alarms, sprinklers, fire pumps, smoke purges, refined exiting systems, etc. If the embassy ever requires evacuation, we have made it possible to evacuate faster and easier.

- Communications. Communication systems from the 1960s to today are almost incomparable. Since Embassy Montevideo's inception, how we work and communicate with each other has evolved, and the embassy's telecommunications and interior design reflects the changes.

a. Diplomacy and embassy life depend upon interpersonal communication. It used to be practiced face-to-face, with typewritten documents, and regular phone calls. But today, face-to-face meetings are supplemented by (and sometimes dominated by) telecommunications technology and the interior





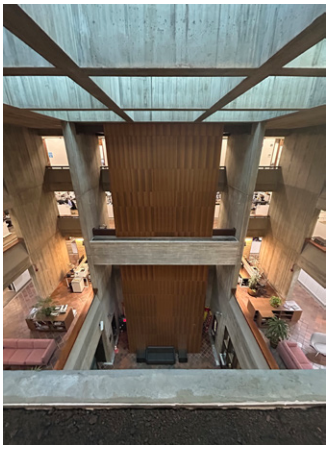




Figure 1. US Embassy Montevideo – shortly after opening. © Image by US Dept of State, Overseas Building Operation Date and photographer unknown.

Figures 2 to 4. US Embassy Montevideo Gallery Atrium – shortly before re-opening. © Image by US Dept of State, Overseas Building Operation, June 2024 by Frederick J Poehler.

design of Embassy Montevideo. Open floorplans maximize use of staff space. Conference and team rooms support personal and group discussions. Private offices are few in number. Internet connectivity, with many hardware and software options, makes all these spaces work together. ■

BIOGRAPHY

Frederick J Poehler, AIA, ASLA, LEED AP. As a hands-on leader and proven architect, I have worked in many international locations creating innovative design, construction, and landscape projects. I have collaborated with diverse groups to achieve successful endeavors and develop projects that meet client's vision, design, and program needs, enhance security and safety, comply with all building codes and regulations, meet budgets and schedules, and fulfill all expectations. My time with the US State Department has blessed me with the opportunity to be design manager for the renovation of the US Embassy Montevideo (originally designed by I.M. Pei).

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ENGAGED RESEARCH: EXPLORING AND STRUGGLING FOR THE ARCHITECTURE OF WELFARE STATES

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ABSTRACT

We are currently experiencing multiple crises that manifest themselves in our built environment and perhaps most importantly in the unravelling of the scissors between a small group of the super-rich and the rest of the world. Gentrification is inextricably linked not only with the construction of new architecture and urban development, but also with the displacement of populations, usually involving the demolition of buildings and entire urban structures. The victims of such urban development are mainly affordable housing, but also public infrastructure, buildings for culture, sport or services built with public funds. A significant part of this endangered building stock consists of architecture built in the three decades after the end of the Second World War, a period that in large parts of the world was influenced by the policies of the welfare state.

The aim of our research, and of the discussion in the conference session, is to explore the ways in which it has attracted the interest of civil society and engaged it in the debate about the preservation of the heritage of post-war modernism. We want to focus on uncovering the practices and strategies of protest against the destruction of the heritage of post-war modernism. We also want to draw attention to the key actors, experts in the history of architecture, who are initiating struggles to save this specific heritage. We have described the relationship between the initiators of protest and their opponents according to William Gamson's theory. This was done in order to critically highlight the precarious position of researchers. Researchers' active opposition to investment plans is seen as an abandonment of the objective scientific field, and their entry into the political arena is pejoratively termed 'activism'. We argue that the involvement of researchers in conservation should be seen as a legitimate scientific practice, applied research.

1. INTRODUCTION

In the dark times, will there also be singing?
Yes, there will be singing
About the dark times.
Bertolt Brecht, "Motto."

We are currently experiencing multiple crises ranging from collapsing ecosystems and the irreversible warming of the planet beyond the limits of the Paris Agreement[1], to the global retreat of democracy[2] and the associated rise of authoritarian regimes, nationalism, and the success of far-right parties, to the global increase in social inequality.[3] This dark age of global socio-environmental decline and inequality is most clearly materialised in our urban environment. From London, Dubai and Moscow to Mumbai, Rio de Janeiro and Lagos, the past three or four decades have witnessed an exponential increase in urban development owned by a dwindling number of private owners. High-rise commercial centres and luxury apartment blocks fill city centres and, together with the tourism that is part of the investment competition of metropolises, displace the poorer classes of urban population. Gentrification is intrinsically linked, not only to the construction of new architecture and urban development, but also, together with the displacement of the population, usually to the demolition of buildings and entire city structures.

The victims of such urban development are largely affordable housing, but also public infrastructure, buildings for culture, sports or services built with public funds. These are buildings whose commercial potential cannot compete with the profits that can be made from replacing them with new construction. A significant part of this endangered building stock consists of architecture that was built in the three decades after the end of the Second World War, a period that in large parts of the world was influenced by the policies of the welfare state.[4] As research on inequality shows, it was also during this period that the world was experiencing a reduction in inequality between different parts of the population. Today, these disparities are increasing, not only at the individual level, but also significantly in terms of the overall impoverishment of countries.[5]

It is not surprising that parallel to this developments interest of experts in postwar architecture heritage increased at the beginning of new millennium. This interest was motivated not only by the architecture qualities of post war modernism but also by the growing importance of environmental questions. At the same time it was exactly the evidence of social context of modernism, which was explicitly thematised by Jürgen Habermas in his 1980 essay Modernity – An Incomplete Project, that motivated the research. In our paper we will focus on public housing and public services which built the core of postwar modern architecture heritage.

1. Window to reach climate goals 'rapidly closing', UN report warns," *United Nations*, accessed May 31, 2024, https://news.un.org/en/story/2023/09/1140527.

2. "The world has recently become less democratic," *Our World in Data*, accessed May 31, 2024, https://ourworldindata.org/less-democratic

3. "Introduction," *World Inequality Report 2022*, accessed May 31, 2024, https://wir2022.wid.world/introduction/.

4. It is not only the specific Welafare State model, based on the Keynesian economic model typical of Western developed societies in the post-war period, that is reflected here. We are also referring to the socialist state of the Soviet bloc countries, where almost all construction was financed by the state and, like in the West, was oriented towards improving the living conditions of the major part of the population. Ákos Moravánszky and Judith Hopfengärtner eds., *Re-Humanizing Architecture, 1950 – 1970* (Basel: Birkhäuser, 2017), 376; Mark Swenarton, Tom Avermaete, and Dirk van den Heuvel eds., *Architecture and the Welfare State* (Abingdon, Oxon: Routledge, 2014), 360.

5. "Rich countries, poor governments," *Our World in Data*, accessed May 31, 2024, https://wir2022.wid.world/chapter-3/.

2. "BOOM, BOOM, BOOM"

In the introduction to his book The Language of Postmodern Architecture, Charles Jencks celebrates the demolition of the Pruit Igoe housing estate in St Louis. His enthusiastic "Boom, boom, boom" was addressed not only to the technocratic monotonous architecture of modernist housing estates, but equally to the messianic position of the architect as the creator of a better society. His celebration of demolition thus paradoxically continued the radical modern paradigm of tabula rasa as pointed out by Vladimir Papernij.[6] Despite Jencks's predictions, the wave of demolitions of modernist housing estates did not occur until almost two decades later. However, compact urban structures did not begin to emerge in their place, and the architecture that replaced the modernist legacy of social housing is not an example of postmodern play and linguistic overlay. It is mostly the building production in the "¥€$ Regime" that at the end of the millennium "has turned architecture into a different art."[7] This regime requires architects to abandon ideas of a better world; their "political" role is to convince the public and politicians of the good design of public space, not of the actual content of architecture and its wider impacts on society or the environment.[8]

In his 2014 study Supplement to OMA's preservation manifesto, restoration theorist Jorge Otero-Pailos paraphrased Rem Koolhaas, who argued with a dash of self-criticism that "the three frothy decades between the early 1980s and the late 2000s were at the root of the transformation of "serious" and "necessary" architecture of the 1970s into starchitecture".[9] Today, starchitecture and its generic derivatives not only dominate building production in city centres across the planet, but, as Otero-Pailos points out „the deregulation of the market economy initially made it impossible to practice this sort of socially committed architecture, and now, more disturbingly, it is eliminating evidence that such architecture ever existed, as this legacy falls victim to development pressures to demolish it".[10]

However, the aim of our research is not primarily to analyse the global processes behind the erasure of the layer of post-war "serious" and "necessary" architecture. Nor are we interested in the demolition itself, but in the ways in which it has aroused the interest of civil society and engaged it in the debate on the preservation of the legacy of post-war modernism. We want to focus on uncovering the practices and strategies of protest against the destruction of the heritage of post-war modernism. We also want to draw attention to the key actors who are initiating struggles to save this specific heritage.

3. DEFENDING THE LEGACY OF THE WELFARE STATE: HOUSING

The Welfare State has primarily made its mark in the history of architecture through its efforts to provide quality housing for all classes, largely following the ideas and manifestos formulated by architects from the interwar period onwards in the CIAM congresses. Today, housing unaffordability is one of the most significant themes of urban conflict

6. Papernij Vladimir, "Modernism and Destruction in Architecture" *Artmargins online*, June 5, 2006, accessed May 31, 2024, https://artmargins.com/modernism-and-destruction-in-architecture/

7. Rem Koolhaas, "Paul S. Byard Memorial Lecture", in *Preservation is Overtaking Us*, ed. Koolhaas Rem and Jorge Otero-Pailos (New York: Columbia Books on Architecture and the City, 2014)

8. These are new creative methods within architectural and urban practice, such as place-making, whose proponents, such as Jan Geel, base their theories precisely on a critique and rejection of modernism.

9. Jorge Otero-Pailos, "Supplement to OMA's preservation manifesto," in *Preservation is Overtaking Us*, ed. Rem Koolhaas and Jorge Otero-Pailos (New York: Columbia Books on Architecture and the City, 2014)

10. Otero-Pailos, "Supplement to OMA's preservation manifesto."

around the world. There is an extensive theoretical literature on the "Right to the city" movements defending the right to housing and the right to use the city, fighting against the eviction of low-income residents. However, few works are devoted to the very topic of the protection of modern architectural and urban heritage as a form of urban mobilization. Wiliam A. Gamson, founder of social movement impact theory, divides actors involved in social struggle in two types: 'challengers' active citizens, who actively enter into decision-making of 'incumbents' politicians and experts in role of power-holding elites, who try to maintain the status quo.[11] Anna Domoradská specifies Gamson's theory to the field of Right to the city, considering challengers as those who "focus on contention of an existing order and resistance to mainstream rules, in search of an opportunity to reshape urban power structures or more generally the direction of urban development."[12] Architectural experts and conservationists, initiating many campaigns and protests, stand as "challengers" in cases concerning the preservation of architectural heritage, despite the fact that they are defending "conservation" positions.

It was architectural historians and architects who initiated one of the most famous struggles to save modern post-war social housing, Robin Hood Gardens. The 2007 call for the preservation of this iconic work of Brutalism was signed by major architectural figures such as Norman Foster and Richard Rogers, and the landmark declaration was supported by the RIBA. A review panel of the Commission for Architecture and the Built Environment also gave a positive opinion on the protection of the work. However, the Director of Heritage of England did not accept the assessment and did not grant protection to the complex. However, the public debate on Robin Hood Gardens has not been clear-cut. The failure of the architectural concept of 'streets-in-the-air' was the main argument against the preservation. The narrative of the complex's decay and dysfunctionality was confirmed by opponents of preservation with sociological surveys which claimed that the majority of residents were in favour of demolishing their housing and replacing it with better housing.

Architects and architectural historians have been left alone in the struggle for the protection of post-war heritage. However, the inability to accept the "beauty" of brutalism did not only manifest itself in the conservative part of society. Even Sir Rogers' capital response "Robin Hood Gardens is a great example of the best postwar architecture and deserves to be kept for future generations"[13] did not influence the decision, which was made at the beginning of the great economic crisis and was completed with the demolition of the complex in 2017.

Social movements for the right to housing or tenant protection only began to grow globally during the crisis, which was fundamentally rooted in the real estate trade. Linking tenant protection with property protection is proving to be an increasingly useful strategy and confirms that experts do not always have to stand on the side of the status quo. As more recent research in the Right to the City movement confirms[14], it is experts who

11. William A. Gamson, *The strategy of social protest* (Belmont: Wadsworth Publishing, 1990).

12. Anna Domoradzka, "Urban Social Movements and the Right to the City: An Introduction to the Special Issue on Urban Mobilization," *Voluntas* 29, no. 3 (2018), 610.

13. "Estate of the art," *The guardian*. https://www.theguardian.com/artanddesign/2008/jun/20/architecture.housing

14. Anna Domoradzka, "Urban Social Movements and the Right to the City: An Introduction to the Special Issue on Urban Mobilization," *Voluntas* 29, no. 3 (2018), 610.

bring a new dynamism to advocacy for civic activities and interests. In Latin American countries, as the Brazilian example of Flávia Brito do Nascimento shows[15], the successes of monument protection are also helping in resisting evictions and gentrification.

4. DEFENDING THE LEGACY OF THE WELFARE STATE: COMMONS

An essential part of state-funded construction in the first three decades after World War II was the construction of public facilities for education, health, culture, and sports for the wider population. In particular, the architecture of cultural, social and educational buildings was an important part of the cultural policy of states. Attention was paid to it as much in liberal democracies as in authoritarian systems. Thousands of such buildings were constructed from the 1950s to the 1970s in some of the manifestations of the rich spectrum of opinion of post-war modernism under the welfare state or socialist state policy. Many were located in the immediate centres of towns and cities, and older structures often had to give way for their construction. In the mid-1970s, therefore, like modernist apartment complexes, they became the target of criticism not only by postmodern theorists but also by conservative politicians and parts of the public. This phenomenon manifested itself most massively in countries undergoing socio-political transformation in the last decade of the 20th century. The debate surrounding the Palast der Republik in Berlin (1973-1976), which resulted in the demolition of this modernist building in 2008 and its replacement with a copy of the historic Stadtpalast that originally stood on its site, is a case in point. The critique of modernism was combined there with a critique of the socialist regime and communist ideology, which not only had to be defeated but also had to be removed from the public space.[16]

The same strategy was applied in the demolition of the Bratislava House of Trade Unions, Technology and Culture - Istropolis (1959-1981). This outstanding work of post-war modernism was one of the most significant investments of the state in cultural and social infrastructure. It was characterised by a generous spatial concept and an extraordinary quality of construction design. In 2022, the building fell victim to privatisation and the exploitative setting of urban development financed by private capital. The new Istropolis, a multifunctional complex with a congress hall and a dominant residential and commercial function, was supposed to "conquer" "the original" "socialist monument" with its quality. It was with this aim in mind when the developer organised an international competition, the winner of which was the renowned Dutch studio KCAP.

As in the case of Robinn Hood Gardens, architectural historians and architects in Bratislava saw the rescue of the building in its listing as a monument. And in Bratislava, too, the advisory body to the Director of the Monuments Office recommended that the Trade Union House be declared a monument. In the sphere of political decision-making, however, they

15. Flávia Brito do Nascimento, "Housing Complexes in Brazil. A modern Heritage," in *Contested Legacies. Critical Perspectives on Postwar Modern Housing*, eds. Andrea Migotto and Martino Tattara (Leuven, University Press, 2023).

16. Recently, it has come to light that copies of the historic decoration of the palace were also financed by the radical right. So it turns out that this was not only an attempt to remove the legacy of totalitarian communist ideology, but also to reinstall another totalitarian ideology. F. Ottelmans. "'We are dealing with fundamentalist rightwingers': Berlin statues are latest battleground in Germany's culture wars," *Guardian*, accesed March 23, 2024, https://www.theguardian.com/world/2024/mar/23/we-are-dealing-with-fundamentalist-rightwingers-berlin-statues-are-latest-battleground-in-germanys-culture-wars.

were ultimately inclined to support business as usual. The Monuments Office alibistically issued no decision.[17]

The evasive responses from the authorities as well as the media campaign by the developer of New Istropolis to question the professional positions of the experts eventually led to the announcement of the Save Istropolis petition. The initiators addressed the petition to the representatives of those public institutions that have a direct impact on the development of the situation in the area. At the same time, the petition was intended to address the public and arouse their interest not only in this particular building, but in the architectural heritage of the second half of the 20th century in general. By the end of 2021, the petition had more than 10 500 signatories. It was also supported by a number of public figures from the cultural and social lifethe fate of Istropolis could not be reversed. The municipal authorities allowed the complex to be demolished, which happened in spring 2022.

In contrast, the fate of the Palace of the Republic was decided at the highest level in the national parliament, and it should also be remembered that while in Berlin the modernist Palace of the Republic has been replaced by the cultural institution Humboldt Forum, in Bratislava it will be a commercial development.

5. ACTORS

The claim that "landmarks are the buildings that have been recognised as such by elected politicians, most commonly on the basis of the recommendations of expert commissions"[18] presented an ideal vision of a scholar providing a service to society by handing over knowledge to be further decided by policy makers pursuing the needs of society. We could say that in this way scholars have fulfilled their role. However, the process of preserving architectural heritage is rarely this ideal. Scholars who present universal heritage values are often misunderstood by politicians, who have to reconcile particular interests and act in processes that are often beyond their control. The commons, built in the era of the welfare state, have in the past decades passed into private ownership and become a space for storing capital surpluses.[19]

The unequal position of experts in promoting the protection of architectural heritage in relation to owners and investors forces them to move from the position of advisors of politicians and officials to the position of direct advocates of heritage protection. The threat to the existence of the object of research motivates scholars to engage in the struggle for its preservation. Often it is architectural historians or heritage specialists who can provide arguments to the wider civic resistance. However, the direct involvement of scholars in protection, in contrast to their role as advisors to officials and politicians, puts them in a difficult situation. Actively opposing investment plans is seen as abandoning the objective scientific field, and their entry into the political arena is pejoratively referred to as 'activism'. Such a division of the architectural

17. Henrieta Moravčíková and Peter Szalay, "The Trade Union House / Istropolis: The Birth and Liquidation of an Innovative Generator of Social Life, Culture, and Education," *Architetúra & urbanizmus* 55, no 3-4 (2021), 122-156.

18. Hilda Heyen, "Myth, Authenticity and Lived Practices – Introduction," in *The Challenge of Change: Dealing with the Legacy of the Modern Movement. Proceedings of the 10th International DOCOMOMO Conference*, ed. Dirk van den Huevel, Maarten Mesman, Wido Quist, and Bert Lemmens (Amsterdam: IOS Press, 2008), 101.

19. David Harvey, "Right to the city". *New Left Review* 53 (September – October, 2009).



Figure 1. Demolition of the House of the Culture, Istropolis in Bratislava. Konček Ferdinand, Skoček Il'ja, Titl Ľubomír © (Photo by Matej Hakár, 2022)

historian's work into public, impartial publication of data and private engagement raises fundamental questions about the meaning and ethics of research? Isn't every scientific interpretation, in fact, an imaginary step out of the ivory tower of objectivity, and the dispassionate observation of destruction merely nihilism, contrary to the unquestioned goal of science to help make the world and society better? In this light, can't the committed involvement of researchers in conservation be seen as a legitimate scientific practice, applied research? ■

BIOGRAPHY

Henrieta Moravčíková is Professor of Architecture History at the Faculty of Architecture Slovak University of Technology, Head of the Department of Architecture at the Slovak Academy of Sciences, and chair of the Slovak DOCOMOMO chapter. Her field of interest is 20th and 21st century architecture and modern architecture heritage. Her book, Architect Friedrich Weinwurm (2014), was awarded the International DAM Book Award. Together with her team she prepared the first complex analytical monograph on modern town-planning of the capital of Slovakia Bratislava (un) planned city (2020). The International Creative Media Award recently awarded the monograph the Gold Award.

Peter Szalay is architectural historian. He works at the Department of Architecture of the Institute of History of Slovak Academy of Sciences and at the Department of Art History of Faculty of Arts of Comenius University in Bratislava. His research focuses on architecture of the 20th and 21st centuries from the art-historical, heritage, as well as broader social and environmental point of view. In 2021, he was the co-editor of the thematic issue of the scientific journal Architecture & Urbanism: The Heritage of Postwar Modernism: Engaged Research. He is executive editor of the scientific journal Architecture & Urbanism, and a member of DOCOMOMO International.

CONTINUITY AND TRANSFORMATION OF POST-WAR MODERNIST ARCHITECTURE: THE CASE STUDY OF THE FORMER COMMUNIST PARTY HEADQUARTERS IN KOŠICE, SLOVAKIA

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#20

ABSTRACT

The case study presented in this paper discusses the issue of the preservation and reconstruction of the former Slovak Communist Party headquarters in the city of Košice, which was designed under the lead architect Milan Motýľ and built between 1979 and 1984 (opened in January 1985). Although the building was initially intended to be a workplace for party members, it has been used as a municipal office following the political changes of 1989. This paper examines the non-problematic use of buildings of key political institutions from the earlier non-democratic regime through the lens of its architectural form. The study shows that through engagement with various actors in the public sphere, such as civic organisations, architects and local authorities, it is possible to develop a reconstruction plan that takes into account the architectural and historical value of the building.

1. INTRODUCTION

Designed in the 1970s and completed in the 1980s, the building of the former Slovak Communist Party headquarters in the city of Košice, also known as the "White house" (Biely dom) due to its distinctive façade, now serves as the city's municipal headquarters. By presenting the political context in which the building was created, its recent past and its potential future, I aim to demonstrate that buildings that once housed key political institutions during the non-democratic regime were easily repurposed for use by current public institutions, not only due to overall lack of interest among the architectural sector in the creation of new representative buildings for the democratic state in the years after 1989[1] but also because of their inherent architectural qualities. Initially intended as a centralised administrative building with ample public space, it would have been a relatively simple task to adapt the party headquarters into a municipal office at that time. In addition, I will briefly describe how engaged research and the involvement of various non-state actors beyond the scope of traditional monument care,[2] which still shows little interest in post-war modernist architecture from the socialist period, has helped to specify the conditions for its future reconstruction.

2. POLITICAL CONTEXT

Following World War II, Czechoslovakia became part of the socialist "Eastern Bloc". The leading position fell to the Czechoslovak Communist Party (KSČ), which had governed as a party-state since 1948. The period of power of the Communist Party in Czechoslovakia between 1948 and 1989 is divided into two phases: the initial period from 1948 to the invasion of the Warsaw Pact armies in 1968, and the normalisation period which lasted throughout 1970s and 1980s until November 1989. Unlike the first phase, especially during the 1950s, the period of normalisation, which came later, is characterised by a more selective application of state repression, targeting the public political, intellectual, artistic and religious expressions of its own citizens.[3] The consolidation of power by the highest authority, the Central Committee of the Czechoslovak Communist Party (ÚV KSČ), led to the assignment of new responsibilities to the party bodies across various aspects of political, economic and social life. After the Constitutional Law on the Czechoslovak Federation was adopted in 1968, executing these duties required the formation of an administrative structure that would operate within the two socialist republics.[4] The Slovak Communist Party (KSS) was a separate organisational unit subordinate to the central KSČ, and carried out these new duties in the territory of Slovakia. However, the orders and directives issued by the centre were implemented by the lower party structures – the district and municipal committees of the KSS, in addition to other organisations which provided facilities for the education of party members, propaganda activities and political-organisational work.[5] As a result, this extensive network of party organisations required appropriate material and technical support with which to carry out its duties, and new party headquarters began to emerge in the 1970s and 1980s in almost every regional and district town in Czechoslovakia. It might be expected that architecture from the late period of normalisation, especially projects for the administrative apparatus of

1. On the absence of a new political architecture after 1989 in Czechoslovakia, see Cyril Říha and Martin Tharp, eds., *The Rule over Your Affairs Once Lost Will Return to You: Architecture and Czech Politics after 1989* (Praha: UMPRUM, 2022), 22–26.

2. In this text, "monument care" refers to state officials' and conservators' "*expert activity in the field of heritage property management*," including the protection, preservation, and reconstruction of monuments. Jakub Bachtík, Tereza Johanidesová, and Kristina Uhlíková, eds., *In the Name of Socialism, in the Shadow of the Monarchy: Post-War Monument Care in Central Europe* (Artefactum, Institute of Art History, Czech Academy of Sciences, 2022), 16, https://doi.org/10.54759/artefactum.2023.01.782.

3. Jakub Rákosník, Matěj Spurný, and Jiří Štaif, *Milníky moderních českých dějin: Krize konsenzu a legitimity v letech 1848-1989* (Praha: Argo, 2018).

4. The Czechoslovak Socialist Republic was a federative state consisting of the Czech Socialist Republic and the Slovak Socialist Republic.

5. On the organizational structure of the party, see Norbert Kmeť, "Komunistická strana Slovenska 1969-1985," in *Bolševizmus, komunismus a radikální socialismus v Československu. Svazek VII* (Praha: Dokořán, 2010), 236–66.

the authoritarian regime, would be inherently political works in an ideologically totalitarian way. In that sense, it refers to an architectural designs that embody the autocratic approach of the central authorities through their form, style and urbanism. Typically, these designs are associated with monumental forms or prominent locations in city centres that are intended to manifest the strength and hegemony of the ruling state power in the built environment.[6] This interpretation, which reduces all of the circumstances influencing the emergence of architecture to ideological purposes, is, however, unsatisfactory. Not only does it deprive us of a fuller understanding of the many other social, cultural, and political factors at play as well as the individual intentions of the architects that are reflected in their designs, but by framing this architecture as totalitarian there is a risk that we are ignoring the historical continuity of the uses of such buildings after the regime change in 1989 and, in many cases, undermining efforts to preserve them. As recent research on Communist Party headquarters in Czechia has revealed, this typological category represents a diverse spectrum of architectural structures.[7] Some of them showcase unique concepts by their creators. Others, in turn, reflect broader principles and trends that were prevalent in the construction industry of the time. From the perspective of architectural forms, the building of the Slovak Communist Party headquarters in Košice combines both of these aspects.

3. THE ADMINISTRATIVE BUILDING OF THE SLOVAK COMMUNIST PARTY

Prior to the construction of the Slovak Communist Party headquarters building, the secretariats of the various party bodies were located at different sites around in Košice, mainly in historical buildings. An integrated administrative building was intended to replace these separate buildings, in the aim of simplifying the organisational structure, saving on financial resources and ensuring greater centralisation. The first Stavoprojekt atelier, part of the state-run Stavoprojekt Košice design institute and led by the architect Milan Motýľ, won a non-public architectural competition with a design based on the graded horizontality of volumes. The new building was placed in the peripheral centre of the New Town housing estate (Nové mesto), which is a remarkable example of the socialist state's mass housing programme designed to serve as a counterpart to the historic city centre. The construction on the single building for various party bodies commenced in 1979. It was built on an exposed site with a slightly sloping terrain which was intended to be the visual focal point of a planned pedestrian route that would connect the new city centre with the historical one. The building as a whole was made up of several autonomous tracts and a distinctive mass of conference halls. **(Fig. 1).** The administrative sections, located in horizontal blocks with rectangular floor plans, consisted of functional units of municipal, district, and regional committees and the House of Political Education featuring a library, meeting rooms and a cinema. The conference hall complex, on the other hand, was conceived as a separate mass on an irregular plan which was connected diagonally to the main administrative part and almost entirely covered with travertine cladding. The

6. On the issue of modernism and totalitarianism in Slovak architecture and on questioning the interpretation of architectural forms through the prism of ideologies, see Henrieta Moravčíková, ed., *Modern and/or Totalitarian in the Architecture of the 20th Century in Slovakia* (Bratislava: Slovart, 2013).

7. Miroslav Pavel, "Odkud vládla strana," in *(a)typ: architektura osmdesátých let*, ed. Petr Vorlík (Praha: ČVUT Fakulta architektury, 2019), 88–94.

building's interiors feature a combination of standardised and original design elements. Representative spaces such as the conference halls, some meeting rooms and the cinema are dominated by decorative acoustic ceilings and a unified palette of red, white, and brown. **(Fig.2)**

4. POST-1989 CONTINUITY

Following the regime change in 1989, the former secretariat's buildings were transferred from Party hands to public ownership. Now that party headquarters buildings across Slovakia had lost their original function, the process of transformation began, and the structures gradually found use as sites of public infrastructure, such as municipal offices, university facilities or cultural centres. According to the architectural historian Miroslav Pavel, the fact that these buildings can be adapted for new purposes without the need for major structural changes shows that the majority of their architects did not necessarily design their projects as showcases of the power of the Party but instead did so with modern administrative architecture in mind.[8] I believe that this is also the case with the party headquarters building in Košice. Shortly after the 1989 Velvet Revolution, there was a proposal to transform the complex into a children's hospital, but this plan was later rejected due to significant dispositional and material challenges. Eventually, the building was repurposed as the administrative offices of Košice City Municipality (Magistrát mesta Košice) and serves this purpose until the present day. Nevertheless, the White house's post-1989 history is mainly linked to the city's efforts to dispose of the building. The ethos of economic privatisation in the 1990s and early 2000s, when many state-owned enterprises and other public assets were transferred to private ownership, is well illustrated by local daily press articles referring to the city's consideration of selling the building at that time.[9] It was widely expected that the sale of city land and the building, in this case referred to as a "*communist palace"*,[10] would quickly increase revenue for the city's budget. While the White house has remained in public hands, several other architecturally distinct buildings with a cultural or shopping function, located in the same area of the New Town housing estate, have been sold to the private sector. As a result of poor reconstruction works, the majority of them have lost their architectural and historical value. Nowadays, the city government recognises the importance of owning its headquarters. However, over the intervening years, only a handful of minor building modifications have been undertaken. The building currently requires a general reconstruction to ensure energy efficiency and thus reduce operating costs. How can a large-scale modernist structure that was built nearly four decades ago be modernised to match the current demands of sustainability while maintaining its architectural values?

5. ON THE ROAD TO SUSTAINABLE PUBLIC ARCHITECTURE

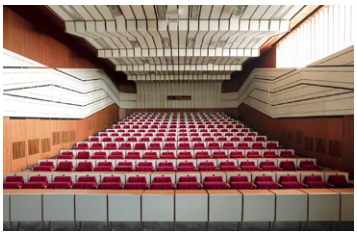
In 2021, the Office of the Chief Architect, which is also one of the public bodies housed in the building, proposed the idea of the general reconstruction. Since the building was not listed as protected heritage, it was outside of the scope of monument care authorities, but it was still necessary to define the criteria

8. Pavel, "Odkud vládla strana", 91–92.

9. Andrea Božinovská, "Prázdna kasa a reálny pesimizmus: strecha nad hlavou primátora napredaj!," *Košický Večer* 9, no. 136 (1998): 1,2; Macko Boris, "Kúpia Biely dom talianski podnikatelia?: vedenie magistrátu hľadá možnosť speňaženia svojej honosnej budovy. riaditeľ PKB by bral 400 miliónov," *Košický Večer* 14, no. 97 (2003): 1,2.

10. "Mesto ide rozpredávať budovy a pozemky," *Košický Večer* 2, no. 8 (1999): 2.









and general framework of the building's transformation, together with the architectural elements that should be preserved and left unchanged. During this phase, engaged members of the public centring around the IMA collective[11] became involved in the process. Active efforts to preserve the building as a part of local and regional heritage consisted of photographing the current state of the building and archival research aimed at finding original design documentation. The outcomes of this research provided by IMA, were presented to the investor, the city of Košice, in the form of a final report which focused primarily on a formal analysis of the building. The importance of describing the characteristics of the architecture and the significance of the components that should be preserved was also emphasised. A list of atypical, original interior fittings with high quality architectural designs was attached, as well as an inventory of artworks. Some key recommendations included maintaining the current mass of the entire building, meaning that no building extensions or demolitions would occur. Others suggested retaining the area of the main square in front of the building as a gathering space, preserving the integrity of the entrance axis, retaining the characteristic travertine cladding on the perimeter walls of the conference hall complex and the administrative areas, and conserving unique interior features such as the decorative ceilings, doors, chairs and integrated fitted furniture items in the meeting rooms. While the research was being carried out by IMA, the investor commissioned a local architecture studio, DOXA, to create a conceptual design for reconstruction that would also reflect the potential of the building's architectural heritage. It is worth mentioning that the architect of the original work, Milan Motýľ, also took part in the consultation process. Almost all of the recommendations and suggestions for preservation were incorporated into the final project developed by DOXA architects. Their design demonstrates the change in the perception of the building from a symbol of the authoritarian regime, which some members of the public and professional community still perceive it to be, to a democratic public building which is defined by its openness and high-quality public space. As the architects noted in their final report: *"We choose an approach where our design is not clearly distinguishable from the original one. In doing so, we want to show that even this historically high-*

11. The Initiative for Modern Architecture (IMA) is an organisation bringing together architects, designers, historians and other "architecture enthusiasts", which focuses on mapping the post-war modernist architecture of East Slovakia.

12. Tomáš Boroš et al., "Udržateľná obnova budovy Magistrátu mesta Košice a jeho okolia," (unpublished document, 2023).

13. For more on this approach, see Igor Machata, "Radikální ochrana," in Živá památka, ed. Pavla Melková (Praha: IPR, 2022), 176–91.

14. The design includes thermal insulation for perimeter structures, with the exception of exterior walls clad in travertine. In the part of the façade where the aluminium cladding is placed, it is proposed to remove the cladding, install the insulation system and then reinstall the renewed aluminium cladding. Replacement of exterior windows and doors with copies is considered as well.

Figure 1. Milan Motýľ, Building of the Slovak Communist Party offices/Administrative building of Košice City Municipality (the White house), Košice, Slovakia, 1979–1985. © IMA Archive, Diana Kakara Dobrescu, 2021.

Figure 2. The interior of the cinema. © IMA Archive, Diana Kakara Dobrescu, 2021.

Figure 3. Visualisation – front view.
© DOXA, 2023.

Figure 4. Visualisation – public pedestrian passage and urban parterre. © DOXA, 2023.

quality and genuine architectural language can, with a little adaptation, meet the current needs of a modern 21st century town hall."[12] Unlike, for example, a contrasting method that adds a new recognisable layer or a "radical" approach that replicates and develops the original ideas and patterns lying behind the physical form of architecture,[13] the DOXA design applies a "conservative approach" to the modification of the original structures. The main emphasis is placed on the building's surroundings. The creation of a new public pedestrian passage that leads directly through the complex helps to open the building from both sides of the central east-west axis and strengthens its role as a focal point of the area **(Fig. 3, 4).** Moreover, the design introduces new improvements, such as debarriering of the main entrance to the building, applying a new energy concept[14] and creating an open urban parterre with services. All of these interventions are particularly noteworthy because they are integrated into the existing volume of the building without compromising on the original architectural design.Other events held in cooperation with the Office of the Chief Architect, such as guided tours and public discussion on the building's future, have contributed to efforts to present this architecture as a vital layer of post-war modernism. Finally, the active work by the civic initiative and municipal authorities has resulted in a wider recognition of this architecture as a part of the city's heritage. This recognition has also been realised at the municipal legislative level through the inclusion of the building into the register of city monuments.

6. CONCLUSION

The purpose of party headquarters in Czechoslovakia was to provide a material and technological basis for the spread of the ideological agenda of the Communist Party. It carried out this aim directly, by functioning as a physical workplace for party members, but also indirectly, by serving as a distinctive landmark and symbol in the urban environment. However, as we have illustrated in this study, this architecture can function almost unchanged in the new post-communist political reality. Despite the fact that the plan for the building's reconstruction remains at the concept stage, it presents us with a potentially novel approach to working with the materiality of the socialist past. The use of this "conservative approach" aligns with the contemporary demand for healthy, sustainable public architecture. By taking into account and developing both the material architectural quality and the broader principles instilled in the design of the original building, its form can easily be adapted to current needs while maintaining its architectural-historical value. In addition to the reconstruction plan, engaged research undertaken by local activists has contributed to raising awareness and spreading knowledge of the building among the general public and other architecture professionals. Although the building is not currently listed, such "from below" care practices could lead to an acknowledgement of its heritage potential. ■

BIOGRAPHY

Monika Kicová (*1995) is a librarian, researcher and activist who is actively engaged in the preservation of modernist architectural heritage. She studied art history at the Faculty of Arts, Masaryk University in Brno. Since 2020, she has been working for the Initiative for Modern Architecture (IMA) civic organisation, where she investigates, documents and raises awareness of the architecture of the central and peripheral locations of the East Slovak region.

AWAY FROM NOSTALGIA: A NEW APPROACH FOR THE FORGOTTEN WELFARE STATE INDUSTRIAL FACILITIES

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#20

ABSTRACT

During the "glorious thirty years" European countries followed a development model that produced an expanded network of factories associated with the economic activity of the territories, closely related to the local communities where they were installed. Successive blows radically transformed this model, beginning with the oil crisis of 1972 and later with changes in the economic agricultural models caused by globalisation. Such changes resulted in an impact on land distribution and use, as well as a decline in national and local industries. This, in turn, led to the abandonment of structures in several cities and villages, which remain as testimonies of an industrial past.

What interests us in this paper is the relationship between what we would call non-activist preservation and effective adaptive reuse by involving the active local communities, promoting the heritage value of these structures not from nostalgic approaches but by boosting activities and interrelations between local actors, securing, at least for the upcoming decades, the protection of this modern heritage.

1. INTRODUCTION

The concept of the welfare state is traditionally associated with programmes of social security and protection policies from the State aimed at its citizens, in accordance with the social contract that regulates what Krieger has called the relationship between governor and governed.[1] This idea has been at the heart of a typical French territorial structure through a decentralisation of middle-sized industry, promoting the expansion of the workforce towards the provinces and increasing the economic and cultural networks into the territory, creating rich and dynamic work environments far from the large urban centres. During the "glorious thirty years" this model produced a system of factories associated with the economic activity of the territories, closely tied to the local communities where they were installed. Successive blows radically modified this model, beginning with the oil crisis of 1972 and later with changes in the economic-agricultural models caused by globalisation that impacted land distribution and use and produced a decline in national and local industries. This, in turn, led to the abandonment of structures in several cities and villages, marking the end of an industrial era.

With the progressive reduction of the traditional welfare state presence in communities, and a liberalisation of international commerce which brought with it the delocalisation of several industrial activities, a strong sense of detachment was transferred to these old and empty structures, and many of them were demolished to erase the memory of a past that no longer resonates with the new population **(Fig. 1)**. This has also conflicted with romanticised views of a "traditional" aesthetics associated with the countryside, leaving the industrial built environment out of the equation.

From a heritage point of view, and faced with a general lack of interest in these modern facilities, preservation of these structures was assumed at first both by the academic and the professional world, with Docomomo serving as a good example of this dual engagement. This involvement, which usually took the form of academic research and watchdog campaigns, could be described as "activist" and may seem as lacking in "objectivity" from scholars where objectivity should be expected. Over the past decade, there has been a shift in approach towards greater recognition of the importance of modern heritage and new research topics. This encompasses not only preserving the industrial heritage per se, but also its relationship with contemporary issues such as ecology, localism, circular economy and adaptive reuse.

2. THE MODERN INDUSTRIAL HERITAGE IN NORMAND VALLEYS

A good example of this situation can be found in the industrial valleys to the south of the River Seine in Normandy, France. Before modern times, these valleys profited from the presence of water power to drive several industrial facilities, like spinning mills, forges and woodcutting workshops. With the advent of modernity, larger and more complex industries emerged, requiring larger populations and intervening significant portions of middle-sized towns. In some cases, a single industry came to define a local community, such as sugar production in Nassandres-sur Risle. This network

1. L. Krieger, "The Idea of the Welfare State in Europe and the United States," *Journal of the History of Ideas* Vol. 24, no. 4 (October - December 1963): 553-568.

of integrated infrastructures and industrial facilities is clear in the valleys of the Charentonne and Risle rivers, which pass through several middle-sized cities and towns before flowing into the Seine waters.

If these industries thrived between the 50s and the 80s, they were progressively losing their appeal vis-à-vis foreign competition, and they eventually closed down. The social impact of these processes has been significant, and it has taken decades for these communities to reinvent themselves after the end of an activity that defined their identity and provided employment for most of the population.[2] From an urban perspective, the presence of these abandoned structures has been viewed as a problem to solve, and some municipalities have imposed a fine or a special tax on the owners of abandoned industrial buildings. This is due to obvious problems related to the existence of these places near residential neighbourhoods and the need to promote the re-occupation of these sites to revitalise urban (or semi-urban) life.

In some cases, the existence of these structures has reached a point of discomfort before before they have been recognized as subjects of heritage protection. This has led to a general lack of interest from both the population and the authorities.

One way to prevent the almost inevitable demolition of these structures is to find new uses for them and integrate them into current social, cultural, and economic trends. In recent years there has been a renewed appreciation for the past and the possibilities that large-span architecture can provide for new activities. However, sometimes the obsolescence of materials and construction techniques has made it impossible to adapt them to current standards, especially in a country where regulations demand high standards in thermal and habitability conditions.

3. LE TIERS-LIEU AS A MODEL OF ADAPTIVE REUSE

To allow for this update, in recent years a new model of adaptive reuse has emerged, lacking the suspicion of "activism" because it is not centred *only* on the idea of preservation. This model is known as "third place" (French *tiers lieu*): a place between house and workplace, where local communities can find a cultural and economic offer, recycling large abandoned industrial buildings and dedicating them to non-productive activities. Inspired by the concept of the third landscape by Gilles Clément,[3] these "third places" operate from the communities, and take the institutional form of local associations which allows them to apply to public funding for renewing facilities and run the programmes of their choice. While it may not be the most "scientifically" sound way to occupy these structures, as I have defined in a paper presented in a previous Docomomo Conference,[4] it promotes conservation by re-incorporating them into the dynamics of the current communities, regardless of some minor concessions to the restoration of the buildings to their original state. Hence, this approach aims to move away from the nostalgia associated with scientific restoration and instead breathe new life into abandoned industries with new uses and aesthetics.

This does not mean that what is being done goes against the most basic concepts of conservation. In a way, valorisation of the industrial aesthetics

2. The demographic evolution of the Eure department shows that the annual variation of the population lowered by half in the nineties, when several industries closed their activities, mainly due to the reduction of immigration. Source: "Évolution et structure de la population en 2020," *INSEE*, https://www.insee.fr/fr/statistiques/7633058?sommaire=7633086&geo=DEP-27

3. G. Clément, *Manifeste du tiers paysage* (Paris: Editions Sujet/Objet, 2004).

4. M. Atria, "Conservation as Project" in *The Challenge of Change*, ed. Dirk van den Heuvel et al. (10th International Docomomo Conference, 2008).

helps to avoid the disfiguration of the metallic and concrete structures, which is visible in the specific case discussed in this paper.

These efforts to update and adapt for new uses are a powerful tool also for promoting the value of modern industrial heritage to the population. This is achieved by making them acquainted with buildings and places that they would have never visited if they had remained in a state of abandonment or if they were to be restored to their original function as operating factories.

The last Europan competition focused on revitalising the damaged relationship between this industrial heritage and local communities, with the proposed intervention of 52 sites throughout Europe, three of which were in the Eure department. These sites encompassed abandoned industries along the Charentonne river with attractive concrete and steel structures waiting to be reused **(Fig. 2).**

4. THE SITE OF COURCELLES: A NEW MEETING PLACE FOR CULTURE AND THE ARTS

On the Charentonne riverbanks, near the town of Serquigny, lie the ancient buildings of an industrial site that has clearly seen better days. Originally established as a forge in 1603, it later became a linen spinning mill in 1830 and, after the Second World War housed a woodworking workshop specialised in building television and radio set cases. The concrete and metallic structure buildings that replaced the old brick eighteenth-century pavilions date back to this period. In the early 1960s, another fire led to a change of property ownership, and the site became the headquarters of an airplane construction company, Avions Mudry et Cie, which built the famous acrobatic planes of the CAP series. The company profited from the woodworking machines and the expertise of the previous workers to build the wooden structure of the planes, which were then flown in the nearby aerodrome of Bernay. As a side operation, under another brand, it built wooden furniture for Knoll. However, in 1995, a fire in the hangars of the aerodrome brought the company to bankruptcy, and since then the facilities have remained vacant **(Fig. 3)**.

The buildings feature a light construction technique with steel trusses and columns and prefabricated concrete panels, as well as undulated fibrocement panels for the roofing. Its present state is regular but healthy, with several portions having been stripped of the original materials. Additionally, a number of interventions have been carried out over the last twenty years to prevent total decay.

In the past, several initiatives attempted to occupy the site for new uses, capitalising on the large spans and open spaces left by the industrial activity, which were in rather good shape. Finally, in 2023 the site Les Nouvelles Coordonnées opened as a cooperative to promote cultural and social activities, renting space to artisans and workshops, as well as collaborating with performing arts companies to recycle stage props.[5]

In the aim of restoring the habitability of the different buildings, a conservation project was established. This project aimed to preserve the original architecture and its complex layout in different volumes. However, it

5. See "Les Nouvelles Coordonnées, C'est Quoi?," *Les Nouvelles Coordonnées*, https://lesnouvellescoordonnees.fr/recit/les-nouvelles-coordonnees-cest-quoi/







Fig. 1. Demolition of abandoned grain elevator (1950s) in Beaumont-le-Roger, France, 2021. Photo: M. Atria.

Fig. 2. Ancient sugar factory in Nassandres, France, ca 2020. Photo: Europan.

Fig. 3. Abandoned concrete structures in Courcelles, 2023. Photo: Les Nouvelles Coordonnées.

also took a more flexible approach to conservation, moving away from strict and traditional methods. The project was based on the idea that the activity and dynamism of the buildings are the best way to ensure their preservation as a living heritage.

In this specific case, conservation and restoration had to take into account certain conditions in terms of local ecology and landscape, as the site was listed as a Natura 2000 site, a European policy for the protection of biodiversity. With this in mind, conservation was an issue not only related to architecture, but to a larger and broader scope that included the river, the wildlife and the neighbouring forest. In this sense, the project considers the whole context, and architecture is only one of the elements that constitute the richness and diversity of the place: all these elements have to be incorporated into the efforts to adapt the site to new uses. Furthermore, the conservation plans included the possibility of recovering the flow of the

river to produce electricity and providing the surplus for the neighbouring community of Courcelles, in the municipality of Fontaine-l'Abbé. The original hydroelectrical station is likely obsolete and therefore it will be necessary to replace the machinery to make it operational again. Thus, the project works on a third level, with the aim of restoring the water force as a productive element in relation to the site and its new activities.

5. CHALLENGES AND OPORTUNITIES

This example of conservation as project —to paraphrase the title of my previous paper— shows that there are different levels of intensity in the tasks of restoration/conservation, moving away from nostalgic impulses. It's not only about architecture or the physical reality of the buildings, but also about the uses, the potential force of the river waters and the social relationships that need to be addressed in a comprehensive way.

Alongside the buildings and residual elements of the industrial production, like television set parts, plane cockpits and other paraphernalia, the current owners have found dozens of boxes with documents dating from the 1950s to the 1990s, covering all the recent industrial activities that occurred on the site. The project includes the organisation and the incorporation of these archives into the French national archives network, and the opening of the contents to proposals from artists and local associations to help build the collective memory of the site.

Taking this into account, this new understanding of comprehensive adaptive reuse can provide more certainties regarding the future of these facilities. They will no longer depend on an enormous effort to reconstruct or restore the buildings to their original state, and thus this will assure not only their material conservation but also their integration into the very social networks they were originally a part of. ■

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WIDER THAN WELFARE: INDUSTRY, INFRASTRUCTURE AND ERADICATION

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#20

ABSTRACT

Acting as an Advisor to the Modernist Society (Manchester, UK) since 2011, the threshold between historian and activist is one that I regularly traverse. Similarly, as a member of the Casework Committee of the Twentieth Century Society, my research frequently informs decision making in attempts to conserve architecture and landscapes of the post-war period. I am interested in expanding the discourse of state related construction 'wider than welfare' into territories of industry, infrastructure, services and more. In a period of nationalisation in Britain after 1947, vast swathes of the built environment were touched by the hands of the state in a modernisation programme that ran parallel to social reform. Where social housing is irrefutable evidence of 'socially committed architecture', I argue that forms of industry and infrastructure are also a demonstrable legacy of a political structure that favoured the citizen. The eradication of much of this built legacy has been drawn into issues of culture and class in the UK and, more than just subject to development pressures, its erasure may be viewed as politically calculated and deliberate.

In this paper, I reflect on a 'wider than welfare' state and collective efforts to establish a broader understanding of the state's role in the built environment of the post-war period. I will question the values of mainstream modernism in narrating these wider histories of the state's influence on the built environment. I shall present primary research concerning county council architecture departments, the design of infrastructural landscapes and higher education institutions to disclose how the research has led to various forms of protection and activism. The idea posited in the session outline, of 'eliminating evidence', will be discussed in terms of the UK's market economy and an apparent subjectivity within current governance that favours certain forms of built heritage and denigrates others.

In this paper I address three major concerns. Primarily, this is a call for understanding the activities of particularly the British state as expanding 'wider than welfare' – that, in the post-war period in Britain, during an intense period of nationalisation and amidst significant social consensus, most forms of physical change were influenced directly by the activities of the state. Secondly, I want to emphasise the impact that this has had in terms of attitudes and decisions in relation to the statutory protection of buildings, landscapes and structures. Finally, it is my aim to evidence that the hand of the state continues to shape ideas of value attached to architectural preservation in academic circles and to consider what this means in terms of objectivity and prevailing political binaries.

The post-war rebuilding of Britain has been described as, 'an era when the state – or, as we might express it more benignly, wider society through the instrument of the state – assumed direct responsibility for housing its people decently'.[1] However, in Britain the responsibility of the state went well beyond housing. Energy provision, transport, healthcare, industry and education were all part of the key reforms to secure 'fair shares for all'.[2] Historian, David Edgerton, developed the term 'warfare state' to describe the parallel activities of the British in service of the cold war, advancing an argument that military expenditure in the post-war period outstripped that spent on welfare.[3] Thus, through an array of policy means, including the major legislative programme of the Labour government from 1945-1951, the state had a guiding hand in vast swathes of social, industrial and military reform.[4] Reports published between 1940 and 1942[5] concerning planning and land-use, laid the ground for the 1947 Town and Country Planning Act, which was the foundation of modern planning in Britain. An intense period of nationalisation also created British Rail, British Gas, British Steel, British European Airways, the National Coal Board and the Central Electricity Authority.[6] Some observers even imagined the architecture profession as a branch of the civil service.[7] The far-reaching effects of this policy development and its passing into statute still resonate today.

At the close of the workshop, *Architecture and the Welfare State*, held in Liverpool in 2012, a series of questions were posed for the concluding discussion. 'Why do we only talk about housing?' was the most direct, but also asked was, '[h]ow are we to address the differences between the exceptional and the everyday productions of the welfare state?'[8] Henry-Russell Hitchcock similarly framed 'the architecture of bureaucracy' amidst 'large scale architectural organizations'[9] proposing that the critic would have 'to develop different tools to evaluate the built results of such practice'.[10] Scholars did not generally take account of Hitchcock's foresight. However, some acknowledge the utility of going 'beyond biographical and stylistic perspectives' to 'relate … more complexly to the history of the … welfare state.'[11] Here, I wish to expand existing norms - for example, housing is considered as symbolizing the 'collective interventions of the modern state'.[12] However, Pries and Qviström argue that an often singular focus on this aspect has obscured the understanding of the complexities of the state

1. John Boughton, *Municipal Dreams: The Rise and Fall of Council Housing* (London: Verso, 2018), 85.

2. Noel Whiteside, "Creating the Welfare State in Britain, 1945–1960," *Journal of Social Policy* 25, no. 1 (1996): 83–103.

3. For a history of the term, see Keith L. Nelson, "The 'Warfare State': History of a Concept," *Pacific Historical Review* 40, no. 2 (1971): 127–43. David Edgerton, *Warfare State* (Cambridge: Cambridge University Press, 2005).

4. Nicholas Bullock, *Building the Post-War World* (London: Routledge, 2002); Lionel Esher, *A Broken Wave* (London: Allen Lane, 1981); John Robert Gold, *The Practice of Modernism: Modern Architects and Urban Transformation, 1954-1972* (London: Routledge, 2007); Alan Powers, *Britain: Modern Architectures in History* (London: Reaktion Books, 2007); Peter Geoffrey Hall, *The Containment of Urban England* (London: George Allen & Unwin, 1973).

5. The Barlow Report (1940) Royal Commission on the Distribution of the Industrial Population - examining social and economic disadvantage recommended the dispersal of industry. The Uthwatt Report (1941) - concerned with land values and investigated by the Expert Committee on Compensation and Betterment. The Scott Report (1942) was authored by the Committee on Land Utilisation in Rural Areas and was the forerunner to green belt policy.

6. Robert Millward and John Singleton, *The Political Economy of Nationalisation, 1920-1950* (Cambridge: Cambridge University Press, 2002); Daniel Norman Chester, *The nationalisation of British industry, 1945-51* (London: HMSO, 1975); R. Kelf-Cohen, *British Nationalisation 1945–1973* (London: Springer, 1973); Michael Robert Bonavia, *The Birth of*

architecture, planning and landscape architecture of the period.[13] Historians have begun to unpack both matters - the discourse around type has expanded beyond housing, schools and hospitals and considered the architecture and landscape architecture of industrial, infrastructural and civic provisions in the context of state production. Recent research also calls for a more holistic understanding of 'welfare geographies', where multiple perspectives can reveal the more diverse aspects and achievements of state planning.[14]

My own research over the last five years has focussed on the architecture and landscape of post-war British infrastructure. Most acutely that of the Central Electricity Generating Board (CEGB) in coal fired and nuclear power stations, the reservoirs of the publicly owned water companies and the development of the motorway system. Nuclear power stations were part of a hidden-in-plain-sight programme for the enrichment of uranium for the British nuclear arms industry.[15] These large infrastructural undertakings were intrinsic parts of the modernisation of Britain but were equally bound to society through the provision of 'amenity', enshrined in statute initially via Section 37 of the Electricity Act (1957), later dubbed the 'Amenity Clause'.[16] It required the minimisation of the impact of generating and transmission sites on scenery, flora and fauna, which created aesthetic value as well ecologically important assets, and resulted in the appointment of landscape architects on new power station projects. In the same period the 'public relation value' of the landscapes of power stations became a crucial part of government policy.[17] This safeguarded the needs of communities and added another layer of cultural value to these landscapes. In 1961, Michael Porter was appointed as the first Landscape Advisor to the Ministry of Transport. The 1973 Water Act also created a duty to promote 'amenity' by the regional water authorities.[18] Thus, the heritage significance of industrial and infrastructural sites extends beyond the value of the built objects, conventionally recognised as being designed (albeit ostensibly technocratic exercises), to the designed landscapes and to the idea of welfare intrinsic in the provision of public amenity. In these terms, infrastructural landscapes that were sponsored by the state expand the ascription of 'welfare' and its geographies. They are also bound to an ideology that saw the apparatus of the state situate social and cultural provision at the core of its industrial expansion through the policies of nationalisation.

As coal fired power stations are demolished in the UK, so too are the socio-cultural structures associated with amenity provision. The vanishing of an entire industry and the dissolution of its supply chains and attendant businesses (also state directed) is happening in places that have already witnessed one such decimation in the politically motivated closures of coal mines in the 1980s (**Fig. 1**). It has become hard to separate industrial heritage from ideology, particularly as political binaries are increasingly entrenched in contemporary culture wars. Currently, Historic England (a public body funded by the Department for Culture, Media and Sport) have no plans to afford statutory protection to any relics of the coal fired power industry, despite calls to preserve at least one cooling tower. The listing of post-war architecture is notoriously subject to the whim of government administrations

British Rail (London: Allen & Unwin, 1979).

7. Patrick Zamarian, *The Architectural Association in the Postwar Years* (London: Lund Humphries, 2020); T.P. Bennett, "The Architect and Organisation of Post-War Building," *Builder* (29 Dec. 1944) 516-521, (5 Jan 1945) 14-17; "The Future of Architects," *Builder* (6 Sep 1946) n.p.; "The Architect and the State," *Architect and Building News* (8 Nov 1946) 91-92.

8. Adrian Forty, "Appendix: Outcomes from the Liverpool Workshop 2012," in *Architecture and the Welfare State*, ed. Mark Swenarton, Tom Avermaete and Dirk van den Heuvel (London: Routledge, 2015) 321-323.

9. Henry-Russell Hitchcock, "The architecture of bureaucracy and the architecture of genius," *Architectural Review* 101, no. 601 (January 1947): 3-6.

10. Michael Kubo, "The concept of the architectural corporation," in *Office US Agenda*, ed. Eva Franch (Zurich: Lars Müller, 2014), 37-45.

11. Daniel M. Abramson, "Representing the American Welfare State," *Grey Room* 78 (2020): 96-123.

12. Miles Glendinning, "Mass Housing: Modern Architecture and State Power - A 20th Century Epic," in *Mass Housing of the Scandinavian Welfare States*, DOCOMOMO conference report (2020).

13. Johan Pries and Mattias Qviström, "The patchwork planning of a welfare landscape: Reappraising the role of leisure planning in the Swedish welfare state," *Planning perspectives* 36, no. 5 (2021): 923-948.

14. Mikkel Høghøj, "Planning Aarhus as a welfare geography: urban modernism and the shaping of 'welfare subjects' in post-war Denmark," *Planning Perspectives* 35, no. 6 (2020): 1031-1053.

and, despite being framed as an objective rule-based system, is openly affected by subjective decision making at the highest ministerial level. Cynically, one might suggest that some of this decision making is ideologically compromised.

To explore this possibility is it worth considering the case of the Dorman Long tower in England's north-east. The tower was built between 1954-57 as part of a plant producing coke for steel production.[19] The building contained a coal bunker and handling facilities, control rooms and water tanks for emergency firefighting. Disused since 1970, other than retaining its water storage function, the tower was scheduled for demolition as part of a programme of works to establish a freeport on the site. A notice of demolition was submitted on 3rd September 2021. Following rapid campaign mobilisation, on 15th September the tower was spot listed by Historic England for its 'deliberate monumental architectural statement of confidence' as 'a rare (considered to be nationally unique) surviving structure from the 20th-century coal, iron and steel industries'.[20] The 18th September saw a government cabinet reshuffle whereupon Nadine Dorries was appointed as Secretary of State for the DCMS. Her first ministerial act, following lobbying from the Conservative mayor of Teesside, was to overturn the listing decision and the tower was subsequently demolished overnight on 21st September. In cases such as this, objectivity is rapidly obscured by political hubris and to search and locate a truth is largely impossible. Left wing media saw it as a debacle that, 'symbolised the evisceration of local industrial heritage in the name of profit-driven redevelopment – and proved the 'Conservatives' only conserve when it suits them.'[21] The same authors pointed out that heritage and employment had been set up as binary opposites by the local Conservative mayor, who argued that the retention of the tower prevented jobs being created in the onward development of the site. Apparently, the two were incompatible.

Returning to the case of infrastructure and their landscapes, as my colleague and co-researcher Luca Csepely-Knorr observes, 'motorways or power stations are also sites through which geographies of mid-twentieth-century British modernity – and the ideas of welfare can be assessed and explored'.[22] Rapid state driven modernisation in Britain after 1960 was supported by government organisations with responsibilities to various ministries. The Central Electricity Generating Board (CEGB, 1958-1990) sat beneath the Ministry of Power and, subsequently (1969), the Ministry of Technology. Similarly, the Ministry of Transport oversaw the construction and management of motorways that were delivered via county authorities. Much of the planning for power and mobility was associated with the British New Towns programme. Thus, ideas of the 'state' and 'welfare' become inseparable when considering the vital links between people, place and employment in post-war Britain. The CEGB were responsible for the provision of power and commissioned and oversaw the construction of large oil fired, coal fired and nuclear power stations.

The fact that these were state enterprises, with clauses on amenity and the environment enshrined in statute, meant that the power stations were part of civic structures alongside fulfilling their function. In all the interviews we have

15. Martin Theaker, *Britain, Europe and Civil Nuclear Energy, 1945–62* (London: Springer, 2018).

16. John Sheail, "The'amenity'clause: an insight into half a century of environmental protection in the United Kingdom," *Transactions of the Institute of British Geographers* (1992): 152-165.

17. George Goulty, "Landscape Electric," *Landscape Design* 162 (1986): 34-37.

18. Tony Aldous and Brian Clouston, *Landscape by Design* (London: William Heinemann, 1979), 79.

19. The steel industry in Britain was nationalized on November 24th, 1949, with the passage of the Labour government's Iron and Steel Act. This was reversed by the Conservative government elected in 1951, but the industry was nationalized again in 1967 under a Labour government as British Steel Corporation. The industry was privatized in 1988 by the Conservative government of Margaret Thatcher.

20. "C20 Director on the demolition of the Dorman Long tower," C20 Twentieth Century Society, https://c20society.org.uk/news/c20-director-on-the-demolition-of-the-dorman-long-tower.

21. Claire Harper and James Perry, "Destroying Teesside's History," *Tribune* (October 1, 2012), https://tribunemag.co.uk/2021/10/destroying-teessides-history.

22. Luca Csepely-Knorr, "'Conditions in Landscape Which the Public as a Whole Wishes to See and Enjoy' – Electricity Generation, Amenity and Welfare in Post-War Britain," *Geografiska Annaler: Series B, Human Geography* 104, no. 3 (2022): 192–208.

conducted, former employees from every tier of the CEGB have expressed their pride in being part of a service with such responsibility. They recall fondly the leisure and recreation facilities of playgrounds, allotments, sports pitches, golf courses and nature reserves, as well as family days, festivals and fairs, sponsored by their employer. These were not the paternalist-capitalist models of earlier industrialists, more these were undertakings bound with the welfare state. Much of this social provision was lost at the point of privatisation in the 1990s and more was eroded as the post-carbon future beckoned, and sites were closed. Beyond a collectively inscribed socio-cultural value, several organisations are now drawing attention to the heritage value of twentieth century infrastructure.[23] This is in the face of Historic England's current advice that cooling towers, the very symbols of post war power generation, are too ubiquitous and numerous to receive statutory protection.

However, it is not exclusively the objects of infrastructure that are at risk, significant twentieth century designed landscapes (now understood as 'welfare landscapes')[24] are being lost at a rapid rate. Absent in any appraisal of decommissioned sites, is an appreciation of the heritage, social, recreational and environmental values of the landscape architecture, so much so that several pioneering and stand out landscapes have already vanished without record or recognition. Landscape architects were at the forefront of the development of our power stations, reservoirs and motorways. No other profession had the requisite skill and wherewithal to be able to address the scale and significance of these changes to our landscape. Of course, if a landscape architect did a good job, then 60 years later their impact and involvement in these infrastructural advances is invisible. Moreover, those leading the development of ideas, and the development of the profession were often women, whose histories, like many female designers, have, until recently, been obscured.

To landscape historians, influential figures such as Brenda Colvin and Sylvia Crowe are well known, but their designed works, significant in scale and highly publicly visible, are under-celebrated. Crowe stands out for her landscapes around nuclear power stations at Wylfa and Trawsfynydd (**Fig. 2**) in Wales and Colvin for her schemes alongside coal fired power stations at Stourport (from 1952), Eggborough (from 1961), Drakelow (from 1963), and Rugeley (from 1963). At 60-70 years of age, the planting in these schemes is at peak biodiversity, but neither this, nor the design heritage value is preventing the loss of the power stations themselves and their landscapes. Victorian industrial heritage is universally recognised as of value, but the ascription of value to artefacts of the post-war state is seemingly irreconcilable with demands for development in the UK. The only current exception to this general picture, is the preservation of a nature reserve at Drakelow. As historians and researchers bringing attention to the schemes and asserting their historical significance, as well as perceiving inconsistencies and subjectivity in statutory processes, it is hard not to be drawn into arguing for their protection.

To complicate the threshold between objectivity and subjectivity, the UK administers a quinquennial research assessment exercise to assess the quality

23. "British Cooling Towers," Twentieth Century Society, accessed May 6, 2024, https://c20society.org.uk/news/british-cooling-towers-sculptural-giants-exhibition-opens

24. A term largely advanced by Scandinavian scholars in discussing the Danish and Swedish welfare state.



Figure 1. Building Design Partnership, Ferrybridge C Power Station, South Yorkshire, UK, 1961-68 (demolished). Landscape architects – Milner White. © Richard Brook, 2020.



Figure 2. Basil Spence, Trawsfynydd Nuclear Power Station, Wales, 1956-65. Landscape architect – Sylvia Crowe. © Richard Brook, 2021.

of work in universities. One of the key metrics is 'impact', defined as 'an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia'.[25] My 'Impact Case Study' in REF2021 evidenced that I had 'impacted on the heritage sector through the statutory listing of post-war buildings'.[26] I made successful applications to list two buildings and a public sculpture. The listing was only part of the impact my research had, but nonetheless points to a value system that rewards forms of soft activism, such as raising public awareness and seeking to preserve the built environment. Now, as a member of the Twentieth Century Society's casework committee, the line between architectural historian and activist is blurred and objectivity potentially conflicted. The only conclusion I personally can draw to reconcile this is, that if I, as an academic with privileged access to the necessary resources, do not do this work, who will? ■

25. REF 2019/01, Annex C, *Guidance on Submissions* (January 2019), 90.

26. "Heritage Action: The revelation, preservation and celebration of post-war modern architecture," REF 2021 Research Excellence Framework, https://results2021.ref.ac.uk/impact/0966669b-8ef4-47f2-bb3c-64490c5a93d0?page=1.

BIOGRAPHY

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THE AYLESBURY ESTATE: SHIFTING NARRATIVES ON URBAN RENEWAL

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ABSTRACT

In contemporary imagery, modern architecture's representation fractures from reality, yet it continues to exert a real impact on people's lives: the Aylesbury Estate represents this crisis inflicted upon London. Once a vast declaration of the social ambitions of modernism, its place within media and politics has been as a symbol of social decline, failed design and dystopia. Despite degradation and displacement, residents of one of Europe's largest public housing estates, mostly decanted by the council, persist in fighting for the Aylesbury Estate's future. Discourse on London's post-war social housing frequently neglects resident voices, prioritising abstracted architectural significance, distanced from its character as occupied and contested space, evident in the recent prominent campaign regarding Robin Hood Gardens. Architectural discussion surrounding the Aylesbury Estate focuses on the plans for its succession, immersed in neoliberal economics, minimal space standards and speculation.

Beyond its monumental legacy, modernist residential estates facilitated community growth, surpassing 'defensible architecture', through key design principles: highlighting common spaces, urban integration, and blending public and private areas. The lack of socially engaged architecture in London's modern public realm prompts a narrative on modernist estates navigating activism, debates surrounding heritage, economics, and politics. Discussions about retrofit arise as an opportunity to understand the intersection between environmental emphasis and socio-cultural dynamics. Recognising diverse attitudes to the architecture of post-war social housing, and activism in the campaign to save the Aylesbury Estate from creative destruction, it's crucial to amplify the vibrant working-class and minority ethnic community's story of spatial injustice to liberate the architecture of the welfare state from the environmentally and socially destructive process of 'regeneration'.

1. "THE ARCHITECTURAL SKULL FOR A NEW KIND OF BRAIN"[1]

The Aylesbury Estate, constructed between 1963 and 1977, and its fate uncertain, is a testament to the ambition of the welfare state, and its subsequent decline. Itself an object of urban renewal, it is at conflict with the same discourse, with perception for most of the estate's existence dominated by a new kind of brain. Its contemporary position has been shaped by demolition since 2009 in an effort to "obliterate entirely all physical and historic reference to the current Aylesbury Estate,"[2] and this ambition suffering defeat in the Royal Courts of Justice.[3] Reflection on the ideals of modernism and social housing in London, alongside the narratives of retrofit, environmentalism and heritage, are necessary to provide a vision for the architectural skull of the Aylesbury Estate. Renouncing the dominant portrayal of the estate, emphasis is placed on its material and social qualities, interpreting the forces that attempt to obscure working-class landscapes from the neoliberal city.

2. FROM THE WELFARE STATE TO NEOLIBERAL EXCLUSION

Built as a response to the fragmented inner-city landscape of Walworth, South London, the construction of the Aylesbury Estate articulated Keynesian social and economic planning, replacing a large swathe of overcrowded housing, semi-industrial sites, and bomb-damaged streets. Industrialisation and standardisation offered "a technological shortcut to social transformation,"[4] and produced a colossal modern monument to the aspirations of the welfare state, empowered by the vast energy wealth of the post-war period (**Fig. 1**). Traversed by 21 kilometres of walkways, interconnected by ramps, lifts and stairs, interwoven with communal gardens, open spaces and play areas, and provided with shops, a health centre and nursery, laundry rooms, district heating and hot water, a young peoples' centre, a children's home and three community halls as an inexhaustive list, it was described as a 'miniature town'. With 12,000 residents, inhabiting four to five story maisonettes and blocks of up to fourteen stories, it stands as the largest system-built estate in London, in sharp contrast to the surrounding streets of Victorian red-brick terraced housing.

Before the construction, the Aylesbury Estate's confrontation with the marginalised and precarious social condition of the urban working class was challenged by the collapse of industry in inner London. Walworth's borough of Southwark endured the highest rate of industrial decline, with 52,000 manufacturing jobs lost from 1966 to 1974.[5]

Before the 1968 Race Relations Act and more significant Housing (Homeless Persons) Act of 1977 social housing was "the prime element through which the provision of social assistance was politicized and racialized,"[6] and after housing provision was now attainable for ethnic minority groups, welfare recipients, single mothers and the homeless.

Ideological debasement of social housing in the United Kingdom gained traction by the mid-1970s. Hostility to high-rise housing from the partial collapse of Ronan Point in 1968, the impact of recession and

1. Norman Mailer, *Of a Fire on the Moon* (Boston: Little, Brown and Company, 1970), 13-14.

2. Ike Ijeh, "Aylesbury Estate: Taking back the streets," *Building*, August 3, 2012.

3. Aysen Dennis v. London Borough of Southwark. (2024) 57 EWHC (Admin).

4. Michael Romyn, *London's Aylesbury Estate: an Oral History of the 'Concrete Jungle'* (London: Palgrave Macmillan, 2020), 57.

5. Romyn, *London's Aylesbury Estate: an Oral History of the 'Concrete Jungle'*, 111.

6. Robbie Shilliam, *Race and the Undeserving Poor* (Newcastle: Agenda Publishing, 2018), 108.

subsequent cuts in funding, changing demographics of council estates and the neoliberal governance of Margret Thatcher eroded political support for the welfare state and its architecture. Nationally, neoliberalism's ascendancy has diminished council housing from approximately a third of all households in 1981 to 6% in 2023.[7] The Aylesbury Estate suffered an increasingly abject decline - in 1990, caretakers of the estate were lost to budget cuts, cleaning staff finished their last shift in 1991, and beyond this, the Aylesbury Estate experienced virtually no maintenance.[8]

Tony Blair's symbolic speech after election victory in 1997 declaring that "all that is left of the high hopes of the post-war planners is derelict concrete,"[9] with the Aylesbury Estate as a backdrop, heralded the start of New Labour's 'Urban Renaissance', a term coined by Richard Rogers, chair of the government's Urban Task Force.

Since, the process of 'regeneration', resolute on the comprehensive demolition of the Aylesbury Estate has been pursued behind a façade of social improvement. The economic impetus for the demolition is articulated clearly by Lord Adonis, a former cabinet minister under New Labour, stating "there are particularly large concentrations of council-owned land in inner London, and this is some of the highest-priced land in the world."[10] And, as Aysen Dennis, a resident of the estate for 30 years, questions: "Who is occupying this invaluable land? Working-class, minority ethnic people."[11] The destructive creative power of neoliberal urbanism extends further than Modernism in erasing traces, with a complete *tabula rasa* contrasting the Aylesbury Estate's retention of red-brick social housing of the previous generation. The absence of the paternalism with which the Aylesbury Estate was built has been substituted by what David Harvey calls 'accumulation by dispossession',[12] extinguishing any engagement with social need.

3. MASS MEDIA, HERITAGE AND THE AYLESBURY ESTATE

Its vast scale and forcefulness dominating Southwark, the Aylesbury Estate was an immediate target for many journalists. In 1977, "living in the sky was nearer the Devil, in psychiatric terms, than Heaven"[13] was published in reference to the estate, and was later described as "the estate from Hell."[14] Media depictions rarely resembled reality, particularly in the naturalised "interpretation of the Aylesbury as a crime-ridden dystopia"[15] not reflected in crime statistics.[16] Anti-social behaviour and crime, nothing dissimilar from what proceeded, or what was experienced in other high-density residential areas, was projected onto the modernist architecture of the Aylesbury Estate.

The greatest influence on the interpretation of the estate's architecture was the politically expedient work of Oscar Newman, translated to the British context by Alice Coleman. Broadcast in 1974, Newman visited the Aylesbury Estate for a BBC Documentary, describing it as an environment that "facilitates the commission of crime" where "inhuman tragedies occur."[17] Modernist design, at the expense of socio-economic conditions and historical context, is overemphasised as responsible for behaviour. Physical impact of this belief is witnessed in an unavailing attempt to "design out

7. Department for Levelling Up, Housing and Communities, 2023. *English Housing Survey 2022 to 2023*.

8. Michael Romyn, *London's Aylesbury Estate: an Oral History of the 'Concrete Jungle'* (London: Palgrave Macmillan, 2020), 184-186.

9. Tony Blair, 'The Will to Win', Speech Given at the Aylesbury Estate, (June 2, 1997), London: Office for the Deputy Prime Minister, Social Exclusion Unit.

10. Anna Minton, *Big Capital: Who Is London For?* (London: Penguin Books, 2017), 67.

11. Interview with Aysen Dennis, October 28, 2023.

12. See David Harvey, *The New Imperialism* (Oxford: Oxford University Press, 2003).

13. *South London Press*, April 19, 1977, quoted in Michael Romyn, *London's Aylesbury Estate* (London: Palgrave Macmillan, 2020), 131.

14. Jonathan Glancey, "That sinking feeling on 'estate from hell," *The Guardian*. September 22, 2005.

15. Ben Campkin, *Regenerating London: Decline and Regeneration in Urban Culture* (London: I.B. Tauris, 2013), 96.

16. Christina Beatty et al., quoted in, Paul Watt, "Territorial stigmatisation and poor housing at a London 'Sink Estate'," *Social Inclusion* 8, no.1, (2020): 24.

17. John M. Mansfield (dir.), *Horizon: The Writing on the Wall*, (BBC, 1974).

crime,"[18] with the removal of five "vicious"[19] overhead walkways between 1994 and 1996. However, the greater significance of these ideas has been in shaping public policy, empowering the demolition of modernist estates across the United Kingdom. Appeal to tradition, the village and street, in accord with Coleman's view that residents "could cope perfectly well with life in more traditional houses",[20] provided impetus to justify in a government-commissioned report the "restoration of traditional street patterns" and the replacement of modernist architecture "with traditional housing types, including terraced houses and mansion blocks."[21] This weaponisation of heritage, legitimising the reduction of social housing to history, facilitates the destruction of the rich social, cultural and architectural qualities of the Aylesbury Estate.

Architectural culture, possessing a dominant voice in the campaign to save Robin Hood Gardens, demonstrated a great severance to the concerns of residents, most impacted by its loss. Whilst showing variation to the hegemonic discourse of estate 'regeneration', reproduction of the injustice of demolition is clear, as middle-class appropriation was proposed to displace the occupants, approximately two-thirds of whom were from a Bengali background. One of several high-profile advocates during the campaign, Richard Rogers, stated how "Robin Hood Gardens has been appallingly neglected and, from the beginning, has been used as a sink estate to house those least capable of looking after themselves – much less their environment."[22] Whilst identifying degeneration caused by the council, blame is shifted to the residents for the condition of the estate. In the case of Robin Hood Gardens, as argued by Nicholas Thoburn, aesthetic merit is emphasised as heritage, excluding the social, disregarding the fact both are architectural features.[23]

4. SOCIAL AND URBAN FORMS OF THE AYLESBURY ESTATE

4.1. SPATIAL POLITICS FROM MODERNITY IN CRISIS

The crisis present at the Aylesbury Estate is also a crisis in spatial democracy, as neoliberal governance increasingly removes participation from urban politics. A ballot in 2001, proposing privatisation of the estate, was overwhelmingly rejected by 73% of residents with a 75.8% turnout, a resident-led campaign defeating one funded by public money. In contrast to this overwhelming popular mandate, Southwark Council, who in 2005 decided to dismiss the result and advance plans of redevelopment and privatisation regardless, was elected with a 26.2% turnout. Attempts to construct a consensus-based politics to "depoliticise the political"[24] have failed at the Aylesbury Estate, with dissent witnessed in protest occupation, marches, legal resistance, and at the offices of the council and architects of displacement. In the context of political neglect, the architecture of the welfare state became a spatial repository of socio-political exchange, demonstrated in the 'FIGHT4AYLESBURY' exhibition, celebrating more than 20 years of housing struggles on the estate, with Aysen's home a canvas to everyday resistance.[25] Moving between Anna Minton's presentation of her book *Big Capital* in the corridor (**Fig.2**) and the apartment, participants

18. *South London Press*, May 20, 1994, quoted in, Michael Romyn, *London's Aylesbury Estate* (London: Palgrave Macmillan, 2020), 208.

19. Alice Coleman, *Utopia on Trial: Vision and Reality in Planned Housing* (London: Hilary Shipman, 1985), 137.

20. Coleman, *Utopia on Trial: Vision and Reality in Planned Housing,* 3.

21. Savills, *Eric Pickles foreword – Savills regeneration research proposal* (London: Savills, 2014), 5.

22. Nicholas Thoburn, *Brutalism as Found: Housing, Form, and Crisis at Robin Hood Gardens* (London: Goldsmiths Press, 2022), 23.

23. Thoburn, *Brutalism as Found: Housing, Form, and Crisis at Robin Hood Gardens,* 55-59.

24. Loretta Lees, "The urban injustices of New Labour's 'new urban renewal': the case of the Aylesbury Estate in London," *Antipode: a radical journal of geography*, 46, no.4, (2014): 931.

25. See Gammarota, Alessia. "FIGHT4AYLESBURY" alessiagammarota.com/fight-4-aylesbury.

could experience the crucial role of these collective areas in the community's resistance to demolition. As spaces of contestation and everyday use, the corridors and courtyards were a venue for democratic discussion during the protest occupation of the Aylesbury Estate in 2015. Film screenings, football matches, workshops and daily public meetings attracted participants from the estate and beyond, facilitating action to keep the architecture alive and the community together to protect it, with squatters and residents uniting to demand collective rights to the city.

The kilometres of pedestrian walkways fostering interaction on the Aylesbury Estate reflected a car-centred view of urban life and design: with a 130% provision for car parking,[26] the ground level was predominantly dedicated to cars, relegating human activities to elevated horizontal planes. Discussing the urbanism of housing estates, Matrix group's feminist interpretation of "an environment designed to enhance the norm of individual mobility […] a male, white, middle-class norm"[27] highlighted the hegemonic approach. This layout established a dual-level structure that has become divergent today: while the ground level is losing its functionality due to declining car dependency, the common spaces in modernist estates - walkways, corridors and open spaces- preserve the flexible identity of multiple uses, becoming the infrastructure of a new type of brain.

In contrast to Newman's analysis of the Aylesbury Estate, residents' stories, set within the daily blend of private and public areas, reveal the 'porosity'[28] of the estate. The echoes of children's voices playing in the corridor, the diverse smells and music from each apartment established "a very colourful, very rich community",[29] and descriptions of residents occupying the walkways in good weather with tables and chairs were demonstrative of habits "that refused to cede to the passage of time".[30]

At Robin Hood Gardens a common urban landscape was produced from the violence of demolition, the rubble of the condemned tenements creating a green mound between the two apartment blocks, as an example of topography remodelling. This process considered landscape as a "charged void"[31]: the garden hill shifted the rhetoric of green space alleviating the buildings' impact towards an open field in constant and unpredictable transformation, with vegetation growing in dialogue with people's uses, crossings and social gatherings, fostering identity formation. "It functions as a ship to carry people through time, house people through time"[32] as a resident expressed; here, the human footprint was the design unit of the Smithsons' sketches where buildings disappeared.[33] Space between buildings could be considered the true legacy of modernist residential estates, and failure to realise or maintain it became their greatest disadvantage.

4.2. URBAN LANDSCAPES OF RENEWAL

Burgess Park, also formed from rubble as part of post-war urban development, worked as the urban link to guarantee mixed communities and today it represents a reference in the context of residents' dispossession (**Fig.3**).

26. SCHC, "Aylesbury Redevelopment: London Borough of Southwark Department of Architecture and Planning" (25 October 1966), quoted in, Michael Romyn, *London's Aylesbury Estate: an Oral History of the 'Concrete Jungle'* (London: Palgrave Macmillan, 2020), 64.

27. Matrix, *Making Space. Women and the man-made environment* (London: Verso, 2022), 41.

28. See W. Benjamin and A. Lacis, "Naples," in Benjamin Walter, *Reflections. Essays, Aphorisms, Autobiographical Writings* (London: Harcourt Brace Jovanovich, 1978), 163, 173.

29. Interview with Aysen Dennis, October 28 2023.

30. Michael Romyn, *London's Aylesbury Estate: an Oral History of the 'Concrete Jungle'* (London: Palgrave Macmillan, 2020), 132.

31. Alison and Peter Smithson, *The Charged Void: Architecture* (New York: Monacelli Press, 2001).

32. Nicholas Thoburn, "Concrete and council housing", *City* 22, no.5-6 (2018): 612-632.

33. Alison Smithson, *Visual Connections of the People to their District,* Smithson Family Collection, (date unknown).



Figure 1. View of the Aylesbury Estate from Aysen's apartment, London, 2018. Photograph by Alessia Gammarota.



Figure 2. Anna Minton at the 'FIGHT4AYLESBURY' exhibition, April 2023. Photograph by Alessia Gammarota.



Figure 3. Burgess Park in dialogue with the Aylesbury Estate. 2017. Photograph by Alessia Gammarota.

Considering the urban landscape legacy of the welfare state as part of architectural heritage and reinterpreting it within its socio-environmental importance allows one to better understand the opportunity of preservation.

The experiment of *Piano di Edilizia Economica e Popolare* of Bologna in 1973 seized the intuition to prevent the abandonment of Bologna's historic centre by reusing architectural heritage for social housing. The system was

also adopted in the proposal of *Piano di Recupero* for sections of the historic centre of Rome in the late 1970s by pioneering Italian female landscape architect Vittoria Calzolari: with new planning instruments, the construction of council houses started to be considered as a means of urban revitalisation, integrated with public services, libraries and shops.

Focused on a different historical built-up area, Bologna's effort provides an illuminated vision of the urban environment. For Bologna's Communist administration, "there was no clear division between the physical environment and the more ephemeral social and cultural qualities that were produced through the motions of everyday life."[34]

If in the Italian example the challenge was the depopulation of the historical centre, nowadays the environmental issue is added to the ongoing housing crisis, emphasising the need of readapting existing heritage.

5. ASPIRATIONS IN THE FORM OF A CONCLUSION: SOCIAL RETROFIT

As demolition of London's modernist estates has been the result also of a stigmatised narrative- where the technical-architectural contributions appeared weak- it's relevant to amplify marginalised perspectives. Rejecting demolition and demanding refurbishment, residents and communities have realised the inseparable link between the social crisis provoked by 'regeneration' projects and environmental urgency of the current climate breakdown. A combined action of architecture and activism as a new inclusive voice to interpret the heritage of the welfare state introduces the idea of *social retrofit,* questioning hegemonic narratives on the city.

In the context of required action, with community-led initiatives such as sustainable energy and food production systems, and adaptive reuse for a changing climate, housing becomes an ecological bastion, with direct action facilitating heritage to be seen as a new kind of environmentalism.

Agency for the Aylesbury Estate was rejected, with neglect leaving "an environment rigid in form, static in programme",[35] whilst, as Pablo Sendra proposes, inspired by Richard Sennett, it is necessary to welcome uncertainty in the design process as a tool to create narrative spaces of interaction.[36] In the words of the borough architects of the Aylesbury Estate: "a developing approach is required".[37] ■

34. Tess Pinto, "The Radical Conservation of Red Bologna," *Tribune* (27 October 2021).

35. Pablo Sendra and Richard Sennett, *Designing Disorder. Experiments and Disruptions in the City* (London: Verso, 2020), 34.

36. Sendra and Sennet, *Designing Disorder. Experiments and Disruptions in the City*, 34.

37. Michael Romyn, *London's Aylesbury Estate: an Oral History of the 'Concrete Jungle'* (London: Palgrave Macmillan, 2020), 148.

BIOGRAPHIES

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ARCHITECTURAL CONSERVATION AND POLITICAL RESILIENCE: THE 2023 ATTACK ON THE PALACE OF CONGRESS IN BRASILIA

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ABSTRACT

In the late 1950s, Lucio Costa and Oscar Niemeyer created the urban plan and civic buildings of Brasília, Brazil's new capital, giving rise to a modern symbol of democratic power. The Palace of Congress, with its unique design, embodied a new concept of monumentality in post-war architecture, characterised by transparency, integration with the landscape, and distinct structural elements. Brasília's urban ensemble, recognised for its architectural significance, was designated a UNESCO World Heritage site in 1987 and a national heritage site in 1989, and the Palace of Congress individually listed in 2007. On January 8, 2023, extremists attempted a right-wing coup by invading Three Powers Plaza's main palaces, including the Palace of Congress. The attack aimed to symbolically seize power, exploiting the building's openness and structural integrity. Although the coup failed, significant damage was inflicted on the palace, including mutilated artwork and destroyed furniture and cladding. Despite the destruction, the Palace's architectural resilience allowed for quick repairs, which were completed within three weeks. The attack targeted not only physical structures but a democratic political initiative, making the swift reconstruction a symbolic act of political resistance. Thanks to detailed documentation and financial resources, the restoration prioritised restoring the building's appearance and functionality, solidifying its role as a symbol of democratic and architectural resilience.

On the afternoon of January 8, 2023, a crowd of over 4,000 people broke into the main palaces of Three Powers Plaza aiming to perform a coup d'état. They demanded military intervention, the closure of the main democratic institutions, political persecution of all left-wing leaders, essentially calling for a dictatorship. Thousands of right-wing activists, who supported President Jair Bolsonaro, had been camping in front of army quarters all over Brazil for the previous two months, since the results of the presidential election, which was won by Luiz Inácio Lula da Silva, the leftist candidate of the Workers Party. Rejecting the results, they blocked roads, organised riots in some capitals, and placed a bomb close to Brasilia's airport. As Lula took office on January 1, they focused their efforts on spreading chaos in Brasilia through the invasion of the palaces that symbolise political power. As their highly destructive action was broadcast on TV and social networks, it became clear that the attempt would not gain widespread support from the public. The missing security forces then began to evacuate the area and arrest the invaders in the buildings. The coup attempt had failed.

Does the architecture of the Palace of Congress embody democratic principles that make it a preferred political target for defenders of a dictatorship? What are the specificities of that architecture as cultural (and political) heritage? What would the political meaning be of preserving those values? By answering these conceptual, historical, and practical questions through the case study of the background and response to the events of January 8, 2023, we aim to contribute to today's agenda of preserving modern architecture as a form of engaged research.

1. A POST-WAR DEMOCRATIC DREAM

Although it was long before envisaged as a political act, the definitive design and inauguration of the new Brazilian Capital were promoted by President Juscelino Kubitschek (1902-1976). Brazil had undergone a 15-year dictatorship (1930-1945) under the rule of Getúlio Vargas (1882-1954). In those tumultuous times, after an attempt at a military coup, Kubitschek's mandate was a breath of fresh democratic air to the nation. The president called for a national competition for the urban plan in 1956, which was won by Lucio Costa (1902-1996). This laid the foundation for the construction of the separated monumental core, the *civitas*,[1] which was built and inaugurated in 1960.

The projects by Oscar Niemeyer (1907-2012) for that ensemble not only subtly changed the urban setting,[2] but they also added to "Costa's rhetoric the representation of the Capital as balance, emphasizing the duality of the National Congress and the individuality of its constituent parts"[3] in a successful new classical and modern monumentality that strongly represented Brazilian democratic power. The key buildings in Three Powers Plaza were the Presidential Palace, the Supreme Court, and the Palace of Congress — with its domes and twin towers. This synthesis, a product of Brazilian Rationalism from the previous decade, was conveyed by the transparency of its walls, the integration between landscape and interior

1. In the text of the original plan, Costa explained: "Ela deve ser concebida não como simples organismo capaz de preencher satisfatoriamente e sem esforço as funções vitais próprias de uma cidade moderna qualquer, não apenas como URBS, mas como CIVITAS, possuidora dos atributos inerentes a uma capital" ("Memória descritiva do Plano Piloto, 1957" in: Costa, *Registro de Uma Vivência*, 283).

2. Macedo and Silva, "Brasilia, the Palace of Congress and Their Urban Changes."

3. Comas, "Brasilia: Monumentality Issues," 41.

spaces, the dynamic interplay between structural order and free-forms, and the marble-clad clean-cut plans and surfaces. In that conceptually resilient building, "irregularities due to the imprecision of construction or due to the passage of time do not diminish the principle of original design."[4] It was Costa's intention to provide a "Versailles for the people" with the Plaza.[5] Niemeyer then explained that "from an architectural point of view, a building such as that of the National Congress should emphasize its fundamental elements […]. To give these greater emphasis has been our plastic objective, situating them on a monumental plane [sic] whereon their shape and form will stand out as **true symbols of the legislative power.**"[6]

At that time, the Brazilian Communist Party—of which Niemeyer was an engaged militant—was fully legalised, with elected congressmen and a tactical approach to the Brazilian bourgeoisie under the banner of a "unified front" and a "struggle for a democratic and nationalist government."[7]

That democratic dream was short-lived, as a military coup in 1964 plunged Brazil into a 20-year-long dictatorship. As the regime became more autocratic and brutal, the Congress would be closed on four occasions: 1965, 1966, 1968, and 1977. As the cry for democratic elections gained the streets in huge demonstrations in the early 1980s, that building would also house an elected Constituent Assembly from 1987 to 1988, when the new *Magna Carta* was issued.

2. THE DEMOCRATIC DREAM AS CULTURAL HERITAGE

The effectiveness of Niemeyer's conception of the Parliament was confirmed not only by its historical role but also by its cultural appraisal. In 1987, Brasília's urban ensemble—as an "urban creation of Costa and Niemeyer"—was added to the UNESCO World Heritage List. In 1989, it was listed as a national heritage site, and in 2007, the Palace of Congress was individually listed as national heritage.[8]

The team of architects and engineers at the Chamber of Deputies had a long-term collaboration with Niemeyer, whose office was constantly invited to design the three annex buildings and make some modifications on the original design — such as a 15-metre-wide enhancement of the main platform, and the complete renovation of the interior design of the main halls and assembly room in the 1970s. That approach, of course, changed in the original Palace in some ways, as the authors usually "approach the building as a new design challenge rather than a conservation project."[9] As the building was progressively considered a Cultural Heritage, a more systematic approach towards preservation was elaborated. In 2014, a Division of Built Heritage was created within the Technical Department, with the tasks of documentation and conservation.

Documentation would involve organising and preserving the 24-thousand-document large archive of drawings, as well as establishing a historical narrative that could determine the value of the many different parts that constitute the monument. In order to develop a comprehensive conservation plan, we have already established some guidelines for specific

4. Macedo and Silva, "From Open Plan to Open Design," 106.

5. Costa, *Registro de Uma Vivência*, 303.

6. Niemeyer and Costa, "Praça Dos Três Poderes e Palácio Do Congresso Nacional," 18–19.

7. See Partido Comunista do Brasil, "Declaração Sobre a Política do PCB", 1958.

8. See Ficher and Macedo, "Brasilia: Preservation of a Modernist City."

9. Prudon, *Preservation of Modern Architecture,* 37.

interventions in the building, based on thorough historical research and material surveys. That extensive work, which is still ongoing, was only possible due to the deep spirit of dialogue and transparency embraced by the entire Congress.

3. AN "IMPERATIVE" ATTACK ON DEMOCRACY

On January 8, 2023, at 2:45 P.M., the security of the building was compromised when protestors overpowered external Security Forces, who offered little resistance. The protesters climbed the front ramps, broke the glass, took out the grills above the lightwells, and entered the building in every possible way. The tear gas thrown by the police spread through the foyer, and its burning shrapnel scorched the carpets. Some invaders used the fire to fight back spraying water from fire hoses, while others methodically targeted the electrical and video switches to disable them. Many others engaged in wanton destruction, damaging architectural models, sculptures, pictures, furniture, and other items within their reach, including, of course, the building.

During Bolsonaro's presidency, right-wing extremists in Brazil had two strategies for cultural policy. The first of which was to emulate the Nazi German government of the 1930s, with nationalist and theocratic slogans and a vague classical aesthetic. The Secretary of Culture Roberto Alvim, for instance, was dismissed after quoting Goebbels in a speech, where he advocated for a "heroic", "national" and "imperative" Brazilian art.[10] The second strategy, which was effectively implemented, was to dismantle cultural institutions, including those related to the preservation of cultural heritage, and cut public funding. Both strategies were evident in the attack on January 8, 2023. The choice of target—a modern monument designed by a communist during a democratic period—essentially reflected the effectiveness of these buildings as symbols of the Brazilian state and, specifically, of Brazilian democracy.

After the attack on the Congress, the preservation team used previous surveys to quickly map the damage in less than two weeks, while repairs had already begun. At that point, the leaders of the three powers were determined to restore the buildings and make them functional as quickly as possible, and restoring them symbolised the restoration of institutional order.

Over 200 panes of glass were broken on the facade, as well as in internal spaces. Many pieces of the marble cladding were ripped off and used as weapons. All the protective grills were twisted, the carpets were soaked with water and burned, the works of art were scratched, thrown to the floor, or simply broken. The cast aluminium angel by Alfredo Ceschiatti (1918-1989) was covered by a patina due to a reaction with tear gas. Most of the furniture was piled in the office space, along with the fabric blinds from the facade. Invaders also defecated and urinated in every office space they could enter, and they tried to set fire to the offices of the left-wing political parties. It was a genuine battlefield scenario.

10. See Alessi, "Secretário da Cultura de Bolsonaro imita fala de nazista Goebbels e é demitido", 2020. For an overview on those policies, see: Danilo Matoso Macedo, *Destruição da arquitetura: crônicas políticas de um país em demolição* (Recife: Ruptura, 2022).

4. THE URGE FOR DEMOCRATIC RECONSTRUCTION

The strength of Modern Architecture was put to the test. Every standard industrial material, such as glass, steel grids, and carpets, could be immediately replaced by new identical material. While cleaning personnel worked hard with the usual maintenance products, professional restorers from the Documentation Department focused on the works of art, while architects recorded the damage and replacement procedures. There was no time for careful restoration at that time since as legislative works were scheduled to begin on February 2—and they did. As further inspections were carried out in the following months, most of those swift early repairs proved they could be definitive, with the exception of the restoration of certain objects, such as sculptures or antiques.

The fast reconstruction of the building was just as symbolic as the attack itself. After all, the invaders aimed to destroy a democratic political project represented not only by the Congress as an institution but also by the building designed in the 1950s. As videos of the invaders emerged, it became clear that they were not only ignorant about the functioning of the political institutions they attempted to replace with an autocratic military dictatorship, but they also ignored that political power today is built not only upon fortified palaces but also on culturally and ideologically crafted organisations of which structured and open modern architecture is a part. Instead of walls and bastions, these organisations are represented by structural grids and glazed façades.

The political and cultural misconceptions involved were paradoxically expressed as solutions for the "problem of the attacks" after the raid, by Roberto Macedo, a columnist from the large conservative newspaper *Estado de São Paulo*. He stated that the buildings made the invasion as "they have glass walls on the ground floor, easily destructible by authentic or improvised bludgeons". According to him, the solution would be to replace the glass façades "with masonry walls and the doors with thicker iron or wooden ones to hinder the entry of undesirables. Another complementary measure would be to fence these palaces off, as sometimes occurs here and abroad."[11] The absurd proposal reflects the idea that consensus should be reached not through political dialogue and proper democratic institutions, but by force. It is the same autocratic view that motivated the invasion.

In the same sense, reconstructing the buildings immediately—both in terms of their appearance and use—was a form of political resistance. The speed of the intervention was facilitated in part by earlier thorough surveys and documentation, as well as the availability of financial resources. Furthermore, there was no doubt about how to proceed in terms of restoring the damaged or destroyed parts to their previous state, even if using different materials.

A conservative restoration approach to the problem would have involved the idea of somehow preserving the historically relevant event by retaining the "scars" of the damage—similar to the concept of preserving historical "patina" as a "mark of the passing of time," a long-cherished idea defended

11. Macedo, "Os vulneráveis edifícios envidraçados de Brasília."

12. For instance, the founding charter of Icomos (International Council on Monuments and Sites), the Venice Charter, states in its Article 11 that: "The valid contributions of all periods to the building of a monument must be respected, since unity of style is not the aim of a restoration. When a building includes the superimposed work of different periods, the revealing of the underlying state can only be justified in exceptional circumstances and when what is removed is of little interest and the material which is brought to light is of great historical, archaeological or aesthetic value, and its state of preservation good enough to justify the action. Evaluation of the importance of the elements involved and the decision as to what may be destroyed cannot rest solely on the individual in charge of the work" (Icomos, "The Venice Charter"). The careful reading of that important document makes clear that this approach must be balanced with others in the same text, such as the Article 9, that states that the aim of restoration "is to preserve and reveal the aesthetic and historic value of the monument and is based on respect for original material and authentic documents."

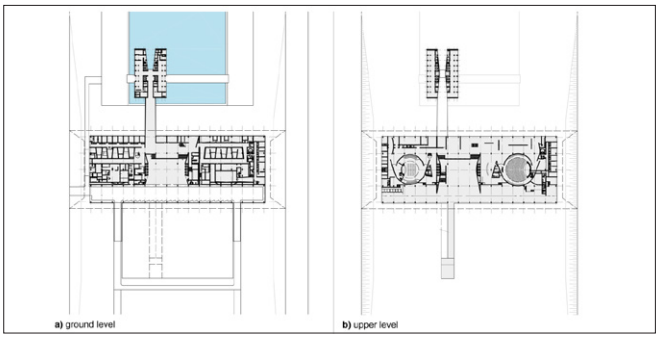


Figure 1. Oscar Niemeyer, Palace of Congress, Brasilia, Brazil. Plans. © Danilo Matoso; Elcio Gomes.



Figure 2. Palace of Congress, Brasilia, Brazil. The invasion of the building and the destruction it caused. © Marcelo Camargo/Agência Brasil; Danilo Matoso.



Figure 3. Palace of Congress, Brasilia, Brazil. Damage Mapping after the attack. © Seção de Patrimônio Edificado. Câmara dos Deputados.

by Ruskinians and expressed in some articles of Icomos' heritage charters.[12] One can only imagine the time, work, and money involved in reassembling glass pieces or carefully documenting the scratches and burns on the floor to leave them as a record.[13] Extreme events such as this raid only highlight how fragile that seemingly rigorous approach can be. Conservation professionals must prioritise the broader political demand in each restoration case before adhering to dogmatic views of Heritage Charters.

A building as delicate yet robust as the Palace of Congress is, in itself, politically resilient. Documenting and conserving such a work in its democratic characteristics—structural order, visual openness, easy access, etc.—adds a political layer to its strength. ■

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13. In fact rehabilitation (glass replacement) "is often implemented when the original glass panes have been lost, are not commercially available, or where it is not financially feasible or desirable to replicate them. Further, new uses proposed for the building or its continued use according to contemporary performance requirements have led to solutions where the steel frames are repaired or replaced and new insulated glass units (IGUs) or additional layers are added to improve energy performance of comfort aspects" (Ayón, Pottgiesser, and Richards, *Reglazing Modernism*, 30–31).

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BIOGRAPHIES

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TRANSDISCIPLINARY APPROACHES IN THE CONSTRUCTION OF THE MODERN: PERU AS A QUEST

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#21

ABSTRACT

Significant cultural transformations, when observed without enough historical perspective, appear to be legible, coherent and transferable constructs applicable to different contexts and practices. However, cultural phenomena never are, especially when we approach their initial stages. Contemporary simplifications of modernity are excellent examples of this, whether used for their idealisation or critique. Each new state of the world would correspond to a progressive transformation of disciplines and practices, with each taking responsibility for their respective fields of knowledge.

However, things are often more complex, and these transformations are closely linked to interactions between individuals, specific circumstances that spark interests, and interdisciplinary exchanges that enrich processes, making them unique along the way. Modern Peruvian architecture and its recurrent interest in the pre-Columbian past seem an excellent case to question how interdisciplinary and intergenerational dialogues have contributed to constructing a project and imagination for architectural discipline.

Throughout the 20th century, the relationship between the avant-gardes, modernity, and the contemporary coexisted with the question of what it means to be Peruvian. Pre-Columbian images fuelled imaginations through archaeological discoveries and the photographs of artists such as Martín Chambi (1891–1973) and the Vargas brothers, Carlos and Miguel (1885–1979 and 1887–1976). Initially, these imaginations only led to academic variations in architectural styles. However, the connection between Peruvian identity and archaeology gradually became stronger, creating a synergy between both disciplines.

Architecture did not play a leading role in the early manifestations of the avant-gardes or the modernisms of the first half of the 20th century. Literature and art, especially poetry, were at the forefront of defining a vanguard horizon that engaged with the transformations in Western culture. Peruvian poet César Vallejo (1892–1938) was crucial in establishing the possibility of a universal dialogue from a local perspective, rather than merely adapting foreign avant-gardes to the local environment. His poetry collections became references for poetic avant-gardes in Spanish, with works as radical, universal, and local as *Trilce*.

Two magazines followed the path of the avant-gardes and modernisms in the Vallejo key during the first half of the 20th century: *Amauta* and *Las Moradas*. *Amauta*, directed by thinker and politician José Carlos Mariátegui (1894–1930), published 32 issues between 1926 and 1930. It covered all cultural manifestations and published both local and international avant-garde content. For example, it included texts such as "*Peruanicemos el Perú*" ("Let's Peruanise Peru") by Mariátegui alongside the publication of Marinetti's Futurist Manifesto and included a dedicated photo of him. Indigenist works by Julia Codesido and José Sabogal were also published. On the other hand, *Las Moradas*, directed by poet Emilio Adolfo Westphalen (1911–2001), published eight issues between 1947 and 1949. This group of intellectuals followed the writer and anthropologist José María Arguedas (1911–1969), who, through reclaiming Andean origin and the Quechua language, seemed able to embody, and simultaneously guide a future integrated with the predominantly rural Andean space, the urban areas of the coastal cities (especially the capital, Lima), and the international avant-gardes in which Westphalen actively participated.[1]

Although both magazines had a broad view of culture and invited participation from people of various disciplines and generations, architecture was not a focal point in their pages. Exceptions include an article by George Kubler in *Las Moradas* about his impressions of architectural transformations in Lima and photographic notes on traditional architecture. Architecture was considered outside the avant-garde cultural space, trapped in a conservative and traditionalist perspective.

This isolation of architecture from the cultural and avant-garde space inspired architect Fernando Belaúnde Terry (1912–2000) to launch *El Arquitecto Peruano* magazine in 1937. The magazine was published continuously until 1977, covering 40 years of production and the international

1. For a better understanding of the construction of the modern and contemporary in the first half of the 20th century in art, literature and the link with architects, see Luis Rebaza-Soraluz (2017). *De ultramodernidades y sus contemporáneos*. Lima: Fondo de Cultura Económica. See also: Luis Rebaza-Soraluz (2000). *La construcción de un artista peruano contemporáneo: poética e identidad nacional en la obra de José María Arguedas, Emilio Adolfo Westphalen, Javier Sologuren, Jorge Eduardo Eielson, Sebastián Salazar Bondy, Fernando de Szyszlo y Blanca Varela*. Lima: Fondo Editorial de la Pontificia Universidad Católica del Perú.

and local debate. It became an essential document for understanding the development of Peruvian architecture in general and modern architecture in particular. The magazine covered a broad spectrum in Peru, including focusing on active architects and builders in its early years. Its covers featured recent modernist architecture, traditional colonial architecture, interiors, and furniture, as well as powerful images of pre-Columbian architecture, especially Inca architecture. Being a Peruvian architect implied discovering Peru.[2]

The agenda for Peruvian architecture in continuity with valuable examples from the past has always been clear and explicit, as was its commitment to modernism in architecture, contemporary building materials, and the introduction and defence of urbanism and planning as essential tools for managing and developing our cities.

The magazine served as the platform for the ideas put forth by the architects who launched the "Expression of Principles" of the Agrupación Espacio in 1947. This document, which marked the explicit beginning of the modern movement in the country, was published in the newspaper *El Comercio* on May 15, 1947, and later in June of the same year in issue 119 of *El Arquitecto Peruano*. It was signed by architects and architecture students, along with a list of supporters made up of contemporary intellectuals, artists, and writers. The "Expression of Principles" referenced a series of artists described as specifically contemporary, including Picasso, Joyce, Gris, and Bartok, along with César Vallejo as the sole representative of the Spanish language. While the list was not intended to be exhaustive, it is notable that it insisted on Vallejo's horizon as a reference for the universality possible from a Peruvian context.

The Agrupación Espacio remained active until 1950, maintaining a presence in the media where they openly criticised the conservative attitude, considered by them to be pretentious, of styles that sought to return Peru to a Spanish essence via the neocolonial style, or hybrid via the neo-Peruvian. Agrupación Espacio proposed modernism adapted to a local reality understood in its time, aligned with international modernity and in sequence with the grand colonial and pre-Columbian architectures. At this point, they explicitly denounced developments from the 18th and 19th centuries for their merely arbitrary combinations and irresponsible alterations of ancient architectural essences.

Although neither *El Arquitecto Peruano* nor Agrupación Espacio explicitly reviewed the pre-Columbian and archaeological context to produce modern architecture, both aimed to include Peruvian identity as not only a variable to be considered but also as a goal to be achieved. The case of a collector architect and the visit of the Albers to Lima can help us understand how the connection with the pre-Hispanic began to take shape among architects.

Teodoro Cron (1921–1964) arrived in Peru from Switzerland in the late 1940s and quickly became part of Lima's social and cultural circles. Passionate about pre-Columbian art objects, he amassed a collection of textiles and ceramics that influenced his aesthetic reflections. Despite the

2. In its first two years, the magazine had two graphic sections entitled "Detalle peruano" (Peruvian Detail) and "El Perú incógnito". (Incognito Peru). The material in the first section was Emilio Harth-Terré's images collection on viceregal architecture, while the second documented vernacular architecture, becoming one of the first records of this architecture in the field.

fact that Cron had rigorous modernist and European training, his projects, especially his houses, integrated Peruvian-rooted traditions. The patios, proportions, and systems of solids and voids in his works reflected an organic adaptation to the local climate and building culture[3] beyond modernity and contemporaneity. As a collector architect, he consciously built a connection with the locals through his observation of reality and detailed, fascinating, and scholarly observation of the material culture of the past, marking a path for linking modernity and tradition in the local context.

Josef and Anni Albers were invited to Peru in 1953 by Fernando Belaúnde after spending two months in Chile. Josef Albers taught courses at the Catholic University of Santiago and the National Engineering School of Lima. Both were previously acquainted with pre-Columbian traditions and architecture, and indeed, Anni Albers had studied Andean textiles for decades, and both had made multiple study trips to Mexico since 1940. Mexico was considered "the promised land of abstract art, which has been there for thousands of years."[4] Thinking of abstract art as a constant presence over time must have produced a paradigm shift in the perspectives of many architecture students and architects, allowing them to view issues not in evolutionary terms or concerning their time but rather to place distant works differing in function, materials, and time, on the same plane of relation based on the abstract as a common substrate of art, design, and architecture. The Albers' conversations with architects like Barragán are well-documented. The work of the Mexican architect can show elements within the dense references, observations, and reflections condensed in his projects. Emilio Soyer Nash (1935–2017) was one of the architects influenced early on by these ideas, combining pre-Columbian themes, tradition, modernity, and abstraction. The Velarde House (1968) was awarded the Hexagon of Gold at the I Biennial of Architecture of Peru (1970). It marked the first public recognition of the discipline for a form of architecture clearly understood as Peruvian. Soyer and his contemporaries had witnessed the restoration of critical pre-Columbian sites on the coast, such as Puruchuco and Paraíso, in the coastal valleys of the Rímac and Chillón rivers, respectively. Soyer maintained links with artists, photographers, and archaeologists throughout his career, but his work in a modernist affiliation lasted until the mid-1970s.

The later work of Emilio Soyer and his contemporaries, as well as in subsequent generations, show a clear connection between archaeology and architecture, albeit in a context where territory and culture integrated a paradigm different from that of the modern movement, a paradigm that has continued to influence the present. However, the pioneers of the close link between architecture, archaeology, and territory are members of previous generations, pioneers of the modern movement, and members of the Agrupación Espacio.

In 1970, the newly formed National Institute of Culture called on architectural offices to work on archaeological sites. The Revolutionary Government of the Armed Forces undertook an ambitious project to

3. Pardo, Cecilia (2024). "El arte textil precolombino en la vida de Cron". In *Th. Cron*, edited by Stephan Schweig e Irene Arce. Lima: Mirada Libre, pp. 102-107.

4. Brenda Danilowitz and Heinz Liesbrock (eds.) (2007). *Anni and Josef Albers. Latin American Journeys*. Ostfildern: Hatje Cantz Verlag.

document and register the archaeological heritage. As Mariana Jochamowitz suggests, this "was an indirect result of the two major events of the time that initiated processes of improvement in the country's cartography: the 1970 Ancash earthquake and the Agrarian Reform,"[5] processes that required rapid redrawing of the territory.

At least three architectural offices that had signed the "Expression of Principles" of the Agrupación Espacio in 1947 participated in this process. These included Luis Miró Quesada Garland (1914–1994), Santiago Agurto Calvo (1921–2010), and Carlos Williams (1924–2004). All three were part of the Agrupación Espacio, and their works were among the emblematic projects of the modern movement in Peru.

Luis Miró Quesada was a teacher and a core promoter of the Agrupación Espacio. In 1945, he wrote the book *Espacio en el Tiempo (Space in Time)*, the main theoretical document of architecture of his time. In 1948, he constructed the Huiracocha House, an immediate reference of modernity in Lima, and in 1953, the Radio El Sol Building, included in the *Latin American Architecture since 1945* exhibition organised at MoMA in 1954, among many other projects. Santiago Agurto was a crucial figure in the projects the National Housing Corporation promoted. He participated, among others, in the Matute Housing Units (1951), Mirones (1952), Rímac (1952), and the Risso grouping (1953), as well as in the design of Ciudad de Dios (1955) and the El Agustino Urbanisation. The Matute Neighbourhood Unit was part of the MoMA exhibit. Meanwhile, Carlos Williams, along with Adolfo Córdova and José Polar, designed what can be considered the first building of the modern movement in Peru: The International Shooting Club (1946). Together with Adolfo Córdova, he developed the FAP Residential Complex in Chiclayo (1958) and participated in housing projects through the National Housing Corporation.

The case of these three architects is unique not only as they were pioneers of the modern movement architecture in Peru but also because, through the experience of surveying archaeological sites, they became references for archaeology and the history of pre-Columbian architecture in the Central Andes. Luis Miró Quesada expanded his pre-Columbian period studies by organising the first exhibition of pre-Columbian pottery with architectural representations. Carlos Williams wrote the chapter "Architecture and Urbanism in Ancient Peru" in 1980 for the significant project *Historia del Perú* by Juan Mejía Baca, and Santiago Agurto wrote the books *Lima Prehispánica* (1984) and *Studies on Inca Construction, Architecture, and Planning* (1987). Williams and Agurto continued researching and producing new knowledge, becoming essential references for studies of Peruvian pre-Columbian architecture. All three architects continued their work.

The case of these double pioneer architects challenges us regarding how we usually imagine interdisciplinary approaches. For a time, archaeology expanded the catalogue of the known routes of temporal depth in material culture capable of enhancing continuities and identities. The

5. Jochamowitz, Mariana (2023). "El arqueólogo de fin de semana". *Revista A*, No. 20, July, pp. 74-81.

experience of architect-archaeologists demonstrates that there is a field of intersection between the disciplines that enables a way of thinking that not only contributes to project work but also, from the perspective of project and drawing, illuminates the understanding of historical phenomena. In the specific Peruvian case, it returns cultural territory to the centre of architectural discipline and offers it as a laboratory for the future.

These architects seem to respond to Mariátegui's mandate to "Peruanise Peru" or to Belaúnde's *The Conquest of Peru by Peruvians*.[6] Although not explicitly directed at architects, these practices appeared to respond to a commitment to a geography, a territory, and an accumulated culture that was there to be recognised or discovered.

Approaching the history of architecture through questioning the relationships with other disciplines or incorporating them into broader approaches than strictly disciplinary ones leads us to a more relational and integrated knowledge of the world in which architecture practice participates. In the specific case of modern Peruvian architecture, the importance of the archaeological perspective in its development is evident and through survey drawing, a shared practice has emerged, benefitting both disciplines. In addition, it could be observed how Vallejo's poetic avant-gardism has had a significant impact on at least two generations of intellectuals and artists, and architects have progressively embraced this influence until becoming central figures in introducing the idea of the modern and contemporary in Peru. ■

6. Fernando Belaúnde Terry, *Peru's Own Conquest* American Studies Press, Lima; Stated First Edition (1965). This book was published initially in Spanish in 1959 by Ediciones Tawantinsuyu in Lima, when he was already well on his way to a career in politics. He became president of Peru in 1963.

BIOGRAPHY

Paulo Dam Mazzi was born in Lima in 1968 and earned his PhD in architecture from the Catholic University of Louvain in 2009. He is a senior lecturer at the Catholic University of Peru, specialising in design and theory. He has published as co-author of *Post Illusions. New Visions. Critical Art in Lima 1980-2006* and *Modeling the World. Images of pre-Columbian architecture*. He has also edited the book *Lacan. Architecture*. Additionally, he has served as curator of projects that relate art, architecture and thought. He is the coordinator of the Transversal project: Actions for the Integration of the Peruvian territory. Since 1995, he has combined university teaching with the critical practice of the architectural project. He is currently the Dean of Architecture at PUCP.

MARGARETE SCHÜTTE-LIHOTZKY'S INNOVATIVE SCHOOLS. THE MODERN REVOLUTION OF OBJECTS

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ABSTRACT

The Austrian architect Margarete Schütte-Lihotzky is recognised in the canon of Modernity for her Frankfurt Kitchen, designed to technify and compact household tasks within the home. The term ‘’“object” in her work spans beyond the kitchen as a replicable prototype to encompass furniture and architecture. These objects interact with their surroundings and transform everyday life rituals.

Notable examples of her work include kindergartens with a modular construction system, featuring cribs, changing tables, chairs, tables, planters, and other items. These elements create flexible spaces that serve as expressions of large-scale progressive education projects. Schütte-Lihotzky implemented these pedagogical pavilions in various locations, revolutionising educational environments with her modular and flexible design concepts. Her kindergartens seamlessly connect outdoor gardens with large halls where children can participate and celebrate together.

For Margarete, kindergartens were bridges between home and school life, guiding children from their family environments into the broader community. This study recognises her furniture and architecture as pieces of a playground that transform habitats. It connects her architectural designs with Maria Montessori's pedagogical principles and emphasises the importance of her innovative strategies for contemporary architectural education. Schütte-'Lihotzky's work remains relevant in both architecture and education, highlighting her enduring contribution to shaping educational spaces.

This study, based on Schütte-'Lihotzky's archives at the University of Applied Arts in Vienna, has two main objectives: to examine how Schütte-Lihotzky's furniture-objects innovated modern pedagogical spaces and to analyse her design strategies for kindergartens that enhance play and social interaction. The study underscores how her methods of designing, playing, travelling, and socialising are relevant for contemporary architectural education, offering a fresh perspective on the role of architecture in society.

1. INTRODUCTION

Margarete Schütte-Lihotzky (1897-2000) was Austria's first female architect, renowned for the Frankfurt Kitchen designed for Frankfurt's urban expansion and post-First World War housing needs. *Das Neue Frankfurt* magazine promoted an intensive social reform from 1925 to 1930, which Schütte-Lihotzky extended to the Soviet Union, China, Turkey, and Cuba.

Her interest in school and kindergarten projects began in this post-war period, she continued improving nursery schools in modular designs, inspired by Maria Montessori', and enriching children's experiences by linking both home and school life.

This communication aims to recognise objects and architectures in Schütte-Lihotzky's work as pieces of a playground that transform space. This understanding of architecture as play connects with her inspiration sources, including Montessori's pedagogy, allowing Margarete to transfer educational pedagogy into a design methodology. Her quasi-anthropological research during her travels, particularly in the USSR and China, identified vernacular technology incorporated into her furniture designs.

This research relies on a thorough investigation of Schütte-Lihotzky's archives at the University of Applied Arts Vienna in two parts: the first part explores how she experimented and created a catalogue of furniture objects that rejuvenated modern living. The second part delves into her modern design strategy for kindergartens, improving spaces for children's play and sociability.

'Schütte-Lihotzky's strategies for school projects and pedagogy included designing, playing, travelling, and socialising. This study concludes that these actions are relevant to contemporary architectural education and necessary to redefine the role of architecture in society.

2. OBJECTS OF MODERN REVOLUTION: CHILDREN'S ENVIRONMENTS

During the fifth Viennese Allotment Garden, Settlement, and Housing Exhibition, Margarete Schütte-Lihotzky showcased various Kernhäuser (core houses) at a 1:1 scale. Her type 7 core house, noted for its versatile built-in furniture, earned her the Silver Medal from the City of Vienna. She also exhibited a model of a kitchen and laundry core, designed based on an anthropological study of household and culinary rituals. This prefabricated concrete unit, measuring 2 x 2.05 metres, exemplified the concept of an endless object—a continuous form ensuring easy cleaning—and served as a prototype for future kitchen projects.

Schütte-Lihotzky's understanding of construction and furniture implied that when these elements gained independence and were conceived as objects, they made spaces multifunctional. These objects fulfilled various roles, such as a dresser doubling as a changing table, crib, or highchair, adaptable to different ages. This understanding extended to her buildings, where furniture transitioned from serving caregivers' individual needs to fostering a communal environment for children, as seen in her greenhouse designs for the Kapaunplatz Kindergarten.

2.1. WORK IN MOSCOW AND POST-WAR NURSERY SCHOOLS

From 1930 to 1937, Schütte-Lihotzky and her husband Wilhelm remained in Moscow, where she designed children's furniture in collaboration with medical and pedagogical institutes for The Architecture Academy of Moscow and The Institute of Mothers and Children. Her catalogues included multifunctional items like adjustable chairs, tables, a folding changing table, a child's bed, and a small adjustable table for children aged six to twenty-four months. She also designed a desk and worktable with a bookshelf and tool cabinet. In 1937, she created a notable drawing for a nursery school, with furniture prototypes tested and produced in series. She proposed an exhibition with children's corners to try out the furniture and experience the ambience.

After the Second World War, Schütte-Lihotzky continued her architectural work in Vienna and other countries, focusing on evaluating and improving nursery schools. Her designs, inspired by Maria Montessori's principles, featured a modular and flexible approach that transformed educational spaces. These designs emphasised the connection with nature through large windows, recreational terraces, and pergolas, aligning with Montessori's vision. Schütte-Lihotzky's work underscored the importance of creating an educational environment conducive to collaborative play, integrating art, culture, and ecological considerations, and helping children transition from home environments to public and community spaces.

2.2. GLOBAL INFLUENCE AND LEGACY

Influenced by the integration of women into the workforce and the restructuring of the communist lifestyle, communal responsibilities for tasks like food preparation and childcare emerged. Public community kitchens and kindergartens served about 17% of the population. Schütte-Lihotzky played a pivotal role during this period, overseeing standardised designs for childcare facilities and collaborating with builders and draftsmen. Her influence extended globally, including contributions to educational innovations in China.

Schütte-Lihotzky was a pioneering architect in constructing schools, childcare facilities, and multifunctional children's furniture. Her research on kindergarten design spanned across China, France, the Soviet Union, Bulgaria, and Cuba, emphasising clean, light, and airy spaces that stimulated children's imaginations while promoting learning and play. Despite challenges related to her gender and political beliefs, her lasting impact is notable, particularly through her innovative design of the Kapaunplatz Kindergarten in Vienna—a globally recognised model.

After the Second World War, Schütte-Lihotzky continued her work in Vienna and other countries, focusing on evaluating and improving nursery schools. Her innovative kindergarten designs featured a modular and flexible approach that transformed educational spaces. These designs integrated art, culture, and ecology, emphasising the architect's role in bridging home life and school life, helping children transition from home environments to public and community spaces.

3. KINDERGARTENS AS FLEXIBLE OBJECTS: MODULAR DESIGN CONCEPTS

Margarete Schütte-Lihotzky's design approach was deeply rooted in the idea of transformation, particularly in the context of children's environments. Her initial transformation of furniture involved a day and night systematisation, embodying the playful action and interweaving it with the concept of architecture for children. These objects were designed for action; the games or free actions they facilitated were activated by the participation of children. Inanimate objects became enablers of dreams and encounters, generating community life. Versatile and playful, these objects became integral to knowledge, recreation, and socialisation **(Fig. 1)**.

The spaces designed by Margarete could be understood as places that promote a pedagogy of autonomy. One of the most significant kindergartens built by her was *Städtischer Kindergarte in Kapaunplatz*. Many details of this project connect her thinking clearly with some of Rousseau's or Frobel's ideas, suggesting that "the kindergarten must be understood as a space that allows and reinforces selected influences deemed beneficial to children".[1]

3.1. FREEDOM OF CHOICE IN PLAY

The architectural design principles of Schütte-Lihotzky's kindergartens became evident from her initial involvement in this type of structure in Frankfurt, dating back to 1929, especially in the *Praunheim Project*.[2] The first principle revolves around a central space that serves as the hub for community life, fostering a unique transcendental tension for the activities that take place there. This space, when engaged voluntarily, embodies a sense of seriousness and the freedom of choice in play. The second principle emphasises a robust connection with the outdoors, perceived from this central location. The main design extends through various gardens interlaced with pergolas. The joy of play ranges from simple fun to the vital emotion elicited by participation. This active involvement in shaping and transforming these spaces empowers children to become co-creators.

The contemporary relevance of these buildings lies in the current global need to rethink educational spaces. Schütte-Lihotzky i pedagogical pavilions for children in numerous places, revolutionising educational environments with modular and flexible design concepts. Her kindergartens connect the surrounding garden with a large hall where children experience community and celebrate. Children could play everywhere. For Schütte-Lihotzky, kindergartens served as a bridge between home and school life, guiding children from their family environment into the broader community. Her modular construction system facilitated flexibility and adaptability, transforming daily rituals and the relationship between objects and urban environments, demonstrating the social impact of her work by influencing broad social reforms. Schütte-Lihotzky's work remains relevant in both architecture and education, highlighting her enduring contribution to shaping educational spaces.'

1. Sebastian Engelmann, "Margarete Schütte-Lihotzky's 'House for Childrens.' Pedagogical Reflections" in *Margarete Schütte-Lihotzky. Architeture. Politics. Gender. New Perspectives on Her Life and Work*, ed. Marcel Bois and Bernadette Reinhold (Vienna: AngewandteUniversity of Applied Arts Vienna, 2023), 297.

2. Peter Noever ed., *Margarete Schütte-Lihotzky. Soziale Architektur: Zeitzeugin eines Jahrhunderts* (Vienna: Böhlau 1996), 119.

3.2. PLAY AND TRAVEL

In 1930, the Schüttes travelled to Moscow as experts in the development of new cities in the Soviet Union. Grete led the group responsible for children's facilities, planning both individual and standardised projects for nursery schools and kindergartens.

Margarete Schütte-Lihotzky completed the Trans-Siberian Railway Car in April 1934 preceding her journey to Japan and China. During this trip, she used photograph to document the daily domestic chores performed by many women along the way. The entire experience left an unprecedented impression, highlighting the scale of industrial advancements in the region. Despite the country's challenges, significant progress was evident. She reflected on the construction of her educational projects, including a kindergarten and a nursery, and she noted the involvement of *Kyrgyz* men and women in the construction, despite language barriers that sometimes hindered communication **(Fig. 2)**.

Her observations of *Magnitogorsk* in the evening described the breathtaking view of the expansive landscape with glowing blast furnaces at its centre. She marvelled at the immense iron mountains, larger than Austria's Erzberg, noting the significant progress in their excavation.

After visiting numerous kindergartens across different cities in China, she determined that a comprehensive review of the organisation, construction, and establishment of kindergartens would be essential in the future by "systematically working through design schemes. Only through the systematic execution of all fundamental preparations will the construction of kindergartens with the existing means be truly economical".[3]

During 1936-37, she was involved in typification projects for children's facilities and the design of standard furniture for various People's Commissariats. Upon returning to Vienna in 1945 following her imprisonment, she focused on establishing a central building institute for children's facilities. In 1946, she established a department for children's facilities within the city's central building authority, planning multiple kindergartens and nursery schools in Sofia.

Schütte-Lihotzky faced challenges due to her gender and political beliefs. Despite this, she secured commissions, including the seemingly modest Kapaunplatz Kindergarten in Vienna during the early 1950s. It became a global standard due to its smart and sensitive design. Her past experiments in social design aligned with her vision for educational spaces.

Her kindergartens warrant serious pedagogical consideration. They embody both the material and organisational aspects of a progressive education initiative, beyond the theories of Maria Montessori or Rudolph Steiner. Following Ralf Koerrenz's perspective, they address the present state and facilitate a transition to a future state by impacting learners through reforms in pedagogical structures and practices.[4]

3.3. BAUKASTENSYSTEM

Schütte-Lihotzky's modular system, Baukastensystem, allowed for versatile, convertible kindergarten pavilions. Such pavilions featured flexible elements such as cribs, changing tables, and chairs, enabling

3. "Dear Comrade, or Exile in a Communist World: Resistance, Feminism, and Urbanism in Margarete Schütte-Lihotzky's Work in China (1934/1956)." ABE Journal, accessed June 21, 2024, https://journals.openedition.org/abe/7169#quotation.

4. Engelmann, "Margarete Schütte-Lihotzky's 'House for Childrens.' Pedagogical Reflections," 290.

efficient assembly using prefabricated wood or concrete components. The system emphasised adaptability and ease of reconfiguration. Alongside Ernst May's research team, she developed systematic and modular buildings that simplified the work of teachers and caregivers while providing ample space for children's play and leisure, as seen in the Kindergarten Siedlung Praunheim.

Her designs focused on creating clean, light, and airy spaces that stimulated children's imaginations while fostering learning and play. In the USSR, she built various kindergarten models that emphasised outdoor areas, walking spaces, and leisure. Her knack for simplicity and simplification ensured a thoughtful design for all projects, including the furniture used within the kindergartens **(Fig. 3)**.

In Turkey, Schütte-Lihotzky worked independently, focusing on rural school designs. Her project for the *Ankara Girls' Lycée* showcased a dialogue between exterior and interior spaces, emphasising classroom ventilation and building illumination with large windows and protective awnings. She underscored the importance of exterior spaces, including benches and walking areas, creating a functional and aesthetically pleasing intermediate space before entering the building.

Despite her involvement in European anti-Fascist movements, Schütte-Lihotzky's designs for the Turkish government reflected a paradox. Her village schools and teachers' houses were part of state politics aimed at defining a new national life, especially in rural areas. Influenced by her experiences in Frankfurt, her Turkish projects adhered to modernist architectural norms. Her designs featured south-facing classrooms, left-side lighting for right-handed writers, home economics spaces, and ample gardens for mental and physical health. The Turkish government often requested the integration of teachers´ housing into school buildings, reflecting urban teacher living spaces from literature.

A certain romantic view akin to Rousseau's influenced Schütte-Lihotzky's work in the Turkish countryside, despite her scepticism. The influential novel by Reşat Nuri Güntekin, Çalıkuşu, depicted a teacher from Istanbul who dedicated her life to educating children in Anatolian villages, highlighting the idealisation of the countryside as Anatolian heaven. This romanticism characterised the intellectual works of the period while preventing a realistic confrontation with rural poverty.[5]

Her research extended to China, France, the Soviet Union, Bulgaria, and Cuba, focusing on the importance of well-designed kindergartens. Her modular methodology typically featured a large central space and several smaller spaces with no set purpose, entirely at the children's disposal.

4. CONCLUSIONS

Margarete Schütte-Lihotzky's architectural innovations transcend mere functionality. They make substantial contributions to social reform and educational environments while preserving the modern architectural heritage through their educational initiatives.

5. Esra Akcan, "Civilsing Housewives versus Participatory Users: Margarete Schütte-Lihotzky in the Employ of the Turkish Nation State," in *Cold War Kitchen. Americanitation, Technology, and European Users*, ed. Ruth Oldenziel and Karin Zachmann (Cambridge: MIT Press, 2011), 185- 207.

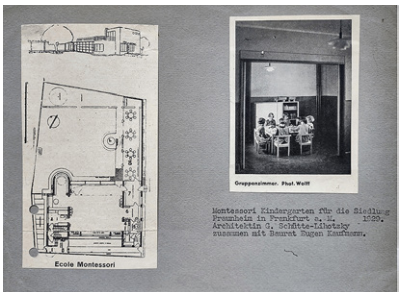










Figure 1. Margarete Schütte-Lihotzky, Montessori Kindergarten, Frankfurt, 1929 © Schütte-Lihotzky Archive, 2022.

Figure 2. Margarete Schütte-Lihotzky, China, 1934 and Children chair design drawing by ink and watercolours, 1935-36 © Schütte-Lihotzky Archive, 2022.

Figure 3. 1 Margarete Schütte-Lihotzky, Modular system for nursery schools, configurations for six groups and details of one group, 1965 © Schütte-Lihotzky Archive, 2022.

4.1 IMPACT ON SOCIAL REFORMS

Schütte-Lihotzky's approach to design spurred significant social changes, particularly in education. Her kindergartens evolved from mere educational facilities into dynamic community hubs, promoting social integration and equity. By employing modular construction systems, she championed inclusivity and influenced global early childhood development policies. The relevance of her designs persists today as educational spaces continue to be reimagined. Her pedagogical pavilions, featuring flexible, modular designs, connected outdoor gardens with spacious halls, enriching children's lives and encouraging exploration, creativity, and collaborative learning.

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4.2 BRIDGING HOME AND SCHOOL LIFE

Her kindergartens acted as crucial bridges between home and school environments, easing children's transition into the broader community. Schütte-Lihotzky's holistic design approach went beyond academics to nurture social skills, creativity, and cultural awareness. Her flexible spaces facilitated seamless interaction among caregivers, educators, and children, fostering a supportive educational ecosystem. These kindergartens effectively guided children from their family settings into a wider social context, supporting their integration into the community.

4.3 LEGACY IN EDUCATIONAL SPACE DESIGN

The concept of "object" in Schütte-Lihotzky's work, from the replicable kitchen prototype to its broader urban implications, underscores her influence. She demonstrated how mobile artefacts could transform everyday rituals—both in homes with her kitchen and retractable furniture designs and in educational settings with modular elements like cribs, changing tables, and planters. These innovations created flexible, modular environments,

redefining architectural design as an everyday art that humanises society by extending the home into communal spaces. Her modular construction system revolutionised kindergartens, enhancing flexibility and adaptability. Schütte-Lihotzky's legacy continues to impact educational space design, embodying progressive education through adaptable and innovative structures. ■

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BIOGRAPHY

Mara Sánchez-Llorens, an architect with a PhD in Architectural Projects from the Polytechnic University of Madrid, founded her studio COMA in Madrid in 2001. Her research focuses on Latin America, architectural grafts, and border studies. She curated Lina Bo Bardi: Tupi or not Tupi. Brazil 1946-1992 at the Juan March Foundation and has won several awards, including Arquia, Bienal Iberoamericana, Mujeres Artes Visuales, and FAD. She has collaborated with AECID and various international universities.

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LIBESKIND HOUSE: THE CONSTRUCTION OF A MODERN AMBIANCE THROUGH THE PROTAGONISM OF JOAQUIM TENREIRO'S WORK

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ABSTRACT

This article is about the Brazilian architect David Libeskind's house, built in São Paulo, Brazil, in 1961. It visited in two moments: the inhabited house (during the years 2000-2004) with the presence of the architect and the empty/uninhabited house (in the year 2016) after his death. The elaboration methodology presupposes the house visitation and the reading of the collection of images from different periods of the said house and a strategy to narrate the sensory experience of the visit, which instructs through the description as a way of looking and talking about the house today.

The biography of the house proposed in the article seeks to establish relations between the construction of modern architecture and its cultural environment in the 1950s and 1960s, from the inter-relationships suggested especially with one prominent interlocutor, the designer Joaquim Albuquerque Tenreiro[1] who contributed significantly to the house design process.

Description as a method was the chosen way of approaching and understanding this house, whether empty or inhabited, to construct a narrative about the experiences lived, and, therefore, perceived through contact with the world of things, material, and in this sense, the survey of pieces created by Joaquim Tenreiro is a fundamental part of understanding Libeskind's architecture.

It seeks to promote the construction of Brazilian historiographical criticism and aims to broaden the understanding of cultural diversity based on the past experiences of the Modern Movement in Brazil.

1. INTRODUCTION

The house of architect David Libeskind, in the Pacaembu neighborhood, built in 1961, in the city of São Paulo, is the focal point of his production that motivates the possibility of establishing an approximation with the field of design for this article, consolidating a language as a modern culture. It allows us to recognize in which dimension regional aspects are inserted in Libeskind's work – a modern Brazilian ambiance that complements itself beyond architecture. In this sense, like a sponge, the house absorbs what settles into it, and from there emerges a *Brazilianness* of restraint and rigor in design, modernism that combines functionality, technique, refinement, and balance. Thus, the relationship between architecture (defined as space designed and built) and lived environment, or place (filled with things) defines the very existence of the house and supports the understanding of the meaning of architecture and in this case, the reading is expanded to *"everything that is Architecture,"*[2] or in the extension of the human sphere itself and the meaning of the affirmation of the constructed building.

We thus have the unpredictability of life in the biography of the house and of things together with its architect-inhabitant, the creator of the original gesture. The dynamics of meanings are described, the path of the meanings of things, architecture, and life, in a strategy to narrate the sensorial experience through visiting the work and photographic records at different times as a method that instructs through looking and informing about the House.

From this point onwards, the central articulation point for this article unites design and architecture revealed through the participation of Joaquim Albuquerque Tenreiro in the house project.

Through significant theoretical references for the discussion of modernity in Brazil, this article aims to show the expressive, cultural, and material quality of this reference work for the study and understanding of Brazilian modern single-family architecture, placing as a presupposition the reading of images, the experience of visit to the work and the expertise built in previous work by the author on the complete work of architect David Libeskind.

2. MODERN CULTURAL EXPRESSIVITY

Comparing two moments of the house as an approach to research is based on photographic records of different moments in the house's existence, which allows us to remember the space that was once inhabited and proceed with a possible way of narrating that reiterates Argan's words: "reality of the narrated fact is indisputably different from the reality of the fact that happened, but the narration that is made today of facts that happened in the past has, for the life we ive today, a value that the fact that happened, as such, cannot have."[3]

Libeskind's production is part of the notable and recognized body of work of Brazilian modern architects, a place where cultural manifestations reached exceptional expressiveness in the first half of the 20th century, despite belonging to the context of an economically peripheral country.

The surprising period of just nine years from the end of the architect's training, in Minas Gerais, in 1952, to the year of completion of his house,

1. Joaquim Albuquerque Tenreiro (Melo Guarda, Portugal 1906 - Itapira SP 1992). Designer, sculptor, painter, engraver, and furniture designer.

2. Philp Ursprung, Diogo Seixas Lopes, and Pedro Bandeira, *Eduardo Souto de Moura: Atlas de Parede Imagens de Método* (Porto: Dafne Editora, 2011).

3. Giulio Carlo Argan, *História da arte como história da cidade* (São Paulo: Martins Fontes, 1992), 25-26.

the central object of this article, in 1961, presents a total set of forty-one works built that consolidated its language, essential for understanding the development of Brazilian Modern Architecture, which was also formed and refined in a very short period, approximately twenty-four years: from 1936, the year in which the Ministry building was designed of Education and Public Health, in 1960, the year Brasília was inaugurated.

Looking at Libeskind's production through his own home was a way to understand the political and cultural effervescence in the country's history, a new aesthetic standard "that we can say is sophisticated without being aristocratic."[4]

According to Martins[5], there are two antagonistic but somewhat complementary positions that enable a reading of the development, establishment, and subsequent dissemination of modern architecture in Brazil.

These two arguments are somewhat present in Libeskind's work. One hypothesis is that there is a connection between his work and the trajectory of organic development of Brazilian architecture, since the beginnings of the Colony, pointing to his capacity for acclimatization, for progressive adaptation of external models to the country's climatic, technical, material, and social conditions. There is, as the central character of this position, Le Corbusier, who drives "the narrative argument of a Brazilian architecture that had to become modern to become legitimately national again."

Another hypothesis, according to Geraldo Ferraz[6], modern architecture is above all an international fact, "a product of 20th-century ideas, given that its adjective (...) belongs to a state of mind restricted to the transformations taking place in the life of the man of our time".

Linked to this vision, Libeskind's work relates to recovering the tradition of constructive rationalism, synthesizing new socially raised programs, the new availability of technical and material resources, and the "modern state of mind". This stance, aligned with the international style and the search for a language that wanted to free itself from a past identified with the weight of a cultural tradition.

There is a clear intersection between the positions defended by Ferraz and the analytical approach of Libeskind's production, as the introduction of modern architecture in Brazil is based on the profound changes in the economic, political, technical, and social life of São Paulo, starting from the First World War.

Concerning the first stance, one can notice, especially at the beginning of his work, a strong influence from Lucio Costa, when Libeskind worked with SPHAN, carrying out graphic and historical surveys of Ouro Preto, under the command of Sylvio de Vasconcelos. This connection is still reaffirmed through contact with Oscar Niemeyer's work, during the Pampulha's construction, back in the 1940s.

This local tradition and climate-sensitive architecture, arising from this tradition, appears in the use of materials such as wood, as seen in the architect's house and other contemporary residential projects. The joinery, especially developed by Joaquim Tenreiro, highlights artisanal work, which

4. Guilherme Wisnik, "Modernidade congênita," in *Arquitetura Moderna Brasileira*, org. Elisabetta Andreoli and Adrian Forty (New York: Phaidon Press Limited, 2004), 36-48.

5. Carlos Alberto Ferreira Martins, Notas sobre a historiografia da arquitetura brasileira, in *Textos fundamentais sobre história da arquitetura moderna brasileira*: v2, org. Abíilio Guerra (São Paulo: Romano Guerra, 2010), 132-133.

6. Geraldo Ferraz, *Warchavchik e a introdução da arquitetura moderna no Brasil: 1925 a 1940* (São Paulo: Masp, 1965).

in its design addresses issues of modern language, however, it distances itself from mass production.

3. TENREIRO AND LIBESKIND: THE HOUSE AMBIANCE

In the investigation into the genealogy of external references linked to Libeskind's production, Joaquim Tenreiro will represent the role of design in line with the house, the "finesse" of design through the complete carpentry project, not just the furniture, but several other elements as shown in the images.

The relevance of the presence of Tenreiro's furniture in the house reveals a kind of symbiosis between the design of the house and the furniture, an exchange of experiences between Libeskind and Tenreiro, as there is his effective participation in the design of the house. These are not, therefore, pieces of Tenreiro's furniture that were used as decoration by Libeskind, but pieces designed for this house as part of the discussions held between them to design the spaces in the house. **(Fig.1)**

The massive presence of furniture, lighting pieces, and ambient composition designed by Joaquim Tenreiro inside the house draws attention and leads us to reason about the aspects and criteria chosen by Libeskind to build the interior environment of his house, but, above all, reveals a moment of cultural effervescence in Brazil, in the 1960s, the originality of the national product and its receptivity inside and outside the country, as well as the greater emphasis on the relationships between aspects of popular culture and design.

The dynamism of the Brazilian artistic and cultural course of action in the 1960s experienced a crossroads of crises in the various sectors of artistic manifestations, which, according to Maria Loschiavo[7], corresponds to the constitution of a new aesthetic project, whose focus was the fight for an authentically national and of contestation.

Of all the designers of his period, Tenreiro is certainly the most representative, whether due to the vigor of his work, the high quality of his production, or because he takes us more deeply back to our Portuguese traditions in the common and elegant use of jacarandas and of braided straw, an outstanding example of traditional textile design. **(Fig.2)**

It is mandatory to remember that, in more than thirty years of activity as a furniture designer, Tenreiro managed to unite the artist with the technician, in a well-considered proportion, bringing solutions that were distinguished, above all, by flawlessness, technical refinement, and sobriety. Thus, interior decoration was no longer seen as "[...] a kind of vanity without justice, pride without logic. Momentary enthusiasm that does not come from any need for plastic expression, nor experience and constant work, assuming greater dignity, and can be considered [...] as an art movement, a creative movement, where new contributions can already be counted to decoration, creations with their character capable of establishing their foundations [...] Then, decoration is not a trick we use to hide an ugly corner, with artifice, with extra elements, but a force that shapes, and creates furniture that fulfills

7. Maria Cecília Loschiavo Santos, *Móvel Moderno no Brasil* (São Paulo: Editora Senac São Paulo/ Editora Olhares, 2017).

functional and aesthetic purposes, curtains that temper the light, and rugs that connect the composition."[8]

This national character, or acculturation process based on the enrichment of native elements, implements the absorption of international standards and is already present in Libeskind's repertoire. It can be said that this formulation is a kind of regionalism, attentive to foreign languages, but, as an aesthetic ideology, seeking Brazilian expressiveness, especially reinforced in the presence of Tenreiro as a partner in the construction of various spaces in the house.

The house is, in this way, a field of experimentation with the pieces recently designed and built by Tenreiro applied in the space lately idealized and materialized by Libeskind, which also allows us to observe, in a very succinct way, the character of marginality to which the furniture has always been connected is called into question by modern architecture[9], as from then on, the furniture starts to be seen as a complementary and essential element in the architectural project, having the same importance as it.

But Tenreiro's presence in the house is not limited to the furniture pieces, as there are other essential elements of the construction of the spaces designed by him.

Partitions, screens, railings, doors, cabinet closures, and lamps are an integral part of a set of pieces that relate to each other and the architecture. **(Fig.3)**

Libeskind could opt for iconic pieces from the renowned international design catalog to compose his architecture, but what is observed here is something that reaffirms the construction of the character of this architectural manifesto in the option for the use of national wood, weave and fibers Brazilians in Tenreiro's work that "reveals this familiar and almost loving proximity to wood: his fascination with the texture of the fiber, organicity, and tactility shines through in the game of volumes, shapes and colors that preside over his production".

Libeskind's option for a set of works of art – painting and sculpture, furniture, lighting pieces – in line with architecture (space) is inserted in this context or spirit of a time and brings together the whole that means architecture, the idea of a work of total art. It is also a way of building Libeskind's artistic legacy because the choice of those works consists of a form of self-representation, which is why an autobiography of the author in the form of an inhabited house makes sense.

4. ARCHITECTURAL MATERIALITY

The volume of the house allows an initial reading with the predominance of horizontality based on the geometric construction of the planes that define its limits. These horizontal and vertical elements receive treatments using different materials, such as stone, wood, and glass tiles, but are not restricted to a plastic-formal aspect of facade composition. When entering the house, it is possible to see that these treated plans form a continuity in the space and shape the interior voids.

8. Joaquim Tenreiro, "Decoração: sobriedade, distinção e acolhimento," *Módulo* 1, no.2 (August 1955): 58-61.

9. According to Mário Pedrosa, "The revolution in architecture is therefore not purely external. On the contrary, it is directed towards the exterior and interior of the building, where it allows us, for the first time, since prehistoric times, when primitive man lived inside the earth, to have a physical awareness of the interior space, of its physical existence." In: Mário Pedrosa, *Dos murais de Portinari aos espaços de Brasília* (São Paulo: Perspectiva, 1981), 253.

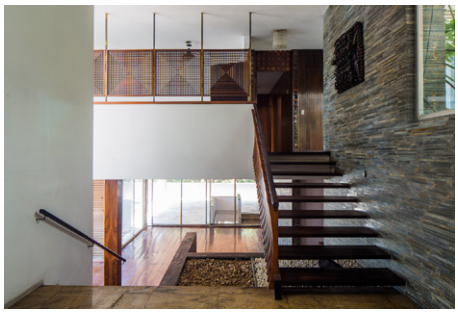






Figure 1. David Libeskind. House (1961) São Paulo, Brazil, 1961. Uninhabited House. Main access vestibule – wooden parts (staircase, railing, screen, panel, and door) from Joaquim Tenreiro. © Karen Balsevicius Evangelisti (2016).

Figure 2. David Libeskind. House (1961) São Paulo, Brazil. Inhabited House. Dining Room - Joaquim Tenreiro: set of table and chairs in rosewood, glass and straw, and chandelier in glass and brass, works of art from the architect's private collection. © Sissy Eiko (1998).

Figure 3. David Libeskind. House (1961) São Paulo, Brazil. Uninhabited House. Living Room, bar, and fireplace (glazed ceramics by Libeskind) star railing, bar, and main door panel by Joaquim Tenreiro. © Sissy Eiko (2005).

The construction and finishing materials used in the construction of the house point to the clear desire to offer a repertoire of different temperatures for the house's environments, to provide for each situation, not only the refinement of thermal technical resolution but the sensation of the place. Libeskind emphasizes, for example, the corner of conversation, coziness, and intimacy in the interactions that took place near the bar, resulting in an environment with lower ceilings, with indirect light, adjacent to the fireplace – place of the fire – taking advantage of the variations in the steps under the stairs.

Texture, color, light, shadow, height, width, and a collection of materials – tactile research present in the treatment of the different plans of this house – are also tributaries of Libeskind's investigations in the field of Plastic Arts in a deepening of the abstract, informal and material compositions of the 1960s.

5. THE CHARACTER OF ARCHITECTURE

Comprehending the construction of space that prescinds the hierarchy placed between architecture and decorative pieces - as items of lesser importance, Walter Gropius stated in 1923 that *"art and technique are the same things"*, and this represented, at the time, a change important in the way of viewing the production of objects for domestic use, where until then the opposition between utilitarian objects and decorative objects prevailed.

For Libeskind, the furniture and internal arrangements that were organized with canvases and sculptures – objects that were not only effective but above all representatives of artistic testimony and aesthetic manifestation – should match the strength of the modern architectural revolution, which was certainly not just external. Quoting Benjamin, *"For the private man the interior represents the universe. It brings together the distant and the past. Your room is the audience in the theater of the world."*[10]

10. Walter Benjamin, "Iluminaciones II," in *Luís Felipe or the interior* (Madrid: Taurus, 1952), 182.

There is a scenography, a visual appeal that manifests itself in this arrangement. And there is an actor for this stage, the metropolitan architect. In this theater, Libeskind creates his world surrounded by the visual and affective presences of his peers in the ideal construction of an artistic time. The house is closely related to this man, its configuration depends on the situation and way of life of its inhabitants; and when it gives it its character, the house takes on a vital dimension: the symbolic dimension.

Still going on about the inhabited house, one can see the remarkable approach of Libeskind's design process with the search for the construction of a modern ambiance. This places it in a unique place in the scenario of modern Brazilian production due to the specific quality relating to the character of this architecture.

This biography of architecture, of an inanimate object, reveals the story of its creation by the architect, the history of the things that the house housed and by housing them modified itself, in an eternal reconfiguration, or even, how things complement each other.

In this case, History is a power, an engine that drives another story, narrated by the house, and "the past, from then on, will not be a simple inheritance, but a construction."[11] ■

11. Lorenzo Mammì, "Preface to the Brazilian edition," *History of Italian Art: From Antiquity to Duccio* – vol. 1, by Giulio Carlo Argan (São Paulo: Cosac & Naify, 2003), 16.

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BIOGRAPHY

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DIGITAL DOCUMENTATION WORKFLOWS AND TRAINING FOR THE CONSERVATION AND PLANNING OF NIKI DE SAINT PHALLE'S TAROT GARDEN

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#21

ABSTRACT.

This contribution outlines the outcomes of the comprehensive documentation of the Tarot Garden (Il Giardino dei Tarocchi) in Italy, a collaborative project between the Getty Conservation Institute (GCI) and the Carleton Immersive Media Studio (CIMS). The project aims to develop a long-term conservation plan in partnership with the Niki Charitable Art Foundation (NCAF) and the Tarot Garden Foundation.

The produced digital assets include measured line drawings, ortho-rectified images, a Geographic Information System (GIS), and a photographic record portfolio. These assets form the foundation for the holistic conservation of The Tarot Garden's physical and intangible aspects.

The Tarot Garden represents the most significant achievement of French-American artist Niki de Saint Phalle over two decades (1978-1998). The conservation plan incorporates condition assessments, archival research, interviews with collaborators and current caretakers, and detailed documentation of the sculptures using digital recording methods.

Additionally, the project emphasizes the importance of training local staff to utilize these digital assets. This capacity building is crucial for the site's maintenance, empowering local staff to continue the legacy of Saint Phalle.

1. INTRODUCTION

The Tarot Garden Conservation Project is the first field project of the Getty Conservation Institute's (GCI) ModCon Initiative, executed through the GCI Collections Department. The project is dedicated to comprehensively conserving the tangible and intangible attributes of The Tarot Garden, a sculpture garden in Tuscany, Italy, with a focus on building the capacity of the local team to contribute to the conservation management of the site using digital assets. The garden was designed and created by French-American artist Niki de Saint Phalle (1930-2002) from the late 1970s until the early 2000s, and features 22 sculptures inspired by the Major Arcana of the Tarot, nine other sculptures, and an entrance wall and café designed by Swiss architect Mario Botta. The site also includes four kinetic sculptures created by the artist's husband, Swiss sculptor Jean Tinguely.

The project's long-term conservation strategy integrates a multifaceted approach, including digitally documenting the sculptures' current condition, qualitative condition assessments, archival research, and interviews with site collaborators and caretakers. The documentation work involved the development of digital assets as well as training The Tarot Garden staff to work with the assets to facilitate the establishment of a maintenance plan for the site. The documentation and training involved the work of the Carleton Immersive Media Studio (CIMS) with the GCI and The Tarot Garden Foundation over a one-year period, including a field campaign in May of 2023 and a training campaign in November of 2023. The GCI's contributions in preparation of the maintenance plan encompass condition assessments of the sculptures, interviewing site collaborators and caretakers, and training staff on suitable maintenance activities. This paper focuses on the use of capacity building activities with digital documentation assets to facilitate the sustainable preservation and management of The Tarot Garden.

2. SCOPE OF WORK

The Tarot Garden presented significant challenges for digital recording due to the large size and irregular shape of its structures, substantial vegetation, and reflective surfaces of the decorative ceramic and mirrored tiles. To address these challenges, a detailed documentation approach was adopted to accurately capture the site's current state of conservation using appropriate technology.

The project involved meticulous planning and implementation of recording and mapping activities to produce measured records of The Tarot Garden at both the scale of the site and each sculpture. These records aim to facilitate conservation planning for the site's attributes and landscape. The activities included mapping the sculptures, topography, and standing structures, such as the entrance wall and café. Based on the recorded data during this project, as-found measured line drawings and ortho-rectified images were produced at various graphic scales. Terrestrial and drone photography generated a high-resolution geographically referenced photographic inventory of all site attributes. A Geographic Information System (GIS) was designed and

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produced using open-source software (QGIS, 2024). The GIS hosts the digital assets of the site, including as-found measured drawings, aerial ortho-rectified images, digital elevation models, topographic contour lines, as well as archival ortho-rectified images and technical reports geo-referenced to their associated sculptures on the site. A photographic record portfolio was developed to support the GIS, providing a navigable database of high-resolution images of the existing condition of each sculpture.

The project's capacity-building activities focused on training the site staff to operate the digital assets produced from the site's documentation. The next sections discuss the documentation work and digital assets produced by CIMS, followed by a discussion of the capacity-building activities with the digital assets and the purpose and outcomes of the training.

3. DIGITAL SITE RECORDING

CIMS carried out digital recording during two periods, with comprehensive documentation work being completed in May 2023 and the supplementary documentation work conducted in November 2023 along with capacity building activities with the site staff. .

A geospatial positioning workflow was designed to integrate various data types, including laser scans and photogrammetry, into a Geographic Information System (GIS) with accurate geographic coordinates. GNSS RTK receivers were used to establish control points across the site. This data was processed to provide precise geographic coordinates, forming a robust geodetic network with a total station survey spanning across the site. The total station measured natural points on sculptures and targets for geo-referencing all the information collected.

The site was 3D-scanned using two FARO laser scanners working simultaneously with relevant surface resolution. Control points were established using targets and spheres for precise point cloud registration. Reflective surfaces presented challenges for the 3D Scanners, as they cause these beams to scatter in unpredictable directions, often reflecting away from the scanner instead of returning directly. This prevents the scanner from accurately measuring the geometry. Therefore, this was overcome by manually cleaning reflected points—the processed scans generated detailed point clouds for each sculpture, documenting interior and exterior geometries.

Terrestrial photogrammetry involved photographing all sculptures, pathways, and key structures using colour-corrected high-resolution mirrorless cameras. The photographs were processed to create high-resolution ortho-rectified images and photogrammetric models. Aerial photogrammetry was performed using off-the-shelf drones, capturing images of the sculptures and the site's layout. These images supplemented terrestrial data and were processed to create comprehensive 3D models. An appropriate Ground Sampling Distance (GSD) for terrestrial and aerial work was calculated to achieve an adequate graphic scale for photogrammetric data.

Overall, the documentation work resulted in a set of detailed digital visual and technical assets of The Tarot Garden, facilitating future

assessments and conservation efforts through the provision of data which is metric, geo-referenced, and high resolution.

4. PROCESSING AND DISSEMINATION OF COLLECTED DATA

4.1 MEASURED LINE DRAWINGS AND ORTHO-RECTIFIED IMAGES

The site's sculptures, structures, decorated pathways, and other details were meticulously documented through measured line drawings and ortho-rectified images. The drawings include elevations, section elevations, and plans tailored to each sculpture's specific scale and geometry. These assets formed the foundation of the digital records produced for the site. On their own, the set of drawings and ortho-rectified images provides detailed information about the recorded condition of the sculptures, including their geometry and true colour of the materials on each sculpture. As part of the comprehensive dataset developed through this project, the drawings and ortho-rectified images supported the development of the remaining digital assets – the GIS and the photographic record portfolio. The site plan and aerial ortho-rectified images of the site served as reference upon which additional data was geo-referenced in the GIS. In the photographic record portfolio, the elevations and plans of each sculpture were used to reference the location and orientation of high-resolution photographs at a close graphical scale.

The development of the measured line drawings involved using Computer Aided Drafting (CAD) and geo-referenced point clouds to trace the geometry of each sculpture. A point cloud was attached to its own CAD file for each sculpture, with a specific user coordinate system (UCS) defined around the sculpture. Despite the irregular orientations of the sculptures, UCS orientations were approximated to the orthogonal faces of each sculpture. Ortho-rectified images were generated using photogrammetric processing software. Each ortho-rectified image was generated using light balanced and colour corrected terrestrial and aerial images, with the resulting ortho-rectified image oriented to align with the geographic orientation of the associated measured line drawing. An example of the measured line drawings of The Empress is shown in **Figure 1**, with ortho-rectified images overlaid with the two elevation drawings, and the plan and section drawings shown in grayscale.

4.2 GEOGRAPHIC INFORMATION SYSTEM (GIS)

A Geographic Information System was developed using the open-source program QGIS to consolidate and manage data for the site, including archival aerial images, the geodetic control network for the site, aerial ortho-rectified images, digital elevation models, contour lines, site plan drawings, and intervention reports recorded for works on the sculptures up to the year 2022. Additionally, the photographic record portfolio was linked to each sculpture in the GIS, providing direct access for navigating to the high-resolution images. The different data sources were linked in the GIS using points and polygonal shapefiles, with hyperlinks provided in the shapefile metadata. All the data was geo-referenced in the UTM zone 32 (North) reference system.

The GIS was developed for this project with the initial purpose of providing a sole, robust, and comprehensive source for managing documentation, digital records, and technical information for the site through a geographic system. However, it was determined that the GIS limited the capacity for sustainable conservation practices on the site because of the requirement for advanced technical understanding of the GIS program to manage the system over the long-term. Based on an adaptive approach adopted for the project, a photographic record portfolio was additionally developed for the site, to support the GIS, which is discussed in the next section.

4.3 PHOTOGRAPHIC RECORD PORTFOLIO

The photographic record portfolio complements the Geographic Information System (GIS) and is a digital resource for managing, recording, and assessing the artworks' condition. It provides interactive navigation with embedded hyperlinks to high-resolution images stored on a cloud-based storage platform. A navigation page with a Site Map and a Sculpture Index listing all the sculptures on the site facilitates navigation through the digital portfolio. Drawing pages within the portfolio include elevations, section elevations, and plans indicating the location and orientation of detailed images of each sculpture. Hyperlinked frames and photo key symbols guide users to detailed pictures stored in a cloud-based platform to maintain feasible document size and prevent image compression, as illustrated in **Figure 2**. High-resolution images were organized by sculpture name in a dated folder structure, ensuring easy access and facilitating future updates. A convenient naming convention for the images was defined to keep the platform organized and accessible to provide a comprehensive and detailed record of the site's sculptures and artworks.

The concept of the photographic record portfolio was developed for the project grounded on the need to provide digital assets which are accessible and operable, based on the capacity of the team responsible for the long-term conservation of the site. The accessibility and operability of the portfolio was designed so that it does not require advanced technical knowledge to operate geographic or digital data processing programs. Rather, the portfolio is a static document used through a common open-source program, such as a PDF reader or web-based PDF viewer. The dynamic component of the portfolio, the database of high-resolution images, is hosted on a cloud-based storage platform, involving the regular addition and management of digital images to record the ongoing condition of the sculptures throughout stages of conservation work. As discussed in the next section, the use and management of the photographic record portfolio was a primary focus of the training activities on the project.

5. TRAINING

Central to this project was empowering local staff through targeted training, ensuring they can effectively utilize the digital assets and sustain Saint

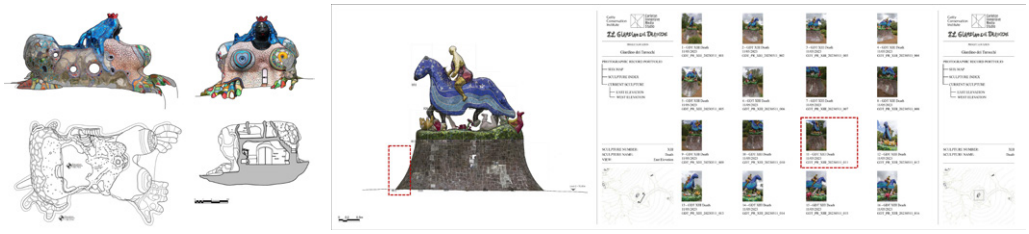


Figure 1: Measured line drawings and ortho-rectified images of The Empress by Carleton Immersive Media Studio for the Getty Conservation Institute, 2023.



Figure 2: Photographic record portfolio layout of The Death by Carleton Immersive Media Studio for the Getty Conservation Institute, 2023.

Figure 3: Capacity building activities with site caretakers by Carleton Immersive Media Studio for the Getty Conservation Institute, 2023.

Phalle's legacy. The team closely assessed the project's requirements and the local staff's needs to develop the best training approaches. Based on the preliminary processing of the digital assets, training sessions were designed to enable the staff to use digital photography proficiently, navigate point clouds, and manage the photographic record portfolio and GIS created for the site.

To facilitate hands-on learning, the staff was provided with a laptop preloaded with the necessary applications and project files. The training spanned four days in November 2023, with each day focusing on different digital asset aspects. Staff were introduced to the drafted digital assets and taught to navigate and manage the photographic record portfolio. With the objective of adding to the image database over time, the staff were briefed on the basics of digital photography and DNG image conversion and editing. The training also covered working with point clouds in Autodesk Recap, using measured line drawings on-site, and working with QGIS. The final day focused on testing workflows taught to the staff involving photography, the photographic record portfolio, and data management in the GIS. Written protocols were provided for image editing using Adobe DNG Converter and RawTherapee, navigating and manipulating point clouds in Autodesk Recap, and managing data in QGIS.

These training sessions were crucial for enabling the local staff to take an active role in the ongoing management and conservation of The Tarot Garden. By equipping them with the skills to use the digital assets, the project ensured that the legacy of Niki de Saint Phalle is preserved through the empowered and knowledgeable stewardship of those closest to the site. This approach not only supports the site's physical maintenance but also honors the collaborative spirit in which it was created, continuing the meticulous care and conservation initiated by Saint Phalle herself **(Figure 3)**.

Throughout the training activities, The Tarot Garden staff demonstrated an eager approach and high capacity to incorporate the use of digital assets

into regular site management and conservation activities. Following the training campaign, the site staff have continued to make use of the digital assets provided, including the cloud-based storage, for recording the conditions and progress of interventions on the sculptures subsequent to the documentation work conducted in 2023. Some discrepancies in the file management protocols have been observed, although consistent use of the digital assets has been seen overall.

6. CONCLUSIONS

Detailed digital records serve as invaluable resources for future conservation campaigns, providing a baseline to assess changes, guide restoration efforts, and preserve the sculptures' integrity for future generations. The Tarot Garden Conservation Project allowed the authors to implement the digital assets resulting from advanced digital recording methods for the capacity building of a local team, facilitating the long-term conservation of the site. The initial documentation methodology focused on the development of a sole digital asset – the GIS – for data management for the site, based on a geographic system. Through consideration of accessibility, operability, and capacity of the team responsible for the long-term use and management of the digital resource, the photographic record portfolio was conceptualized and developed to support the GIS.

The involvement of The Tarot Garden staff continues to be essential for the preservation of the site, and as such, the capacity building activities of the project focused on training staff to operate and manage the GIS and the photographic record portfolio. The training's objective was to provide digital assets to support the staff in their ongoing conservation activities on the site. ■

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BIOGRAPHY

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THE LINK BETWEEN ARCHITECTURE AND PSYCHOLOGY IN JAPAN: YOSHINOBU ASHIHARA'S LANDSCAPE THEORY

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#21

ABSTRACT.

This paper will examine Japanese modern architecture and elements of traditional architecture from the perspective of neuroscience. Yoshinobu Ashihara (1918-2003), is one of the few Japanese architects who maintained a good balance between formulating architectural theory and practicing architectural design while focusing on the impact of design on the human psychology. Studying at Harvard Uni. GSD and being influenced by architectural theorists such as Christian Norberg-Schulz who studied with Ashihara during his time at Harvard Uni. GSD and conducting research in different countries allowed Ashihara to examine Japanese architecture from different perspectives.

1. INTRODUCTION

For the past few decades, architects have tried to improve on the modern architectural movement, leading to more sustainable designs, while giving color to the dry image of modern architecture. Japanese architecture is considered one of the most sustainable in the world, due to its use of natural materials, and nature itself to confront problems such as natural disasters. However, as Jun'ichiro Tanizaki mentioned in "In Praise of Shadow", in modern era cities, it is not possible to design with only traditional methods. Rather, a balance can be held between traditional and modern architecture. As James Maude Richards states in "An Introduction to Modern Architecture", architects gained the opportunity to find their own style in the modern era. However, as Donald H. Ruggles mentions in " Beauty, Neuroscience & Architecture: Timeless Patterns and Their Impact on Our Well-being ", some modern architects' designs were more functional, but didn't account for psychological needs. Yoshinobu Ashihara (1918-2003), is one of the few Japanese architects who maintained a good balance between formulating architectural theory and practicing architectural design while focusing on the impact of design on human psychology. After receiving his undergraduate degree at Tokyo Imperial University (1942), after WWII, Ashihara continued with his studies and became the first Japanese person to study at Harvard University GSD (1952-1953). Working as a staff member for Marcel Breuer for one year after graduating from Harvard GSD, being influenced by architectural theorists such as Christian Norberg-Schulz who studied with Ashihara during his time at Harvard GSD and conducting research in different countries allowed Ashihara to analyze Japanese architecture from different perspectives. In his writings, Ashihara compares Western and traditional Japanese architecture, while referring to Gestalt Theory and Edgar Rubin's Vase theory, and focusing on landscape, over-texture concept, sense of direction, imageability, the law of enclosure, and boundaries. Ashihara's interpretation of Gestalt Theory had a large impact on architectural and urban landscape designs, which he elucidates using some of his own works such as the Komazawa Olympic Gymnasium, Central Plaza (1964), Musashino Art University (1964-68) and The Sony Building (1966), which were all registered as important modern architecture by DOCOMOMO Japan. Therefore, the aim of this paper is to study Japanese modern architecture while focusing on Ashihara's ideas as elucidated in his writings and works, with the aim of understanding the link between architecture and psychology as described by different sources such as Gestalt Theory.

2. JAPANEASE TRADITIONAL ARCHITECTURE

As James Maude Richards states in "An Introduction to Modern Architecture", traditional architecture is created by craftsmen who, after gaining a lot of experience and using available materials, create a functional design that meets the needs of their clients. Therefore, appreciation of Japanese culture, along with traditional techniques, in order to gain proper understanding of the client's psychological needs, is the main purpose of this paper.

2.1 BOUNDARY IN JAPANESE ARCHITECTURE

As Yoshinobu Ashihara mentioned in "The Aesthetic Townscape" the purpose of boundary in architecture is not merely to divide space, but to find a way to create a sense of harmony in connecting different types of spaces. Culture determines the form and limits of the boundary in architecture. As Hiroyasu Fujioka points out in "近代建築史 (KINDAI-KENCHIKU-SHI)", due to the fact that Japan is an island and there is no risk of attack from overseas, boundary has a different definition in this region which can be seen in usage of thin and temporary wooden walls instead of thick stone walls in Japanese houses. As Yoshinobu Ashihara mentions in "The Aesthetic Townscape", a man's shelter is temporary, which is evident in the Shinto belief that just 4 bamboo sticks connected with a rope ("Shimenawa"), are enough to create a sacred area that is separated from the surrounding space.

Despite the temporary walls, there are clear differences between outside and inside culture. For example, as Ashihara points out in "The aesthetics of Tokyo", the culture of removing one's shoes before entering the home defines the boundary between inside and outside. As long as the space is one where shoes are not removed, it is considered an outside environment, which will determine the behavior of the people in that space.

Boundary isn't only used to divide the outside spaces but is also used to create borders inside buildings. In Japanese houses, these borders can often be seen with subtle design choices. For example, the level of the entrance area ("Genkan") is 3 to 5 centimeters lower than the rest of the house. This type of boundary can also be seen in defining the border between the bathroom and other rooms.

Another element that defines the boundaries inside the house is the use of different flooring in different parts of the house. The use of tatami in the living and sleeping rooms and wood for the kitchen and other rooms.

2.2 A FLOOR-ORIENTED ARCHITECTURE

Given that in Japan, as Ashihara mentions in "The Aesthetic Townscape", man's shelter is temporary and subtle demarcations are used to create boundary, Japanese architecture was pushed towards being floor oriented. Religious beliefs about being one with nature, inspired architects to externalize the interior design, instead of internalizing the exterior. One of the elements that blends the interior with the exterior is the beautiful Japanese garden, Tsuboniwa, which are usually designed in the back of the house to give the residence a pleasant private space.

2.3 TRADITIONAL MATERIALS

As mentioned earlier, Japanese architecture is considered one of the most sustainable in the world due to its use of natural materials such as timber, clay and tatami. Nature itself is used to protect man's shelter. Houses are built higher than the ground level, which allows air to pass easily from under the building, which helps in ventilation, prevents moisture and rotting, and

helps to control the rain during typhoons. This technique also connects to the religious belief that evil spirits can pass from under the building.

Another example of sustainable Japanese architecture is the Kumiki post and beam technique, in which pieces of wood are interlocked together and no nails are needed. This technique is used to oppose external forces acting upon the building during storms and earthquakes.

Furthermore, the use of tatami flooring not only absorbs air humidity and helps with sound insulation and air purification, but also helps people's peace and mental stability due to the presence of phytoncide. According to the National Institutes of Health (NIH), phytoncides revitalize the body and possess various effects, such as antibiotic and insecticides, and deodorants, which can enhance both mental and physical health. Tatami is used not only as a material for flooring, but also as a traditional Japanese unit of measurement used the design process.

3. GESTALT AND JAPANESE ARCHITECTURE

As Jun'ichiro Tanizaki mentioned in "In Praise of Shadow'', modern materials and techniques undoubtedly saved and developed traditional designs, however, as Stewart Brand mentions in "How Buildings Learn", modern architects focus more on the presentation of the building, and less so its psychological effects on people. As Donald H. Ruggles refers in the "Beauty, Neuroscience & Architecture: Timeless Patterns and Their Impact on Our Well-being", the emotions that the environment creates in humans is not only limited to the sense of sight, but it is the genetic memory that decides whether the design brings the sense of avoidance or pleasure. In Japan, Yoshinobu Ashihara is one of the few Japanese architects who focused on examining Japanese traditional architectures and people's needs while formulating architectural theory and psychology.

3.1 MODERN MATERIALS

In a country such as Japan where there is a large population with little space for construction, along with frequent natural disasters, the use of modern methods and materials has proven to be effective. However, these methods should be implemented in such a way as to meet the psychological needs of the people.

As mentioned in the article "Psychological and physiological effects of a wooden office room on human well-being: Results from a randomized controlled trial", when living in an environment made of natural materials such as wood, a sense of pleasure is brought to the subconscious mind, given that humans have adapted to nature through evolutionary processes. While concrete is one of the main materials in modern architecture, it does not provide the same effect, therefore Ashihara suggests a concept to use it in a more pleasant way.

In "the aesthetic townscape", he points out that concrete loses its "aliveness" with the passing of time. Therefore, he uses the over-texture concept which was inspired by Gestalt's theory, "the whole of anything is greater than its parts". In the design of the Komazawa Olympic Gymnasium Park, designed by Ashihara, in a 24 x 24-foot unit, the tiles are placed next to

each other with a special pattern, whereby placing these small units together, a general texture is created that can be seen from a higher level. It can be asserted that Ashihara's conceptualization of over texture was significantly influenced by his visit to Saint Mark's Square in Venice Italy **(Fig.1)**.

Furthermore, Yoshinobu Ashihara believes that the higher the sense of imageability, the better the environment. He points out that humans are generally interested in imagining and seeing from an angle higher than their level of vision which gives them a luxurious sense of privacy which can be seen in the flower arrangement of small bonsai trees, or model making. He believed that by using the over texture concept, when people see a certain design while walking in the park, they unconsciously try to imagine the whole ground view from the highest level possible.

The use of glass in the exterior design of the modern building is another point that Yoshinobu discusses in his books. He believes that since the interior of the building is hidden during the day, the building can be seen as a sculpture. However, at night, due to the lights and reflections, the interior is visible and creates designs opposite of the figure and ground theory. As Jun'ichiro Tanizaki mentioned in "In Praise of Shadow ‘’, in traditional Japanese houses, due to the wooden interior and lack of light reflection, the dishes have a shiny coating to reflect the light and create a more peaceful environment. It can be said that the reflection of light from modern glass buildings at night can be compared to shiny Japanese bowls that create a more spiritual atmosphere next to concrete finished buildings.

3.2 SENSE OF DIRECTION

In terms of external design, Ashihara believed that the exterior space is just the interior space without the roof and must be treated the same. In his book he referred to the yin and yang Chinese theory. By juxtaposing the positive spaces, the negative space between them becomes a positive space and "in order to become a yang (something), there must be a boundary which will form an entity". Furthermore, the design of this created positive space is different depending on the type of design.

As Christian Norberg-Schulz, mentions in" The Concept of Dwelling: On the Way to Figurative Architecture", how to approach the design and connect one point to another, depends on the type of area. For example, the way of approach in the design of Asakusa temple in Tokyo and Murou-ji temple, in Uda city, Nara prefecture, is different even though both are sacred places. He also points out that in traditional designs, religion and its beliefs are the main designers, and in the case of temple design, the higher the temple is built above the ground and closer to the sky, the closer a person feels to their gods.

The Murou-ji temple is located on top of the Mt. Muro. The design of the stairs and the positioning of the Gojyu Pagoda above them are intentionally crafted to enhance the visual experience as one ascends, the Pagoda becomes increasingly prominent, transforming the sensation of tiredness into excitement and anticipation upon approaching the main feature, the temple. The same technique was used in the design of the Komazawa Olympic Gymnasium







Figure 1 St. Mark's Square, Venice, Italy, (Photo by Yukio Futagawa, Exterior Design in Architecture)

Figure 2 Yoshinobu Ashihara, Komazawa Olympic Gymnasium, Tokyo, Japan, Right. (Photo by Zahra)

Figure 3 Muro-ji Temple, Nara, Japan, Left. (Photo by Yukio Futagawa, Exterior Design in Architecture)

Figure 4 Yoshinobu Ashihara, Komazawa Olympic Gymnasium, Tokyo, Japan, Right. (Photo by Shuji Yamada, Exterior Design in Architecture)



(Fig.2). The tower inside the park with the similar design as the Gojyu Pagoda has been designed according to the people's perspective, so that as people approach the higher stairs, the image of the tower becomes more complete for them, and the sense of achievement replaces the sense of tiredness.

However, in the Asakusa temple, the design of the path had to meet a different need. Asakusa Temple is located in the capital city, therefore the path to the temple had to be designed not only to bring the feeling of excitement, but also, needed to control the crowds during the ceremonies. Therefore, the Asakusa temple is located at the end of two lines of small shops.

A modern example we can refer to is the design of the Sony building in Ginza-Tokyo, designed by Yoshinobu Ashihara. The path to the building and the connection between the inside and outside of the building, was designed in such a way that people had access to the upper floors of the building by elevators from the entrances of the parking lot, the subway line and on the ground level. The interior space and the floors were designed in the form of large and consecutive stairs so that people could explore each floor while going down the stairs.

3.3 ORDER OF SPACES

Japanese temple has different sections with different purposes which are designed to be walked through in a certain order, and visitors encounter a more comfortable and pleasant space with each section they walk into. Visitors walk through the exterior section, which is the entrance of the temple, and move to the semi-exterior space which has shops and restaurants, and finally to the interior space, the temple itself. This space order concept can be referred to as the gestalt continuity concept, which states that the human brain tends to make connections between different objects, and therefore making connections between different spaces of different uses can bring a sense of pleasure. This concept can be seen in the design of the Ashihara's Musashino Art University in Tokyo design. In Musashino Art University, students first find themselves in the entrance area and the gate, the exterior space, which has rough flooring and no special lighting. After passing the stairs they enter the central plaza, the semi-interior space, where there are outdoor lighting poles, and refined materials are used for the flooring. Finally, after passing the stairs, students enter the premises of the building which has more delicate lighting and fine-grained finishing materials been used for the flooring.

4. CONCLUSION

Relying solely on traditional architecture is insufficient to address the complex and evolving demands of the modern world. Therefore, it is necessary to develop solutions that meets contemporary needs while also incorporating the evolutionary benefits that traditional architecture provides. One innovative approach is the over-texture concept, which allows modern materials such as concrete to mimic the pleasing effects of natural materials to which humans are inherently adapted. This approach not only maintains aesthetic and tactile appeal but also meets the functional requirements of modern construction.

A crucial aspect of the design process involves thoroughly understanding the project's societal context. This understanding helps in defining essential features such as paths of travel and boundaries, ensuring that the design is both functional and harmonious with its surroundings. Careful consideration of these elements can result in spaces that effectively meet the practical and psychological needs of individuals, promoting well-being and a sense of community. Even minor design decisions, when made thoughtfully, can have a significant impact on the overall success of the project. By integrating modern techniques with traditional sensibilities, architects can create environments that are both innovative and deeply rooted in human experience. ■

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BIOGRAPHY

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MODERN MOVEMENT AS A MEDIUM FOR EXPRESSION AND AS A DISSEMINATION TOOL IN AUDIOVISUAL MEDIA

SUSANA LANDROVE BOSSUT
FUNDACION DOCOMOMO IBERICO

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#22

ABSTRACT

The popularity of series such as *Game of Thrones* and film franchises like *The Lord of the Rings* or *Star Wars* have contributed to a rise in screen tourism. Film location scouts will always look for a location to fit a plot and lately there has been a growing trend to use contemporary architecture as a backdrop. This trend has increasingly included buildings from the modern movement.

Heritage from that period 'looks very good on camera' as can be appreciated in many different productions, particularly those made in the last five years. In Spain, for example, many of these have been filmed in buildings designed by some the greatest architects of the modern movement, such as Francisco Sáinz de Oíza, Miguel Fisac or Javier Carvajal, to name just a few. Such productions take place in a wide array of buildings, such as single-family homes, apartment blocks, laboratories, churches, etc.

This might be the ideal moment to consider the use of audiovisual media as a means of disseminating the modern movement.

1. INTRODUCTION

Screen tourism is a relatively recent concept. It consists of promoting visits to certain locations that have been featured in series or films. At first glance, this may seem banal. We are used to a tourism that involves recognised heritage buildings. Notable cases include the fact that more than seven million people visit the Eiffel Tower annually, six million visit the Roman Coliseum and two million visit the archaeological site of Chichén Itzá. All of these destinations are associated with outstanding buildings belonging to very different periods and styles. However, modern tourists are no longer just interested in travelling to see historical sites; they are looking for a more personal relationship with the film characters they admire.

Digital television platforms like Netflix, HBO or Amazon Prime have become integral parts of our lives, providing a new model of entertainment. This new way of watching movies at home has changed our entertainment habits, and many prefer the comfort of home viewing rather than going to theatres.

Many of these platforms started out by acquiring the rights to broadcast films and eventually became film production companies themselves. In doing so, they not only screen films on their platforms, but also nurture them with high-quality content. In 2019, Netflix acquired the broadcasting rights to the film *Roma*, which was simultaneously screened in commercial cinemas and on Netflix. When Alfonso Cuarón's magnificent film won the Oscars for Best Foreign Language Film, Best Director and Best Cinematography, it became evident that a new model of film marketing had been established: digital platforms.

2. *GAME OF THRONES*

The television series *Game of Thrones* debuted on HBO in 2011, adapted from the book series written by novelist and screenwriter, George R. R. Martin. Its final season, season eight, premiered in 2019. In total, the eight seasons add up to 73 episodes, and almost 70 hours of footage filmed in locations as diverse as Croatia, Spain, Northern Ireland and Iceland.

The city of Braavos was recreated in Girona, Spain. Arya Stark begs for money in Obispo José Cartañà street, goes to the theatre in Plaça dels Jurats and embalms corpses in the Arab Baths. Girona also served as King's Landing, and the immense staircases of its Roman cathedral were the setting where Queen Margaery almost made the walk of shame.[1] These royal settings have become places of pilgrimage for the fans of the series, and companies such as Civitatis now offer tours to visit the filming locations of the series. The same happens in Seville, where the Alcazar was transformed into Dorne as well as other locations of the *Game of Thrones* world, and other film sagas such as *Star Wars* or *The Lord of the Rings*.

The economic impact of a film shoot in a city is difficult to quantify, as visits to these locations are maintained for many years. This is why the Spain Film Commission decided to promote the Spain Screen Grand Tour, an initiative to discover Spain through films, series and other productions. According to a study by TCI Research, in 2022 one in ten European tourists chose their destination influenced by series or films. With this data in mind,

1. Cersei does get to do the walk of shame, but that time it was filmed in Dubrovnik.

it would seem like a good initiative to enhance certain locations related to modern movement architecture as film sets in order to increase the number of visits to these enclaves and promote their recognition.

3. THE MODERN MOVEMENT AND ITS ENHANCEMENT

One of the most significant problems in the recognition of the modern movement's architecture by the public is its recent construction. While cathedrals or palaces are unquestionably important, buildings constructed less than a century ago, with 'not very noble' materials such as concrete or brick are often questioned. Our task is not only to enhance the value of this heritage, but also, in some way, to make it economically profitable. We can establish four phases in this process: registering and documenting modern movement architecture, promoting its protection, raising awareness of its importance, and, finally, providing for its conservation by searching for new functions that will guarantee its sustainability and allow for a new economic profitability.[2]

Movies and series can contribute to this process as they allow us to gain a deeper understanding and appreciation of heritage, and therefore help its conservation. At the same time, they are significant in strategic terms because they can allow for economic growth based on the relevance of the buildings as touristic assets.

The Carvajal house, built as his family home in 1966 by the architect Javier Carvajal in Somosaguas (Madrid), is characterised by a series of massive concrete volumes spread horizontally. The house is organised on a single floor around two courtyards, one of which separates the service area from the main living area.[3] The singer C-Tangana, winner of four Latin Grammys, filmed the music video of *Comerte Entera*[4] in 2020 in this courtyard with the company Little Spain. As of May 2024, the video has garnered over 21 million views on Youtube and was watched by more than 250,000 people on the first day it was uploaded. No other advertising campaign on a building would ever allow for such fast diffusion. The film *La Madriguera*[5] by Carlos Saura was also shot in this house in 1969. The current owners of the house now rent the house for filming and events, which helps in maintaining the property.[6]

Miguel Fisac also designed his own house on the outskirts of Madrid,[7] at the end of the 1950s. The house stands on a platform which rises over a hillside and is organised around a covered courtyard. It was built in several phases and extended according to the needs of the family. The architect masterfully uses different materials: concrete, brick and stone to create a cosy atmosphere. The entrance and the living room form part of the set in the series *Sentimos las Molestias*.[8]

In 1965, José Antonio Corrales constructed one of the most interesting housing complexes of the Spanish modern movement in Galicia, Neighbourhood Unit No. 3.[9] It consists of three parallel blocks that are staggered to adapt to the slope of the land. The blocks are connected by a series of walkways and corridors which also house shops, offices and, according to the original project, a nursery. The apartments follow different typologies, but all of them use the same module, 1 m long. In addition to the linear blocks,

2. Daniel Villalobos Alonso, Eusebio Alonso García, Iván I. Rincón Borrego, and Sara Pérez Barreiro, "El cine como difusión y promoción de la Arquitectura del movimiento moderno," in *El fundamento social de la arquitectura; de lo vernáculo y lo Moderno, una síntesis cargada de oportunidades* [Actas del X Congreso Docomomo Ibérico, Badajoz 18-20/04/2018] (Madrid: Fundación Docomomo Ibérico/ Ministerio de Cultura, 2020), 363-369.

3. "Casa Carvajal," Docomomo Ibérico, accessed May 1, 2024, https://docomomoiberico.com/edificios/casa-carvajal/.

4. C. Tangana, "Comerte entera," Youtube video, 3:30, posted by CTanganaOficial, January 14, 2021, accessed May 1, 2024, https://www.youtube.com/watch?v=3xlExHPyqM0.

5. The life of a married couple goes by calmly in a minimalist and very luxurious house. One day they receive some more traditional furniture through an inheritance.

6. "Casa Carvajal," Docomomo Ibérico, accessed May 1, 2024.

7. Miguel Centellas, Carmen Jordá, and Susana Landrove, eds., *La vivienda moderna, Registro Docomomo Ibérico, 1925-1965* (Barcelona: Fundación Caja de Arquitectos/Fundación Docomomo Ibérico, 2009). "Vivienda y estudio del arquitecto Miguel Fisac," Docomomo Ibérico, accessed May 1, 2024, https://docomomoiberico.com/edificios/vivienda-y-estudio-del-arquitecto-miguel-fisac/.

8. Movistar + original series starring two musicians, one a rock star and the other a renowned orchestra conductor.

9. Centellas et al., La vivienda moderna, Registro *Docomomo Ibérico, 1925-1965*. "Vivienda y estudio del arquitecto Miguel Fisac," Docomomo Ibérico, accessed May 1, 2024.

3 towers and 10 semi-detached houses were also built. The use of concrete as a finishing material gives the complex a certain brutalist air. Sunlight was an important consideration in the layout of each of the parts and concrete brise-soleils were installed on the south-facing façades. All the dwellings have staggered interiors, clearly marking the uses of each room. These differences in level allow for greater lighting and the creation of storage spaces.

The open spaces between the blocks serve as recreational and leisure areas, especially in the large square, which was intended as a social and recreational area for the tenants. Nowadays it is rarely used, due, among other things, to the decrease in the number of children living in the building. The children's joy, that the architect was aiming for, is reflected in the film *Jump!* [*¡Salta!*].[10] The architectural virtues of this superb example of the modern movement are also on display in *The Summer We Lived* [*El Verano que Vivimos*].[11]

Another emblematic building belonging to the Spanish modern movement is Torres Blancas,[12] designed by Francisco Sáenz de Oíza. The building fits into the organicist trend with striking curved forms in its façade. The building is topped off with some overhanging forms that originally housed a restaurant. There is a swimming pool on the roof which maintains the organicist approach of the whole complex.

In 2009, Jim Jarmusch filmed *The Limits of Control*[13] in Torres Blancas. The entrance hall of this same building is easily recognisable in the music video by C-Tangana and Kiko Veneno *Los Tontos*.[14]

The top floor of the building, which used to be a restaurant, was connected to every apartment with a dumb waiter so that food could be directly delivered to the tenants. Neither the dumb waiter nor the restaurant are in use nowadays, and the floor has been abandoned for some time. This situation allowed for the floor to be rented for several movies and series such as *Bosé*[15] and *Holy Family* [*Sagrada Familia*].[16] The building is now included in the General Catalogue of Protected Buildings of Madrid, and has been granted level 1 protection, singular grade. Additionally, the City Council has just approved the project to carry out a refurbishment to convert it into eight dwellings.

The church of Nuestra Señora de Guadalupe[17] designed by Enrique de la Mora Palomar, Félix Candela Outeriño, José Torroja Cavanillas and José Ramón Aspizau Ordoñez was built between 1962 and 1965 in Madrid. The basilica has an octagonal ground plan circumscribed by a 55-metre circumference. The roof is made of a series of ruled surfaces: specifically eight hyperbolic paraboloids. Inside, the grey concrete roof contrasts with the coloured light filtering through the stained-glass windows. This is the perfect place to pay a heartfelt tribute to one of the protagonists of the *Holy Family* series.

This same series showcases one of the most interesting spaces of the Eduardo Torroja-CSIC Institute of Construction Sciences [Instituto de Ciencias de la Construcción Eduardo Torroja-CSIC],[18] the single-span ramp that connects the access to the first floor of the central building, turning it into an adoption agency. This complex consists of two main buildings: the office building and the cement and concrete laboratory building. Two very modern concepts were introduced in this complex:

10. Film by Olga Osorio that tells the story of two brothers who live in that block and one of them travels in time.

11. Film directed by Carlos Sedes in which he tells the story of his son's into the life of his father, a well-known architect.

12. Celestino García Braña, Carlos Gómez Agustí, Susana Landrove, and Víctor Pérez Escolano, eds., *Arquitectura del movimiento moderno en España. Revisión del Registro Docomomo Ibérico, 1925-1965. Catálogo inicial de edificios del Plan Nacional de Conservación del Patrimonio Cultural del Siglo XX*, (Barcelona: Fundación Docomomo Ibérico/Fundación Arquia, 2019), 440. "Torres Blancas", Docomomo Ibérico, accessed May 1, 2024, https://docomomoiberico.com/edificios/torres-blancas/.

13. A mysterious man travels to Spain to finish a job.

14. C. Tangana and Kiko Veneno, "Los tontos," Youtube video, 3:12, posted by CTanganaOficial, February 25, 2021, accessed May 1, 2024, https://www.youtube.com/watch?v=vjWyRfnR5CQ.

15. Series created by Nacho Faena for Paramount+. The series tells of different moments of the life and career of the singer and actor Miguel Bosé.

16. Directed by Manolo Caro, this Netflix series is set in an affluent neighbourhood in Madrid in the early 2000s.

17. Susana Landrove, ed., *Equipamientos I: Lugares públicos y nuevos programas, 1925-1965, Registro Docomomo Ibérico* (Barcelona: Fundación Docomomo Ibérico/Fundación Caja de Arquitectos, 2010), 232. "Iglesia parroquial de Nuestra Señora de Guadalupe," Docomomo Ibérico, accessed May 1, 2024, https://docomomoiberico.com/edificios/iglesia-parroquial-de-nuestra-senora-de-guadalupe/.





Figure 1. Javier Carvajal Ferrer, Carvajal House, Pozuelo de Alarcón (Madrid), Spain, 1966. © Fundación Docomomo Ibérico, Luis Argüelles, 2023.

Figure 2. Miguel Fisac, House and Studio of Miguel Fisac, Madrid, Spain, 1957-1971. © Fundación Docomomo Ibérico, José Hevia, 2009.

prefabrication and modular repetition. Certain components, such as the windows and the floor tiles, were prefabricated in workshops on-site using the 1.60 module adopted in the general organisation. The use of this module made it possible to optimise costs and execution times.

The amazing circular dining room of this building features a garden area in the centre and a glass enclosure that can be obscured by means of movable elements. It serves as the headquarters of the family business in the series *Galgos*.[19]

Every Christmas a well-known sausage company makes a promotional video for its products. We are referring to the Campofrio company advertisement, which arouses great interest among viewers. Every year, the most important Spanish actors take part in it. The 2022 Christmas advertisement was recorded in this particular space.[20]

The architectural quality of this complex is undeniable, and in recent years it has become a set for numerous productions, appearing on the screens of millions of viewers.

Somehow, the heritage of the modern movement has become fashionable, and it looks good on camera. More and more of these types of buildings are being chosen as locations for all kinds of filming. Evidence of this is apparent in the fact that all the productions that appear in this text, with the exception of *La Madriguera* and *The Limits of Control*, have been filmed in the last five years. We should make the most of this and promote the modern movement through film.

4. CINEMATIC CATALOGUE

Different municipal, regional and national governments have realised the importance of supporting film productions. To this end, they have carried out various initiatives, such as the creation of Film Commissions or Film Offices. These are generally public companies, which function as technical agencies to assist production companies in the audiovisual sector, promoting the logistical, artistic, and professional information necessary to film in a given location.

The Valladolid Film Commission in Spain (VAFC) commissioned several members of GIRAC[21] (Daniel Villalobos, Sara Pérez, Iván Rincón and Eusebio Alonso) to write a series of location sheets. These locations were divided into three groups: classical, modern, and contemporary. The

18. Celestino García Braña, Susana Landrove, and Ana Tostões, eds., *La arquitectura de la industria, 1925-1965. Registro DOCOMOMO Ibérico*, (Barcelona: Fundación Docomomo Ibérico, 2005), 203. "Instituto Técnico de la Construcción y del Cemento," Docomomo Ibérico, accessed May 1, 2024, https://docomomoiberico.com/edificios/instituto-tecnico-ciencias-de-la-construccion-cemento-eduardo-torroja/.

19. Series produced by Buendía Estudios for Movistar Plus + about a family business dedicated to pastries and children's food.

20. "Campofrío presenta su anuncio de Navidad de 2022," Youtube video, 4:09, uploaded by El Debate, December 14, 2022, accessed May 1, 2024, https://www.youtube.com/watch?v=y5eU0quSi8I&t=66s .

21. Grupo de investigación Reconocido de la Universidad de Valladolid: Arquitectura y Cine.

22. "Ficha localizaciones," Nube adobe, https://indd.adobe.com/view/eebc6018-4367-481f-87b4-9dbc7db2c46d.





Figure 3. Francisco Javier Sáenz de Oíza, Torres Blancas, Madrid, Spain, 1961-1968. © Fundación Docomomo Ibérico, Luis Argüelles, 2023.

Figure 4. Eduardo Torroja Miret, Gonzalo Echegaray Comba and Manuel Barbero Rebolledo, Instituto Técnico de la Construcción y del Cemento, Madrid, Spain, 1951-1953. © Fundación Docomomo Ibérico, Luis Argüelles, 2011.

goal was to identify architecturally interesting enclaves, large enough to set up a film shoot and where the owners were interested in providing the space in exchange for a financial donation.

A series of fiches[22] were compiled with photos, plans and a brief description of the importance of the building and its main characteristics. With this information, the VAFC can offer a location catalogue that includes a large number of buildings belonging to the modern movement.

We have centred on Spain, but the situations and actions analysed along these lines can be extrapolated to other geographical contexts.

5. CONCLUSION

The market for films, series and documentaries has significantly expanded in recent years, mainly due to the growth of viewing platforms. This shift in paradigm is coupled with the rise of screen tourism, which attracts more and more people every year. Therefore, film directors are no longer only looking for places to film, but 'places' are looking for directors to film in them.

This situation provides an opportunity for the dissemination of the modern movement, and its buildings are a resource that can be advertised through Film Commissions. Soon, these buildings will become places to visit, not only for architecture lovers but also for consumers of screen tourism. Let's not miss this opportunity: LIGHTS, CAMERA, ACTION! ■

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STIMULATING HISTORICAL IDENTITY THROUGH ALTERNATIVE MEDIA

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ABSTRACT

This contribution is based on the topic of memory and the factors required to develop it. From this premise, it questions if visual media can be used to stimulate the formation of identity values in any audience and consequently contribute to spreading the culture of protecting and preserving Modern heritage.

A prior survey showed that there is a vast literature on the socio-emotional effects of using modern media to convey information: Films and TV series are two tools that have gained immense popularity in spreading culture.

Thus, to validate the actual potential of utilizing them as proper tools, the research first examined whether and how the so-called architect-educators - among them enumerated Bruno Zevi and Paolo Portoghesi - exploited visual media. A critical analysis was subsequently made of a selection of historical films and recent single and serial screenings that have had a beneficial impact on the consideration of certain architectures of the Modern.

Several common characteristics emerged from the investigated cases that led to the effective operation of the aforementioned means for teaching purposes. To name a couple of instances, the visual media must be part of a more structured project integrated by other media; it also turned out to be crucial for the subject of the architectural-urban focus of the film or TV series to be present in the narrative for a significant part of the plot, or at least during pivotal moments.

Therefore, through these exemplified expedients and others discussed in the text, the present study documented that a didactic-pedagogical exploitation of visual media not widely considered for this purpose is possible and advisable. This alternative use, while having to be appropriately synthesized from the knowledge of educators, sociologists and psychologists, can succeed in stimulating an identity-cultural recognition of cultural heritage even in ordinary people.

1. INTRODUCTION

In Italy, historical memory and identity are very heartfelt issues and are almost always accompanied by the concept of their preservation and enhancement.

This tradition is certainly linked to the Italian centuries-old culture of history and restoration, but also to the richness of cultural and natural heritage[1].

However, historical assets must be considered as dynamic resources to adapt their fruition to the wide development of society[2].

Indeed, even Italian popular culture recognizes historical monuments and architectures, but modernist and rational works have not yet been perceived as historical. This occurred undoubtedly because of the tardy identification from around the world, even by specialists, of the Modern as a relevant heritage to be preserved: this recognition can be dated to 1956, when the first reaction for the protection of a 20th-century building occurred. Specifically, the intervention concerned the Casa del Fascio of Giuseppe Terragni by Ernesto Nathan Rogers[3], even though other previous events had commenced the protection of modern heritage: UNESCO was formed in 1945, and in 1987 the first modern area was included in the list of World Heritage Sites[4].

Recently, two mediums of knowledge that are becoming increasingly popular and can be employed positively by educators to reactivate interest in modern architecture are films and TV series[5]. Indeed, from a first visual attraction, a beneficial interest in the cultural heritage can arise.

Several sociologists and psychologists, including McLuhan[6], have already advanced studies on the employment of visual media as a vehicle to intensify, enhance or promote specific initiatives.

More recently, psychologist and psychotherapist Giuliana Bruno has intersected architecture, visual arts and media in her research[7], demonstrating the power of emotions generated by an appropriately constructed visual media.

2. ARCHITECTS-DIRECTORS AND DIVULGATION OF CULTURE

As expressed by Wolfgang Schivelbusch[8], the birth of cinema appears to have influenced a shift in architectural styles during that time, which emerged to be both directed towards movement and more concerned with its aesthetic appearance.

This change is not accidental, not least because, as historian Sigfried Giedion[9] writes, with cinema arises an immediate awareness from the architect's perspective of its potential use.

Indeed, remaining primarily in the close sphere of architectural connoisseurs, several known architects have promoted the employment of visual media both for spreading knowledge, for self-advertising and as a medium for understanding reality[10].

An emblematic example is Bruno Zevi, who in his well-known writings repeatedly explained the potential of visual media, with a particular predilection for cinema to fully understand the fourth dimension of architecture[11]. Moreover, among the effective didactic methods to explain the history of architecture, in a *Bianco e Nero*[12] magazines' article, he again defined cinema as an irreplaceable medium.

1. Alberto Ferlenga, *L'architettura. La differenza italiana*, 39-67.

2. Simona Troilo, *La patria e la memoria: tutela e patrimonio culturale nell'Italia unita*, 19-23.

3. Ernesto Nathan Rogers, "Un monumento da rispettare," *Casabella Continuità* 212, no. 1 (September-October 1956): 2-5.

4. The site in question is Brasilia, Brazil's capital city designed according to Lucio Costa's urban plan, built by Oscar Niemeyer and landscaped by Roberto Burle Marx.

5. Esther Corvi, *Nuovo cinema web: Netflix, Hulu, Amazon: la rivoluzione va in scena* (Milano: Hoepli, 2016), 2-11.

6. Marshall McLuhan, *Understanding media: the extensions of man*, 3-23.

7. Giuliana Bruno, *Atlante delle emozioni: in viaggio tra arte, architettura e cinema*, 15-41.

8. Wolfgang Schivelbusch, *The railway Journey: the Industrialization of Time and Space in the 19th Century*, 45-69.

9. Sigfried Giedion, *Building in France, Building in Iron, Building in Reinforced Concrete*, 176.

10. The topic is extensively explored in the volume *Il cinema degli architetti* edited by Vincenzo Trione.

11. Bruno Zevi, *Saper vedere l'architettura: saggio sull'interpretazione spaziale dell'architettura*, 46-47.

12. Bruno Zevi, "Architettura per il cinema e cinema per l'architettura" in *Bianco e Nero*, 8, 1949, 60-63.

Architect Paolo Portoghesi perceived visual media with a different purpose: as an opportunity to disseminate his idea of architecture, but, at the same time, as vehicles to spread the word about politics and to emphasize the importance of knowing history[13].

Beyond that, the postmodernist architect encouraged the making of the film *Il Dramma della Gelosia* with director Ettore Scola in *Casa Papanice*[14], a villa he designed, which thus gained visibility and was also recognized as a cultural asset by the local inhabitants.

3. ORDINARY PEOPLE AND VISUAL MEDIA

The film *Il Dramma della Gelosia* shed light on the fact that popular cinema had, in the past, already influenced people's consideration of specific places in their daily lives. Therefore, to understand how to manage and re-propose this way to promulgate knowledge, it is necessary to analyse some historical and recent cases by focusing on certain useful strategies that emerged in these episodes. Furthermore, it is crucial to understand what image was conveyed in the analysed case studies, and what effect it had on the target audience.

3.1. HISTORICAL CASES OF EFFECTIVE VISUAL MEDIA

Beginning with a film by the previously appointed director Ettore Scola, namely *Una giornata particolare*, this masterpiece has provided visibility to Mario De Renzi's convention house in Viale XXV Aprile in Rome: in particular, architecture represents the archetype of social housing[15]. This is because the director wanted to emphasise the historical importance of this large complex of subsidized houses, which was the first example of partnership between the state and the private sector, realised as part of a strategic social housing plan in Rome.

The success of the film and the contribution it had in bringing the population to accept this atypical building are certainly linked to the presence of actors who were already famous in those years: in fact, Marcello Mastroianni had already received an Oscar nomination for *Divorzio all'Italiana* (1961) and Sophia Loren had starred in several films directed by De Sica[16]. Furthermore, De Renzi's house is always present throughout the narrative and almost the entire story takes place there, giving the building a starring role.

Another movie that represented modern architecture and made it an icon recognised everywhere is *Le Mépris* of 1963. Director Jean-Luc Godard combined some unbeaten characteristics and achieved a masterwork that made Italians and internationals alike acknowledge Villa Malaparte in Capri by Adalberto Libera **(Fig. 1)**. First, the film is based on the homonymous book by the writer Alberto Moravia, which ensured an initial common ground in the imagination of Italian people when they approached the movie[17]. Secondly, the presence of actress Brigitte Bardot at the height of her career[18] stimulated popular interest in the projection.

A final aspect that should certainly not be overlooked is that the turning point of the story is set in the villa, with shots carefully planned by the director to accentuate certain compositional features of the building.

13. Silvia Micheli, and La-Catherine Szacka, *Paolo Portoghesi: Architecture Between History, Politics and Media*, 55-88.

14. Silvia Micheli, and La-Catherine Szacka, *Paolo Portoghesi: Architecture Between History, Politics and Media*, 123-150.

15. Massimo Casavola, *L'attore di pietra: l'architettura moderna italiana nel cinema*, 62-65.

16. Two famous examples are *La ciociara* (1960) and *Ieri, oggi, domani* (1963).

17. Massimo Casavola, *L'attore di pietra: l'architettura moderna italiana nel cinema*, 69-73.

18. In fact, she had already become famous after the film *Et Dieu...créa la femme* (1956) by Roger Vadim.

Such a decision is mainly intended to bring out the symbolic sense of the conflicting relationship between "classical" and "modern"[19].

Moreover, paraphrasing Gaston Bachelard[20], the image of the house becomes a representation of the character of the story's protagonists: luxurious, but empty and isolated.

3.2. NEW CASES OF EFFECTIVE VISUAL MEDIA

Recently, perhaps considering the current impact of films and TV series on society's consciousness, the Nippon Foundation has pushed for the collaboration of the well-known film director Wim Wenders with the city of Tokyo, who, to give positive notoriety to the public facilities designed by famous architects such as Tadao Ando, made them co-protagonists of his new film *Perfect days* of 2023 **(Fig. 2)**. This film is one of the pieces that compose the more complex urban regeneration project called *The Tokyo Toilet*[21] and encompasses all the aspects that have emerged from the effective historical cases discussed: in fact, the entire narrative takes place around the small buildings in the foreground, a famous director was chosen and the lead actor, Kōji Yakusho, is recognised as one of the top talents among Japanese actors today.

Yet another modern-day instalment is Denis Villenueve's latest film, *Dune: Part Two*. In this case, the modern architecture presented is the famous Brion Memorial by Carlo Scarpa. The sacred image of the Brion complex, originating from Scarpa's multifaceted culture, is functional in representing the home of the emperor and the esoteric sisterhood group, both of which play a key role in the story.

Although the tomb has been represented extensively through videos and known photographic collections[22], the film event has encouraged a season of popular rediscovery of the Modern memorial. The reasons for this revival are linked to the presence of prominent actors on the current scene, including Timothée Chalamet and Zendaya Maree Stoermer Coleman. In addition, many notable online magazines published articles explaining the movie, but also giving specific historical overviews of Carlo Scarpa's architecture[23].

Regarding the TV series phenomenon, they are increasingly becoming a global cultural fact that should not be underestimated as a means to direct the spreading of culture, also due to their ability to create strong identity groups[24].

A recent series that brought some of Rome's buildings to the small screen is *Devils*, filmed between 2020 and 2022 during the Covid-19 pandemic. This work, which is structured in two different seasons, is filmed partly in the first season and largely in the second one in the Eur district of Rome, with several shots of the modern *Palazzo della Civiltà Italiana* and of the building dubbed "La Nuvola" of Massimiliano Fuksas[25].

Architecture once again co-stars on the scene and is functional to underline the megalomania of these businessmen who have lost their perception of the world around them.

The success and international spread of the series are surely linked to the presence of Alessandro Borghi in the lead role and Patrick Dempsey in the cast, both already well-known actors from television[26].

19. Alberto Frassino, *Jean-Luc Godard: (1945-1976)*, 60-65.

20. Gaston Bachelard, *La poétique de l'espace*, 23-50.

21. The Tokyo Toilet, accessed April 3, 2024, https://tokyotoilet.jp/en/

22. Guido Guidi, *Carlo Scarpa's tomba Brion* (Ostfildern: Hatje Cantz, 2011).

23. To name a few: the *Dove* specialist program of *Corriere della Sera*, the online section of *Il Gazzettino* and *Domus*.

24. Andrea Bernardelli, "Serie tv di culto, ovvero il culto delle serie tv. Protagonisti seriali come cult icons nell'epoca della complex tv," Ocula 21 (April 2020): 199-217.

25. "Diavoli, tutto quello che c'è da sapere sulla seconda stagione della serie tv": Skytg24, accessed April 6, 2024, https://tg24.sky.it/spettacolo/serie-tv/2022/04/19/diavoli-stagione-2-serie-tv

26. Since 2017, Alessandro Borghi has achieved success as the protagonist of the series *Suburra*, while Patrick Dempsey rose to fame with the series *Grey's Anatomy*.

4. EDUCATING THROUGH VISUAL MEDIA

It is essential to highlight potential methods that emerged from the analysed cases which can be used by cultural educators.

As Bruno Zevi pointed out[27], using movies to explain architecture to both ordinary people and professionals can be an excellent resource, but it must be guided by an explanation aimed at making the audience focus on the most important aspects of what is being displayed. Taking the screening of *Delta*[28] in 2023 as an example, the projection in several Italian locations was preceded by a short introduction and followed by a final discussion by the director Michele Vannucci, which was necessary to provide an exhaustive interpretation of the film.

In addition to this, the impact on the population of the historical films previously mentioned shows that the big screen is a viable way to spread knowledge about the architecture of the Modern, - more than documentaries - but it is also necessary to correctly structure this method of distributing knowledge.

First, as the symbolic initiative of *The Tokyo Toilet*[29] project shows, the film should be placed in a more organised system of culture dissemination, to provide both an initial visual-suggestive impact on the audience, and a further conceptual deepening beyond the mere viewing of the film. For this specific matter, the Nippon Foundation has set up a site dedicated to the regeneration project and conveyed the spread of the architecture through the notable channel of the magazine *Domus*[30].

For visual media to be effective in stimulating knowledge of modern and historical architecture, they must have certain characteristics that have surfaced in the present discussion, namely:

- being based on a book that is already established in the knowledge of the common public
- being managed by an experienced director
- to feature one or more famous actors
- within the footage, having the architectural elements to be highlighted by being showcased prominently.

In addition, further control must be made on the socio-emotional effects that images of architecture and their symbols will produce on the audience. This impact should be well-thought because every architecture has as its final aim the communication of a message, a symbol or a specific idea[31].

Moreover, TV series that present before each episode an initial part with the theme song and a recap of the previous episodes, are suitable for the possibility of introducing an initial screen with specific focal data of buildings and places where filming takes place.

The seriality and plot continuity in TV series stimulate the audience's collective identity and memory[32] and bond with the main characters and portrayed places: there is still untapped potential that needs to be explored to better implement these tools to enhance care and respect for heritage.

27. Bruno Zevi, *Saper vedere l'architettura: saggio sull'interpretazione spaziale dell'architettura*, 46-47.

28. A film set in the Po Delta area in Italy, highlighting the difficulties of maintaining the natural balance of this fragile place.

29. The Tokyo Toilet, accessed April 3, 2024, https://tokyotoilet.jp/en/

30. Ken Farris "Toilette pubbliche, Tokyo, Giappone / Public toilets, Tokyo, Japan: Shigeru Ban Architects, Nao Tamura, Suppose Design Office, Akarui.co.jp," *Domus* 1054, no. 2 (February 2021): 12-21.

31. Robert Venturi, Steven Izenour and Denise Scott Brown, *Learning from Las Vegas*, 6-12.

32. Alon Confino, "Collective Memory and Cultural History: Problems of Method," *The American Historical Review* 102, no. 5 (1997): 1386–1403. https://doi.org/10.2307/2171069



Figure 1. Adalberto Libera, Villa Malaparte, Capri, Italy, 1930-1943 © Credits to Herve Simon, 2014. Published in flickr.com in 2021.



Figure 2. Shigeru Ban Architects, Toilet in Yoyogi Fukamachi Mini Park, Tokyo, Japan, 2020. © Credits to Hiro Komae, 2020. Published in apnews.com in 2020.

5. CONCLUSIONS AND POSSIBLE DEVELOPMENTS

This contribution is based on previous sociological studies that have seen the potential of visual media, but also the possible negative effects of the power to convey a certain image[33].

However, several past and recent cases examined demonstrate that visual media such as films and TV series can be used for educational-didactic purposes, without them becoming documentaries or lectures.

Using and displaying modern architecture are fundamental actions to set in motion an initial cultural recognition in people, but it must be carried out by educators who can foresee and control the possible impact of visualisation in society.

Considering studies that have linked architecture, visual arts and media[34], it is necessary to synthesise these within the visual educational product that is created and distributed. In this way, it will be possible to foster a sense of historical awareness in the community and achieve a first step towards universal protection of heritage.

To conclude, it therefore falls upon those educating present-day professionals, students, and individuals in society the responsibility to overhaul current methods of education in order to instil a rejuvenated appreciation and regard[35] for not just the Modern, but also our vast cultural and natural heritage. ■

33. Marshall McLuhan, *Understanding media: the extensions of man*, 3-23.

34. Giuliana Bruno, *Atlante delle emozioni: in viaggio tra arte, architettura e cinema*, 15-41.

35. Alberto Ferlenga, *L'architettura. La differenza italiana*, 121-132.

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BIOGRAPHY

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TOWARDS A NEW METROPOLIS: THE MACHINIST UTOPIA IN URBANISM AND CINEMA

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ABSTRACT

The years between the two great wars of the 20th century meant to architecture — and to architects — assuming a leading role in thinking and proposing the cities. The intellectual avant-gardes of the early twentieth century, thrilled by a fast-changing world, saw mechanization as the catalyzer of transformations that would bring a new balance to the relation between humanity and environment, when reason would soothe the degenerating conditions of the industrial metropolis. The Machinist Utopia is metropolitan; the changes should take place within the metropolis and its future was the subject-matter upon which the modern movement structured its discourse. This paper reflects upon the Machinist Utopia rhetoric discourse in urbanism, through a parallel with selected fiction films of the same period. That discourse was based on the urgent demand for change ahead of the imminent catastrophe that would take place, either as consequence of technological advances or result of one's inability to adapt to it. Fear – a rhetoric fallacy — is the argument towards which the rhetoric tools that structure this study — pathos, ethos and logos — are applied. Through pathetic associations the avant-gardes instilled values to the image of "machine" to state its ideological standing-point and put it into practice. This new city, designed for a new man, would be the synthesis between rationalism and *spirit of the time*, the cause and the consequence of elevated human spirit, and the only possible alternative to extermination. And the modern architect would be the hero who helps humanity cross that threshold.

1. PRELUDE – "THE MACHINISM DISTURBED EVERYTHING"[1]

> *To 'let go of oneself,' to 'remove from oneself' a customary equilibrium and conditions, and to pass into a new condition—these are effective conditions of every work of art*. Sergei Eisenstein[2]

Contrary to the vision depicted in the dystopias of sci-fi cinema of the time, the avant-gardes of the modern movement saw in the discourse on the machinist metropolis an instrument to transform all systems linked to the past, which would lead to the consolidation of a modern, enlightened and just society. The discipline of architecture would be protagonist in modern society and the only possible choice for the future: "architecture or revolution."[3]

The parallels proposed here seek narrative convergences between urbanism and fiction cinema of the interwar period. We list productions that speculate about the future of the machinist metropolis, featuring the machine as agent of transformation, and tell stories about the radical social changes underway in the period of study. Likewise, the urban proposals studied are those directly involved in the discourse and action of the machinist utopia, object of manifestos and prototypes by the avant-gardes of the modern movement.

1.1 URBANISM

The inherent ideological character of the "science" of urbanism lies in the interdependence between sociological — and philosophical — thought and the possibility—and certainly the necessity—of action in emerging cities. Despite being rationally grounded on data, calculations, research and drawings, the urban formulations that sought to account for the industrial metropolis presupposed value systems of personal nature. They were "truths" rationally constructed on passions, polarized between enthusiasm for the new machinist reality and a fervent impetus to return to the past; both approaches being object of numerous proposals for the ideal city.

> *For Françoise Choay:*
> *The city, a cultural fact but semi-naturalized by habit, was for the first time the object of radical criticism. Such questioning could not fail to lead to inquiries about the foundations. The presence of the city was then replaced by its own idea. And, after having qualified the existing urban order as disorder, efforts were made to oppose it with ideal orders – models - which are, in effect, rationalized projections of collective and individual imaginaries*.[4]

Room is then opened for the arbitrary and for a passionate discourse, at first true pieces of utopian fiction but, soon after, turned into active and concrete propositions, supported by the due logical arguments and with practical consequences for the future of cities.

1. Le Corbusier, *Precisões* (São Paulo: Cosac & Naify, 2004), 37.

2. Sergei Eisenstein, *A Forma do Filme* (Rio de Janeiro: Jorge Zahar, 2002), 153.

3. Le Corbusier, *Precisões*, 191.

4. Françoise Choay, *O urbanismo: utopias e realidades* (São Paulo, Perspectiva, n/d), 50.

1.2 CINEMA

In spite of its origins as funfair attraction, where everyday actions - filmed with steady cameras in single shots - were projected in front of enraptured audiences, cinema was raised by the avant-garde intellectuals of the early twentieth century to the condition of artistic manifestation of the machine age: a radical change in the perception of reality resulting from the manipulation of parts — mediated by mechanical and technological systems — that could be edited, reproduced, manipulated and charged with pre-established meanings with convincing effects. Therefore, for Walter Benjamin the work of art, "(...) Instead of being designed based on a ritual, is based on another practice – politics."[5]

2. PATHOS

> *Pathos (…) shows its effect when the viewer is compelled to jump in his chair. When it is compelled to fall when standing. When he is compelled to applaud, to scream. When the eyes are compelled to sparkle with satisfaction, before shedding tears of satisfaction... In short, when the viewer is forced out of himself*. Sergei Eisenstein.[6]

For Eisenstein, a pathetic compositional structure is an effective means of portraying an attitude towards a fact to be displayed, how the author relates to this fact and how "(...) he wants the viewer to receive, feel and react to the fact portrayed. (...) The decisive factors that structure the composition are taken by the author from the basis of his relationship with the phenomenon"[6]. For him, the editing of isolated shots – with previous adjustments of angle, light and scale – is the main means for a creative transformation of the static rigidity of a frame into a narrative with intellectual content seeking empathy and persuasion.

2.1 PARS-PRO-TUTO

The modernist avant-garde architects, constructing this intellectual narrative, sought to manifest, in a single object, the rules of the new architecture; trying to make the modern metropolis perceived as a real and complete experience.

The filmography aligned with the artistic avant-garde, used symbol-objects that evoked its icons whenever necessary to represent the unknown, that key element of the future that introduces change into the plot. The extreme focus on details reveals the rhetorical force of these images, but also a lack of material of the present to represent the future as a convincing whole. By pathetically inserting elements of the machinist ideology in the filmic narrative the cinema of the period propagates its vision of the machinist metropolis.

2.2 FAST & FURIOUS

The Futurist city would be the ultimate victory over nature. Dynamos, towers, and power stations of monumental scale shaped the landscape. Despite the buildings in Sant'Elia's renders appearing gigantic and perennial, the city would last a generation to be annihilated, so that a new city could be built over it, in a permanent process of transformation.

5. Walter Benjamin, *Transcription of speech: The work of art in the age of mechanical reproduction* (UCLA School of Theater, Film and Television 1936; transcribed by Andy Blunden, 1998).

6. Sergei Eisenstein, *A Forma do Filme* (Rio de Janeiro: Jorge Zahar, 2002), 153.

The radical ideals of the Futurism, inspired by the speed and strength with which industrial elements claimed the urban landscape; turned the artistic avant-gardes to the aesthetic possibilities of the machine, be it the harbinger of a free and progressive society, in which "(...) nothing (...) is more beautiful than a power plant teeming with activity, retaining the hydraulic pressures of an entire mountain range and the electrical energy for an entire landscape (...)"[7] - or of man's total subservience to technology.

L'Inhumaine's[8] sets, designed by Mallet-Stevens, host the dispute between two rivals for the love of soprano Claire Lescot. On one side, Einnar Norsen, the engineer-hero; on the other, Maharajah Djorah. Clair is murdered by Djorah, and Norsen's supreme invention is revealed: a machine to revive the dead.

The characters are faced with dangers and uncertainties whenever they exchange modern paradises for the traditional city. The tension is given by superimposition, accelerated cuts of the sequences and panoramic shots show a steaming city as background for a speeding car; the very landscape of Futurism.

The engineer wins the dispute, modernity wins over the old, and Clair raves about a dynamic Paris of factories and fast trains. The maiden is saved, and sings broadcasted to the world. "For all mankind" — the film's final subtitle — the engineer took all the risks.

3. ETHOS — TABULA RASA AND RESURRECTION

World War I — and the numerous conflicts unleashed to accommodate the changes in the geopolitical order — turned into a real catastrophe the fear that had long been felt in the form of epidemics, famine, bankruptcies, urban violence, and moral degradation. This scenario of crisis, treated by the intellectual avant-gardes as a call for a rupture with the "old" aesthetic and values is essential for understanding the modernist idea of utopia. The modern urban vision is proposed in terms of an impasse between salvation or damnation[9], it's the very rite of purification that society must go through to carry out the great transformation that the modern era imposes.

In Metropolis[10] Fritz Lang films the machinist society and the tensions that would lead to proletarian revolution and transformation. The threatening future in a tragic mechanized world is avoided by the brain-capitalism united to proletarian hands with the intermediation of the heart - ideals of justice and freedom - moved by Freder's love for Maria.

Lang's visit to New York in 1924 brought him an enthusiasm for the skyscraper, an icon of the virtues and vices of industrial society. Although aware of the urban ideas of the modern avant-garde, he sets his story of forbidden love and proletarian revolt in a metropolis of decadence, fear and disappointment; an urban landscape dominated by a single massive skyscraper, ambiguous representation of both rapacious capitalism and the creative capacity of a weakened Germany.

Meanwhile, across the Atlantic, the future is bright. The metropolis in Just Imagine[11] incites opportunity and social ascension for an America in crisis. The film portrays an ultra-modern, healthy and happy metropolis. A typical American citizen of the recession years awakens in the future to find

7. Kenneth Frampton, *História Crítica da Arquitetura Moderna*, trad. Jefferson Camargo, rev. téc. Julio Fischer (São Paulo: Martins Fontes, 1997), 97.

8. *L'Inhumaine*, dir. Marcel L'Herbier, screenplay by Pierre MacOrlan, sets by Robert Mallet-Stevens, Fernand Léger, Pierre Chareau, René Lalique, et al. (France: Cinégraphic, 1924).

9. Colin Rowe and Fred Koetter, *Collage City* (Massachusetts: MIT Press, 1978); Rem Koolhaas, Delirious New York (New York: The Monacelli Press, 1994).

10. *Metropolis*, dir. Fritz Lang, screenplay by Thea von Harbou, sets by Otto Hunte, Erich Kettelhut, and Karl Vollbrecht (Germany: Universum Films AG (UFA), 1927).

11. *Just Imagine*, dir. David Butler, screenplay by DeSylva, Brown, and Henderson, sets by Stephen Goosson (United States: Fox Film Corporation, 1930).

a radiant New York, with traffic on several levels and immense, spaced apart, skyscrapers, shining with electricity.

If Metropolis depicts the concerns of the European avant-gardes with the threats and opportunities in aesthetics and society, source of transformative content, Just Imagine is pragmatic and delirious. The machinist utopia in its North American version does not seek the transformation of society based on a collective and intellectual order. Rather, it's based on individual ventures according to the rigid norms of the market. The path to resurrection is through prosperity and profit, in the name of which all technological efforts must operate as parts of the spectacle of progress.

4. PATHOS, ETHOS AND LOGOS — TOWARDS A NEW METROPOLIS

> *Now we have reached the fatal moment in the historical cycle when our sentimental impulses must be seen as identical with the rule of reason*. Le Corbusier.[12]

The modern city would be the habitat of a new individual, freed from archaic pettiness and daring enough to overcome the necessary disruption the world had been exposed to. Efficient and sublime, this city would be a perfect symbiosis between humankind, its deepest desires, and the true, fair and unquestionable scientific facts.

While Gropius and Hilberseimer traced the lines of the city planned to maximum performance; for Le Corbusier the city of the machine age is pure manifesto, it goes beyond pragmatism. The individual who inhabits this radiant city finds fulfilment watching from the window the splendour of the modern world. In perfect coexistence with nature, walks in green fields, among geometrically harmonious buildings, exercises, works and lives in a pristine environment. The aesthetics of the machine is an efficient manifestation of what is simple and pleasing to the human eye. Buildings are clear plastic facts, things are in their place, and the individual is free to seek the sublime.

4.1 WHICH SHALL IT BE?

Things to Come[13] tells a story of war, transformation, and the conquest of nature through technology and science. Everytown, ravaged by a war, suffers with disease, poverty, and a degenerated society until the arrival of a stranger in his ultramodern plane. He leads an attack of the Freemasonry of Efficiency, dropping peace gas bombs, and Everytown is free and ready for reconstruction.

Although Le Corbusier turned down the invitation to design the film's sets, Korda used many of the ideas from Towards a New Architecture to set the Everytown of 2036. The enthusiasm for technology and reason is portrayed through an aesthetic that no longer refers to smoke and steel, but rather to the lightness of Dom-ino structures and glazed planes, hygiene and health. The machinery and architecture here are crystal-clear and, over the rubble of the historic city, the radiant future emerges.

12. Le Corbusier, *Por uma arquitetura* (São Paulo: Perspectiva, 1971), 37.

13. *Things to Come*, dir. William Cameron Menzies, screenplay by H.G. Wells, sets by Vincent Korda (UK: London Film Productions/ United Artists, 1936).

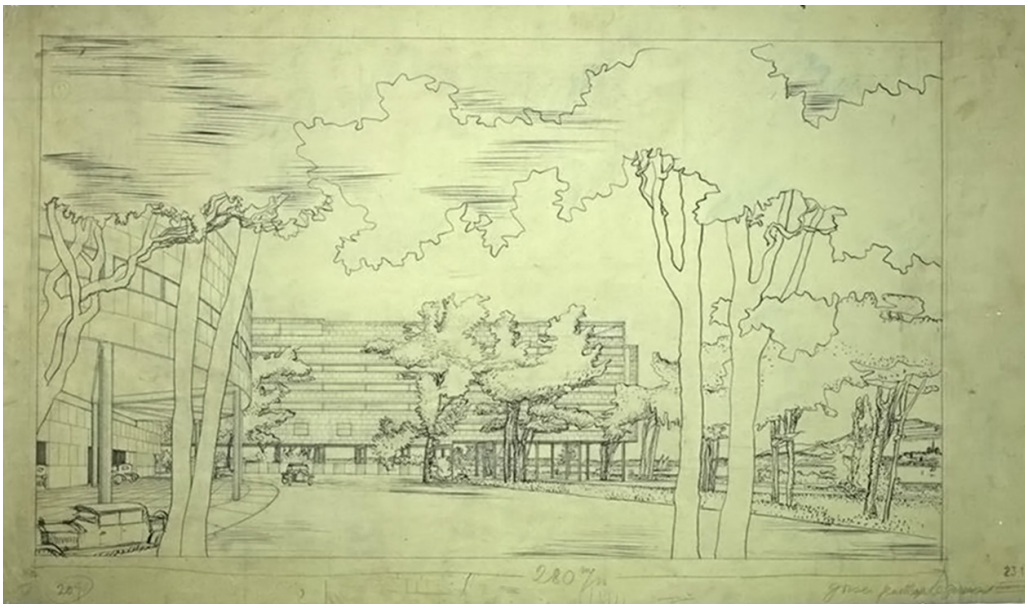






Figure 1. Le Corbusier & Pierre Jeanneret, Palace of the League of Nations, 1927. The whole manifest in the part. © FLC / ADAGP

Figure 2. Marcel L'Herbier, L'Inhumanne,1924. Early 20th century urban landscape from a speeding car. © Screen-print YouTube https://www.youtube.com/watch?v=7LC7RpFtk1g

Figure 3. King Vidor, The Fountainhead, 1949. A building has integrity, just like a man. © Metrograph via https://www.thecollector.com/fountainhead-ayn-rand/

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5. EPILOGUE

(Architect)A building has integrity just like a man, and just as him it must be true to its own idea, have its own form, and serve its own purpose.
(Client)-But we can't depart from the popular forms of architecture.
- Why not?
-Because everybody's accepted them.
- I haven't.
-Do you wish to defy our common standards?
- I set my own standards.
- You intend to fight against the whole world?
- If necessary.[14]

The hero is the central figure of the founding myth, upholds the moral and ethical values and points the way. He personifies the rite of passage, takes the

risks and triumphs. Moved by the impulse to re-establish balance in the face of adversities of a new reality, salvation is revealed to him. He is not a demigod; the modern hero is an ordinary individual.

Freder selflessly fights the villain-machine with determination; Norsen's inventions bring back to life, out of love, the victims of the archaic world; a fearless John Cabal rebuilds Everytown from the ruins. In all cases, the hero's motivations lead the rhetorical structure in search for the audience's empathy.

The modern architect is a hero in service of the cause of architecture. In The Fountainhead he defies men of common sense using only his integrity, architecture and a handful of dynamite. For Howard Roark[15], architecture is not subject of negotiation; it contains the higher truths. Roark holds the key for transformation, fulfils the ritual of sacrifice, and triumphs. The script for The Fountainhead was written in 1934, with references to architecture and architects of the time and greatly contributes to the image of the architect as an indisputable artist, whose genius must be understood to unveil the mysteries of salvation through architecture.

5.1 THE END

The intellectual interwar avant-gardes saw, in that moment of transformation, the inadequacy of the physical and cultural structures of the city to deal with the machine age. The machinist city had its founding myth: in face of that decaying and threatening reality, transformation should come to make humankind and society egalitarian, healthy and free. The plots of the filmography presented here are structured on this same logic: an unbearable situation faced with the imminence of disaster requires urgent action: a rite of passage personified in the figure of the hero.

It's, therefore, possible to identify convergences in the rhetorical structure of the modern discourse on the future of cities: the pathetic linking of transformation and change to the image of the machine and the machinist city; a system of desirable values that would condition these transformations; and the logical developments the new condition would bring about.

If that discourse appealed to reason to justify the *tabula rasa* as necessary to make cities where humanity would reach plenitude, soon the world would face real need for reconstruction. In the years following 1945, modern urbanism would both, blend into the traditional European urban fabric, and arise worldwide in the form of *ex-nihilo* experiences. But that's another story. ■

14. *The Fountainhead*, dir. King Vidor, screenplay by Ayn Rand, sets by Edward Carrere (USA: Warner Bros., 1949), extract, 00:10:29–00:13:16.

15. Protagonist of *The Fountainhead*.

BIOGRAPHY

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EXPERIENCES OF MODERN SPACE IN THE CENTRAL VALLEY OF CHILE

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ABSTRACT

The Central Valley of Chile, stretching from Santiago to the Biobío River in the south, is a region deeply rooted in rural tradition that has been fundamental in shaping the nation's character. Throughout the 20th century, various modern architectural works emerged in this area, revitalising living spaces to adapt them to the contemporary era, drawing from both global and local dimensions. This transformation led to innovative spatial experiences, particularly in how new architecture directly engaged the senses, breaking free from figurative and classical conventions. Consequently, the sensory nature of the human body became a fundamental concern for architectural conception and recognition, now essentially defined through an interplay of forms, dimensions, proportions, textures, colour combinations, luminosities, etc.

Different authors believe the emphasis on visual stimulation from early modern production also paved the way for a multisensory unfolding of spatial experiences. These arguments support the notion of sensory intellection as an appropriate method for gaining a deeper understanding of the works of modern architecture in this specific region of Chile.

The audiovisual record presented here is relevant to the topic at hand, as the inherent sensory intellection of these works has been captured, reproduced, and interpreted through fifteen micro-documentaries comprising the project "Experiences of Modern Space in the Central Valley of Chile." The digital format of this unprecedented audiovisual series has expanded the reach and dissemination of these works, allowing them to be shared beyond their ancestral locations.

This writing presents the main conclusions derived from the aforementioned sensory intellection process, which reveals at least five types of characteristic spatial experiences of modern architecture in this remote territory, demonstrating equally significant levels of consistency.

1. INTRODUCTION.

The Central Valley of Chile, a geographical area stretching from Santiago to the Biobío River, constitutes a territory steeped in rural tradition, which is even attributed with the foundational character of the country[1].

In the 20th century, modern architectural works began to emerge in various points of this unique geographical area, updating the way in which architectural spaces were experienced, engaging its inhabitants in a dialogue with a universal impulse and the local circumstances shaping the works[2].

This transformation of spatial experience, which began to unfold in this traditional region of Chile, brought with it a way of stimulating the senses that was very different to that provided by the rooted classical culture. Figurative associations and normative conventions regarding how constructions should be were giving way to a freer conception of architecture. This new approach recognised the sensory nature of the human body as a central factor in its configuration. As a result, architectural works became more of a system of interrelated forms, spaces, light, textures, colours, balances, etc.; all coherent with the sensory parameters common to all people.

The aforementioned theme and the primary works of modern architecture representing it have been showcased through the project "Experiences of Modern Space in the Central Valley of Chile." This project consists of a series of fifteen micro-documentaries that capture and interpret these spatial experiences, extending their influence beyond their atavistic physical locations[3].

2. SENSORY INTELLECTION AS A METHOD.

The realisation of the project has entailed the theoretical and empirical development of a methodology proposed here as an approach consistent with the intrinsic sensory condition of modern architecture.

The strong emphasis on stimulating the sense of sight, which became implicit with the advent of modernity, can be summarised in the words of Julius Lessing after visiting the World's Columbian Exposition in Chicago in 1893:

> *There we saw utensils created with the same spirit as our railways, ships, and cars, utensils whose form derives directly from the material and the technique, and developed with such clarity that they no longer address the calculating intellect, but speak directly to the eye and provide it with that pure and full pleasure that we understand as beauty*[4].

This emphasis on visual elements in the early stages of modernity is also endorsed by Helio Piñón, who in his writings elaborates on the idea of visual intellection, understanding it as "a very acute visual intuition that mobilises intelligence"[5], a concept that would be valid both for the artistic creation process and for the type of reaction that occurs when contemplating the result of such creation.

Juhani Pallasmaa, on the other hand, while recognising that predominance of the sense of sight and following the theoretical production of many other authors, particularly that of Maurice Merleau-Ponty, maintains

1. José Bengoa, "Central Valley of Chile: Imaginaries, Interpretations, Reveries," in *A Contracorriente*, ed. Andrea Griborio and José Luis Uribe (Ostfildern: Hatje Cantz Verlag, 2016), 35.

2. Glenn Deulofeu, "Universality and Its Circumstances: Three Maulino Dialectics," *Universum* 32, no. 2 (December 2017): 47-61.

3. Glenn Deulofeu, "Experiencias del Espacio Moderno en el Valle Central de Chile," Universidad de Talca, https://www.eemvcch.cl/#/.

4. Sigfried Gideon, *Space, Time, and Architecture: The Origins and Development of a New Tradition* (Barcelona: Editorial Reverté, 2009), 348.

5. Helio Piñón, *Theory of the Project* (Barcelona: Ediciones UPC, 2006), 86.

that "the eye collaborates with the body and the rest of the senses..." and therefore "... every moving experience of architecture is multisensory"[6].

Given the aforementioned, and paraphrasing Piñón, we have sought to implement a methodology that could be called sensory intellection, and therefore, enable a sharp sensory intuition capable of mobilising intelligence, producing a deep understanding that goes beyond words.

In this sense, the audiovisual format with which the fifteen works that compose the project are recorded and interpreted is consistent with the issue at hand, as it assimilates visuality, sound, and a wide range of movements, factors that, interrelated, make up the essence of the spatial experiences presented in the project.

This method encouraged the filming of works without a previous script, so as not to interfere with the spontaneous experience of the spaces. This allowed the architectural qualities that emerged in the moment to guide the shot selection. The same intuitive approach was applied to the subsequent editing of the audiovisual pieces, structuring them in coherence with the sensory intellection that developed as the fragments were presented.

Regarding the shots, we could say that they are connected to the visual tradition established by Julius Shulman. This includes humanising the image, emphasising frontal vision, the considering the formal axes of the work, accounting for various depth planes of the image, and using perspectives such as high and low angle without distorting the parallelism between the vertical delineations.

Below, the most essential aspects obtained through the process of sensory intellection delivered via the spatial experience of each of the works will be exposed. These aspects are grouped into five types that reveal an unprecedented and characteristic understanding of modern architecture in the Central Valley of Chile. These results are guaranteed by the selection of works, as they represent the most representative sample of the spatial and functional diversity that is still valid throughout this territory today.

2.1 BETWEEN FULLNESS AND EMPTINESS

Most of the modern spatial experiences depicted in the micro-documentaries[7] occur under the influence of the interrelationship between the clear definition of volumes, which we will understand as fullness, with open spaces that we will understand as emptiness.

The EMPART Building in Talca (1954) is noteworthy for its design as an extensive passageway under a longitudinal residential block that crosses and communicates a central block of the city from side to side. This route is flanked on either side by a series of smaller residential blocks, whose absence allows for a connection with small squares and gardens. The sensation of an intimate habitable world in the heart of the city is enhanced by the sound barrier produced by the volumes at the ends, which isolate the noise produced by vehicular movement, making the birdsong, rustling leaves, and the voices of neighbours inside the complex stand out all the more so.

6. Juhani Pallasmaa, *The eyes of the skin. Architecture and the senses* (Barcelona: Editorial Gustavo Gili, 2014), 52.

7. All the buildings named hereafter have been featured in each of the micro-documentaries in the project. Experiencias del Espacio Moderno en el Valle Central de Chile, directed by Glenn Deulofeu (Talca: Escuela de Arquitectura de la Universidad de Talca, 2017-2021), https://www.eemvcch.cl/

In contrast, the Fernando Lezcano High School in Curicó (1975) features a covered passage under a spacious horizontal roof, from which elongated classroom blocks hang towards one side, separated by pockets of vegetation where the sounds of birds and those typical of school activity prevail. This changes abruptly during breaktime, when students spill out into the schoolyard and fill the space, taking assertive possession of the voids that were on the opposite side of their classrooms.

The Talca campus of the University of Chile (established in 1967, now the University of Talca) was built on agricultural land outside the city, and completely detached from its urban fabric. The marked centrality of the square on which a series of university function volumes hang and rotate still offers a spatial experience rich in latent relationships that become evident when users circulate or stop there.

The smaller-sized Hotel Turismo (1960) is located in a bustling area of Linares. It enhances the surroundings of Plaza de Armas by featuring a small commercial plaza and pedestrian passages on the ground floor. It is possible at all times to appreciate how the network of elements provides a rich architectural pattern to those who pass by while also promoting the systematisation of more hermetic surfaces on the upper floors, in line with the original functionality of a hotel.

This collection of works is completed by a relevant building, as it meant the construction of the first tower in the city of Talca at that time: the Lircay Building (1975). Unlike the previous cases, the experience of inhabiting between fullness and emptiness is expanded to its vertical dimension. The commercial building's rooftop, typical of the slab-tower typology, originally functioned as a community plaza and now provides a rare vantage point to appreciate the city and its lively commercial life. The experience of the spaces deployed throughout the vertical axis of the building is constantly offered to whoever enters the building, as it is the volume of the tower itself that opens up to create a connection among all its common spaces, while at the same time it provides a panoramic view of the city's southern area.

2.2. PERMEABILITIES

This group of buildings reminds us of a very recurrent spatial experience in many modern buildings. It features three different versions of that dematerialisation on the ground level, where the row of pillars is left in front of the enclosure plane, creating a transitional space between the exterior and the interior.

The Cauquenes Municipal Building (1947) offers extensive corridors that open up to public space, breaking up the predominantly opaque constitution of the volume behind it, creating a stimulating connection between the built form and the citizens of Cauquenes. It offers shelter from the sun and rain, as well as providing a space for people to chat, or simply pass through the forest of white square pillars.

The CORVI Building in Talca (1964) on the other hand, offers a more refined and comprehensive design regarding the passage between the interior

of the building and its immediate surroundings. A row of pillars extends towards the street made up of thin tubular steel elements, alongside an independent, glazed enclosure plane in the upper section. All these elements perceived simultaneously by a body in motion, create a significant urban experience for Talca, as the linearity of the street is greatly expanded in multiple directions, juxtaposing various forms, planes, chromatisms, textures, sounds, etc. It is worth noting that the superimposition of the two housing blocks that exist above this interconnected space only serves to emphasise the spatial complexity outlined above.

To complete this group of works, the main building of the former FIAT facilities in Rancagua (1967) is now used for another type of industry. Despite the change in use, it retains the original design and layout. The administrative area building is particularly noteworthy, featuring two floors and measuring approximately arranged parallel to the road. Its design seems to complement the speed and linear movement of the passing cars. The row of free-standing pillars found on the first level leaves the upper floor seemingly suspended, creating a feeling of immateriality that is enhanced by the reflection of the road activity on the glass of its continuous horizontal window that unfolds uninterruptedly along its length. Additionally, two other volumes, the workers' building and the sculptural water tower, complement the overall design and interact with the road, completing this singular spatial experience.

2.3. HYBRIDISED SPACES

This collection of works offers a rather unique spatial experience, as they both share an urban setting and similar architectural characteristics. These are buildings composed by the encounter between what seem to be two different architectural works, while together they constitute a valuable city corner.

This is the case of the former Social Security Headquarters Building in Talca (1962) and currently the University Extension Centre of the University of Talca. The building features a structural grid of regular porticoes and it is situated in the corner with another solid volume. The exterior displays curves that are both spatial and delineated on the façade. On the inside, the characteristics of both volumes tend to blend into more diaphanous spaces, currently used for the exhibition of works of art on the first level, or for cinema and theatre in the auditorium on the second level. At the same time, a zigzagging staircase unfolds into a vertical opening that articulates these two worlds, which is emphasised by the suspended linearity of its bronze handrails.

The Linares Post Office Building (1966) does the same with what could be considered the encounter of two systematised volumes, one leaning towards opacity and the other towards transparency. The intersection of these opposing elements produces a third architectural feature in itself: an access portal framed by the emergence of a staircase, a large lateral plane enriched by the texture of numerous small mosaics, and an upper lattice.

2.4. AUTONOMOUS INTERIORS

In the following section, we will review the spatial experience offered by some works consisting of the definition of a volume with autonomous characteristics, both in its formal structure and in the vigour of its interior space.

The administrative building of the Talca Match Company (1960) is essentially a box that completely opens up in its centre to produce a spacious public reception area. The dense ribbed slab covering this space provides a sensation of texture inside that counteracts the visual openness towards the outside.

This sensation of texture created by the constructive grid of the upper plane of the space becomes even more intense upon entering the San Javier Parish (1964). A stereometric grid composed of fine tubular steel elements seems to hover above the interior space, even crossing over the glazed surfaces with which it intersects on the perimeters.

A very particular and intense version of these interior spatial autonomies is presented by the COPELEC Building in Chillán (1965), which at first approach could be understood as a prism altered by various formal actions, many of which are quite visible from the exterior, and have an impact on the light, form, and spatial characteristics of the experience inside the building.

Upon entering, a zigzagging ramp with two sections leads to a small platform that allows us to contemplate the space from an intermediate height, surrounded by abundant juxtaposed elements such as double-cone pillars, embedded cylindrical skylights, or convex curvature walls. This entire spatial experience is tied together by the characteristic chromatism of exposed reinforced concrete and the textured finish created by the intentional rusticity of the wooden-board formwork. The upper beams, which support the structure,

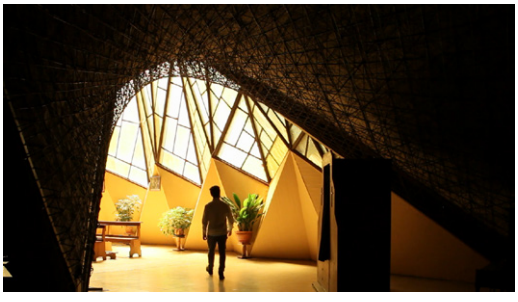


Figure 1. Frame from the micro-documentary about the CORVI Building in Talca, Chile (1964) © Glenn Deulofeu.

Figure 2. Frame from the micro-documentary about the COPELEC Building in Chillán, Chile (1965) © Glenn Deulofeu.

Fig. 3, Frame from the micro-documentary about the Church of the Divine Word of Los Angeles, Chile (1958) © Glenn Deulofeu.





intersect with the peculiar pillars as if they were moorings that also manage to unify that polyphony.

2.5. WAVY ENVELOPES

These works, in addition to possessing the interior spatial autonomy previously discussed, take the resolution of their envelopes to a formal exploration that results in the undulation of the surfaces that guide the experience of space.

The Cathedral of Chillán (1960) contains its visitors through a series of catenary arches that come together in a single nave, which in turn is fragmented in its length by the linear light inputs that occur at the meeting point between the arches. Visitors can experience a variety of visual perspectives as they move, combined with the background sounds of creaking wood furniture, quiet whispers of people seeking peace for their prayers, and the distant noises from the city.

The Church of the Divine Word of Los Angeles (1958) offers a truly unique spatial experience in the Central Valley of Chile. The church features a large continuous mantle woven with fine bars of smooth steel that ascends and descends to offer a diversity of curves, marking the spaces for religious rituals. These unprecedented hyperbolic paraboloids enhance the visual and tactile experience all the more so due to their texture, which is a dense filigree that captures a layer of air approximately a handspan in height on which the fibrous plates of the roof rest.

3. FINAL REFLECTIONS

Constructed primarily between 1942 and 1975, these buildings represent the establishment of modern architectural projects in the Central Valley of Chile through predominantly public or corporate initiatives. They showcase a wide range of alternatives for inspiring their inhabitants, enhancing activities beyond mere utility.

The sensory worlds portrayed in these works may appear simple at times, as if acting in the background, while at other times they reveal great complexity, vigorously enveloping us.

Despite being physically separated, this unprecedented series of fifteen micro-documentaries has enabled us to blend different spatial realities from a sensory perspective. Both commonalities and differences can be observed through a comparative lens. This overall interconnection of forms, spaces, textures, sounds, movements, luminosities, etc., acquires a sensory entity of its own that accounts for the consistency that modern architecture reached in this remote part of the world. ■

BIOGRAPHY

Glenn Deulofeu, Architect, Ph.D. from the School of Architecture of Barcelona. Deulofeu is Assistant professor at the School of Architecture at the University of Talca, where he has been responsible for modules within the areas of Technology, Media, Context, Research, Studio, Design-Build Studio, and Degree Studio. The diversity of these topics has allowed for the integration and application in the reality of both their research and their vision of the historical and contemporary development of architecture. In this pursuit, he has focused his studies, projects, and publications on modern architecture emerging in the Central Valley of Chile.

EXPLORING LATE-MODERNIST DOMESTICITY IN A WOODEN FLEXIBLE HOUSE VERSUS A CONCRETE BRUTALIST HOUSE

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ABSTRACT

Modernism revolutionised residential architecture with features such as transparency, ergonomic layouts, and authenticity. Yet, these ideals often clashed with the desire for cosiness, tradition, and accommodating and storing everyday clutter. In the post-war era, authenticity and domesticity became central to housing design, raising questions about the lasting value of modernist key features for residents. How did they inhabit and appreciate their homes and what modifications did they make? This study delves into the housing narratives of two iconic modernist homes in Belgium, both protected monuments located in the same street in a Ghent municipality. One architect, Jean Van den Bogaerde's 1966 home and office, contrasts with the Van Wassenhove House designed by Juliaan Lampens in 1970. Despite their differences, both houses share architectural significance. Van den Bogaerde's inhabitants embraces openness with a flexible timber-frame structure, large windows and movable floor-to-ceiling walls, while Van Wassenhove's brutalist design, nicknamed "the bunker," consists of a massive concrete volume. Despite its sealed appearance, the latter offers spatial expansiveness through split levels and an open plan. A domestic life unfolds in both houses, but in a different way. Interviews reveal how both modernist houses require a specific commitment from their occupants, even in the flexible and open wooden house. This paper explores how residents inhabited and modified these houses, using a literature review, archival research, home visits and interviews with the original residents, shedding light on the interplay between architecture and lifestyle in the modernist era. Additionally, some videos, drawings and interviews with users (dancers) who lived in the Van Wassenhove house for a weekend support the findings.

1. INTRODUCTION

Modernism just before and after the Second World War was driven by a social mission. Modernist architecture aimed to create well-equipped affordable housing in order to emancipate the masses. Rationality, functionality, transparency and sobriety were the means to do so. Rationality and functionality were achieved through the inclusion of an ergonomic and labour saving layout combined with domestic technology, transparency by open floor plans. Furthermore, underused rooms, such as the bourgeois 'parlor' or 'best room' or attic, were done away with. The modernists believed that architecture should express developments in science and technology and was a way to free people from old hierarchies. However, these ideals slowly faded away during the sixties, and made place for an architecture that connected more with its environment, the needs of the people and authenticity was embraced as a central concept.[1] As Belgian Architectural historian Geert Bekaert explained, architects realised that "architecture can only stand up for itself and propagate its own value in the play of forces that define a society".[2] This shift is also reflected internationally, with Team X serving as a turning point.

This paper discusses two late-modernist houses built around 1970 (1966 and 1970) situated diagonally opposite each other on the same street in Sint-Martens Laethem, a wealthy village close to Ghent. These were both designed by architects who were alumni and former teachers of the Sint-Luke Architecture School of Ghent, Jean Van den Bogaerde and Juliaan Lampens. Both houses are considered the architects' main masterpieces and are featured in the overview book of Bekaert[3], 1995: 138, 140-141) and protected as heritage. However, initially there not known abroad. That changed for Juliaan Lampens when a themed issue was devoted to his oeuvre in the internationally respected journal *a+u*.[4] Additionally, the work of Van den Bogaerde was published in a retrospective book.[5] Another factor taken into account for choosing these houses, is their different relation with the environment and the varying degree of flexibility. While Lampens' home, known as the bunker, is very closed-off, fixed and even withdrawn from the street, the house of Van den Bogaerde is open to all its sides and very flexible. Finally, the fact that we were also able to visit the two homes in person and able to gather data about the homes as well as its inhabitants, meant we had a pragmatic reason to select these houses. The living biographies of these houses allow us to uncover and discuss some characteristics that are inherent to late-modernism, although they belong to another strand within modernism.

2. THE OPEN, FLEXIBLE HOUSE OF VAN DEN BOGAERDE

In 1966, Jean Van den Bogaerde designed his own house with architectural studio on a triangular plot. Flexibility was very important to him. The use of a timber-frame construction, a well-thought-out floor plan, and prefabricated sandwich-panels and roof scales **(fig. 1 middle)**, allowed for the construction to be completed in no more than seven months. Van den Bogaerde drew inspiration from Le Corbusier's La Tourette and L'immeuble d'Habitation de Marseilles, through their use of pilotis, open floor plans, curved vaults and

1. Hilde Heynen, "The jargon of Authenticity. Modernism and Its (Non)political Position," in *Constructed Happiness. Domestic Environment in the Cold War Era*, eds. Mart Kalm and Ingrid Ruudi (Estonia: Estonian Academy of Arts & Authors, 2005), 10-27.

2. Geert Bekaert, *Hedendaagse architectuur in België [Contemporaneour Architecture in Belgium]* (Tielt: Lannoo, 1995), 141.

3. Beckaert, *Hedendaagse architectuur in België*, 140-141.

4. Christophe Van Gerreway and Fredie Floré, "Rediscovering Juliaan Lampens," *Theme Issue Juliaan Lampens, Architecture and Urbanism, a+u*, ed. Yoco Fukuda-Noennig, no. 523 (2014): 74.

5. Geert Bekaert, *Jean Van den Bogaerde: architectuur 1955-1989* (Tielt: Lannoo, 1989).



Figure 1. Julien Lampens, Van Wassenhove House, St-Martens-Latem, Belgium (top) Julien Van den Bogaerde, own house (middle) and its later added garage (bottom) both in St-Martens-Latem, Belgium (© Els De Vos, 2005)

outdoor staircases. Furthermore, attention was paid to Mies van der Rohe's use of materials, skeletal construction, open spaces and light, and Frank Lloyd Wright, with his horizontality, and overhangs. Additionally, he was influenced by the Case Study House Programme in California. The use of floor-to-ceiling wooden sliding doors with translucent paper betrays his admiration for Japanese architecture. His house is on the first floor and includes space for a carport under the cantilevered upper floor **(fig. 1, middle)**. That was considered a more progressive solution than a closed garage. There is a central concrete core that houses the kitchen, bathrooms and staircase, and the rest of the space is open. To the right is the living area, and to the left the children's living area. Architect Van Den Bogaerde is particularly proud on the flexibility of his home. The walls between the children's bedrooms can be removed, and the master's bedroom is also only separated from the living room by sliding doors. Overall, the house could be completely converted. At one point, he even drew sketches of a design in which the house was converted with all elements into a single-story dwelling. However, in reality, he did not follow through with this transformation.

Interestingly, Van den Bogaerde eventually constructed a threefold garage in order to store the children's bikes, the garden equipment, the garden chair set, etcetera **(fig. 1, bottom)**. He considered the lack of a garage a shortcoming. Since there was no room in the transparent house to store various items, he was glad to have realised early on that he needed to install built-in cupboards to compensate for the absence of an attic. It is akin to Philip Johnson who built a fully enclosed brick house in the garden of his iconic 1949 open glass house because he also needed a place to receive guests in privacy.[6] Van den Bogaerde's garage also served a useful purpose when he was unable to climb stairs for a period and decided to live there.

The kitchen is a very small, laboratory kitchen with a counter where family members can have breakfast on bar stools. Van den Bogaerde's wife regretted some things, mainly in relation to the kitchen. Although it was a laboratory kitchen that was supposed to make work efficient and labour-saving, in practice it was not that convenient. When she prepared several courses, she had to do the dishes in-between because the kitchen was too small to keep them. She also used the children's living room to store some kitchen goods. Her husband later provided more cupboards because there was insufficient space for storing kitchen utensils. The distance to the garden also made it difficult to eat outside, as she explained: "Of course, we don't enjoy the garden as much because, if we want to eat outside we have to move everything. Surely that you think twice [before doing that]."

The interior is a mix of styles **(fig. 2)** Persian carpets, inherited from an uncle, cover the floor. Grandmother's antique rocking-chair stands next to a Bertoia Diamond Chair. The dining table and chairs are Italian, while the globe lamp is Japanese. Besides the modern art, there was also a medieval painting from 1633 inherited from an uncle 'Kanunik'. The sculptural fireplace had to be moved as a result. Architect Van den Bogaerde is against minimalist interiors. Referring to the neighbouring Van Wassenhove house

6. Alice T. Friedman, "People Who Live in Glass Houses: 'Edith Farnsworth, Ludwig Mies van der Rohe, and Philip Johnson," in *Women and the making of the Modern House* (New York: Abrams, 1998), 126-159.

designed by Juliaan Lampens, he says: "the inhabitant also has some works of art, but he is unable to hang them up. I can't understand that. No. A man has to live in his house."[7]

3. THE TRANQUIL, FIXED BUT CLUTTERED DOMESTIC INNER LANDSCAPE OF LAMPENS

Architect Juliaan Lampens clearly had another view of how to live in a modernist home. He once said in an interview: "There have been clients who at first could not endure this way of living, but who once accustomed to it, did not want anything else. I'm now building for a second generation, the children of my first clients who have grown up in these homes."[8]

The Van Wassenhove house was designed for a secondary school teacher, art lover and single, Albert Van Wassenhove. Lampens designed a concrete enclosed volume, that was hidden from the street and only open to one side **(fig. 1)**. The floor plan is a square with other geometric volumes, such as a square (for the office space) or circles for the bedroom, the dome above the cubic desk and the round pond that collects rainwater from the main roof **(fig. 3)**. Lampens (2014, 8) refers to the second period of Le Corbusier, and to Mies van der Rohe, Alvar Aalto, Oscar Niemeyer and Eero Saarinen, among others. He makes use of exposed concrete, wood and glass. His house is mostly categorised as Brutalist. The brutalist house of the Brazilian architect João Batista Vilanova Artigas is most similar to Lampen's houses. The sobriety and brutalist character can be understood as a way to resist the bourgeois and consumer culture attitude. As Angelic Campens explained: "The effect of this struggle contributed to a shift in the general situation, where entire groups of architects who built in the modern glass style switched to more protected and closed structures."[9] This is exactly what Lampens did. By means of powerful sketches he designed a very strong geometric composed house. As the surrounding suburb is full of bourgeois residential houses, Lampens created an inner domestic landscape enclosed by a concrete shell. The open plan of the house did not contain interior doors and walls never reached the ceiling. As such, Lampens encourages a basic togetherness within the living space. The client, Van Wassnehove, also had a say as he opted out of a fireplace as he found that unnecessary, but included a central office space, slightly elevated above the living room, overlooking the garden. Zenithal light through the round skylight illuminates the office. **(fig. 3 top left)**

Nevertheless, Lampens was insistent on precisely positioning everything in this house, including the fixed concrete table. When an architecture student asked him what to do if the resident wanted to move the fixed table, Lampens answered laconically: "The need to move the table to another place in the house is non-existent, since I have situated the concrete table in the right spot from the beginning."[10] However, today the house is a museum house that also serves as an artist's residency. Videos, drawings and interviews with temporary users (performers in dance, theatre and circus) who lived in the Van Wassenhove house for two days and nights in the framework of an experiment, confirmed the rigidity and the impact of the



Figure 2. Van den Bogaerde, Living room of Van den Bogaerde House, Sint-Martens-Latem, Belgium (photo: Liesbeth Vanderschueren, Els De Vos, 2005)

7. Jean Van den Bogaerde, interview by Els De Vos and Liestbeth Vanderschueren, Sint-Martens Laethem, 2005.

8. Lampens quoted in: "Like Bijlsma, Living towards Nature. Houses by Juliaan Lampens," *Oase Journal*, no. 55 (2001): 109-118.

9. A. Angelic Campens, "The sociological dimension of concrete interiors during the 1960s," *Palgrave Communications*, vol. 3 (2017): 8. DOI: 10.1057/palcomms.2017.35

10. Lampens quoted in: Jo Van Den Berghe, "House Van Wassenhove," *Theme Issue Juliaan Lampens, Architecture and Urbanism, a+u*, ed. Yoco Fukuda-Noennig, no. 523, (2014) 60-73: 64.



Figure 3. Architect Juliaan Lampens, Van Wassenhove House, Sint-Martens-Latem, living room with at the left the study room and a circular skylight above (top) and corridor with bedroom and bathroom (bottom) (photo's: Selin Geerinckx, 2019)

fixed table on the movements in the home. Moreover, they found the table ergonomically inconvenient to sit at. They also experienced a coldness in the house, due to the abundance of concrete.

Unlike today, the interior of the house was once filled with the clutter of light, despite the architect's request for his clients to refrain from adding decoration.[11] Nevertheless, the formal language of Lampens' architecture is strong enough to preserve the sacredness of the spaces, even when filled with objects.

CONCLUSION

The glass house of Philip Johnson is in contrast to the enclosed brutalist house of João Batista Vilanova Artigas. Typologically, the houses discussed can be compared, providing a rich basis for examining the divergent architectural philosophies and spatial experiences embodied in each house.

Both inhabitants appreciated and praised their home, which still exudes timeless modernity. Albert Van Wassenhove granted it to the University of Ghent for further research, while Jean Van den Bogaerde offered his plans and archival material to the Sint-Lucas Architectural archive.

Neither of them adhered to dogma when it came to their lifestyle, as they both offered resistance. Van den Bogaerde kept older furniture in his home alongside designer furniture, against the advice of the modernist avant-garde architects who argued for freeing yourself from the past and arranging the home in a purely modern way. Lampens also had some design pieces, but there was also clutter everywhere.

Both houses have an open internal layout, although the bedrooms in the Van den Bogaerde House could be closed off, similar to the cells in Le Corbusier's La Tourette. The open character is valued in both houses. Lampens' architecture was robust enough, geometrically speaking, to overcome the mess and clutter. Additionally, the transparent structure of Van den Bogaerde's house was successful in maintaining order in the composite interior. However, Van den Bogaerde constructed an oversized garage to store all goods that did not find a place in the home or to provide temporary accommodation when he was unable to climb stairs. This space had to serve as an alternative to a cellar, attic, or enclosed built-in garage, all of which were considered unnecessary by modernists. Although Van den Bogaerde's house seems more flexible and, as such, easier to live in, other elements determined the residents' way of life. The rational kitchen didn't seem so practical and efficient, as his wife had more cleaning and washing to do. Furthermore, living on the first floor made eating in the garden more complicated.

Nevertheless, these factors did not diminish the tremendous quality of life the house offered. That quality was different in both houses. For Albert Van Wassenhove, his elevated office was the centre of his domestic life that was interwoven with work. Living alone meant issues of privacy or conflict between inhabitants were logically not a concern. In the Van den Bogaerde House the possibility for the children to retreat to their own living room, or even their own bedroom, was a major advantage. And despite the fact

11. Angelic Campens, "The sociological dimension of concrete interiors during the 1960s," 5.

that Lampens' houses were, in general, more imposing, even intentionally so, it did not prevent the children of the residents from commissioning the architect to design a house for them as well.[12]■

12. The author is grateful to Selin Geerinckx for the images she provided on the Van Wassenhove House designed by Juliaan Lampens.

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BIOGRAPHY

Els De Vos, a professor at the University of Antwerp, chairs the interior architecture programme. Her research is situated in the field of history and theory of (interior) architecture, home culture, gender, and public space in the second half of the twentieth century. Her PhD on the architectural, social and gender-differentiated mediation of dwelling in 1960s–1970s Flanders is published by Leuven University Press (2012). She has published in several journals and is co-editor of several books and special issues. She has co-curated several exhibitions, most recently Living in Colour (Antwerp, 2019) and Female Symbols and Urban Space (Brussels, 2021).

PARAFICTIONS OF THE GLITCHED ESTATE IN CENTRAL HILL

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ABSTRACT

This paper discusses the context to a South London housing estate, Central Hill, as a 'parafiction' of the 'soft city' - two terms in cultural studies that describe alternate but familiar realities. Both are constructed from factual fragments that are unrelated, with their stories presented back to us in novel immersive film-based media.

Our postgraduate unit, Arena, at the Birmingham School of Architecture, has explored both terms through performative events. We use architectural data intertwined with archival artefacts to reveal tension between competing aesthetics and narratives, and in tandem with the socio-cultural conditions captured by pop culture today.

To coincide with a group exhibition, *Horror in the Modernist Block* at Ikon, an established international arts institution, the Arena unit responded to the curatorial theme presenting "new and recent works by contemporary artists that experiment in the aesthetics of architectural modernism and unpack the often-contested legacies of modernist buildings."[1]

The 'Glitched Estate' was presented as a docu-short film, with a performance alongside artists' video work, capturing the dual narratives between the local authorities, community residents and activists concerning Central Hill's ongoing conversation as at-risk of demolition. Designed by Rosemary Stjernstedt, a pioneering architect as the first woman to reach senior grade at London County Council.

The docu-short format becomes the element that enables the parafiction around Central Hill – juxtaposing competing ideas of the redevelopment of a well-loved but contentious landmark. The architecture provides the discussion of social context - and to read the building's legacy in today environment. This contemporary process is a new instrument in our information age to draw an indistinguishable line between fiction and reality, advocating modernism's significance to a broader audience in an unconventional gallery setting.

1. INTRODUCTION

As the camera pans across the entourage, the edit then cuts to a gritty aerial view. Amongst the borrowed light of the streets, you can faintly detect the tiered structure of the estate. Another cut makes no mistake in telling you where they are, with the sign with Central Hill Estate framed clearly. These scenes are taken from a music video of K-Trap's *Warm*[2] an example of UK drill - an emerging music sub-genre with its aesthetic culture heavily indebted to the urban qualities of inner London.

The video presents the estate as part a Soft City. Initially termed by writer and critic Jonathan Raban, it recounts narratives of human geography, blending fact and contemporary culture with the everyday fiction of people's lives. "Cities…we mould them in our images… The city as we imagine it, the soft city of illusion, myth, aspiration, nightmare is as real, maybe more real, than the hard city one can locate on maps…in demography and architecture."[3]

Soft City is a cultural study on the multiple versions a city can adopt in attempting to gather meaning and identity. But written in 1974, how we imagine 'it' has evolved with our continuous consumption of visual media today. We find ourselves in a hyper version of the soft city where there is no doubt that the image is significantly more real than the hard one with live in.

Parafictions, coined by art historian Carrie Lambert-Beatty, are an "artistic fabrication ventured outside the boundaries of the novel, frame or stage."4 As a combination of true stories combined with a fictional style, they are a useful theoretical device to help us navigate a post-truth reality experienced through performances. Applying a parafictional process to document contentious structures like Central Hill becomes a means to enlighten the drama of renewal, economy and political pressures being played out. This essay explores the parafiction of the Soft City with the use of a docu-short – a short form of a documentary-type video with archival content as factual connections interspersed with creative and fictional elements. The docu-short was presented at Ikon gallery's group blockbuster show, Horror in the Modernist Block5, **(Fig.1)**, in 2023 alongside video artists Ola Hassanain, Ho Tzu Nyen, Kihlberg & Henry, and NT.

From the curatorial synopsis the exhibition is introduced as:

> *Today, buildings constructed in the modernist style stir mixed reactions. For some, they are architectural icons. To others, they are haunting relics of failed concepts and bygone eras… The exhibition and publication look at how these artists unpack the often-contested legacies of modernist buildings through the lens of horror… highlighting how the design and features of a building can shape not only our movement and perception, but also our deepest fears.*[6]

Whilst the exhibition explores horror as a driving reference for the discussion of architecture today, the docu-short produced for the exhibition sought to capture the tensions our soft city holds under the forces of gentrification and proliferation of urban visual culture.

1. From excerpt from the exhibition press release: Melanie Pocock. *Horror in the Modernist Block*. Birmingham, Ikon Gallery, 2023.

2. "K-Trap – Warm," YouTube video, 2:40, posted by "K-TRAP", May, 13 2021, accessed June 9, 2024, https://www.youtube.com/watch?v=K_hUaDUjGOU

3. Jonathan Raban, *Soft City* (London: Hamilton, 1974), 2-3.

4. Carrie Lambert-Beatty, "Believing in Parafiction," in *EP.2 Design Fiction*, ed. Alex Coles, (Berlin: Sternberg Press, 2016), 74.

5. "Horror in the Modernist Block," Ikon Gallery, accessed June 8, 2024, https://www.ikon-gallery.org/exhibition/horror-in-the-modernist-block

6. From excerpt from the exhibition press release: Melanie Pocock. *Horror in the Modernist Block*. Birmingham, Ikon Gallery, 2023.

2. ESTATES IN THE NOW

The feature of housing estates in film and media are both practical and aesthetic. Practical in that, including in music videos, they document the reality of the artists' daily lives and their neighbourhood, captured with affordable, convenient technology. And so their estate (of where they live) becomes the incidental setting. Aesthetic in that the tonal qualities of the material and stratification of society in its internal planning, play out to act as metaphors like in JG Ballard's *High Rise* or enhance narratives like in Ken Loach's depiction of familial social mobility in *Poor Cow*.

2.1 ESTATES IN THE SOFT CITY

In earlier decades of their popularity, modernists estates represented aspirational ideas of progress for more equitable living or spatial catalysts for dystopian societies. In more recent recounting of life in estates, artist and documentary maker, Ayo Akingbade depicts current ways of living in her trilogy of films *Dear Babylon, Tower XYZ, In Ur Eye*. For Akingbade, her works were born out of necessity to avoid the visual tropes of "kitchen-sink style or depressing social realist depictions of London."[7] In *Unofficial Britain*, the urban rambler Gareth E. Rees takes the reader across unexpected landmarks in today's gritty urban environment. Chapter Demons in the Present, the implausible frequency of ghost apparitions in modern housing estates leads to a phenomenon of "spiritual occurrences caused by emotions of living beings in the here and now rather than ghosts of the past."[8] Concluding this unique take on urban exploration, "reality is a very fragile thing… so things you create in your own mind can develop a reality just as powerful."[9]

For both Akingbade and Rees, the view of the residents, the makers, the artists, community leaders captured on film, are used to construct a parafiction on the reality of the now.

So what would the parafiction be in content such as K-Trapp's *Warm*? The track is part of drill – a British music genre emerged from South London. Drill is a musical reaction to the "unchecked social inequality" prevalent in South London, just as grime music did the same for East London at the time of rapid gentrification surrounding the 2012 Olympic Park developments.[10] As hotspots of grime and drill, they centre specifically on the effects of gentrification, which, combined with the government's austerity policies since 2010 particularly affecting local councils' welfare programmes including maintenance of estates and its ability to house residents on long waiting lists are severely compromised in a process of managed decline.

2.2 ESTATES IN THE HARD CITY

Lambeth Council set up a housing subsidiary, Homes for Lambeth (HfL) in 2017 to accelerate the delivery of new homes for the South London Borough but has been beset by ineffective use of public funding and management, creating just 80 homes since its establishment.[11] One of its main remits was to manage the regeneration of post-war estates in London including Cressingham

7. "Ayo Akingbade Introduces Her Film Tower XYZ," MUBI, accessed June 8, 2024, https://mubi.com/en/notebook/posts/ayo-akingbade-introduces-her-film-tower-xyz

8. Gareth E. Rees, *Unofficial Britain: Journey Through Unexpected Places* (London: Elliot & Thompson, 2020), 59.

9. Rees, *Unofficial Britain: Journey Through Unexpected Places*, 59.

10. "Them Pretty New Blocks: Drill Music and Gentrification in South London," Crack Magazine, accessed June 9, 2024, https://crackmagazine.net/article/long-reads/them-pretty-new-blocks-drill-music-and-gentrification-in-south-london/

11. Homes For *Lambeth, Lambeth Data Hub, Appendix A: The Joint Delivery Plan*. (London: Lambeth Council, 2023). 8.

Gardens, Fenwick and Central Hill. HfL came under significant pressure with its plans to regenerate Central Hill with partial demolition of the well-known architectural landmark with new builds to be sold at current market rates developed in conjunction with a private developer. Seen as a triumph of post-war planning with an innovative tiered graded structure nestled into a step topography of Gypsy Hill, the plight of estate was widely publicised in social media and in national news[12] due to a grass-roots campaign to help counter the narrative (from the council) of yet another declining housing estate.

The campaign to save Central Hill, also drew attention to its architects Rosemary Stjernstedt and Roger Westman under the directorship of Ted Hollamby. Stjernstedt was an English architect graduating from the Birmingham School of Architecture as one of its first female alumni in 1934, and then taking a town-planning course at the Architectural Association which led to her moving to Sweden in 1939 to work as a town planner. After World War II, she returned to England and began working for London City Council (LCC) Housing Division, later becoming the first woman architect to reach senior grade I status in any British county council division.

Sweden's strong culture of gender equality had a significant impact on Stjernstedt's career, giving her the confidence to take advantage of the progress made in the public sector in England. After the LCC was dissolved, she commenced work for Lambeth City Council, designing social housing projects including Central Hill.

Completed in 1975, the estate was one of the boldest additions to Lambeth, providing over 450 homes with gardens, play areas, large terraces, and open green spaces. It was designed to focus on the needs of residents and the community while taking advantage of stepped topography and the view over London. Its most notable building includes the tiered maisonettes **(Fig.2)**, undulating between historic trees on the hill. Stjernstedt's architectural ambitions derives from where the design is not only about the built fabric but also the community and individuals. Influenced by her time spent in Sweden, her designs advocate for a culture of equality, countering the spatial convention of 19th Century Georgian homes in the vicinity where the internal arrangement placed the dweller as a demonstration to their social status. In these houses, productive areas of a family home (kitchen, washrooms) were separated from affluent living areas (dining rooms, reception rooms). Central Hill however, represented a modernist approach incorporating technology as a solution to easing the domestic work of the working class. Stjernstedt prioritised the feeling of community with its open terraces, open plan living. The block was laid out efficiently to portray the landscape as a blurred threshold between labour and leisure for an egalitarian family. Architecture critic Rowan Moore describes the project as "creating both moments of drama and quiet enclaves…between its buildings… They give as much shelter and privacy as you could want but also help you feel part of the larger neighborhood, landscape, and ultimately, the city beyond. You feel enclosed more by a series of layers than opaque walls."[13]

12. "The Central Hill estate in Crystal Palace is often held up as a triumph of post war planning," ITV News on 14 March 2017, accessed Jun 9, 2024. https://www.facebook.com/watch/?v=10154393913707944

13. "Housing estates: If they aren't broken…" The Guardian, accessed June 7, 2024, https://www.theguardian.com/artanddesign/2016/jan/31/council-estates-if-they-arent-broken-lambeth-council-central-hill-estate-social-housing-affordable

3. THE GLITCHED ESTATE

Campaigns to save the structure involved a statutory listing application for Central Hill to justify recognition of Rosemary Stjernstedt's designs. It states the need to "reappraise the work through the intersectional lens of representation, and heritage" with an increasing national and international level of significance to her work.

The campaign challenged the rejection of the listing application, claiming the estate isn't 'pioneering'. It notes how Neave Brown, working at a similar time to Stjernstedt on social housing projects, had "all of his work in the U.K. being listed by 2014". Listing more of her buildings would help to establish her status as a major post-war British architect and protect her work.[14]

There is a myriad of media sources building up a picture of the drama playing out along political lines. From news clips to architectural journals, to music videos, to local public forums to Facebook groups. The amount and variety of information crontributes significant confusion and tension between them all.

In the docu-short, opposing information, using the situationist techniques of the detournement, was reconstructed into playful pieces of truth of the now, generating a state of perseverance in a never-ending game. Existing archival content and anecdotal fragments is scripted as information, repeated, glitched out, then played over once again, **(Fig. 3)**. The glitch insinuates another possibility to occur from these glitched archival fragments.

3.1 GLITCHED NARRATIVES

Glitches between the media creates a dual narrative, uncovering all aspects of the Central Hill spectacle. Representation of both sides of the story (the community and Lambeth Homes) was important to spark further debate and help uncover the political reality while simultaneously letting the audience reflect on their own views about the fate of the estate. The performance of cast totems, abstracted components from the built forms, combined with an edited audio, produced a one-off performance at Ikon Gallery. The interplay of physical/digital mediums created an engaging story to bring an awareness to the current situation – a parafiction of truths and human emotions. The two sides of the docu-short:

DYSTOPIA: a brutalist modernist block, located in Gipsy Hill, presents a broken urban vision for residents, exemplifying a failed housing project forcing an antagonised community that requires the attention of Lambeth Council to dismantle and allow the decline of its social fabric for future political gain.[15]

[Or…]

UTOPIA: a modernist landmark designed by pioneering architect Rosemary Stjernstedt presents the ideal city living for its residents, exemplifying a successful housing project cultivating a close-knit community raising the attention of Lambeth Council as an exemplar to national and international groups, and to preserve and continue the legacy of Stjernstedt's designs.[16]

14. Kate Jordan, "Unfair Dismissal: the legacy of female architects working for London Councils," *Architectural Review*, vol. 243, issue 1449 (March 2018): 34-41.

15. *Dystopia* description taken from docu-short synopsis by Wiktoria Piotrowska and Nicholas Morrison, as exhibited at Ikon exhibit.

16. *Utopia* description taken from docu-short synopsis by Wiktoria Piotrowska and Nicholas Morrison, as exhibited at Ikon exhibit.





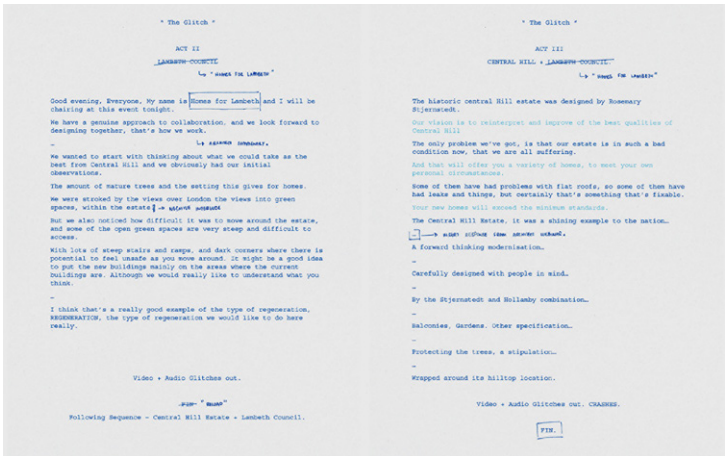


Figure 1. The Glitched Estate performance, Ikon Gallery, 2023. © Birmingham City University, Nicholas Morrison and Wiktoria Piotrowska, 2023.

Figure 2. Graphical diagram of Central Hill Estate, Rosemary Stjernstedt, London UK, 1974. © Birmingham City University, Nicholas Morrison and Wiktoria Piotrowska, 2023.

Figure 3. Graphic composition of docu-short script. © Birmingham City University, Nicholas Morrison and Wiktoria Piotrowska, 2023.

What the docu-short, *The Glitched Estate* captures, is an antidote to the passiveness of news and culture in media today. Film has 'montage' as a physical quality that artists explore as a form of materiality. The Glitched Estate gives voice to Stjernstedt's ideas, and in her own words from a recording of *Pioneers: Women Architects and their Work* in 1986. Cut and edited with another recording of the community consultation with HfL, the political and economic reality of housing in this London Borough is played out in amongst the optimistic vision of Stjernstedt's modernism.

For the Save Central Hill campaign, the residents' and architecture critics promoted their work through targeted news outlets that circumvented the official narrative by the council of 'economic regeneration' via demolition. This form of digital activism has power of sorts. Cultural happenings (such as the Ikon exhibition), gives the campaigners the ability to be heard. Writer/curator Francesca Gavin highlights this opportunity with internet culture: "Owning the media means owning visibility." But this approach has limits as she describes how "the state is able to hide their operations while in public."[17] as the residents have claimed. Glitching competing news feeds in docu-short format provides a new narrative structure allowing multiple endings for ideas of the future while addressing contemporary issues of the estate.[18]

17. Francesca Gavin, *Watch This Space* (London: Pentagram, 2017), 163.

18. See Gavin's term of Slow Futurism in Francesca Gavin, *Watch This Space* (London: Pentagram, 2017), 197.

4. REVEALING THE RECENT PAST (CONCLUDING THOUGHTS)

In 2022, news arrived that HfL was to be subsumed by the council proper as a result of a damning Kerslake Review[19] recommending its closure - effectively halting the redevelopment plans of Central Hill indefinitely. A positive outcome for the residents and campaign group, but one with unanswered questions on the impact of the derelict properties and forced relocation of hundreds of residents. In 2023, K-Trapp release a remix of Warm, featuring additional artist Skepta. This time, recorded in a night scene on the Central hill Estate, it presented an alternate aspirational story, depicting a new sense of affluence with high end luxury cars occupying the streets. With scenes of almost identical sequence from K-Trapp's initial track, it plays out as a parallel fiction to the raw energy of the original.

Lambert-Beatty defines the scepticism we should be conscious of in our everyday lives with the implausible exposé by artists using parafiction as a mode of storytelling. The Glitched Estate provides a compelling reality to an architectural landmark representing the dichotomy modernism has found itself in today.

Additionally, art practice is a contemporary intervention to politically motivated moves in a city. Francesca Gavin observes that the production of images in digital activism doesn't necessarily mean you become free. Only through meaningful action does activism occur.[20] Whilst, *The Glitched Estate* is not activist in its intent, it is part of a growing concern of artists. Ayo Akingbade's Dear Babylon is part of a trio of films of London Life. It's fictional narrative of another housing estate, played by actors, voice real concerns and give a legitimacy to the parafiction. These works, alongside the Glitched Estate seek to "build solidarities in the fight against gentrification" in forming community participation to share "methodologies around activism in response to the UK's housing crisis."[21]

In support of Gavin's view on digital activism, the capture of architectural modernism must move beyond fetishising the aesthetics of its material quality on film. Central Hill only has a few cultural moments so its representation in the soft city is peripheral compared to other housing landmarks such as the Heygate or Haggerston estates that have been featured significantly in cultural media more widely. But *The Glitched Estate* provides a model for the archiving of architectural heritage that plays into the mood of the public consciousness of the soft city we see on our screens. ■

19. "Housing Delivery, Background Information," Lambeth Council, accessed June 9, 2024, https://www.lambeth.gov.uk/housing-delivery/background-information

20. Francesca Gavin, *Watch This Space* (London: Pentagram, 2017), 164.

21. "Can Film Assist in the Fight Against Gentrification?" Frieze, accessed June 27, 2024, https://www.frieze.com/article/can-film-assist-fight-against-gentrification

BIOGRAPHIES & CONTRIBUTORS

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This paper includes contributions from Nicholas Morrison, Wiktoria Piotrowska, and Andreea-Claudia Buzuloi, with the production of the docu-short and contextual reading of the estate's layout. All contributors are graduates from the MArch Architecture programme at Birmingham City University and work in the West Midlands.

BEYOND MODERNISM

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ABSTRACT

Various trends and movements influenced architectural transcendence after Modernism. Well-known history includes European architects calling for human scale and variety and Anglo-Saxon architects adopting a visual language of archetypes, popular taste, and symbolism. In other regions, various emanations and terminology can be found, like Metabolism, Critical Regionalism or Late Socialism. Despite the fact there is a growing interest in this young legacy, many buildings from the 1970s and 1980s are threatened with demolition or drastic transformation. They are facing the same issues as the Modern Movement legacy, being camouflaged at the risk of vanishing. This conference session, therefore, aims to develop and share knowledge of architecture dating from the decades after Modernism. Documentation of various international cases, movements, and developments is considered a first step towards making comparisons, evaluations, and, finally, informing decision-making in regard to conservation.

This paper discusses several themes and theories, aiming to explore a framework for identifying and discussing similarities and differences in their underlying ideologies and contexts. The first theme addressed is pluralism, as defined by Charles Jencks. Pluralism is observed as a socio-political plurality, with various cultural, geographical and regime-related contexts. Additionally, on the building scale, the absence of a dominant ideology led to the combination of architectural styles. A second theme is nostalgia, relating, for instance, not only to classical references in post-modern buildings but also to the increased interest in heritage in the 1970s and onwards. The current interest in the 1970s and 80s legacy can once again be considered a nostalgic longing. In contrast to nostalgia, futurism is the last theme discussed. Metabolism and high-tech have created visions and solutions to current societal and environmental issues.

Although the themes discussed do not provide a complete or comprehensive representation of the building stock under discussion, they aim to foster discussion on its characteristics and underlying ideologies.

1. INTRODUCTION

Following the decline of Modernism, new architectural ideas and expressions emerged. Rather than adhering to a singular ideology, a range of possibilities and truths were embraced. European architects such as Aldo van Eyck and Team X rebelled against the concept of 'unliveable' cities[1]. They called for more coherence between people and things, leading to further emphasis on human scale and variety. In Anglo-Saxon countries, architects like James Stirling, Robert Venturi and Denise Scott Brown adopted the visual language of archetypes, classicist architectural elements, popular taste, and symbolism. Referring to Charles Jencks, this pluralism was perceived as the Post-Modern ideology as there was no dominant cultural style or ethos[2].

However, both Modernism and its turn-away should not be reduced to visual language or style. At the planning and programmatic level, for example, separating functions as advocated by CIAM's functionalism was abandoned and the intergration of different programmes in urban plots and at building level was promoted. These multifunctional hybrid concepts could be inspired by traditional or indigenous towns or grow into high-tech superstructures. Various other post-CIAM emanations and terms can be found, like Metabolism, Critical Regionalism or Late Socialism. There seems to be no abrupt end to Modernism, but rather a transcendence, an influx of various influences and movements.

The legacy of post-modernism has recently sparked increased interest in architecture, heritage practice, and academic circles. Already in 2008, the DOCOPOSMO project endeavoured to document the Post-Modern architecture of the 1970s and 1980s in Chile. In the Netherlands, the Cultural Heritage Agency initiated a programme studying and ultimately listing 'Post 65' heritage built after 1965. Academic interest is evidenced by the growing number of conferences, such as the recent Young Heritage Symposium in Brussels[3].

Despite this trend, buildings from the 1970s and 1980s are threatened with demolition or drastic transformation. Will they face the same issues as the Modern Movement legacy, being camouflaged at the risk of vanishing? In line with the goals of Docomomo, this paper aims to develop and share architecture dating from the decades after Modernism. Documentation of various cases and developments is considered a first step towards comparisons, evaluations, and, finally, informing decision-making in regard to conservation. It can give a broad insight into the characteristics of this transcendence from Modernism into other architectures across different countries and regions. Although this paper is written from a European perspective, influenced by the author's background, it seeks to provide themes and theories to promote the research in an international context. The three themes brought forward in this paper, pluralism, nostalgia, and futurism, do not provide a complete or comprehensive representation of the building stock under discussion. However, they are regarded as topical and relevant as a perspective for understanding the architecture 'Beyond Modernism'.

1. W.J. Heuvel, *Structuralisme in de Nederlandse architectuur.* (Rotterdam: Uitgeverij 010, 1992), 10,12.

2. Charles Jencks, and Maggie Keswick, *The Language of Post-Modern Architecture*, (London: Academy Editions, 1991), 10.

3. Marylise Parein, and Stephanie Van de Voorde, eds., *International Symposium on Young Heritage (1975-2000) Book of Abstracts* (Brussels: VUB ARCH, 2024)

2. PLURALISM

As Charles Jencks wrote in 1977, while declaring the death of Modern architecture, "the present situation tolerates opposite approaches, and I hope that architecture doesn't prematurely crystallise around a single style and doctrinaire approach, as it has so many times in this century. I prefer (…) that it is pluralistic: the idea that an architect must master several styles and codes of communication and vary these to suit the particular culture for which he is designing"[4]. Did his wish come true, and did architecture become local and differentiated rather than an international style as promoted by the Modernists? Or can we also observe international similarities in the transcendence after Modernism? And is the architecture 'Beyond Modernism' understood as Late Modernism, Post-Modernism or any alternative -ism in different regions and countries?

2.1. SOCIO-POLITICAL PLURALITY

In Europe, Team X played a pivotal role in the transcendence of Modernism. Emerging from CIAM and Modernism, they declared CIAM dead as early as 1959 and advocated for 'The story of a different idea', focusing mainly on housing and habitat[5]. While many Western European countries followed the trend towards a more human architecture, there were also differences. From 1965-1985, new towns appeared in the UK, France and the Netherlands[6]. Although these national programmes shared the ambition to create a counterpart to the large-scale developments of the post-war years, they varied in their planning policies, cultures and the scale of the towns. This led to, for example, differences in the importance of the public domain and the separation of public and private space[7].

Expanding the scope to Eastern Europe, the influence of political regimes and socio-economic contexts plays a role. While Western Europe had already abandoned the ideals of Modernism, behind the Iron Curtain, state socialist buildings remained the norm up into the 1990s. However, even during this socialist time, counter-movements, such as the 'improvisation' building culture in former Czechoslovakia, resulted in local versions of architectural diversity[8].

Besides the political regimes at the time of their creation, later and current political developments also influence how buildings from the 1970s and 1980s are preserved and valued today. This applies, for instance, to the late modern building stock in post-Soviet countries. The German research project 'cities. building.culture' examined both the physical changes and attitudes towards the architecture after the Sovjiet period[9]. In addition to the bipolar post-war context, dictatorial regimes in several European countries determined the direction of architectural developments. These differentiations observed in become even more pronounced when considering global transcendence beyond Modernism.

2.2. ARCHITECTURAL PLURALITY

Pluralism is present in the wide collection of projects beyond Modernism, as well as in the visual language and spatial ideas of a single architectural

4. Jencks and Keswick, *The Languaje of Post-Modern architecture*, 7.

5. Heuvel, *Structuralisme in de Nederlandse architectuur*, 12

6. Pascaline Gaborit, *European New Towns, Image, Identities and Future Perspective* (Brussels: P.I.E. Peter Lang, 2010), 24.

7. Ivan Nio, *Moderniteit en suburbaniteit in nieuwe stad. Almere, Cergy-Pontoise, Milton Keynes* (Amsterdam: Faculteit der Maatschappij- en Gedragswetenschappen, Universiteit van Amsterdam, 2016), 11, 289.

8. Petr Vorlík, "Transfers — the Principle of Making a Silk Purse Out of a Sow's Ear," in *Improvisation*, ed. Petr Vorlík (Prague: Faculty of Architecture of the Czech Technical University in Prague, 2021), 67, 72.

9. "cities.building.culture - built heritage in post-sovjet urban development," cities.building.culture, 2021-2024, https://cities-building-culture.com.

building or urban ensemble. The decline of modernist ideology gave freedom to create various styles and genres in architecture and arts. Post-Modernism, in all its guises, has also been referred to as 'the circus of prefixes'[10]. While Post-Modernism encompasses several movements, the term is often narrowed down to popular, historicising or symbolic formal language characterised by double coding, irony, parody, pastiche, hyperreality and hybrid language. Double coding seeks to make connections between the present and the past, between new techniques and old patterns, and between the elite and the people (Raaij 1993, 547).

This architectural plurality, both in the collection of neighbourhoods and in individual projects, is exemplified by Dutch residential neighbourhoods constructed between 1965 and 1985. These everyday living environments adopt characteristics of, on the one hand, a humanist approach of organic forms and diversity and, on the other hand, a rationalist approach of pragmatism and formal architecture[12] **(Fig. 1)**. The mixing of different spatial typologies and visual styles, showcasing pluralism, may occur on various levels. On an urban level, the neighbourhoods are planned as 'a city within a city', combining various functions and facilities. The public space is often designed as a sequence of enclosed spaces like squares, alleys, stairs and courtyards. On an architectural level, the complexes mix housing types to accommodate a variety of households and architectural archetypes such as gates, colonnades and towers to provide a familiar image and identity[13] **(Fig. 2)**. Expanding the scope to include other countries and regions, functional programs and timelines could either confirm or contradict the architectural plurality or add nuance to it.

3. NOSTALGIA

Jennifer Bloomer discusses the place of nostalgia and longing in contemporary Western architecture[14]. She writes that the desire for the new is a longing for something one cannot have because as soon as the new is materialised, it ceases to be new. Our persistent desire for the new is in itself a nostalgic longing. This circle of nostalgia and newness relates to the architecture after Modernism in its longing to break with 'old' Modernism that aimed for the 'new', while the 'new' Post-Modernism aimed for nostalgic identities.

Furthermore, from the current perspective on this architectural legacy, Bloom's 'new nor old' plays a role. While Modernist buildings in many countries have entered the heritage domain, such recognition continues to be very rare for younger buildings. Yet, we have seen nostalgic revivals of the 1970s, 80s, and 90s in music, fashion, and other areas of design. Could we anticipate that each new era of architecture will eventually be considered as heritage?

3.1. NOSTALGIA LOOPS

A closer look at the aforementioned pluralism in Dutch 1965-1985 residential neighbourhoods in the Netherlands, reveals a complexity of -isms and ideologies[15]. The humanist approach of small scale, organic growth

10. Hilde Heynen et al. *Dat is architectuur' : sleutelteksten uit de twintigste eeuw* (Rotterdam: Uitgeverij 010, 2001), 767.

11. W. Fred van Raaij, "Postmodern consumption," *Journal of Economic Psychology* 14, (September 1993): 547.

12. Lidwine Spoormans, A. Pereira Roders, W. de Jonge, L. Reinders. "The Groeikern Legacy - Housing typologies in Dutch New Towns." In *The 16th International Docomomo Conference Tokyo Japan 2020+1 Proceedings: Inheritable Resilence: Sharing Values of Clobal Modernities*, eds. Ana Tostões, and Yoshiyuki Yamana, (Tokyo: Echelle-1, 2021).

13. Lidwine Spoormans, W. de Jonge, D. Czischke, A. Pereira Roders, "Exploring visual language and typologies in Dutch midrise residential neighbourhoods." In *Proceedings 17th International Docomomo Conference: Modern Design: Social Commitment and Quality of Life,* eds. Carmen Jordá Such, Maite Palomares Figueres, Ana Tostões, and Uta Pottgiesser, (Valencia: Docomomo international, tirant lo blanch, 2022).

14. Jennifer Bloomer, "The Matter of Matter: A Longing for Gravity," in *The Sex of Architecture*, ed. D. Agrest, P. Conway, and L. Kanes Weisman (New York: Harry N. Abrams Inc., 1996),161-162..

15. Lidwine Spoormans, W. de Jonge, D. Czischke, A. Pereira Roders, "Exploring visual language and typologies in Dutch midrise residential neighbourhoods." In *Proceedings 17th International Docomomo Conference: Modern Design: Social Commitment and Quality of Life,* eds. Carmen Jordá Such, Maite Palomares Figueres, Ana Tostões, and Uta Pottgiesser, (Valencia: Docomomo international, tirant lo blanch, 2022).

and mixed functions was inspired by traditionalism and 1930s Amsterdam School. The movement of structuralism (with Herman Hertzberger as its protagonist), aiming for adaptability based on highly systemised patterns, referred to post-WWII functionalism. The rationalist approach of pragmatism and formal cube-like architecture related to Modernism. And finally, the Post-Modernism of archetypes, as a symbolic formal language, relates to neo-classicism. Although the materialisation of these previous codes and symbols is referential rather than reconstructive, the longing for familiar historically based images is evident. In the book 'The Past is a Foreign Country', David Lowenthal warns against 'nostalgia for nostalgia' and notes that nostalgia is often for past thoughts, recalling a memory, rather than past things[16].

Besides referring to previous architectural movements in new constructions, the appreciation of heritage also grew after the Modernist era. The year 1975 was declared the European Architectural Heritage Year, which launched new ideas for the rehabilitation of monuments and cultural heritage in urban planning across Europe[17].

3.2. CURRENT NOSTALGIA

Generally, 1970s and 1980s buildings are beyond the status of 'new' but are not yet considered heritage. As stated by Kevin Lynch in 'What Time is this Place', "Preservation is fine for the past that is long past, but yesterday is thought of as something to dump"[18]. Does the growing interest in this stock, which is now half a century old, indicate a shift in our perspective, the beginning of longing for this recent past? Results of participatory research from Dutch neighbourhoods from 1965-1985 show that attributes inspired by tradition such as multifunctional city centres and masonry facades, are predominantly viewed positively by residents and professional stakeholders. However, then innovative attributes (e.g. separated infrastructure systems or elevated residential decks) are more contested[19]. Further research is required to confirm whether this phenomenon is widespread or not and how it will be affected by the passage of time.

4. FUTURISM

"How to build a city that can adapt to unknown information of the near future? How to build a city that is capable of accommodating the traffic of future times? (...) The scholar of tomorrow will find a solution that will further simplify the lives of the people of tomorrow"[20]. Although Friedman implied that the architect would become redundant in that process, constructing the future living environment is a task faced by every generation of designers.

Our contemporary challenges share striking similarities with those of the 1970s and 1980s. The 1972 report 'The Limits to Growth' by the Club of Rome already addressed the relationship between economic growth and its impact on the environment and the global challenge this implies. Today once again, affordable housing, land use, and collectivity are the main societal

16. Lidwine Spoormans, W. de Jonge, D. Czischke, A. Pereira Roders. 2022. "Exploring visual language and typologies in Dutch midrise residential neighbourhoods." In *Proceedings 17th International Docomomo Conference: Modern Design: Social Commitment and Quality of Life,* eds. Carmen Jordá Such, Maite Palomares Figueres, Ana Tostões, and Uta Pottgiesser, (Valencia: Docomomo international, tirant lo blanch, 2022).

17. David Lowenthal, *The past is a foreign country* (Cambridge: Cambridge University Press, 1985), 8, 12.

18. Miles Glendinning, *The conservation movement: a history of architectural preservation; antiquity to modernity* (London: Routledge, 2013), 405.

19. Kevin Lynch, *What time is this place?* (Cambridge: MIT Press, 1971), 42.

20. Lidwine Spoormans, "Everyday Heritage - Identifying attributes of 1965-1985 residential neighbourhoods by involved stakeholders." (PhD diss., Delft University of Technology, 2023).

issues. How can we continue to build the city of tomorrow? And what can we learn from the futurist ideas of the past?

4.1. UTOPIA

The utopia of absolute mobility and interchangeability of constructions and functions was an appealing futuristic vision whose origins lay in Modernism but which later found clear expression in built form. The metabolism movement, akin to the aforementioned structuralism, proposed new systems and technology to create a society for free individual movement and development. While previously, the built city and architecture regulated human existence in public spaces with social norms, architecture was now to become a means by which people could control technology and machinery[21]. These ideas from Kisho Kurokawa's Capsule Declaration were realised in, for instance, the Nakagin Capsule Tower **(Fig. 3)**, an icon completed in 1972 and demolished in 2022. Moveable and adaptable individual units with minimal footprint were one ingredient to create a future of high mobility. An elevated three-dimensional structure would be the integrating system, bundling traffic, services and public functions, providing citizen pedestrians with protection from pollution and allowing free movement[22].

The technological visions and innovations applied in superstructures with hybrid programs have various forms and identities. Raised megastructures can be identified as 'bridge-buildings', but extensive ground-bound structures as 'neighbourhood schemes' share the same concept of multifunctional programs in a utopian urban structure[23]. Their visual language can be brutalist, as in Japanese metabolism examples, or explicitly high-tech, as exemplified by the 1977 icon Centre Pompidou **(Fig. 4)**.

4.2. CURRENT FUTURE PERSPECTIVE

As addressed in the previous paragraphs, the legacy after Modernism contains a multitude of spatial concepts and visual styles, harking back to previous elements, symbols and styles as well as utopian ideas, new systems and technologies. How should we consider this pluralism, in an already multi-layered built environment? According to Kevin Lynch, "the best environment for human growth is one in which there are both new stimuli and familiar reassurances, the chance to explore and the ability to return"[24]. Faced with the many contemporary challenges in our living environment, such as sustainability, climate adaptation, densification, equality and affordability, we cannot afford to disregard the present stock. Lynch offers design directions to unite the old, the nostalgic, the new, and the future. Accepting and juxtaposing a plurality of histories, structures, and formal languages into a 'temporal collage' is a model we can adopt and continue in current times.[25]

5. DOCUMENT TO DISCUSS

This paper has emphasised the need to shift focus to the architectural legacy 'Beyond Modernism' because, despite the recent surge in interest, these buildings are now threatened with demolition or drastic transformation. To

21. Yona Friedman, "De Mobiele architectuur," in *'Dat is architectuur' - Sleutelteksten uit de twintigste eeuw*, ed. H. Heynen, A. Loeckx, L. De Cauter, K. Van Herck (Rotterdam: Uitgeverij 010, 2004), 328-329.

22. Kisho Kurokawa, "Capsule Declaration," in Metabolism in Architecture, (1977/1969), 85.

23. Friedman, "De Mobiele architectuur," 330.

24. Guilherme Maia, "Urban futures of a recent Portuguese past: Francisco Conceição Silva and the Megastructures," In *Proceedings 17th International Docomomo Conference: Modern Design: Social Commitment and Quality of Life,* eds. Carmen Jordá Such, Maite Palomares Figueres, Ana Tostões, and Uta Pottgiesser, (Valencia: Docomomo international, tirant lo blanch, 2022), 754-755.

25. Lynch, *What time is this place?*, 42.





Figure 1. Piet Blom, Neighbourhood Kasbah, Groot Driene, Hengelo, The Netherlands. Completed in 1973. Photo © Lidwine Spoormans

Figure 2. Kees Rijnboutt and Sjoerd Soeters, Neighbourhood Hoptille, Amsterdam Zuidoost, Amsterdam, The Netherlands. Completed in 1981. Photo © Lidwine Spoormans





Figure 3. Kisho Kurokawa, Nakagin Capsule Tower Building, Tokyo, Japan. Completed in 1972 and demolished in 2022. Photo © Dick Thomas Johnson (2021) via Wikimedia

Figure 4. Richard Rogers and Renzo Piano, Centre national d'art et de culture Georges-Pompidou (Centre Pompidou), Paris, France. Completed in 1977. Photo © bynyalcin (2013) via Wikimedia.

prevent facing the same issues as the Modern Movement legacy, which is camouflaged at the risk of vanishing, the first step is documentation of international cases, movements, and developments. The themes and theories discussed in this paper aim to explore a framework for identifying and discussing similarities and differences in their underlying ideologies and contexts. This paper is also a call for action, inviting academics and practitioners to join the network and contribute to this urgent topic. ■

BIOGRAPHY

Lidwine Spoormans is a researcher and lecturer of Heritage & Design at TU Delft since 2011 and has a background in architecture practice. Her research fields include housing renovation, intervention methods, and young heritage. She organised a series of graduation studios on the topic of housing transformation. She is a board member of Docomomo international and MC member of the COST Action European Middle-Class Mass Housing. In 2017, she launched the digital platform www.love80sarchitecture.nl. Her PhD thesis titled "Everyday Heritage - Identifying attributes of 1965-1985 residential neighbourhoods by involved stakeholders" aims to bridge the gap between listed heritage and everyday architecture.

PORTUGUESE ARCHITECTURE IN THE 1980S: INTO A DREAMLIKE EVERYDAY LIFE

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ABSTRACT

Viewed by Fredric Jameson as an expression of "late capitalism", post-modernism is in Portugal delivered with a sense of something that is booming. Portuguese architecture was, in the aftermath of the 25th of April 1974 Revolution, trying to move beyond modernism. Its heart lied with the pop art culture, echoing Andreas Huyssen's "After the great divide", Sylvian Harrison's "Pop Art and the origins of post-modernism", or Marianne DeKoven's analysis of "the sixties and the emergence of the postmodern". Postmodernism in Portugal thrived in what was repressed in the 1960s and now has an opportunity to rise. It was the public expression of the democracy. Throughout the 1980s, post-modernism was the expression of a new emerging political state: a large number of schools, cultural centers, fire stations, libraries, were built. The epitome of that process was the Casa dos Bicos (1983) by Manuel Vicente and José Daniel Santa-Rita, the Matosinhos Town Hall (1987) by Porto's architect Alcino Soutinho, the Portuguese Pavilion for the Expo'92 in Seville (1992), by Manuel Graça Dias and Egas José Vieira.

These buildings are the figureheads of hundreds of designs. In magazines and catalogues we find a stream of plastically incorrect, hybrid architectures, which reflect the will to transport architecture into the public arena. The revolutionary commitment gave way to the commitment of the individual. The censorship to be abolished was the "censorship of pleasure".

This paper aims to reflect on how Portuguese architecture was, in the 1980s, a cathartic way of experiencing everyday life. Hence the stream of neo-vernacular collages, twisted classicisms, zoomorphic references, cartoon-like architectures, all children of the 1974 Revolution. They scream "l' imagination au pouvoir" or "sous les pavés, la plage". Into the heart of a dreamlike everyday life.

1. INTRODUCTION

Viewed by Fredric Jameson as an expression of "late capitalism", and frequently as a mix of childish whims with evil commercial goals, post-modernism was in Portugal discovered and delivered with a sense of something that is booming.

Portuguese architecture was, in the aftermath of the 25th of April 1974 Revolution, trying to move beyond modernism. Its heart lied with the pop art culture, echoing Andreas Huyssen's "After the great divide"[1], Sylvian Harrison's "Pop Art and the origins of post-modernism"[2], or Marianne DeKoven's analysis of "the sixties and the emergence of the postmodern."[3] More than reflecting big commerce, postmodernism in Portugal thrived in what was for political reasons repressed in the 1960s and now had an opportunity to rise. It was, in fact, the public expression of the democracy that followed the 25th of April 1974 Revolution. It captured the moment when Portugal aimed to reinvent itself, no longer the center of an Empire, but a small country with a lot to prove.

As we will see, throughout the 1980s, post-modernism was the expression of a new emerging state and municipality power: a large number of schools, cultural centers, fire stations, libraries, were built beyond modernism tropes, as a liberated, sometimes chaotic, architecture.

The epitome of that process was the intervention in Casa dos Bicos ("House of Spikes", 1983) by Manuel Vicente and José Daniel Santa-Rita, which was part of the official state program of the 17th Council of Europe Art, Science and Culture Exhibition and the Matosinhos Town Hall (1987) by Porto's architect Alcino Soutinho. The Portuguese Pavilion for the Expo'92 in Seville (1992), by Manuel Graça Dias and Egas José Vieira, ended this cycle. In magazines, catalogues and booklets of that time, we find a stream of plastically incorrect, hybrid architectures, which don´t translate market values but the will to transport architecture into the public arena.

This paper aims to reflect on how Portuguese architecture was, in the 1980s, a cathartic way of experiencing everyday life. I have done research at the archives of the architects that I have considered seminal for this paper, the personal ones and at the Fundação Marques da Silva (Porto) and Faculdade de Arquitectura da Universidade do Porto. I have extensively interviewed said architects, historians and critics. I have visited the buildings, studied the designs and researched all the literature that was published on this subject, in that era and after, on architecture and on relevant adjacent matters. The theoretical framework of this paper relies on the aforementioned works of Fredric Jameson[4], Andreas Huyssen, Sylvian Harrison, Marianne DeKoven, and Heinrich Klotz's *The History of Postmodern Architecture*, which I will refer later on.

In the research I was confronted with a stream of neo-vernacular collages, twisted classicisms, pop distractions, zoomorphic references, cartoon-like architectures, all children of the 1974 Revolution. They scream "l' imagination au pouvoir" or "sous les pavés, la plage". Beyond modernism, into the heart of a dreamlike everyday life.

This paper surveys these long-forgotten examples of very crude, in-your-face designs and buildings, a completely unchartered and unloved territory.

1. "Pop Art (…) is the key movement that starts the impulse towards the post-modern". Andreas Huyssen, *After the great divide: modernism, mass culture, postmodernism* (Indiana: Indiana University Press, 1986), xi.

2. "The critical consciousness generated by *pop* (…) guessed or represented a parallel with the formulations later on made by postmodernism". Slyvia Harrison, *Pop Art and the origins of post-modernism* (Cambridge: Cambridge University Press, 2001), 4.

3. Marianne DeKoven's main idea it's that the "radical movements" of the 1960s are the end of the utopian pulse of modernism then giving place to a "commercial, popular, populist, subjectivist, multiple and diffuse, egalitarianism" that defines postmodernism. Marianne DeKoven, *Utopia Limited. The sixties and the emergence of the postmodern* (Durham and London: Duke University Press, 2004), xvi.

4. Heinrich Klotz, *The history of Postmodern Architecture* (Cambridge, Massachusetts; London, England: The MIT Press, 1984), xiii.

They are children of the 1974 Revolution, not really of the market forces. Even though they mean a distancing from militant political commitment in favour of a mundane enjoyment of everyday life.

According to Samuel P. Huntington, with the 1974's Carnation Revolution, Portugal began the "Third Wave Democracy", a process which would be soon followed by democratic transitions in Spain, Latin America and Asia Pacific countries; and, with the collapse of the Soviet Union, Eastern Europe's countries. Democracy started happening in Portugal after the revolutionary period, and architecture couldn't afford to be a neutral vessel. As the dictatorship was ruled out, technocracy wasn't yet an option. Portuguese architecture in the 1980s was the wild expression of a new-born regime, in a very brief and full of certainties period, just like post-modernism itself.

2. CONTEXT

At the beginning of the 1980s, the option for a liberal democracy stabilized the political process. Traditional Portuguese expressions were rescued by the children of the Revolution, entangled with the desire to a cosmopolitan world. When the singer António Variações released, in 1982, "Povo que lavas no rio" ("People who wash in the river"), a mythical song by Amália Rodrigues, fado was reintroduced as popular music and the rejection of Portuguese traditional iconography, that was felt in the aftermath of the Revolution, ended. Architecture played a major role in this process because it enabled a physical experimentation of what was emerging in various cultural frameworks.

That was essentially the time of Lisbon, the capital of the Empire which in its last African configuration ended in 1974-75. In the aftermath of the Revolution, the "Porto School" was in the shadow, reluctant and defensive, even though some cracks were showing, as we will see.

Generations of architects that had worked during the dictatorship had then a sense of freedom, and a new generation was eager to mark its territory. Manifestoes, publications and exhibitions poured in, trying to capture the "new architecture" that would rise beyond modernism. The revolutionary commitment gave way to the commitment of the individual. The censorship to be abolished was the "censorship of pleasure".

The main event was Depois do Modernismo (After Modernism, 7-30 January, Sociedade Nacional de Belas Artes, Lisboa, 1983), encompassing architecture, visual arts, fashion, dance-theatre and music. It had a large public repercussion and unexpectedly projected architecture to the centre of the cultural debate.

This period of democratic and cultural rebirth was lived in a postmodern climate. Postmodernism allowed architecture to connect with the theoretical debates. Post-modernity was a lived, almost tactile condition. And what several practices had in common was the mixture of "high" and "low" cultural forms with local or international implications. In opposition to modern culture, the mundane was the pulsating element, the dilettante ubiquity replaced the political statement, pleasure was the ideology.

One of the unexpected consequences was that visual culture, architecture in particular, gained ground against literature, which is the cultural dominant in Portugal.

3. PUBLIC BUILDINGS: CASA DOS BICOS (1983) AND THE MATOSINHOS TOWN HALL (1987)

The cultural openness of the new democratic regime was all over the Casa dos Bicos intervention by Manuel Vicente and José Daniel Santa-Rita. The representation of democracy gained form in the Matosinhos Town Hall designed by Porto School's architect Alcino Soutinho.

The Casa dos Bicos rehabilitation was an experience on heritage that brought the Asian work of Manuel Vicente to the historical centre of Lisbon. Having worked in Macau since 1962 (and with Louis Kahn in 1968 and 1969), the Casa dos Bicos was a transposition of the theory and practice developed in Macau to a heritage building, which helps to explain the big controversy it created. The reconstruction of the Casa dos Bicos, ruined by the 1755 Great Earthquake of Lisbon, was proposed according to existent iconography. The reconstitution of the "spikes" façade did not reproduce, however, an historical truth but instead created an ambivalent, playful space. The new-old façade of the "spikes" was disrupted by the surreal design of the window frames, by António Marques Miguel, and by the introduction of eccentric elements such as the big stairway in the interior or the glass pane in the rear façade. It was neither a "reconstitution" following criteria of "authenticity", nor the Venice Charter tradition of distinguishing the old from the new. In the Casa dos Bicos – renovated in 2012 to house the José Saramago Foundation – we are at the heart of a Portuguese version of postmodernism; an elaborate game of mirrors, a dreamlike atmosphere.

By the mid-1980s, Porto's architecture was well established and had in Álvaro Siza a protagonist with a growing international presence. Porto remained "loyal" to the modern tradition and was within this culture that confronted the challenges of the new trend. However, in the Matosinhos Town Hall, with some scandal, Alcino Soutinho adopted classic and modern architectural devices in a Collage City manner, aiming to create a civic building. The façade – the term was again applicable – is characterized by a wavering portico of classical inspiration, although the atrium is an open space that expands horizontally and vertically. The building's neoclassical "mask" was contradicted by the modernist interior; the ochre density of the volume disappeared in the blue-tiled color of the pillars and walls of the atrium. The side façade was an exercise in textbook postmodernism: a fractured volume with a curving porch that "falls" over the stairs.

4. POST-MODERNISM IN THE MEDIA: A CHRONOLOGY TO DISINTEGRATION

But beyond these "iconic" buildings, there was something deeper and spread-out going on. In the magazines, catalogues and booklets of that time, one can contemplate a long stream of very challenging buildings and

designs. They portrait a wild, "barbaric" period in Portuguese architecture, that is difficult to love or even to understand.

In these drawings and designs it is clear the eclectic surge, an epidemic of form, the joy of confusion, the use of the multiples resources of architecture. This expansion matches what was going on in the streets and in the daily life: the desire of freedom. Architecture was seen as a stage design for a liberated everyday life.

In the "Depois do Modernismo" catalogue, Michel Toussaint, the architecture curator of the exhibition, criticizes modern architecture, enumerates the postmodernism themes and concludes: "Against purity, against the morals of cleanness, against the anonymity we have been imposed". According to Luis Serpa, the chief curator of the event, the initiative started from the awareness that "the generational moment to take a non-aligned viewpoint with the dominant modernism had arrived"; the main objective was "to know where we can stay when everything suggests that we are no longer anywhere".

The projects displayed at "Depois do Modernismo" were therefore tentative but nevertheless confident in the flourishing state of architecture as an artistic expression. They were shown in a group of cardboard "little houses", echoing the "Strada Novissima" of Paolo Portoghesi's 1980 Venice Biennale.

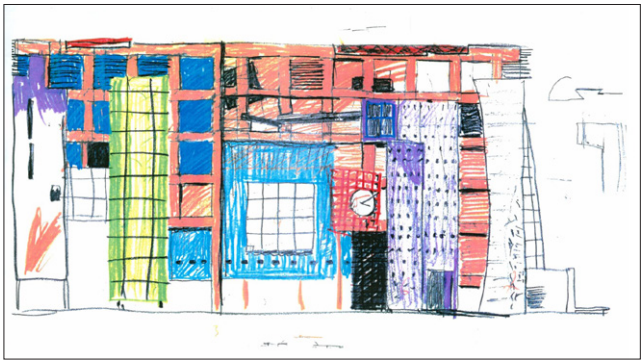
The neo-avant-garde choreography of "Depois do Modernismo" needed opposition and the non-participation of the "Porto architects" played an essential role in the event's mythology. By sending a text analyzing "the evolution of Portuguese architecture" they rejected the concept of the event and refused to participate.

Some examples taken from the catalogue provide common themes of that era:

- In the "Architectonic Complex" in Viseu, by João Vasconcelos, the modernist elaboration of the axonometric model is undermined by the "baroque angel" that floats in the top of the building.
- The Fire Station in Ericeira, by José Santa-Rita Fernandes, is one of many designs of that period with that program. Strangely, it seems to be designed as the luxurious scenario for the "good life".
- Luiz Cunha, from a previous generation, proposes a "Non Bureaucratic Plan for the reconstruction of the City of Angra do Heroísmo, Terceira, Azores": a giant ring road for the rebuilding of the island. "Non-bureaucratic", as mentioned, but somewhat threatening. More than a utopia, it looks like a dystopia.
- In the "Project" by Tomás D'Eça Leal, the influence of Aldo Rossi and of the neo-rationalists is evident, as it was common in that years: "pure" forms rendered melancholic and festive at the same time.
- The "Architectural drawing (Macau)", by Vicente Bravo Ferreira, a wavy and monumental structure has some surrealist tones, not far from the Delirious New York-era projects.

The issue no. 149 of the magazine *Arquitectura* also published in 1983 and dedicated to the Novíssimos – the "very new" – has many participants in







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common with the Depois do Modernismo exhibition and shares the same goals. José Manuel Fernandes, the editor, wrote about a "lost generation (…) as a coherent and collective project" but stresses what he understands as "a greater attention to the formal, symbolic, vernacular, historical aspects of architecture".

Some examples displayed as a mosaic:

- In the "Urban Intervention in Castro Verde", by Victor Mestre, there is a recurrent emphasis on axial and monumental composition.
- In the "Housing in Chaves", by João Vieira Caldas, classical motifs by way of collage return to domestic architecture.
- In the piece "Columns" by Manuel Graça Dias, a collection of columns from Macau, Lisbon and Chaves aims to say that all is relative; all is beautiful.

Figure 1 Manuel Vicente, José Daniel Santa-Rita, Casa dos Bicos (House of Spikes), Lisbon, Portugal, 1981-1983. Archive: Fundação Instituto Marques da Silva.

Figure 2 Alcino Soutinho, Matosinhos Town Hall, Portugal, 1980-1987. Archive: Fundação Instituto Marques da Silva.

Figure 3 Manuel Graça Dias, Egas José Vieira, Portuguese Pavilion Expo'92, Seville, Spain, 1989-1992. Archive: Fundação Instituto Marques da Silva.

- In the set of proposals by Manuel Lacerda, we return to Rossian motifs of classical inspiration idealistically trying to recapture a lost urbanity.

In the issue no. 3 of the *Arquitectura* Portuguesa magazine (1985), dedicated to Arquitectos Pioledo and in the catalogue of the New Architecture in Trás-os-Montes, an exhibition of the same group of architects (with Graça Dias, Egas José Vieira and Júlio Teles Grilo), held in 1987, in La Coruna, Spain, we find a display of postmodernist architecture.

The Pioledo office, created in Vila Real by António Belém Lima, was a singular event in the history of Portuguese architecture. For the first time it reunited a collective of architects from the Porto and Lisbon schools working out of the main cities. This "experiment" is registered in these two publications. Some examples displayed as a mosaic:

- The Library in Alijó, by Graça Campolargo, crosses images of the classical tradition, a bold approach that is recurrent in the Pioledo group.
- Also by Campolargo, the "Pharmacy" in Mateus has a modern plan and traditionalist elevations in a "double coded" approach.
- The "Stage" in Sabrosa, by Carlos Baptista, is a postmodernist evocation of agitprop constructivist architectures, also recurrent in the Pioledo fashion.
- Sometimes these exercises take an almost cartoonish character as it happens in the "José Caldeira House", Vila Real, by Albino Teixeira, which looks like a locomotive made out of classical motifs.
- In the "Handicraft Centre", Chaves, Manuel Graça Dias shows no interest in classical imagery but instead tries zoomorphic models, not of pet animals but of wild animals of unknown origin.
- The work of Júlio Teles Grilo, like the "House" in Chaves, has this telluric expressionism, very far from modernist hygienism or any other canonical tradition.
- The drawings of the "Mirandela House", by Egas José Vieira, are a demonstration of a baroque use of modernist plans and imagery, in juxtaposed and intersected spaces, not really open or "libre".

5. THE PARTY IS OVER: THE PORTUGUESE PAVILLION FOR THE EXPO'92, SEVILLE

The "Depois do Modernismo" event as a generational project culminated in the Portuguese Pavilion for the Expo'92 in Seville, by Manuel Graça Dias and Egas José Vieira, two architects already mentioned. This building was a synthesis of the spatial and graphic research developed over the 1980s by its authors, combining erudite geometries with pop textures, architectural and decorative elements, without distinction or hierarchy. Being an ephemeral pavilion, the context was perfect for an experimentation that was understood as an opportunity to expose Portugal as a proud mixed and hybrid country. As Portugal is the result of many contradictory historical layers, so the building was full of fragments and accidents and "stories" to tell. Its anti-

monumentality also aimed to express a country without colonialist or imperialist residues but, in any case, and in its own way, European. The Seville Pavilion was also a singular appropriation of postmodernism: a patchwork of ideas, high-tech architecture made with poor materials, apparently improvised steel structures, and a chaotic decorative use of the traditional blue-tiles.

The Seville Pavilion expressed the idea of a modern country, soon after Portugal joined the CEE/EU (1986). A very revealing photograph show us the by then prime-minister Cavaco Silva rejoicing at the model display of the structure while the Spain prime-minister Filipe Gonzales looks at it very attentively.

6. CONCLUSION

Portuguese postmodernism was closer to the temporal ambivalence and fictional sensibility presented by Heinrich Klotz in *The History of Postmodern Architecture* than the taxonomic surveys portrayed by Charles Jencks. As Klotz wrote in its attempt to define postmodernism, "not only function but fiction as well"[5], or what he called the "fictionalization of architecture." This precept permeates his reading of the movement, and it's a crucial key to understand the Portuguese experience.

All the cases described or mentioned in this paper aimed to cross architecture with other artistic expressions, in an almost delirious state. They had a sense of urgency, an almost violent desire to intervene in the public and/or in the intimate arena. Frequently they are, at the same time, playful and sinister, festive and somber.

The body of architecture was subjected to mutilations, dissonances, reconstitutions, fragmentations. As a consequence, the human body was put to a test and architecture became a trial, an ultimate experience. Architecture dressed up for the night: with pediments, porticoes, arches, round openings, columns, flags, friezes, rainbow colors, accidental geometries, constructivist dilacerations, free-style traditionalisms.

The anxiety but also the playfulness of that era is expressed in the photograph of António Variações with "scissor eyes", and in the drawing of the "concrete gums" of Graça Dias, preparing to bite. The 1980s in Portugal were the stage of countless mundane, populist and turbulent buildings and designs, almost authoritarian in their will to communicate. Democracy was finally at work. ■

5. Heinrich Klotz**,** *The history of Postmodern Architecture*, 5.

BIOGRAPHY

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IRONY AND EXPERIMENTATION IN JARETTI AND LUZI'S ARCHITECTURE (1960-1974)

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ABSTRACT

Sergio Jaretti (1928-2017) and Elio Luzi (1927-2006) were active in Turin, Italy, from the mid-1950s onwards. Their work, both praised and criticised over time, is today at the centre of a process of investigation and critical re-evaluation, which is leading to the recognition of its density of themes and meanings.

In one of their first buildings, the Obelisk palace (1954-59), the two architects express, in a provocative, ironic and surreal manner, a radically critical position concerning the orthodoxy of the modern movement. After having underlined their position, Jaretti and Luzi pursued their research between the 1960s and 1974 (when their professional paths parted), with an approach at times appearing uniquely analogous to certain northern European works. This paper, availing itself of archival and bibliographic research and of the direct analysis of the buildings, focuses on this phase of the architects' production, including outstanding works such as the via Curtatone house (1962-65), the Pitagora towers (1962-68) and the Mirafiori tower (1970-74). We aim to underline the experimental features of such works, which emerge both in discontinuity and continuity with some of the themes of the modern movement. Indeed, on the one hand, one can notice the adoption of a renewed *plan libre*, which leverages the enjoyability of living spaces, even in the relationship with the outside environment; and on the other hand, one can identify an expressive use of materials, which rejects any mythologization of technological innovation.

1. THE BEGINNINGS

"I am not a rationalist, but I am a functionalist": this statement by Luzi is emblematic of an attitude free of ideological or formalistic superstructures that accompanied the entire oeuvre of the architects from Turin Sergio Jaretti Sodano (1928-2017) and Elio Luzi (1927-2006). The careers of the two architects unfolded almost entirely in north-west Italy: after graduating with Carlo Mollino from the Faculty of Architecture at the Politecnico di Torino and some very early work carried out separately, in the mid-1950s Jaretti and Luzi formalised a partnership that would last until 1974, when their paths separated. Their work together was almost entirely dedicated to the theme of the residence and produced only a few, mostly unsystematic written reflections.

The work that ensured their immediate recognition at a local level and some resonance (and controversy) at a national level[1] was the Obelisk palace (1954-59)[2] in Turin. The building featured a tight articulation of interior spaces, flats organised on several levels or with double-height ceilings, and no repetitive floor plan. Staircases, mezzanines and perspectives from interior balconies, through to the rooftop "belvedere", multiply the viewpoints and the possibilities of enjoying the space, reinterpreting some recurring elements of the villa typology. These distributive features, however, took a back seat in the general perception of things compared to the completely unorthodox appearance of the building. An envelope "continuous and flexible like human skin"[3], made of artificial stone elements, characterises the building, evoking forms of Catalan modernism and aspects of Wright's research. It was a real virtuosic tour de force for both designers and construction companies. The architects openly stated their intention to move away from what was perceived as a stale and academic late-rationalism, with a touch of irony and a certain surrealism. They weren't alone: in 1957, the publication of the Bottega d'Erasmo and other works by Gabetti and Isola and Giorgio Raineri in *Casabella-Continuità*[4] gave rise to controversy over the "Italian retreat" from the modern movement[5] and introduced the term "neoliberty" (greeted with some annoyance by those involved) into the debate[6].

Considered in the context of Jaretti and Luzi's professional and cultural journey as a whole, the initial venture of the Obelisk palace seemed to be a demonstrative element, both for the architects and for the construction company (Manolino) with its craftsmen. The architects continued their unconventional research with relatively simpler solutions in other buildings during the 1950s (the Manolino house in Chieri, 1955-56; the house in via Pietro Cossa, 1956-57; the house in piazza Statuto, 1958-59[7]).

2. HOUSES, "STIMULATING DOMESTIC LANDINGS"[8]

In the 1960s, during the intense building activity that accompanied the Italian economic boom, the two architects continued their research into residential themes. It can be difficult, considering formal aspects alone, to establish links between the works of the first period and those of the decade that

1. Paolo Portoghesi "Dal neorealismo al neoliberty." *Comunità*, no. 65 (December 1958): 79.

2. Maria Luisa Barelli and Davide Rolfo. *Il palazzo dell'Obelisco di Jaretti e Luzi. Progetto e costruzione*. Roma: Gangemi, 2018.

3. Elio Luzi "L'architetto." In *Le Case Manolino*, edited by Luca Barello, Andrea Luzi, 31. Buttigliera d'Asti: Il Tipografo, 1996.

4. *Casabella-Continuità*, no. 215 (April 1957).

5. Reyner Banham "Neoliberty. The Italian retreat from modern architecture." *Architectural Review*, no. 747 (April 1959): 232-235.

6. Eugenio Gentili, Ernesto N. Rogers "Ortodossia dell'eterodossia." *Casabella-Continuità*, no. 216 (September-October 1957): 2-4; Gabetti R., Isola A., Rogers E.N. "Risposte ai giovani," *Casabella-Continuità*, no. 217 (November-December 1957): 2 and 69. For a comprehensive reconstruction of the events, see D'Amato C. "La «ritirata italiana» dal Movimento Moderno. Memoria, storia e questioni di stile nell'esperienza del neoliberty," and Cellini F. "La polemica sul neoliberty," *Controspazio*, no. 4-5 (October-November 1977): 50-51 and 52 respectively.

7. Davide Rolfo "Il fascino discreto della borghesia. Costruire su un lotto difficile. Piazza Statuto, Torino," in *Storie di case. Abitare l'Italia del boom*, edited by Filippo De Pieri, Bruno Bonomo, Gaia Caramellino and Federico Zanfi, 397-415. Roma: Donzelli 2013.

8. Roberto Gabetti "Opera autentica, piccola, piccola." In *Le Case Manolino*, edited by Luca Barello, Andrea Luzi (Buttigliera d'Asti: Il Tipografo, 1996): 12.

followed: however, several lines of continuity can be traced in the pursuit of personalisation of living spaces and in the experimental tension focused on the technical and material dimension of design.

At the same time, however, we can see a decisive and highly original progression beyond that, in a direction that seems to find points of contact with certain experiences outside Italy. In addition to the houses in via Saluzzo (1960-62) and corso Orbassano (1961-62), and the "sister" villas that the two architects built for themselves (1963-65), among the works completed during this period, the house in via Curtatone (1962-65) and the Pitagora towers (1962-68) best highlight the most innovative features of this research, which also relies on an ironic and astute interpretation of building and town-planning regulations.

Exploiting the contradictions between the maximum volume allowed by building regulations and the smaller volumes actually permitted by the new Master Plan of Turin (1959)[9], the two architects organised the project according to what they called a "desirability diagram", emptying the buildings at the base and concentrating the habitable surfaces increasingly on the upper floors, with flats that were progressively sunnier and quieter, as well as more commercially attractive.

Certain themes typical of the Modern, from which the young Jaretti and Luzi seemed to have ostentatiously distanced themselves from the Obelisk palace, reappear in a manner revisited to the point of being almost unrecognisable, in the search for expressiveness and the humanisation of architecture: the pilotis plan, the distinction between structure and non-bearing enclosure, windows *en longueur*, the *plan libre*, the intensive building developed vertically.

Having abandoned the traditional bourgeois atrium of the multi-storey house, the ground floor became a unique pilotis floor, with cylindrical reinforced concrete columns flanked by a multitude of other brick columns, introducing an element of spatial complexity and at the same time functional ambiguity, as their actual reason for existing (they house the ducts for the systems, downpipes, rubbish chutes) was not immediately comprehensible. In the house on via Curtatone[10] this space is articulated, at different heights, around two circular water tanks. Their roundness is reflected in the walls around the staircase and the lift shaft. It is a joyful artificial landscape, rich in stimuli, which welcomes and accompanies the inhabitants, and was conceived in direct relation to the outdoors.

The "tree-like" structure of these buildings, expanding upwards, disintegrated façades, decomposed volumes and allowed for great freedom in the organisation of the plans of the different floors (there is no "standard plan"). In via Curtatone, the flats, which are all different, still seem to reflect the villa typology: inevitably side by side, but separate in their singularity; designed for unknown inhabitants, trying to guess their needs and desires; characterised by windows and large balconies, but generated by a centripetal plan which, seeking an intimate dimension of living, is organised on each floor around the distribution spaces and internal cloisters.

9. "Il Piano Regolatore Generale di Torino 1959", *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino*, no. 3 and 4 (March and April 1960).

10. Marisa Cerruti "Edifici residenziali di Jaretti e Luzi." *L'architettura. Cronache e storia*, no. 154 (August 1968): 300-303.

The same themes return with ever greater intensity in the Pitagora towers[11]; the designers adopted an isolated block type, ensuring ventilation and multiple views. The design envisaged the successive realisation of three tower buildings, linked by a continuous porticoed basement. In the tower at the corner with piazza Pitagora, in particular, the irregularly shaped plot required the design of a multi-faceted volume, ruling out all standardised composition of the façades. The construction system, similar to that of the building in via Curtatone and many other constructions by Jaretti and Luzi in the same years, also took on the role of defining a common language, flexible and adaptable to the different situations of a large building site. The load-bearing structure in reinforced concrete and the brick cavity walls are exposed, as they are in many other buildings of the time. But this current technology is reinterpreted here in an entirely original way: the circular columns adopted on the pilotis floor, slender and therefore paired two by two, produce a sort of fragmentation and intensification of the sightlines, and are connected to the square-section pillars of the upper floors with a DADO system. For the cavity walls, Jaretti and Luzi "invented" a solution that was both economical and capable of alluding to a masonry tradition well rooted in Piedmont, with the adoption, for the outer wall, of solid facing shiner bricks, with the frog (intended in the normal position to house the mortar) shown with a decorative function. In order to keep the roller shutter boxes flush with the interior walls, the thin cavity walls (30 cm) were thickened in correspondence with the openings and projected towards the outside, articulating the design of the elevations by means of subtle and continuous variations. This solution was complex to implement and, having initially been made possible by an artisanal organisation of the building site, was abandoned in the third and last tower, built almost in the Seventies.

Every solution chosen was adopted on the basis of functional reasons and incontrovertible, almost "natural" chains of logic, applying a "method [of design] of 'fighting collaboration' [...which] led us by painful but inexorable degrees to discard all solutions that, having only formal arguments on their side, failed to prevail over the enemy collaborator, and to accept, sometimes with repugnance, choices based on 'objective' arguments"[12]. A similar reasoning would later lead Luzi to highlight the need to dispose of every preconceived idea on both the "construction elements" and the "spaces" they delimit, abandoning the terms generally used to define them. In order to convey the idea, he stated: "not 'windows' but holes to catch the light, so never a 'window' (a done and standard idea) but something different in each specific case"; and "cancel labels such 'balcony', 'living room' [...] and reinvent 'space for being outdoors in the dwelling not at ground level', 'a place to see friends, or carry out activities in the home during free time, etc.'"[13]. Tracing human functions and activities has no "purifying" connotation here, on a formal level, but rather that of responding appropriately to the implicit demands of the inhabitants. In these ways, however, the two architects developed a figurative language that was to become their distinctive stylistic signature.

11. Jaretti Sodano S., Elio Luzi "Le torri Pitagora a Torino." *L'architettura. Cronache e storia*, no. 131 (September 1966): 286-291; Jaretti Sodano S.,Luzi E. "Turmhäuser in Turin." *Baumeister*, no. 5 (May 1967): 576-578.

12. Sergio Jaretti Sodano, Elio Luzi "Le torri Pitagora a Torino." *cit.*: 287.

13. C. Torta, C.S. Zorzan *Jaretti & E. Luzi testimoni ed artefici dell'architettura piemontese del dopoguerra*. degree thesis, Politecnico di Torino, Faculty of Architecture, a.y. 1981-82, supervisor C. Ronchetta, co-supervisor M. Parenti.





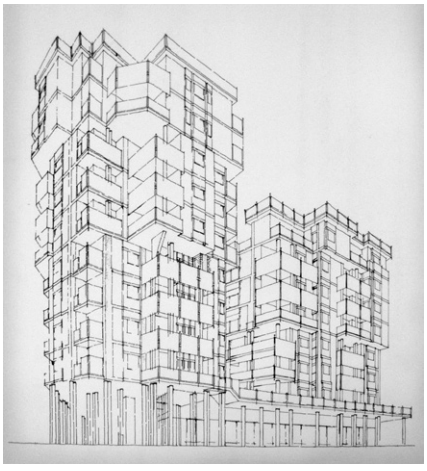


Figure 1. Jaretti and Luzi, the via Curtatone house, Turin, Italy (1962-65) (on the left, photo by Lucio Beltrami; on the right, photo by S. Cavallo, in Jaretti Archive, Politecnico di Torino).

Figure 2. Jaretti and Luzi, the Pitagora towers, Turin, Italy (1962-68). A drawing of the two first towers (Jaretti Archive, Politecnico di Torino).

Fig. 3. Jaretti and Luzi, The Mirafiori tower, Turin, Italy (1970-74). A detail of the façade.

3. "TECHNICOLOUR FOR THE CITY WITHOUT QUALITY"[14]

In a later phase, between the end of the 1960s and the early 1970s, Jaretti and Luzi's confrontation with the demands of student protest and their reflection "on the limits of a professional activity that is increasingly perceived [...] as a place of mediation of decision-making processes implemented outside and above the field of expertise"[15], led the two architects to explore new approaches, as in the residence in via Ormea (1967-70), the residential and commercial building in via Breglio (1969-71), the residential complex in strada del Drosso (1970-74) or the Mirafiori tower (1970-74), the last of which was to be completed jointly. Despite a growing mistrust in the

14. Sergio Jaretti "Technicolor per la città senza qualità." *Modo*, no. 39 (May 1981): 38-41.

15. Gustavo Ambrosini and Giovanni Durbiano "Architetture di Jaretti e Luzi, 1955-74, 1975-95." *Edilizia popolare*, no. 242 (November-December 1995): 34-64.

architect's possibility to influence the city's growth processes, Jaretti and Luzi did not renounce the use of alternative and, to some extent defensive, strategies in the face of the rigidity of urban planning constraints and the decline in the level of skill possessed by the workforce.

The ironic attitude towards any ideological or bureaucratic superstructure seemed to transcend into, at times, bitter sarcasm: experimentation with the use of colour and "catalogue" materials took the place of elaboration "based on design". In the architecture built during these years, the distinction between the supporting elements and volumes supported becomes more and more evident, bringing to the fore a structural grid with a rigid orthogonality.

In the Mirafiori tower, in particular, the cylindrical pillars now almost adhere to the outer walls, highlighted by the chromatic contrast between the black-painted concrete and the concrete block façade walls originally conceived to shimmer in natural light. Unrestrained use of colour also characterises the balcony parapets, the shutters and, as a further pop element, the cylindrical coloured fibreglass cabinets highlighted on the balconies. The dense composition, set on a predefined floor plan, culminates in a paradoxical rooftop pool covered by a parabolic vault.

That of Jaretti and Luzi is a mocking approach that does not represent a formal rejection of the themes of Modernism (as upheld by most post-Modernist interpretation), but a last ditch attempt to humanise a context, both in terms of design and regulation, in which the degrees of freedom of the individual – designer and inhabitant – are increasingly reduced.

4. LOOKING AROUND

Jaretti and Luzi were never interested in a structured theoretical elaboration, which they always regarded with suspicion. Part of their own expressive research seems, instead, to be based on the careful and critical analysis of the day-to-day reality of the profession and of regulatory constraints, on the observation of changes in building production and construction sites.

They did not work within the academy, but for a brief, late exception in the case of Luzi, and their works were only partially published. This unabashed "splendid isolation" which, in retrospect, they proudly claimed[16], did nothing to facilitate the consideration of their works by critics.

The two Turinese architects have always moved with great freedom between the dogmas and anti-dogmas of modern architecture; their re-elaboration of some typical elements of Modernism poetics does not derive from a preconceived distancing, but from a profound critical and liberal spirit, and from an attitude that always places man's "pursuit of happiness" at the centre.

Some aspects of their work present similarities with the coeval research of architects such as Aldo van Eyck and, above all, Herman Hertzberger. There are no documented exchanges between Jaretti and Luzi and the Dutch group, whose architectures began to be published in Italy, apart from a few exceptions[17], in the second half of the 1960s, and no evidence that

16. Sergio Jaretti "Figli di un dio minore nell'architettura del Novecento a Torino." In *Quaderno del Pensatoio*, no. 22 (February 1988).

17. Jan van Goethem "Casa dei ragazzi ad Amsterdam." *L'architettura*.

the two Turin architects knew Habraken's seminal book[18], published in Italian only in 1974. However, it seems interesting to highlight a certain "evolutionary convergence" going beyond the Modern Movement, which was more methodical and "scientific" in the Dutch case, and more intuitive in the Italian. Besides the similarity of certain constructive and formal solutions (DADO-column system, exposed brickwork or concrete blocks), an expressive use of materials that rejects all mythologization of technological innovation and the idea of technical progress as a value in itself, as well as certain predilections in the organisation of space, it is the humanistic approach and faith in the possibilities of architecture to interpret changes in society and improve human life that seems to unite the work of Jaretti and Luzi and the Dutch architects.

Some research documents, following the separation of the two architects, still show the interest (at least of Jaretti) in an open design approach, with reference to the experiences – as well of Habraken – of Alexander, Erskine and Kroll[19].

The research conducted so far does not permit us, at least for the moment, to draw certain conclusions, but it opens up the complex question of placing Jaretti and Luzi's work in not only an Italian but a European scenario. At the same time, the research contributes to highlighting the complexity of the evolution of Modern themes, through non-obvious paths. ■

18. Nicolaas John Habraken *Supports. An Alternative to Mass Housing*. London: The Architectural Press, 1972; first edition in Dutch: *De dragers en de mensen. Het einde van de massawoningbouw*. Amsterdam: Scheltema & Holkema, 1961). *Cronache e storia*, no. 72 (October 1961): 386-402.

19. Sergio Jaretti, Elisabetta Calderini and Gianluca Cosmacini. *Quaderni del Pensatoio*, no. 1 (March 1983), *Partecipazione, qualità, persona*.

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PARQUE GUINLE POST-MODERN?

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ABSTRACT

Parque Guinle is a residential complex in Rio de Janeiro, with its master plan and initial buildings designed by Lucio Costa. Despite the original 1948 master plan envisioning six buildings, Costa only constructed three blocks in the 1950s. The design for the remaining buildings was undertaken by the brothers Milton, Marcelo and Mauricio Roberto, over ten years later, between 1954 and 1963. The temporal gap between the two groups of buildings designed within the same complex allows for an intriguing comparative analysis. Roberto brothers' buildings incorporated a revision of modern paradigms, reexamining fundamental compositional elements under a new formal interpretation.

One aspect becomes clear and illustrates the transformation of a fundamental design principle into the identity of Brazilian architecture – the pilotis. The concept of pilotis was explored by Costa to its full potential in Parque Guinle, configuring these spaces as a flexible element, an articulator between the ground and the building, fullness and emptiness, and public and private. Costa had already interpreted Corbusier's lessons, incorporating the idea of free ground floor and advocating it as design strategy perfectly suited to tropical climate. Parque Guinle, with its rugged topography and abundant vegetation, constituted a modern experience of ideal implementation to test the conceptual and formal attributes of the pilotis as a space-configuring element and adaptation to the terrain.

This article aims to approach the differences between these buildings, focusing on the set designed by the Robertos' in this later phase of modern architecture. The work seeks to revisit the original concept of pilotis as established by Corbusier and as interpreted and applied by Costa. Goal is to identify the main points of mutation or deviation from these concepts in these works of Robertos'. Revision of concepts can highlight the timeless nature of certain strategic design principles that go beyond modernism.

1. INTRODUCTION

Located in Laranjeiras, Rio de Janeiro, and considered one of the icons of Brazilian modern architecture, Parque Guinle is a private urban park housing with a set of three buildings designed by Lucio Costa between 1943 and 1952. Known as one of Costa's major works, the original urbanization plan for the park comprised six residential buildings, of which only three were constructed. Subsequently, between 1956 and 1962, Marcelo and Milton Roberto completed the complex, occupying the land area originally intended for the other three buildings planned by Costa. Following the original layout designed by Costa, the Roberto brothers' project consists of six buildings composing an elongated flexed bar. The temporal gap between the two groups of buildings designed within the same complex enables a curious comparative analysis.

This article aims to explore the differences between the two projects, focusing on the complex designed by the Robertos', as they incorporated a revision of modern paradigms through their fundamental compositional elements under new formal interpretation. The research method includes a comparative analysis of drawings, site visit, original writing by architects and also recent theorist works. The creation of a drawing that unified the six buildings Roberto's buildings was also fundamental for this work's development.

The analysis begins by acknowledging that the second set of buildings shares common denominators with the first. However, whether these aspects are related to the author's formal commitment to some principles of modern architecture or simply working within the same site and program constraints is something this work seeks to clarify.

When Costa designed the buildings for Parque Guinle, his role as key figure in Brazilian modern architecture had already been established for at least a decade. Costa had already established significant experience working with elements and design strategies propagated by the avant-gardes of early 20th century. This role was solidified in 1936 when he simultaneously brought Corbusier to Brazil and led the team that designed the Ministry of Education and Health in Rio, a seminal work. The connection between Costa and Corbusier is a crucial point for understanding the early years of modern architecture in Brazil, but it is not, precisely, the endpoint. Costa tested the universality of some design principles canonized by Corbusier, giving them a local character and exploring the potential for formal mutation of each of these elements, especially pilotis and brise-soleil.

2. PILOTIS, LE CORBUSIER AND LUCIO COSTA

The origin of the term "pilotis" harks back to its very etymology before being incorporated into the terminology of modern architecture. In 20th century's second decade, a new concept was attributed to the word when Corbusier established a broader sense for it than its traditional definition. From that moment on, the word "pilotis" acquired status of a propositional formal configuration, a meaning that went beyond designating a structural construction element; it represented the recovery of the ground.

By elevating the interior of the house, the entire surface below it could be used for "recreation, parking, or continuation of the garden under the house[1]." In 1925, Corbusier published in the *Almanach d'Architecture Moderne* a first drawing in which he introduced the idea of pilotis. A parallel was drawn by placing side by side drawings of a traditional building with load-bearing walls and his modern proposal. In the latter, the independent structure freed the ground level from continuous foundations, eliminating the solid base to support the building.

In Brazilian architecture, the use of pilotis is directly related to typological transformation since the modernist movement, both as formal element and as organizing strategy for site layout and flow relationships at the base of the building, establishing new permeability relations. During the 1930s, Costa absorbed the ideas put forward by Corbusier, advocating for pilotis and independent structures as elements of Brazilian modern architecture. The multifaceted nature of pilotis usage and the analogies of this concept were frequently raised in Costa's texts and project memories, as well as the reference to Corbusier as author of these principles.

> "*...the adoption of the construction system advocated about twenty years ago by Le Corbusier and P. Jeanneret, and now, so to speak, incorporated as one of the fundamental principles of modern architecture – the 'pilotis'*[2]."

Such considerations are reinforced by Costa, referencing the construction traditions of Brazilian architecture and their connections to antiquity, emphasizing the feasibility of materializing these spatial attributes using reinforced concrete. Furthermore, the innovative sense of employing pilotis in Parque Guinle, as well as the influence of Corbusier's experiences, are highlighted by Costa:

> *I then advised for a contemporary architecture that was more suited to the park than to the mansion, suggesting that the elongated six-story buildings should be raised off the ground [...]. It was the first set of buildings constructed on pilotis and the harbinger of Brasília's superquadras*.[3].

The recurrence of pilotis in Brazilian modern architecture was evident in publications cataloging national production in the 1950s. In *L'Architecture Aujourd'hui*, from 1952, Giedion mentioned the use of this design strategy and the encouragement of urban legislation for the creation of pilotis: "In the tropical climate of Brazil, pilotis are entirely justified. Today, the use of pilotis has become so widespread in Brazil that regulations allow for an additional floor to be added to any apartment building project where pilotis have been planned[4]."

The number of works built from a vocabulary common to modern architecture expanded in the country from the 1940s onwards. Office buildings and apartments emerged in major urban centers, alongside the construction of complexes like Pampulha (1940), by Niemeyer. From the 1950s, the plastic

1. Le Corbusier, *The Radiant City* (Nova York: The Orion Press, 1967), 21.

2. Lucio Costa, *Lucio Costa: registro de uma vivência*, (São Paulo: Empresa das Artes, 1995), 92.

3. Lucio Costa, *Lucio Costa: registro de uma vivência*, (São Paulo: Empresa das Artes, 1995), 205-212.

4. Siegfried Giedion. "Le Brésil et l'architecture contemporaine". *L'Architecture Aujourd'hui 23, n. 42-43* (August 1952) : 3.

potential of reinforced concrete began to be explored in the design of structures with sculptural forms. Niemeyer increasingly gained prominence nationally and internationally and incorporated the use of pilotis in larger-scale housing projects, such as JK Building (1951) in Belo Horizonte.

3. LUCIO COSTA X ROBERTO BROTHERS

3.1. SITE PLAN RELATIONSHIPS

The Parque Guinle´s buildings are situated on a spacious plot that conceptually approaches the idea of city within the park, from the perspective of the lot itself. The terrain, with inclined edges and an oval depression in the middle, is bounded to the south by Gago Coutinho Street and to the west by the park and the mansion.

Costa's layout, in broken line, forms a section of an arc. Consequently, two of the buildings, Bristol and Caledônia, were positioned along the slope of the terrain, with their main facades facing afternoon sun, as well as towards the park and the unique view towards the mansion. The third building, Nova Cintra, the first to be constructed, was aligned with Gago Coutinho Street, establishing a transition between park and city. Unlike the others, which have ground floors with pilotis interspersed with gardens and access gates, Nova Cintra, due to its more urban condition, has shops and services on the ground floor, arranged slightly above street level and accessible through a garden.

The Roberto Brothers' buildings are situated at the highest part of the terrain, following Paulo Cesar de Andrade Street in a boomerang-shaped bar, in the area of greatest elevation change within the park. The terrain is configured as a large, elongated parcel, with significant slope from north to south, measuring approximately 210mx60m. The extreme topographic character of this implantation zone is reflected in the relationships between base and ground, delineating notable formal differences compared to Costa's blocks.

3.2. ABOUT THE BASE LEVEL

The first point that differentiates the volume of the Robertos' from Costa's buildings is the presence of a continuous solid base below the pilotis, which acts as leveling element, accommodating the condominium's basements. This stone-clad base is higher in the eastern half where the slope is steeper and gradually decreases towards the west, allowing direct access from the street to the last building, Guarapes, the only one of the six blocks with pilotis at ground level. Functionally, the use of pilotis in both projects is justified by a common reason – organizing accesses and establishing covered and open levels at the buildings' base, overcoming the site's topography. What differentiates each approach is the relationship between solids and voids, proportion, and design of the elements in the base and the body of the bars.

The solid base close to the ground plays a fundamental role in configuring the pilotis in Robertos' project. The open and covered spaces arranged along this platform are integrated and have permeable access between them, creating an elevated promenade relative to the street, amidst the treetops and with privileged views of the park. Visual permeability is not complete due to

the layout of the arc-shaped implantation and the elements arranged along this sequence of pilotis, such as entrance spaces, storage areas, front volumes of garages, and the structure's support planes. Access to the intermediate parking levels is provided by stairs and ramps positioned along the pilotis, similar to the arrangement in Costa's Bristol and Caledônia pilotis.

3.3. SHAPE OF PILOTIS

Another striking difference concerns the pilotis' shape and height, as well as their involvement configuring spaces at ground level – although, in both cases, the pilotis floors are equally responsible for accommodating the level differences caused by the rugged topography. In Costa's buildings, the Dom-ino system with flat slabs and pillars positioned set back from the facade plane reduces the structure to a minimum; pillars are lightweight and circular in section, therefore, punctual, with a diameter of 0.40m. They form a regular grid, with structural spans of 4.20mx6.20m in Bristol and Caledônia, with heights ranging from 6.00m to 2.50m; and 4.10mx4.40m and 4.10mx6.80m in Nova Cintra, with constant height of 5.00m. In Bristol and Caledônia, the double height of the pilotis occurs at the lower ends of the street, allowing the insertion of ramps and stairs and their plastic exploration as spatial configuration elements, as well as accommodation of semi-buried underground garages, while in Nova Cintra, the flat character of Gago Coutinho Street enables consistency in the height of the pilotis and the ceiling height of the lower floor.

In the case of the Robertos' buildings, the structural spans are varied, and the pillars are trapezoidal, with a rectangular section, with dimensions that can reach 1.50mx0.40m. Thus, they take on the form of blocks or support planes, which gives greater weight to the structure visible at ground level. The presence of these planes, as well as the double height of the pilotis, configuring a common base with two floors in all six buildings, gives the Robertos' buildings less spatial fluidity and less visual permeability than in Costa's design. Furthermore, the fact that the pilotis floor is significantly above the street level in Robertos' complex disconnects the building from the park and from the area´s urban context.

3.4. VOLUMETRY, SOLIDS AND VOIDS

Comparing the project's volumetry, it is observed that the idea of isolated blocks was set aside in the six new buildings, but common concepts were kept in the bases´ configuration. While Costa designed six-story blocks on pilotis plus a roof, with prismatic geometry, the Roberto Brothers present an irregular ten-story bar plus a roof, designed with inflections that follow the terrain's shape. Despite the buildings forming a continuous bar, the lobbies and vertical circulations of each block are independent.

Analyzing the facade facing the park and its volumetric composition at the base and pilotis, in the Robertos' buildings, another element stands out – a continuous plane of perforated masonry, set back from the apartment volume. This plane establishes kind of intentional visual barrier, closing off the

parking areas present on all intermediate levels contained within the pilotis' double height. The design of this plane touches the upper slabs in a zigzag form. Its circular perforations evoke nautical hatches and are positioned in regular rhythm along this wall clad in ceramic tiles of green tone.

In Robertos' design, the use of more solid planes than voids are recurrent. There's the perforated zigzag, the stone-clad base with small ventilation openings in the sublevels, as well as other stretches of masonry arranged along the pilotis that function as dividers of open spaces. The design of these elements' further distances Robertos' buildings from the delicate and lacy lightness of the cobogós or brises of Costa's early buildings in Parque Guinle. The facade of the Robertos' complex facing the park lacks solar protection elements and lacks equivalence between the modulated rhythm and the structural grid, something clearly visible in Costa's design. At the detailed scale, the interest of the Robertos' was already moving in a new direction, more in line with the brutalism that was emerging from São Paulo school than with the lightness of Rio's school.

4. CONCLUSIONS

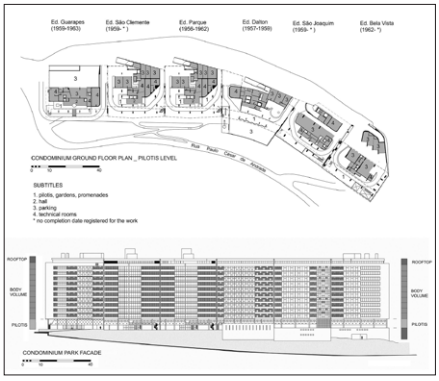
The study of the project developed by the Roberto Brothers for Parque Guinle clearly shows its origin in Costa's original plan. Like Costa's first buildings, the new set of buildings respects the location of the blocks and follows the same volumetric plan, with a tripartite organization in base, body, and crowning.

The mainly aspects that determine differences between the projects are interconnected by the base solution and its repercussion to the building volume and the global image of them. These characteristics are linked to the pilotis concept, its structural and space elements. It is possible to affirm that Lucio designed the pilotis in Guinle Park to accommodate the building base to the terrain, while Robertos' create a base to level the pilotis. Their project explores the idea of a base to accommodate topography and organizes the ground floor on pilotis under the apartment volumes, all with same height profile. The topography and the program with much more parking needs was probably decisive to make the solid base close to the terrain. Lucio`s projects demonstrate diverse ways to relate to the ground and the pilotis to the building body, which gives more lightness to the base.

Some Corbusier´s first projects brought the idea of creating a base to level the pilotis and organize an upper ground floor under the same concept, as in Stuttgart Weissenhoff (C2 house) or in Durand, Argel. But he also proposed the pilotis touching the ground under sinuous habitational buildings between the city mountains, in his utopic urbanism project for Rio (1929). Again, it is clear that the flexibility of the concept was captured by Costa, and later, by Robertos' going back to the Corbusier`s ideas.

However, the Robertos' design presents a more robust and heavy structure in the pilotis. This weight in Robertos' complex is accentuated by the use of ceramic tiles in darker colors than those present in Costa's buildings. Although the Robertos' didn't abandon visual permeability and









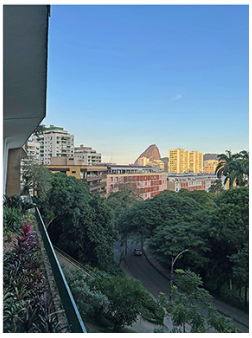












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accessibility of the pilotis, there is a notable expansion of solids in relation to voids. Part of this is due to the recurring presence of perforated colored masses and the multiplicity of geometries in the ground and intermediate floor masonry, both in plan and section.

The question surrounding the structure's form refers to a series of works that began to detach from Dom-ino system, with its first lightweight and circular-section pilotis, as initially explored by Corbusier, Costa and Niemeyer. These include Corbusier's Swiss Pavilion (1930-31), as example of an experimentation with more robust concrete structures as spatial configuration elements of the ground floors, with sculptural pilotis with rounded forms; or even buildings contemporary to the experiences analyzed here, such as

Figure 1. Aerial view of Parque Guinle with the two sets of buildings. © Leonardo Finotti, 2010.

Figure 2. Roberto Brothers', Parque Guinle, Rio de Janeiro, Brasil, 1959-1962. Ground floor plans and Park Facade. Credits (authors' edition on Luis Felipe Machado's drawings, 2024).

Figure 3. MM Roberto, Parque Guinle, Rio de Janeiro, Brasil, 1959-1962. Building view from the Park entrance, Guarapes building, park façade inflections and the stone base, pilotis and its architectural elements, view of Lucio Costa's buildings from the garage zone behind the perforated wall. Credits © Mara Eskinazi, 2024.

Corbusier's Unité d'Habitation in Marseille (1945-52), whose pilotis take the form of double trapezoidal planes with rounded edges, or Niemeyer's V-shaped pillars used on various occasions with various configurations, such as JK Building (1951) in Belo Horizonte, and Lagoa Hospital (1952-58) in Rio. Niemeyer's V-shaped pillars differ greatly from Corbusier's sculptural ones, but both are formally aligned with an idea of mutating from lightweight and punctual circular-section pilotis to more robust flat structures.

That said, although we can draw parallels in search of what was being built in Brazilian and world scenario in the 1950s, seeking a contextualization of the projects in question seems less relevant than highlighting their points of mutation towards brutalism and postmodernism. The recognition of this gradual abandonment of punctual supports in favor of planar ones brought losses in terms of fluidity and permeability of spaces in pilotis at the housing scale. On the other hand, these mutations demonstrate a clear commitment to specific constraints of this project, which, while remaining aligned with the typology of the bar on pilotis, explores a formal freedom related to its structural and programmatic demand, without fear of seeking sophistication in the robustness and a more exuberant plasticity of architectural elements. ■

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FRENCH NEW TOWNS: LAST "AVATAR" OF THE WELFARE STATE OR AVANT-GARDE PROPOSALS?

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ABSTRACT

At the end of the 20th century, nine new towns were developed in France: five on the outskirts of Paris (Évry, Melun-Sénart, Marne-la-Vallée, Saint-Quentin-en-Yvelines, Cergy-Pontoise) and four located near other major metropolitan areas (Le Vaudreuil/Rouen, Villeneuve d'Ascq/Lille, L'Isle d'Abeau/Lyon, Rives de l'Etang de Berre/Marseille). These new towns, which were intended to accommodate 100,000 to 500,000 inhabitants, were planned between 1965 and 1969 by France's Welfare State in order to cope with metropolitan growth. However, projects likely to meet this objective had yet to be defined. While the State provided new planning tools (*Land Orientation Act*, 1967), the issue was handed over to multi-disciplinary design offices created on each construction site. How was their ambitious mission brought to life, and what did it achieve? These questions have remained largely unanswered due to a lack of expert knowledge and inquiry into this matter. Literature on the history of urban planning in France has already dismissed these new towns as failed experiments, considering them to be the last "avatar" of modernism (Roncayolo, 2001) — in line with mass housing projects, seen as symbols of the Government's failure to provide adequate living environments. Nonetheless, research is underway to gain better insight into the recent past. In furtherance of this research, the aim of this paper is to reassess the place of French New Towns in urban history and urban planning. My hypothesis is that these projects were the result of a productive marriage between 20th-century urban planning expertise and the post-war CIAM debate on "Habitat," which led to the birth of new avant-garde proposals. To develop this idea, I will draw on my ongoing analyses (based on a review of current literature, archival research and field surveys), comparing the first urban and architectural experiments carried out in three new towns: Le Vaudreuil, Évry and Villeneuve d'Ascq.

1. INTRODUCTION

Until now, there has been no comprehensive publication on the history of French new towns. Parts of it can be grasped by cross-reading various historical sources on Paris, which usually present the new towns as the final stage of the Government's continuing efforts to enhance the Capital's living conditions. Indeed, following Henri Prost's regional plan (1934), which provided the suburbs with public infrastructure (roads, railroads, waterways and sewers), a new study was carried out in the 1960s, leading to the idea of stemming the chaotic development of the suburbs by creating five new towns: Évry and Melun-Sénart in the south-south-east, Cergy-Pontoise and Saint-Quentin-en-Yvelines to the west-south-west, and Marne-la-Vallée to the east. This idea was also taken up in four other French regions, intended to balance the national development: Villeneuve d'Ascq in the *Nord* region (Lille), Le Vaudreuil in the Seine Valley in Normandy (Rouen), L'Isle d'Abeau in the Rhône-Alpes region (Lyon) and Rives de l'Etang de Berre in the Provence region (Marseille). Even if this recent past has yet to be understood, French historians have already consider these new towns as the last 'avatar" of modernism[1], in line with mass-housing projects seen as the Welfare State's failure to provide adequate living environments. But today, we are invited to re-evaluate this interpretation in light of recent research, such as the analysis of the urban and architectural qualities of the Parisian Garden cities (Pouvreau[2]) and of the great variety of housing typologies built in Dutch new towns (Spoormans[3]). Through this lens, my hypothesis is that French new towns should be considered as a result of a fruitful marriage between 20th century urban planning know-how and the post-war CIAM debate on Habitat (Avermaete et al.[4]), which led to the emergence of avant-garde proposals. To explore this hypothesis, the purpose of this article, which relies on an ongoing analysis (based on literature and archival and field surveys), is first to shed light on the common conceptual framework of French new towns, and then to compare three projects, from their urban design to their first experimental housing units: namely, Le Vaudreuil, Évry and Villeneuve d'Ascq.

2. A COMMON CONCEPTUAL FRAMEWORK

Intended to accommodate between 300,000 and 500,000 inhabitants in Paris, and 100,000 to 250,000 in the other regions, the French New Towns had two characteristics in common. Firstly, due to their large scale, they were classified as projects of national interest. This was a common procedure at the time, involving public funding and extraordinary land procedures (where parcels were either bought or expropriated) as well as the creation of a public administrative agency in charge of implementation. For the new towns, two hierarchical levels were created, each with specific duties and responsibilities: an Urban Design Office on each site, and a governmental Secretary, monitoring the nine projects. The second common characteristic of these new towns was their four main objectives: 1° to offer "new clusters" of employment, housing, equipment and public services; 2° to "facilitate" the resolution of traffic and transport issues; 3° to be "real cities", with

1. Roncayolo, Marcel (ed.). *Histoire de la France urbaine. 5. La ville aujourd'hui* (Paris: Seuil, 1985), 368-369.

2. Pouvreau, Benoît et al. (dir.). *Des cités-jardins pour le XXIe siècle: valorisation, préservation, perspectives* (Marseille: Parenthèses, 2022).

3. Spoormans, L.G.K. *Everyday Heritage: Identifying attributes of 1965-1985 residential neighbourhoods by involved stakeholders* (Dissertation A+BE, TU Delft, 2023).

4. Avermaete, Tom, Swenarton, Mark, Van den Heuvel, Dirk (eds). *The Architecture of the Welfare State* (London: Taylor and Francis/Routledge, 2015).

"living urban centres" and a jobs-housing balance; 4° to "constitute, by their experimental nature, landmark operations of contemporary urban planning"[5].

Apart from these objectives, which referred to a number of quantified program indicators (to be reached in 5 years), there were no real guidelines for project conception and implementation. On the contrary, there was an obvious intention to allow the definition of each project according to its on-site conditions. This was the task of the Urban Design Offices, placed under the responsibility of a civil engineer, assisted by a multidisciplinary team of architects, geographers, economists, sociologists and other experts, each of whom contributed a specific set of knowledge and experience. These team members were well aware of the social demands of the time, concerning the need for better environmental and urban conditions, as embodied in Henri Lefebvre's clarion call to create "with the new city a new urban life"[6]. The architects came from a range of backgrounds. Some were familiar with the French urban tradition (linked to colonial experience) and/or were acutely aware of the post-CIAM debate on Habitat and the contemporary modern architectural and urban research. Furthermore, the new town teams could rely on a wide range of references and theoretical or practical publications, including recent assessments of new towns abroad; some of these assessments were carried out during field trips, notably in Harlow and Lelystadt[7]. This know-how, relying on the 20th century planning methods dealing with different scales (ranging from outline plans to residential units), inspired the French projects, even though their scale and programs were not comparable. As defined by the *Land Orientation Act* (1967), three main operational documents would be used: the *master plan*, the *land use plan* and the *concerted development zone plan*, all of which were coordinated with one another.

In this context, the French teams were less utopian than pragmatic, attentive to existing conditions. In any case, the selected project sites were not barren lands: they extended over several municipalities, each having its own heritage of historic villages, existing public facilities and recent residential developments. As a result, there was no uniform method for designing new town projects. The first step always consisted in determining the circulation network, adapted to the practical realities of the site. Then began work on major public facilities, such as regional *Préfectures*, town halls or educational buildings, along with some housing estates. Within the new urban centres, whose progress was closely monitored, many projects were developed as experiments into the new research trend of the time, exploring the potential of a three-dimensional architectural and urban approach to enhance social environments, beyond the traditional opposition between individual and collective spaces. In the early 1970s, the State was to encourage this line of research by creating the new *Plan Construction* public entity, whose mission was to facilitate experimentation into open industrialization, in order to foster the advent of flexible and modular housing solutions that would be "better adapted, in the present and for the future, to the needs of society"[8].

5. French Government, *New Towns Program* (1971).

6. Lefebvre, Henri, *Le droit à la ville* (Paris: Anthropos, 1968).

7. See Merlin, Pierre, *Les Villes Nouvelles* (Paris: Documentation française, 1969).

8. *Urbanisme,* n°125, April 1971.

3. BUILDING "LANDMARK OPERATIONS"

The three new towns of Le Vaudreuil, Évry and Villeneuve d'Ascq are representative of the design and implementation conditions described above. In the early 1970s, they were the stage of competitions which, organized with the advice of *Plan Construction*, were opened to construction teams comprised of architects, engineering offices, industrial firms and real estate developers.

3.1. LE VAUDREUIL: A THEORETICAL "CITY SEED"

This regional new town was intended to accommodate the industrial growth anticipated for the Seine Valley, from Paris to Le Havre (**Fig. 1**). The chosen site, located 25km upstream of Rouen, was a vast agricultural plain dotted with a few traditional villages and boasting a landscape with two impressive natural features: a cliff face and a great sand-pit lake connected to the Seine River. These "as found" conditions, crossbred with ecological concerns, offered the opportunity for theoretical research, inspired by Lefebvre's invitation to build "experimental utopia"[9]. Thus, instead of a master plan, the design team proposed the image of a "multifunctional urban organization for approximately 15,000 inhabitants", made up of four overlapping "networks": 1° *circulation*: a grid of primary roads and partially raised pedestrian paths; 2° *built volumes* (of variable heights, up to 5 levels), that could accommodate a variety of programs; 3° *open and natural spaces*; 4° *public facilities*, often grouped together to constitute "nodes" of social life. This study served as guidelines for the housing competition, launched in March 1971. The objective was to build the first "fragment" of the city, dubbed "City Seed", consisting of an "experimental programme" of 4,000 collective and individual dwellings and public facilities. The challenge was to define a construction system which, using standardised and flexible components, could be easily "assembled" and "disassembled" to meet the "changing needs of the urban society".

The competition was won in 1972 by the building team of architect Henri Beauclair, who had developed an innovative construction system. Based on a metal grid functioning like a Meccano set, and using prefabricated floors, façade panels and dry walls, it was able to generate a wide range of built typologies, ranging from individual houses to collective blocks of flats. The French press immediately celebrated this project as the advent of multipurpose constructions allowing future residents to configure their own apartments.

Implementation of this project did not live up to expectations since, for economic reasons, the Meccano-type system was replaced by concrete construction methods which, contradicting the flexibility intentions and used for the entire housing programme, generated a relatively monotonous built landscape. Nevertheless, the environmental quality of the project remained tangible, mainly through the public spaces, offering views over the natural panorama.

3.2. ÉVRY: A METROPOLITAN "URBAN CORE"

Open landscape was also a determining factor behind Évry's design (**Fig. 2**). Situated to the south-east of Paris, on a site that included a number of urbanized

9. Archival papers quoted in Blain, Catherine. "A Tangible Utopia: The Genesis of Built Experiments in French New Towns". In *Lessons from the British and French New Town: Paradise Lost?*, edited by B. Colenutt, S. Coady Schäbitz, D. Fée (Croydon: Emerald, 2020), 183-195.

areas, the project benefited from the presence of an expansive agricultural plain, allowing for a new urban configuration. Set in the shape of an X, representing 4 districts separated by 4 public parks, the master plan proposed a new multiple-use centre that was fully served by a train station. The main public buildings and facilities included a new regional *Préfecture* building and a university campus, along with several mixed housing and commercial complexes, a regional cultural centre and a shopping mall (named "Agora"). Intended as a bustling, mainly pedestrian "living urban core", it allowed for an overlapping of "open spaces and built volumes of varying heights"[10].

In May 1971, while the construction of certain public buildings was underway in the centre (notably, the *Préfecture* and Agora), a competition was organized for designing a first neighbourhood named "Évry 1". The construction site, located to the north of the centre, was an open space surrounded by four main roads (one facing a public park). Here, unlike in Le Vaudreuil, the guidelines were very precise. The project called for mixed-use development, including 7,000 dwellings (for rental or purchase), public facilities and commercial offices, all of which were to occupy the centre of the site, leaving the rest free for public spaces and gardens. The key themes were "openness", "continuity" and "complementarity" (between built and natural spaces), and "rhythm and contrasts." The project would also remain faithful to the reality of "the growing interest in the quality of the environment" and "the search for more space, flexibility and possibilities for personalizing the accommodation," while offering "a living environment favourable to the development of a new urban society."

The winning proposal was put forward by a multidisciplinary team: architects Michel Andrault & Pierre Parat, Paul Sirvin, Jean Macary and André Molle, and artists Bernard Lassus, Gérard Singer, Vincent and Yvette Aleaume. Revisiting a terraced-house project by Andrault & Parat using concrete posts and beam and slab elements (1966), the proposal featured a variety of building types following two principles: unity and diversity at different scales, and the integration of visual arts. Indeed, a "colour chart" was used to guide the arrangement of dominant, accentuating features (vegetation, building materials, light, and colours), and artwork was proposed to enhance public spaces (squares, streets, passages, etc.).

Only the first phase of the project was completed (2,500 dwellings). But the result met the promise to deliver coloured buildings in a variety of heights and dimensions (including pyramid-shaped collective units ranging from 3 storeys in height to larger 5 to 12-storey versions) and to provide diverse "effects of contrasts, redundancies, transitions or oppositions" of "visual sequences," ultimately creating "varied urban spectacles".

3.3. VILLENEUVE D'ASCQ: A "CAMPUS CITY"

Originally dubbed Lille Est, this new town demonstrates the effectiveness of using an institutional framework to build up an area that had previously been earmarked for large-scale public facilities. Indeed, its creation was approved in 1967, following a government decision to build two university

10. Quoted from *Cahiers de l'IAURP*: vol. 15 (1969) and vol. 31 (1973).

campuses in the eastern suburbs of the city of Lille: one for Sciences (Lille 1, opened in 1966), and the other for Arts, Literature and Law (Lille 3, slated for completion by the early 1970s) (**Fig. 3**).

The designated site was already occupied by several villages and new developments of terraced or detached houses (some built alongside a luxurious golf course) as well as many social housing estates. The main goal was to draw up a master plan allowing for the harmonious development of new urban clusters within the existing urban fabric. That was mainly achieved through the creation of the dual network for vehicles and pedestrians and a vast system of public spaces, encompassing a linear park with a chain of lakes and sports areas.

In January 1972, while the town hall, theatre and commercial centre were being built in the new urban core (Hôtel-de-Ville district), a housing competition sponsored by *Plan Construction* was launched to accompany the construction of the Lille 3 campus in the northern district of Pont-de-Bois. The project included 1,000 social housing units (one-third reserved for students), a 250-room university residence hall, and multi-purpose facilities (for social, educational, sports, and commercial uses), public areas and car parks. For the new neighbourhood, several design elements were to be respected, regarding: 1° the layout, flexibility and grouping of the "housing units"; 2° the environmental quality of the surroundings (including the vegetal and mineral spaces, street furniture, etc.); 3° giving precedence to the concept of "intermediate housing" by creating solutions allowing a single-family housing lifestyle within the collective complexes.

Alexis Josic won the competition with a project designed as a "system integrating and articulating spaces, solids and voids," in which housing units of various volumes could be "stacked and nested"[11]. As in the case of Évry 1, two building typologies were developed: 2 to 6-storey terraced housing groups that were accessible through a central circulation area, and large 10-14-storey collective units of flats (mostly duplexes) accessible through internal walkways located at every third level. In both typologies, a broad range of visual landscapes were created via the articulation of volumes through the interplay of recesses and the colours of the façades. This project was completed, albeit with a slightly greater number of dwellings. Large units lined the wide public space which, intended as an "urban theatre," included a variety of public amenities and shops, along with works of art installed in open-air meeting spaces and gardens.

4. CONCLUSION

Designed by architects who had closely followed the CIAM-Team 10 debates on Habitat, these three experimental projects were intended as "landmarks" of a new urban and architectural approach, offering an adequate environment to the needs and expectations of the new society. The success of such projects, largely financed by public funds, obviously depended to a large extent on political commitment. The advent of the oil crisis (1973) had a dramatic impact on their achievement. While their first housing projects were still

11. *Techniques et Architecture*, n°293, 1973.

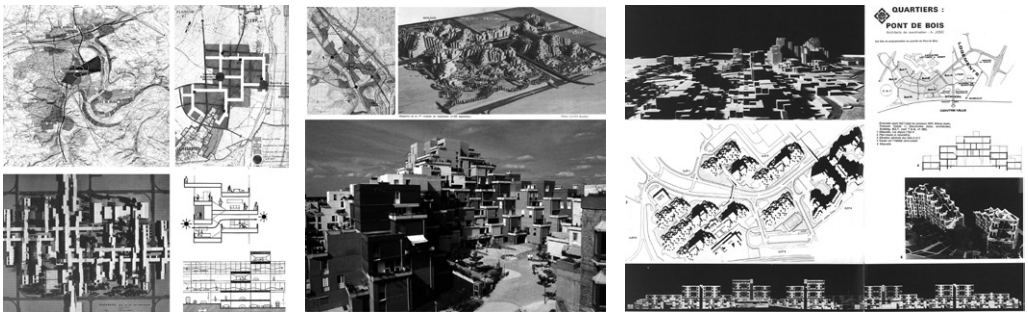


Figure 1. Le Vaudreuil, France. Housing competition of the "City Germ", 1971. General design guidelines [TA n°6, April 1972].

Figure 2. Évry, France. Schematic plan of the city, 1969. Évry 1 housing competition, mockup of "Les Pyramides" by Andrault, Parat et al. [*Cahiers de* l'IAURP, vol. 31, 1973]. Partial view, 1990 ©EPEVRY.

Figure 3. Villeneuve d'Ascq, France. Pont de Bois housing competition, 1972. Winning project of Alexis Josic [TA n°302, Dec. 1974-Jan 1975].

under construction, a barrage of criticism declared them too complex if not too expensive. From that moment onwards, neighbourhood projects conceived as a whole, offering a wide range of housing types and including vegetal or mineral, private or public spaces, were declared unrealistic.

This turnaround was evidenced in the 1974 government circular, favouring research into a new type of dwelling: "intermediary housing". The objective was to select building systems that combined the advantages of individual and collective housing by meeting three criteria: individual access to each unit, each having a private outdoor space (equal to a quarter of the total surface area) and measuring up to 3 storeys in height. Focus on this smaller scale research, closer to the traditional way of creating urban spaces, left French new towns on the wayside, their development finally taking place in the shadow of political concerns. Suffering from a lack of maintenance, the initial housing units have already been largely renovated and, in some cases partially or totally, demolished. Mentalities are nevertheless changing, as shown by the Ministry of Culture's recent recognition of a small private co-ownership building in Évry 1 as "Remarkable Contemporary Architecture" (ACR label, 2019). It is up to us to delve deeper into the history of new towns to bring to light their contribution to 20th century heritage. With the growing interest in the environmental and ecological dimension of cities, they might be reconsidered as significant research for the future. ■

BIOGRAPHY

Catherine Blain is an architect with a PhD in Urban Planning. She is a research fellow and lecturer at ENSA Paris-Belleville (IPRAUS/AUSser UMR 3329 CNRS). Her research, publications and contributions to the academic community deal mainly with the history of architecture and urban planning in France since 1945, with particular focus on projects and theories of the Modern Movement, new towns, the industrialization of construction and experimental housing programmes, heritage issues and building components. An active member of DoCoMoMo-France (scientific committee), she is also a member of various scientific associations, including the European Architectural History Network (EAHN) and the Société Française d'Histoire Urbaine (SFHU).

MODERNISM AND COUNTERCULTURAL ARCHITECTURE: NOT EXACTLY A NEAT CUT-OFF

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ABSTRACT

Designers who have been influenced by counterculture in the 1970s were committed to countercultural principles at different levels—from the foundation of alternative communities to the adaptation of industrial technologies towards more sustainable alternatives. Their architectural production diverged from the International Style because it implemented more ecological construction technologies, promoted more sustainable lifestyles and reduced energy demands and waste. Existing literature suggests that the architecture of the counterculture, often developed by designer who were trained during the boom of the International Style, was not always completely set apart from Modernism. However, the correspondences between countercultural architecture and Modernism have not yet been systematically investigated. This research study aims to shed some light on the transcendence of Modernism into countercultural alternatives by examining the works of three figures: Paolo Soleri, Steve Baer and Martin Wagner. The comparison of their production from the 1970s allows to debate on the links between Modernism and countercultural ideals in architecture at various scales. Representative projects are discussed considering their characteristics in terms of spatial organization, construction methods and materials. Ranging from typological principles to material qualities, the identified links between Modernism and countercultural ideals highlights that certain sustainable design concepts have been developed in continuity with some Modern ideals.

1. INTRODUCTION

In the 1960s and 1970s, industrial growth and urbanisation were scientifically revealed to be responsible for the degradation of the ecosystem[1]. In this framework some architects were influenced by countercultural ideas and attempted to develop alternatives to an architectural production which was intertwined with industrialization and fossil fuel consumption. Recent studies consider countercultural architecture a relevant trend of architectural history[2]. Existing literature highlights the links between Modernism and countercultural utopias[3].However, the impact of Modern architectural principles on the development of countercultural architecture has not yet been systematically debated. This research investigates the transcendence of Modernism in the architecture linked with counterculture by examining the work of three representative figures from different backgrounds: Paolo Soleri (active in Arizona, US), Steve Baer (active New Mexico, US) and Martin Wagner (active in Switzerland). The analysis of their production reveals Modern elements in terms of spatial organization, construction methods and materials. Furthermore, their comparison allows to identify, despite the diversity of contexts, few Modern correspondences.

2. FROM WRIGHTIAN ORGANICISM TO ECOLOGY: PAOLO SOLERI

In 1965, Italian architect Paolo Soleri (1919-2013) founded the Cosanti Foundation in Arizona, a self-built, ecologically aware settlement, sustained by income from its ceramic production. This experiment shared some of the ideals expressed in Wright's *The Natural House* (1954) and was influenced by Soleri's working experience at Taliesin West. Previously educated in Turin, Soleri was also inspired by the model of the European city[4]. He distanced himself from the Wrightian concept of the diffuse city[5] because he believed in the potential of compact self-sufficient communities, based on sustainable activities. Building on his experiences in Cosanti, Soleri codified his vision by inventing a new research field called arcology, a portmanteau word formed from architecture and ecology.

In the framework of the ecological concerns which spread in the US from awareness of environmental disasters, Soleri looked at the ecological equilibrium achieved by native populations in the Southwest[6]. He proposed new cities dictated by rational use of resources, deep knowledge of biology and natural science and organic connection with local environment. In 1970, he began to work on the construction of Arcosanti, Arizona. This experimental settlement is an ongoing process; it includes workshops, dwellings and facilities.

Arcosanti's buildings are complex and organically connected structures which house multiple functions. Most of the structures are built of prefabricated concrete elements, which were often earthcast locally. The appearance of the concrete surfaces and the shapes designed by Soleri (apses, vaults, domes or semi-domes) are far from the typical aesthetics of International Style (**Fig. 1**). However, Arcosanti's layout was obtained combining effective use of resources, structural optimization, functionality and climate adaptive solutions for indoor comfort. In the buildings, orientation

1. Donella H. Meadows, ed., *The Limits to Growth : A Report for the Club of Rome's Project on the Predicament of Mankind*, (New York: Universe Books, 1972).

2. Laura Lievevrouw, Caroline Voet, 'A Drawn Story of Architectural Phenomena. Re-Reading Flemish Architecture of the 1960s and 1970s Through an Architectonic Lens: Redrawing the Design Process of Westrand (1967)', in *EAHN 7th International Meeting*, ed. by Ana Esteban-Maluenda, Nicolas Marine, Laura Sánchez Carrasco, and Alberto Ruiz Colmenar (Madrid: Ediciones Asimétricas, 2023), pp. 203–13; Lobo Gómez, Noemí, and Diego Martín Sánchez, 'Ambiguous and Muddy: The Alternative Practice of Reiko Tomita and Her Group Atelier Zō during the Bubble Era', in ibid.

3. Andrew Blauvelt, ed., *Hippie Modernism : The Struggle for Utopia*, *Hippie Modernism the Struggle for Utopia*, First edit (Minneapolis: Walker Art Center, 2015).

4. Angela Sicilia, *Le Architetture Di Paolo Soleri : Un Viaggio in Arizona* (Catania: Malcor D', 2015).

5. Bruno Zevi, *Storia Dell'architettura Moderna*, 10th edn (Torino: Einaudi, 2010), 429–434.

6. Luigi Spinelli, *Paolo Soleri : Paesaggi Tridimensionali*, *Paolo Soleri Paesaggi Tridimensionali* (Venezia: Marsilio, 2006).

maximised thermal performance and roofs were shaped to capture the energy of the sun in winter and provide shade in summer. In addition, Soleri integrated passive solar devices. The revolutionary architecture he proposed represents a significant attempt to identify solutions to the cultural and ecological crises created by a consumerist society[7].

3. MODERN TECHNOLOGICAL APPROACH FOR SUSTAINABLE DESIGN: STEVE BAER

In 1960, a group of art students established an alternative community for artists near Trinidad, Colorado. This settlement was meant to be a live-in work of Drop Art and accordingly was named Drop City. For the construction of their buildings, the founders were inspired by Buckminster Fuller's Geodesic Dome as their ideal was the efficient use of resources in construction and climatization. However, the Fullerine domes erected in Drop City were works of bricolage; constructed from irregular salvaged elements and finished with stucco, they were far from the precision standards of Fuller's award-winning structures[8].

The building experiments in Drop City captured the interest of American inventor Steve Baer (b. 1938), who was recently back in the US after a few years spent working as welder and studying at the polytechnic in Zurich[9]. Interested in polyhedral structures, Baer found in Drop City favourable conditions to experiment with Zomes, post-geodesic structures with irregular volumes (the name "Zomes" combines "zonohedron" and "dome"). The Zome was suitable for Drop City as its irregularities allowed the use of salvaged elements for construction. The first Zome in Drop City was completed in 1966 with metal cladding made from the body of cars. In Drop City, Baer also experimented with passive solar energy.

In 1971, Steve Baer and his wife Holly realized their own house in Corrales, New Mexico (**Fig. 2**) The house is made of 11 connected single story Zomes of different size. The disposition of Zomes (containing usually one room each) in a U-shaped plan limited thermal losses on the northern side and formed a patio towards the east. The house was equipped with "Drum Walls" composed of water barrels stacked behind a glazed exterior surface and adjustable reflective panes. This structure allowed to collect and store solar heat for indoor thermal comfort. To avoid heat losses in the absence of sunshine, the drum wall was closed off by the outer moveable reflective panes, which acted as insulators. The Zomes were built with adobe walls and aluminium sandwich panels glued onto a cardboard honeycomb structure and injected with polyurethane foam to improve insulation[10]. The Baers developed their house to test the application of inventive technology to achieve sustainable solutions.

4. FOSSIL FUEL FREE AND HIGH TECH ARCHITECTURE: MARTIN WAGNER

In 1978, Swiss architect Martin Wagner (b. 1947) designed two solar houses in Switzerland – one in Bigorio (Ticino) and one in Hofstetten (Solothurn) – which were built in the following year (**Fig. 3**). In the framework of the energy

7. Sven Bjork, 'L'arcologia Di Paolo Soleri', *Documenti Di Architettura*, 10–12 (1972), 6–17.

8. Simon Sadler, 'Drop City Revisited', *Journal of Architectural Education*, 59, n.3 (2006), 5–14.

9. 'The Plowboy Interview: Steve and Holly Baer', *The Mother Earth News*, no. 22 (1973).

10. Piet Vollaard, Frederique van Andel, 'Zome House Corrales, New Mexico', *DASH*, no.7, (2012) 88–95.

austerity which followed the 1973 Oil Shock, buildings' oil dependency for indoor heating was questioned in Europe. When Wagner started developing these projects, he was establishing his own architectural firm in Switzerland. With a degree from Higher Technical School in Windisch (Switzerland), he had previously worked in the studio of Dolf Schnebli in Ticino. In 1973, Wagner had enrolled at the Southern California Institute of Architecture in the US, where he obtained a master's degree and worked as a teaching assistant while collaborating with the studio Morphosis. He moved back to Switzerland in 1975.

Given the environmental and energy crisis of the 1970s, Wagner's solar houses were designed to use solar-powered heat instead of oil-powered mechanical systems for indoor thermal comfort. The architect proposed this radical alternative because both sites were located in sunny spots with south-facing slopes. Despite the favourable locations, the use of solar thermal systems for heating still required that the buildings' energy demands be lower than those which were standard at the time.

Wagner developed for both houses layouts which maximised passive solar gains and reduced energy losses by exposing living areas to the south with large windows; sighting service rooms on the northern side of the buildings; limiting glazing on the western, eastern and northern façades; and including winter gardens and perimetral buffer spaces. Furthermore, Wagner used more insulation compared to the standards of the time and designed energy-conserving windows. The energy-efficient design and construction solutions were used without abandoning the spatial and aesthetical qualities favoured at that time. Wagner implemented Modern architectural features (open floor plans, flat roof, large windows, double-height floors and concrete structures) as well as High Tech elements (visible technical components, aluminium sheet cladding and colourful steel structures).

5. MODERN CORRESPONDENCES

The examined architectural projects have been developed in different contexts. Soleri's designs for Arcosanti materialized within the architect's own work-in-progress community which refused the model of the metropolis and aimed to achieve an equilibrium between human society and the natural ecosystem. Similarly, the concept of Baer's Zome house originated from his involvement in the construction of the alternative settlement of Drop City, which motivated the inventor to apply advanced technology in sustainable design. Instead, Wagner's solar houses, were designed to define a fossil-free alternative for architecture at the time of the energy austerity in Europe, when established architectural practice was facing a complex challenge.

Recent studies on countercultural architecture[11] have shown the pioneering environmental awareness of architectural designers involved in countercultural movements. Classifying the examined projects as "countercultural architecture" positively conveys the rebellious spirit of an architectural approach which challenged conventional practice of their time, pushing boundaries both aesthetically and conceptually. However, such a definition suggests a neat boundary between Modern architecture and these pioneers of sustainable design,

11. Fanny Lopez, *Dreams of Disconnection : From the Autonomous House to Self-Sufficient Territories* (Manchester University Press, 2021); Steven Mannell, *'Living Lightly on the Earth' : Building an Ark for Prince Edward Island, 1974-76*, Canadian Modern (Halifax, Dalhousie Architectural Press, 2018).





Figure 1. Paolo Soleri, Arcosanti, Arizona, US, 1970-present. (Photo: kallahar, 2016, source: Wikimedia Commons, licensed under the Creative Commons Attribution 3.0 Unported license)





Figure 2. Steve Baer, Zome house, New Mexico, US, 1971. (Credits: Boyd Norton, Records of the Environmental Protection Agency, Record Group 412, National Archives at College Park, College Park, MD)

Figure 3. Martin Wagner, Solar House in Bigorio (left) and Solar House in Hofstetten (right), Switzerland, 1979. (Archive of Martin Wagner)

and eventually leads to overlook the correspondences between them. Despite their ecological engagement in the 1970s, the examined representatives were partially or completely trained during the previous architectural decades—when the International Style became dominant in Western architectural production, driven by faith in the progress of technology. The transcendence of Modern architecture in the examined works is clearly identifiable by comparing the characteristics of the designs focusing on spatial organization, construction methods and materials.

Arcosanti's structures combine complex volumes to improve the synergy of indoor space with the natural context, so as to benefit the functionality of indoor space beyond the rational layout of plans. The irregularity of the volumes and the implementation of archetypical shapes allowed him to optimize the use of resources. A functional design process can be observed in Baer's house: rooms are shaped and distributed to ensure the best indoor condition in relation to outdoor climate and environmental-aware construction methods. Despite the rational principles behind their conceptions, both these projects appear radical in terms of typology and aesthetics. Their irregular plans and elevations are very far from the typical geometries of Modern architecture. Instead, a Modern organization of indoor space is clearly identifiable in the houses designed by Martin Wagner. The Swiss architect arranged the plans according to the principles of functionalism in terms of proportions and distribution of rooms. However, he distributed spaces adopting a climate adaptive approach: living areas are located in the most thermally advantageous parts of the building to increase comfort and—therefore—reduce energy demand.

All the examined projects were realized implementing groundbreaking construction techniques, based on the upgrade of Modern ones. Soleri's concrete earthcasting on site allowed him to achieve optimized precast structural elements in concrete by limiting material waste. Similarly, Baer's prefabricated elements used to build the Zomes, were designed to be energy-efficient and allow a low-tech and dry assembly process. In both these examples, design of the assembly method plays a crucial role in the optimization of construction process. This attitude was also partially adopted in Wagner's solar houses. Built primarily of

cast concrete (Bigorio) and concrete blocks (Hofstetten), both houses were provided with continuous insulation layers within the building fabric. Prefabrication was ingeniously implemented by Wagner when choosing to design the solar collectors as structural elements of the roof to be assembled on site.

Most of the materials used in the investigated projects belong to the Modern tradition: reinforced concrete, painted steel and glass. However, their implementation is customized for functional needs (space dimension) and resource-effectiveness (energy-efficiency and economy of construction). For the same reason, classical Modern elements are combined with High Tech components (aluminum skins, in both Baer's and Wagner's buildings) and preindustrial ones (adobe walls, in Baer's house; silt forms, in Arcosanti).

These comparisons highlight major correspondences between the examined examples and Modernism. First, each project was designed by rationally organizing space in relation to functional criteria. Second, the buildings were realized thanks to optimized construction process involving methods and materials linked to Modern architecture.

6. CONCLUSION

This study allowed us to identify the transcendence of Modernism in the work of three environmentally aware designers active in the 1970s. Although we have focused on a small number of examples, the analysis of works constructed in three different contexts made it possible to identify recurring correspondences. The comparison of the examined cases suggests that the pioneering results achieved by the designers in terms of resource and energy savings were linked to the critical development of Modern design principles and Modern construction methods in light of the environmental crisis.

The introduction of environmental concepts implied an alternative vision of the concept of buildings as machines for living in. Major typological and aesthetical variation compared to Modern architecture are tangible in Soleri and Baer. The latter were active in the framework of US countercultural movements; therefore, they were committed to proposing alternative life styles. Wagner's solar houses, instead, are typologically integrated within their contemporary Swiss architecture. However, despite their Modern appearance, these buildings have been developed to be free from fossil fuel dependency.

The implementation of climate-adaptive choices in the buildings' spatial organization can be seen as an evolution of functionalism. Furthermore, the integration of renewable energy systems represents a continuation of the Modern commitment to ensure indoor comfort levels, also reducing the environmental impact of buildings. The construction methods used to realize all examined works include rationalised prefabrication techniques—a recurring process in Modern production.

Even if their environmental character distinguishes the examined cases from Modern architecture, their correspondences with Modern design and construction principles support the idea of a less neat cut between Modernism and environmentally-aware architecture. Thanks to this study, countercultural architecture appears to be not an abrupt reaction to Modernism, but rather a rational and critical development of it in light of the environmental crisis.

Additional studies on other representative figures of countercultural architecture may deepen the understanding of the influx of Modernism within the development of sustainable design in the 1970s and onwards. ■

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MONUMENTAL MODERNISM: LEGACY OR WASTE?

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#24

ABSTRACT

Massive modern buildings, sometimes monumental in size but ordinary in function, may not always fit into the masterpiece category. Nevertheless, they represent a built heritage, which, for cultural and sustainable reasons, would be better to understand and transform than to replace. The session seeks case studies addressing the challenge of giving new life to a modern heritage of outdated large buildings in decaying urban centers. The questions at stake are: How much change do they require? Does that change allow it to preserve its architectural values? How can contemporary society balance the economic effort of maintaining and the need for reuse, adaptation, and sustainability? These questions present the challenge of moving towards broader shared criteria on transformation and reuse.

1. A LEGACY OF URBAN PROPORTIONS

The post-COVID migration to increasingly frequent remote work deepened the crisis of office buildings already with very low occupancy dramatically threatening the already decaying life of old urban centers. Even newly built office buildings remain vacant in large cities like Buenos Aires or São Paulo, giving little hope of revitalizing their original office programs.

The obsolescence of downtown areas is today a global phenomenon. Population decline, lack of private investment and fierce competition by suburban new developments like office parks or shopping centers are sucking energy, workers, and clients from old central locations.

Even powerful economic cities such as Chicago, Los Angeles, Mexico DF, Bogotá, São Paulo, or Buenos Aires are witness to physical degradation, vacant spaces and insecurity. Extreme cases, as the almost complete disappearance of Detroit's central area, a city that filed for bankruptcy after losing two million residents, reveal the depth of such crises.

A great part of these urban centers' building stock consists of modern buildings from the early years of the second part of the 20th century, which, as a whole, constitute a valuable legacy that embodies the aspirations of renewal of modern architecture. The size of this modern legacy as a whole is in itself a problem of urban proportions, both in practical, economic and cultural terms. The large scale of many of these modern buildings makes their presence and worrisome deteriorating condition even more evident. Their fate is increasingly put in doubt as they become vacant, useless, and ultimately shut down or squattered. They thus need physical updating and programmatic redirection to attract new tenants and foster new uses. A challenge that won't be addressed unless innovative, converging new criteria can be agreed among the architectural discipline, practicing architects, investors, and the general public that would allow to reconcile the need for conservation of their cultural legacy and their radical transformation to new programs, activities, and environmental standards.

2. THE LARGE-SCALE MODERN BUILDING

The emergence of the Modern Movement coincided with the changing of a mostly rural world into an urbanized one. In 1948, the General Conference of UNESCO, guided by Julian Huxley, pointed to population growth as one of the three major problems of the postwar world.[1] The urban explosion affected both the old, historic European cities and the newer American ones. After the Second World War, even in the so-called "third world," countries faced rural exodus and internal migrations to the cities. After the mid-1950s, most of the population of Latin American countries like Uruguay, Chile, and Venezuela lived in urban centers, and México DF, Rio de Janeiro, and São Paulo were already world-scale metropolises.[2]

Since the 1920s the increase in scale had been a long-lasting feature of modernity, altering the traditional relationship between the building and the urban block and the dynamic of urban centers. Unsurprisingly, in 1968, the theme of the XIV Milan Triennale, curated by Gian Carlo De Carlo, was "Il

1. Raúl Urzúa, "The demographic dimension," *The UNESCO Courier*, no. XLV.1 (January 1992):14.

2. Arturo Almandoz, "Mudanças políticas e institucionais para o planejamento latino-americano do segundo pós-guerra," in *Urbanismo na América do Sul: circulação de ideias e constituição do campo, 1920-1960*, ed. Marco Aurélio A. Gomes (Salvador: EDUFBA, 2009), 231.

grande numero" addressing what had constituted a critical motif for practicing architects. Mirko Zardini observed that the "greater number" was a typical Team X theme, and Paola Nicolin traced its roots from the early CIAM meetings to the ongoing debate on working-class dwelling and experimental social programs.[3] The "Greater Number" controversial exhibition, interrupted by student protest, also marked a turning point. Nicolin noticed the emergence of the notion of "environment" in the critique proposed by the exhibition, reflecting the dilemma of modern industrial society, "which at the close of the 1960s was confronted by two distinct options: one, its apotheosis as mass consumer society; and two, its complete collapse."[4]

The challenge imposed by the large scale generated a wide range of architectural responses, constituting a quite heterogeneous legacy. Increasing the building scale would sometimes be part of a broader effort to comply with social issues, providing housing or workspaces for a growing urban population. Other times, it would be just an opportunity for bigger profit margins through the overexploitation of urban land. Sometimes, it would be a fertile field for new typological and technical experimentations, others, it would only result in unimaginative and insipid replication. As a whole, this heterogeneous legacy motivated equally heterogeneous critical appraisals.

Many iconic works celebrated by the historiography of the Modern Movement could easily belong to the category of large-scale buildings. Unlike the *Siedlung* experience, which referred mostly to suburban expansion, these large-scale buildings were part of a process of urban densification. They can be acknowledged as modern architecture's efforts to rework the compact city centers.

Henri Sauvage's housing flats on Rue des Amiraux in Paris were built in 1922 on almost the whole block. It is flanked by three streets, has an inside swimming pool, and a terraced façade to allow sunshine to reach the street. Fritz Höger's impressive *Chilehaus*, a massive, brick-faced ten-story office building completed in 1924, occupies a full block of Hamburg. The *Rockefeller Center* (1928-1940), a mixed-use complex designed by a collaborative team of architects that included Raymond Hood, Wallace Harrison, and Harvey Corbett, renewed no less than four blocks of the Manhattan grid. The Rockefeller slogan of the "city within a city" could also be applied to Oscar Niemeyer's *Copan Building* (1952) in São Paulo, designed as a huge structure 32 stories high, which encompassed distinct types of apartments, shops, cinema, and a public gallery on the level of the street. Arne Jacobsen's *SAS Royal Hotel* (1958-60) stretches over the full head of an urban block, and so does the *Conjunto Nacional* (1952-1955) by David Libeskind in São Paulo. Even Alison and Peter Smithson's *Economist Building* (1959-1964) responds to the dialogue between the large-scale and the urban block, splitting the built area into three separate volumes.

Expecting to impact the traditional grid by presenting a contrasting fragment of the modern city, modern building programs grew to a larger scale. Occupying no less than a full block became the ideal for a program that would gain expression through the plastic contrast between its different

3. Mirko Zardini, "Milan 1968. Triennale Milano: 'Il grande numero'," in *Team 10, in search of a utopia of the present, 1953-81*, eds. Max Risselada and Dirk van den Heuvel (Rotterdam: NAi, 2005), 158; Paola Nicolin, "Beyond the Failure: Notes on the XIVth Triennale," *Log*, no. 13/14 (2008): 88, https://www.jstor.org/stable/41765234.

4. Nicolin, "Beyond the Failure: Notes on the XIVth Triennale," 91.

components. Many buildings from the 1950s, 60s, and 70s gained urban importance through an atrium or public space that preceded the building and allowed for generous perspective views. The continuous built tissue of the traditional corridor street worked as a frame for the vitality and novelty of these buildings, which took advantage of their prominent locations.

From Alan Colquhoun's criticism of the superblock in the seventies to the vaticination of Rem Koolhaas on "bigness" as something on way to extinction, "like the dinosaurs," antipathy towards huge buildings has not been an uncommon feeling.[5] More contemporary sustainability concerns, might consider them as a testimony to a failed model of waste and unwarranted reliance on technical ability to manage whatever the consequences of developmentalism.

Nevertheless, large-scale modern buildings are facts of the contemporary city that can hardly be ignored. The purpose of the session *Monumental Modernism: Legacy or Waste?* is to establish a provisional inventory of the different situations of the "large modern buildings" and the strategies already enforced to make them useful again. The questions at stake are: How much change do they require? Does that change allow to preserve its architectural values? How can contemporary society balance the economic effort of preserving and the need for reuse, adaptation, and sustainability?

3. REUSING THE LARGE-SCALE BUILDINGS

In the last decade, Docomomo has moved from its former commitment to the documentation and preservation of the architecture of the Modern Movement to a more profound recognition of the environmental challenge.[6] This shift led to the amendment of the Eindhoven Declaration, which expressly mentioned the pledge to a sustainable built environment (Eindhoven-Seoul Statement, 2014) and invited us to review the modern legacy with wider lens. In that sense, the issue strongly engages with what Ana Tostões has called "the broad meaning of reuse," which shall encompass the conventional maintenance actions and the spatial and functional transformations required to update buildings to contemporary needs and technical standards.[7]

Many massive buildings, sometimes monumental in size but ordinary in function, may not fit into the masterpiece category, nevertheless, they represent a built heritage, which, for sustainable reasons, would be better to understand and transform rather than replace. This situation presents the challenge of how to pay respect to their architectural quality and at the same time, reuse them, radically transforming them into useful structures for contemporary needs and sustainable standards.

Preservation disseminated as a culture based on the knowledge and maintenance of monuments. Its intellectual and technical apparatus was conservative and mostly targeted at restoring buildings to their original state. The value of usage, in its most pragmatical sense, was considered secondary.

Yet, dealing with modern heritage in a broader sense demands a very different perspective. First, it seems important to recognize the heterogeneity of the modern legacy. Beyond the iconic masterpieces stand many good

5. Alan Colquhoun, "The Superblock [1971]," in *Essays in Architectural Criticism. Modern Architecture and Historical Change* (Cambridge: The MIT Press, 1981), 98; O.M.A., Rem Koolhaas, and Bruce Mau, *Small, Medium, Large, Extra-Large* (Rotterdam: 010 Publishers, 1995), 497.

6. See: Theodore Prudon, "The Modern Movement and Sustainability: Yesterday, Today and in the Future," *Docomomo Journal*, no. 44 (January 2011): 4-7; Ana Tostões, ed., *Modern Heritage. Reuse, Renovation, Restoration* (Basel, Lisbon: Birkhäuser, Docomomo International, 2022), 9.

7. Ana Tostões, "Reuse, Renovation and Restoration (the 3 R's)," *Docomomo Journal*, no. 52 (January 2015): 3.

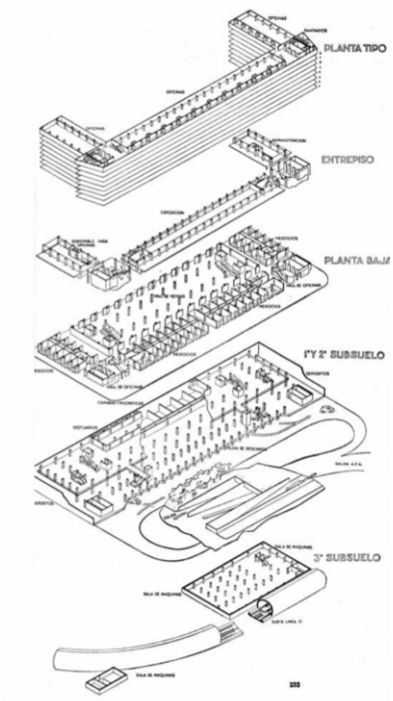






Figure 1. Oscar Crivelli; Jorge Heinzmann, Mercado del Plata Building, Buenos Aires, 1948-1961. Plans. © *Revista de Arquitectura*, no. 332, August 1948. Universidad de Buenos Aires. Facultad de Arquitectura, Diseño y Urbanismo. Centro de Documentación – Biblioteca Prof. Arq. Manuel Ignacio Net. Buenos Aires Argentina.

Figure 2. Fermín H. Bereterbide, Wladimiro Acosta y Alfredo Felice, El Hogar Obrero, Buenos Aires,1941-1954. © Instituto de Arte Americano, UBA / Alejandro Leveratto, Moderna Buenos Aires.

Figure 3. Torre Sumitomo, Av. Paulista. Catalina Díaz, Martina Roldán Nosetti, Alejandra Vellettaz, Tesis Proyectual 2023. © Cátedra Marcelo Faiden, Facultad de Arquitectura y Estudios Urbanos, Universidad Torcuato Di Tella.

modern buildings that deserve to be preserved, allowing us to "situate the conservation of modern architecture within the framework of the circular economy as part of a global effort to reduce energy consumption" – as Tostões has put it.[8] This effort is unlikely to be successful if we treat them as monuments. On the contrary, the value of usage must be seriously considered if we aim to save them.[9]

The size of this large-scale modern building legacy and the radical intervention needed to make it useful again asks for a new sensibility that would recognize the intrinsic value of the building's original architectural expression without surrendering to paralysis. As conservation is now both a matter of preserving architectural values as well as an environmental principle, in many cases, the visible aspect of the buildings would be put in a second term; in others, the original expression of the buildings would be put in the first term. But, it seems the answer will no longer be the same when establishing these priorities. It may even be a matter of design sensibility to measure which parts or aspects of a building would allow for one or the other priority to prevail.

Established criteria for older heritage accept adaptation and change of use as long as the original parts of buildings are differentiated from the new interventions and additions. It has become a standard of those interventions to adopt contrasting materials and forms to make sure that the new and the old can be easily distinguished. But in the case of this large modern legacy, typically buildings of the 50s, 60s, 70s, and even 80s, this strategy cannot be easily followed since their materials and shapes are not that different from those of contemporary architecture.

In some cases, the intervention will only consist of renovating elevators, curtain walls, and hidden installations, but even then, high-performance double glass windows require different frame widths, larger than those intentionally narrow frames typical of the 50s and 60s.

Programmatic renewal demands even more changes, often involving a more radical shift in façade treatment, inside distribution, and rearranging lower ground floors and entry schemes, which means establishing a different relation to the streets. Because of a wider strategy in terms of reuse, it is also frequent to alter the whole profile of the building, adding new volumes or changing the shape of existing ones.

In cities like Buenos Aires, programs to revitalize the urban center through tax incentives promote the conversion of old office buildings into apartments. The *Mercado del Plata*, an iconic modern piece of the late 50s occupying a full central block, is a large office building once owned by the city government that has now been sold to the private sector to be transformed into a hotel and apartments.

The *Cooperativa El Hogar Obrero* (Fermín H. Bereterbide, Wladimiro Acosta y Alfredo Felice, Buenos Aires,1941-1954),[10] a large apartment block occupying the whole length of a block, has been in relatively healthy conditions. Still, the mostly public programs of the lower levels have been transformed into a shopping center in recent years, adding a whole floor,

8. Tostões, *Modern Heritage. Reuse, Renovation, Restoration*, 19.

9. On the balance between symbolic value and value of usage in preservation see: Gérard Monnier, "The Reception of Modernism by Users: Practical Value and Symbolic Value," in *Back from Utopia. The Challenge of the Modern Movement*, eds. Hubert-Jan Henket and Hilde Heynen (Rotterdam: 010 Publishers, 2002), 358-367.

10. Carlos Gustavo Giménez, "City Block: Una Utopía Moderna para Buenos Aires," in *Summa+* no. 136 (Buenos Aires: Donn 2015), 60-65.

11. A different circumstance and a different outcome from that of Bo Bardi's SESC Pompeia. See: Carlos Eduardo Comas, "Historia de dos unidades: SESC Pompeia y SESC 24 de Maio," *Summa+* no. 163 (Buenos Aires: Donn, 2018), 9-19.

completely changing its lower façade and relation to streets, and radically transforming the interiors to achieve the required commercial standards.

The intervention on an old department store building on a large corner plot of central São Paulo and its adjacent buildings by Paulo Mendes da Rocha and MMBB Arquitetos, produced the SESC 24 de Maio (2017). The successful project effectively activates the already compromised urban center with intensive public community programs. The rearrangement of the original building took advantage of their existing concrete structures but kept little, almost nothing, of its identity features.[11]

Either pushed by abandonment and decay or by powerful economic forces already transforming the large modern buildings of our threatened urban centers, the trend is already moving forward, even if we do not yet have clear disciplinary guidelines. There is no consensus on the criteria to which extent the identity of the original buildings should be preserved or if it can be covered by new envelopes as has been done by Lacaton & Vassal in many interventions on residential buildings.[12]

A recent academic exercise made by Sabastián Adamo and Marcelo Faiden at Universidad Torcuato Di Tella[13] proposed a radical way to give back life to a list of prominent buildings in Buenos Aires and São Paulo. The list of the chosen buildings reveals an interest both in their architectural qualities, their central location and threatened fate, and their potential for radical transformation.[14] Notoriously, the goals of the exercise look for a radical programmatic redirection, an increase in built surface, a better relation to public space, and an enhancement of their environmental behavior. Transforming built volumes, façades, and interior distribution sometimes leads to a completely new identity for the intervened buildings, but always preserving something of its spirit, a remembrance of what existed. Adamo-Faiden's academic exercise on signed office buildings with radical interventions asks the same questions we already presented at the beginning. We do not have yet the answers, but they should be flexible enough, since for the large-scale modern buildings in decaying centers, it is not a matter of taste but a matter of survival. ■

12. Frédéric Druot, Anne Lacaton, and Jean-Philippe Vassal, *Plus. La Vivienda Colectiva, Territorio de Excepción* (Barcelona: Gustavo Gili, 2007).

13. Escuela de Arquitectura y Estudios Urbanos, Universidad Torcuato Di Tella, Taller de Tesis 2022 y 2023.

14. Torre Conurban (Kocourek, Katzenstein y Llorens 1969-1973); Torre UIA (Manteola, Petchersky, SanchezGomez, Santos, Solsona y Viñoly, 1968-1974); Torre IBM (Mario Roberto Álvarez, 1978-1983); Galerías Jardín, Florida 559 (Mario Roberto Alvarez, 1976); Torre Olivetti (Pantoff Nicolas, Fracchia Fernando, 1962); Torre Galería Florida, Paraguay 606 (Bonta Eugenio, Sucari Carlos 1964); Club Aleman (Mario Roberto Alvarez, 1972) ; Edificio República, Ex Entel (Sánchez Elía,Peralta Ramos, Agostini, 1954); Torre Pirelli, Maipu 1300 (Mario Bigongiari, 1970); Tucuman 744 (Mario Roberto Alvarez, 1987) among others in Buenos Aires; and Edificio Galería R. Monteiro (Rino Levi, Roberto Cerqueira César e Luiz Roberto Carvalho Franco, 1963); Edificio Palácio do Comércio (Lucjan Korngold, 1955); Edifício: Esther (Alvaro Vita Brazil, Adhemar Marinho, 1935); Galeria Metropole (Salvador Candia, Gian Carlo Gasperin, 1959); Conjunto Zarvos (Julio Neves, 1958); Edificio O estado de SP (Franz Heep, Jaques Pillon, 1951); Edificio Joelma (Salvador Candia, 1969) in São Paulo.

BIOGRAPHY

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HOUSING PROBLEM IN ITALY AND LARGE-SCALE BUILDINGS IN SECOND HALF OF THE 20TH CENTURY. A FRAGILE HERITAGE

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ABSTRACT

From Fifties to Seventies the "housing problem" had emerged with particular gravity in Italy. It appeared essential to find new ideas for dealing with an issue that, though present for some time, had been greatly aggravated by the migration of population from South to North of the country. The Ministry of Public Works engaged some public programs to solve the problem and many architects experimented new typologies, architectural solutions and strategies to build large-scale housing buildings. There was also explicit discussion of ways of rationalizing the construction site, but most importantly there was an increasing grasp of the concept of partial prefabrication, namely the use of prefabricated elements only for certain parts of a building. An example is the IACP building for 100 dwellings, built by Gino Valle as part of the 1971 Plan for Economic Housing of the Municipality of Udine (PEEP) for the new development areas in the eastern part of the city. The complex, over 150 meters long, forms as a sort of wall between the green courtyard area and the road axis, with the ground floor acting as a filter between the street, the green area behind and the longitudinal pedestrian path. The distribution floors are open areas, designed as spaces where the inhabitants can gather, with a wealth of paths that differ markedly from those of a simple walkway. As in many other Italian examples of the time, the provision of semi-public communal spaces never worked, in the face of the desire to privatize them, sometimes discreetly but much more often decisively, with elements being inserted to separate them and use them to store personal belongings. The building IACP has consequently been showing its fragility for some time now, not so much in its materials and construction techniques as in spatial terms and the ways it is used.

1. INTRODUCTION

"The Italian construction industry has an absolute and urgent need to review and perfect the conceptual and technical processes that underlie the design and implementation of construction," wrote Pier Luigi Nervi in 1945 in an article published in "Metron."[1] This was at a time when the "housing problem" had emerged with particular gravity after the war and it appeared essential to find new ideas for dealing with an issue that, though present for some time, had been greatly aggravated by the wartime destruction.[2] The Ministry of Public Works engaged some public programs to solve the problem and many architects experimented new typologies, architectural solutions and strategies to build housing complexes.[3] It is hardly surprising, in the debate over the need to plan for reconstruction and in an economic situation when industry was undergoing far-reaching changes, if many began to believe the solution lay in industrializing the construction industry. They trusted to the potential of technological development and its applications to architecture[4], in Italy previously based almost entirely on traditional and artisanal methods.[5] The goal was to increase productivity while lowering costs and speeding up building work by standardizing the key elements that constitute a building. The concepts of "prefabrication", "standardization" and "industrialization" were confusing to most architects, who often misunderstand the terms of the question that related to a process affecting design and construction.[6] The contribution brings out the transition from the theoretical studies of the new construction systems to the experiments conducted after the war[7], down to the construction of the first housing estates to use prefabricated components in the early fifties, when it was widely understood that the themes of prefabrication and the industrialization of construction had to be correlated with those of architecture, economics and urban planning. There was explicit discussion of ways of rationalizing the construction site and industrialization, but most importantly there was an increasing grasp of the concept of partial prefabrication, namely the use of prefabricated elements only for certain parts of a building. The focus shifted to the whole production process, highlighting the profound shortcomings with regard to standardization, project planning and execution and the simplification of construction procedures. In Fifties the problem of social housing became harder because of the immigration from South to North Italy. The central moment of this phase was the experimentation conducted in the suburbs of the principal Italian cities (Milan, Turin, Rome, Naples) by Social Housing Institute (Istituto Autonomo Case Popolari, IACP) about the large- scale buildings. For examples in Milan from Fifties to Seventies new housing estates were built with French patents for prefabricated building systems to be used for the construction of new housing estates (Camus system, Balency system and Barets system) concentrating the energies on interpreting the building of between 5 and 10 storeys high in many typological, distributional and constructional variants. The mid-rise building characterized many of the settlement models presented by the urban plans.

1. Pier Luigi Nervi, "Per gli studi e la sperimentazione nell'edilizia," *Metron* no. 3 (October 1945): 36.

2. Ernesto Nathan Rogers, "Uomini senza casa," *Domus,* no. 206 (February 1946): 2.

3. Francesca Albani, "Post-war experimentation in Italy: the QT8 housing estate in Milan. Construction, episodes, perspectives," in *Understanding and Conserving Industrialized and Prefabricated Architecture,* ed. Franz Graf and Yvan Delemontey (Lausanne: Presses Polytechniques et Universitares Romandes), 241-271.

4. Ignazio Gardella, "Case prefabbricate alla mostra del Consiglio delle Ricerche," *Casabella Costruzioni* no. 193 (March 1946): 5.

5. Anna Maria Talanti, L'industrializzazione edilizia in Italia 1945/1954 (Milano: Associazione Italiana per la Prefabbricazione per l'edilizia Industrializzata, 1981).

6. Eugenio Gentili, "La prefabbricazione oggi," *Metron*, no. 3 (October 1945): 44.

7. Piero Bottoni, "Il Quartiere Sperimentale Triennale QT8," *Edilizia Moderna*, no. 46 (June 1951): 61.

2. IACP BUILDING FOR 100 DWELLINGS BY GINO VALLE (1975-1979)

2.1. PROJECT AND CONSTRUCTION

The project for this large-scale residential building was part of the 1971 Plan for Economic Popular Housing of the Municipality of Udine (a town in the north-east of Italy near to Slovenia and Austria lines) for the expansion areas in the eastern part of the city. The urban plan envisaged two different strategies: the first was to complete the residential areas built by the IACP in previous projects; the second was to build on the vacant sites.[8] The project was commissioned to Gino Valle, an architect born in Udine in 1923, who was well known (also abroad) for his works, for his desire for experimentation beyond the purpose of creating specific links and paths of research between the different works.[9]

Gino Valle's building was part of the first group of works and was intended to complete an area in which various IACP buildings, constructed in different periods, would form an open courtyard. The project clearly sought to impose order on this disjointed situation, and his building, 184 m long, was meant to form a sort of continuous wall between the two parts, defining a real courtyard that could only be crossed on foot.

By concentrating the vertical communication points outside the residential building, he freed the ground floor to create a public pedestrian path that would serve as a connection between the western part of the complex and the bus stops, so that the building did not form a wall between the green courtyard and the road axis. The basement level was open on its two main sides, so being transformed into a sort of lowered courtyard, with the function of a filter between the street, the green area behind and the longitudinal pedestrian path spanned by the access bridges leading to the staircases.

The theme of prefabrication was also embodied in the construction of a large social housing complex. Underlying the surface in many of Valle's works is a theme that in some cases proved fundamental, namely modularity. Almost all of Gino Valle's projects are structured on the basis of a geometric grid that unifies and governs the composition and sometimes becomes modularity and prefabrication. In the case of IACP building the grid is 3,64 m that articulated 3 typologies of dwellings. This theme was common to many leading architects in the debate between the wars, but Valle never wished to design a prefabricated architectural element, unlike Angelo Mangiarotti[10] or Marco Zanuso, who were also highly active in industrial design. Gino Valle mainly interpreted the concept of seriality in its application to design, using construction systems already on the market or variations designed by himself and therefore focusing his research into composition and design on the potential for variation, participation, and experiments with new formal solutions.

2.2. SOCIAL SPACES

The key of the project could be found in the study of cross-section: an open ground floor and six storeys divided in two groups of three served by two alternate distribution floors providing access to different dwellings served by internal staircases leading to the upper and lower floors. The distribution floors

8. "Zona PEEP Udine est: edificio per 100 alloggi," *Casabella* no. 432 (January 1978): 44-47.

9. Pierre-Alain Croset and Luka Skansi, *Modern and Site Specific: The Architecture of Gino Valle, 1946-2003* (London: Lund Humphries, 2018).

10. Francesca Albani and Franz Graf, *Variation and Modularity* (Novara: Interlinea, 2019).

are open areas designed to be spaces where the inhabitants would gather, with a wealth of routes that differed widely from simple walkways. These spaces were inspired by British examples, including the work of the Smithsons in the 1950s. These floors are accessed by three distribution towers with elevators, located outside the volume, to which they are connected by bridges.

3. FAILED UTOPIAS

3.1. THE FRAGILITY OF ARCHITECTURE

The fragility of the architecture is sometimes also due to the level of experimentation that the designer chose to adopt. This is the case of the building for 100 IACP housing units in Udine. The complex forms as a sort of wall between the green courtyard area and the road axis, with the ground floor acting as a filter between the street, the green area behind and the longitudinal pedestrian path. The distribution floors are open areas. An idea borrowed from Anglo-Saxon examples, which, however, has never been reflected in the way the inhabitants experience these spaces. As in many other Italian examples of the time, the provision of semi-public communal spaces never worked, in the face of the desire to privatise them, sometimes discreetly but much more often decisively, with elements being inserted to separate them and use them to store personal belongings. The same process appears in the Housing complex in Giudecca in Venice[11] and Buja housing complexe,[12] revealing the inhabitants' explicit purpose of not wishing to experience these spaces collectively, instead trying in every way to expand the private spaces to the detriment of those designed for different uses. The IACP building has consequently been showing its fragility for some time now, not so much in its materials as in spatial terms and the ways it is used. The distribution corridors, which were supposed to play a central role in the social life of the inhabitants, soon became a problem in the management of the apartment building. It was therefore divided into three compartments, but by reducing these long walking spaces, one of its fundamental aspects of innovation and architectural research was lost. In addition, with the change of users from young large families to an elderly population, the internal distribution of the housing with entrance stairs is now inadequate and makes access difficult. Finally, the decision, during recent maintenance work, to change the colours of the façades, originally characterised by the colour green with the distribution areas painted red, has dealt it a fatal blow. The new colours (grey and red) are not compatible with Gino Valle's reflections on the use of colour in architecture. This large-scale housing building needs new strategies to make them useful again.[13]

3.2. CONCLUSIVE REMARKS

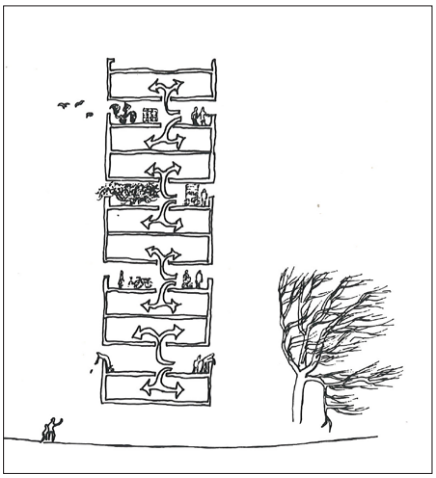
Gino Valle's buildings are well known and celebrated everywhere, but in his own land, Friuli, there is a passionate affection for and pride in this character with an international profile. Historiography, the local and international community, know and appreciate his extensive work, the subject of numerous studies and cultural initiatives that describe and celebrate the logic that led to the creation of some of the most interesting Italian architecture

11. Francesca Albani, "Social Housing in Venice: The Giudecca Housing Estate by Gino Valle (1980-1986) and the Challenges of Change," in *Inheritable Resilience: Sharing Values of Global Modernities*, 16th International Docomomo Conference, Tokyo, Docomomo International (August 29-September 2, 2021): 398-403.

12. Quartier résidentiel Santo Stefano di Buia, "L'Architecture d'Aujord'hui," no. 216, (September), XIX.

13. Francesca Albani and Carolina di Biase, *Architettura minore del XX secolo. Strategie di tutela e intervento* (Sant'Arcangelo di Romagna: Maggioli Ediore, 2013).





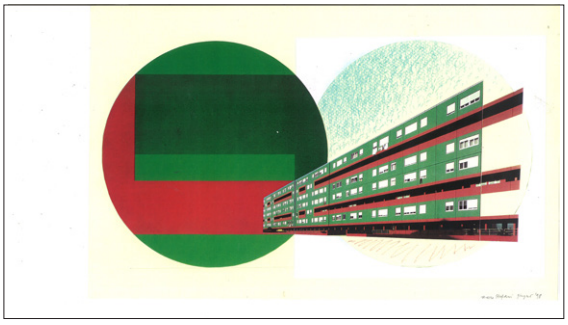






Figure 1. Gino Valle, Iacp Building for 100 Dwellings, Udine, Italy, 1975-1979 (Archive Studio Valle Architetti Associati, Udine).

Figure 2. Cross section of the building (Archive Studio Valle Architetti Associati, Udine).

Figure 3. Photomontage with a paintings by Carlo Ciussi and main façade of the building, 1990s (Archive Studio Valle Architetti Associati, Udine).

Figure 4. Building under construtions (Archive Studio Valle Architetti Associati, Udine).

Figure 5. Building after the maintence works and repainting (Archive Studio Valle Architetti Associati, Udine).

in the second half of the 20th century. But if we examine the state of his works, focusing on the way they have stood the test of time, we cannot fail to register a dichotomy between what is celebrated and their state of preservation. Many of the buildings by Gino Valle are also exemplary in this respect. Some have received careful maintenance, but others are in a state of disrepair. The change in the social and cultural contexts for which they were built, the inevitable aging of materials and methods of use or, more simply, occasional needs, have led to alterations that, to varying degrees, are affecting the significance and the values embodied in these architectures.

The great built heritage that Gino Valle has left us, extremely articulated and firmly anchored in the places and the time in which it was produced, is an important testimony not only to the achievement of one of the most versatile and refined architects in the second half of the 20th century, but also to the societies that produced him, whose cultural, economic and political requirements he expressed. Today, a review of the work of one of the architectural firms that continuously created some of the most important works in the period should foster an awareness that their permanence represents an important phase of Italian culture and a vital presence for the multi-layered

contemporary city. Raising awareness of the conservation of this heritage is therefore an important objective that contemporary architectural culture needs to undertake to ensure its transmission to those who come after us.[14] ■

14. J. Rykwert, "A Powerful Legacy," *Building Design* (May 6): 33.

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BIOGRAPHY

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MENDING WALL – CONTINUITY IN THE MODERNIST CITY: INTERPRETING SMALLBROOK RINGWAY CENTRE, BIRMINGHAM

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ABSTRACT

Before I built a wall I'd ask to know
What I was walling in or walling out,
And to whom I was like to give offense.[1]

The title of this paper and the excerpt are from Robert Frost's poem *Mending Wall*, written at the onset of the First World War. Here, the seasonal and mutual upkeep of a rural dry-stone wall becomes a metaphor for the contested nature of national and domestic borders, as well as what constitutes our sense of identity at a moment of profound global change. Similarly, Sennett's[2] notion of the open "edge-as-border" proposes an urban dimension to Frost's rural prose, locating the building and street as a place of civic participation. Together, these frame important questions about the nature of the building as a wall, and the maintenance and renewal of such structures.

Conceived as gated city wall, Smallbrook Ringway Centre (James Roberts, 1962) was one of the first buildings to line Birmingham's Inner Ring Road, addressing the changing patterns of life and mobility, and representative of the power of city governance. That representation is now at risk, the locally listed building condemned by its developers as a wall and recently approved for demolition after a nationally fought campaign for its renewal[3].

Through a critical analysis of Smallbrook Ringway Centre and interpretation in the form of a counterproposal, this paper explores the dynamic relationships "between the old and the new, the temporal and the timeless, innovation and quotation"[4].

The analytical and interpretive dimensions of the paper contribute to a unique understanding of this modernist building which remains at risk, offering a framework for thinking about heritage concerned neither with preservation nor progress, instead calling for what St. John Wilson[5] describes as 'a paradoxical interpretation of tradition as the springboard for innovation'.

1. INTRODUCTION

Built in 1961 as part of the post war renewal of Birmingham, James Roberts' Smallbrook Ringway Centre stands as a testament to civic ambition and architectural intellect. Roberts saw the Ringway Centre as a 'counterpart of the old town wall, […] and the Rotunda as the equivalent on the skyline of the cathedral of the old town'[6]. Birmingham never had a defensive city wall, growing from a market economy to become a global centre of industrial production. Roberts' scheme therefore offered an interpretation of the setting, the wall-like nature of the Ringway Centre locating the place culturally and temporally. Yet it's monumental scale and perception as a wall has contributed to its demise, with the building currently at risk of demolition.

Through the exploration of the wall as civic praxis, critical analysis of Smallbrook Ringway Centre, and interpretation in the form of a counter proposal, this paper explores the dynamic relationships "between the old and the new, the temporal and the timeless, innovation and quotation"[7]. Together, these foreground the role of architectural interpretation in heritage activism, challenging conventional modes of historical research and conservation practice.

2. BUILDING AS WALL

Written at the onset of the First World War, *Mending Wall* is a narrative of the seasonal rebuilding of a drystone wall and metaphor for the violently contested state of national boundaries. The title articulates the cooperation required in maintaining the wall, bringing neighbours into active dialogue. Human endeavour is pitched against the climate, flora, fauna, and the metaphysical presence of the place, revealing Frost's doubt as to the longevity and ultimately need for such delineation. Nevertheless, the presence of the wall reminds us of our common ground, marking a threshold through which we pass, and the passage of time.

Although modern construction means seasonal restoration is no longer necessary, Frost's poem reveals important questions about architectural form, maintenance and conservation. First, that counter to negative connotations of division, the wall-like nature of Smallbrook Ringway Centre emplaces it within the city. Sennett's notion of boundary and border articulates this difference; 'The boundary establishes closure through inactivity, by things petering out, not happening; to say that the edge-as-border is a more open condition means it is more full of events in time'[8]. Second, that buildings remain contingent on renewal. As Ingold[9] notes, building, as in the case of Frost's wall, is an activity – *a* building brings that activity to a close showing signs of permanence and solidity, meaning its inhabitation is distinct from, and consequential upon, the processes by which it becomes manifest.

3. HISTORIOGRAPHICAL CONTEXT

The debate over how best to reconstruct Birmingham in the post war period divided professional opinion, particularly on the role of the street. City engineer Sir Herbert Manzoni referred to the Inner Ring Road as 'a city street

1. Robert Frost, *Mending Wall in: North of Boston*, 1914.

2. Richard Sennett, "The Public Realm," in *The SAGE Handbook of the 21st Century City,* ed. Suzanne Hall and Ricky Burdett (London: SAGE Publications Ltd, 2018), 590.

3. Michael Dring et al., *Re-Imagining Smallbrook Ringway - A Counterproposal for Adaptive Re-use* (Birmingham, 2022),

4. https://c20society.org.uk/news/alternative-plans-tabled-for-birminghams-threatened-ringway-centre.

5. Colin St. John Wilson, *Architectural Reflection - Studies in the philosophy and practice of architecture* (Oxford: Butterworth Architecture, 1992), 67.

6. Wilson, *Architectural Reflection - Studies in the philosophy and practice of architecture,* 67.

7. BFCAA, *BFCAA Architects A-Z* (Birmingham: BFCAA, n.d.).

8. Wilson, *Architectural Reflection - Studies in the philosophy and practice of architecture,* 67.

9. Sennett, "The Public Realm," 590.

of novel character – it is not an urban motorway, nor principally a traffic street or a shopping street'[10]. John Madin[11], architect of the city's now-demolished Central Library, took a more radical approach, believing that the pedestrian-oriented precinct was superior to linear development along the street.

Smallbrook Ringway Centre was almost unique in its orientation to the street yet responded to the monumental nature of infrastructure. The assembly of land by the city Corporation began in 1917 at the inception of the Inner Ring Road. At Smallbrook Street this required the purchase of around ninety buildings and bomb-damaged ruins, and closure of historical passages and yards (shown in red in **figure 2**). Despite an intentionally laissez-faire approach to planning, Roberts was able to 'join up a series of discrete proposals for extensive, mixed-use complexes, [managing] to pull off what the council had failed to accomplish: an integrated architectural approach to the Ringway'[12]. Its monumentality is a result of civic ambition delivered through private means and Roberts' ingenuity and influence.

According to Ian Nairn, the 230-metre sweep of Smallbrook Ringway Centre presented 'a wall with gates in'[13], the latter formed by 'the delicate yet strong details of the concrete piers and beams that carry the Centre over Hurst Street'[14]. The upper floors of the building cut a dynamic line along the ring road, those below mediating the variable ground conditions, with the covered shopping parade offering civic decorum **(figure 3)**. Two levels of subterranean car park serviced the offices above, with the Locarno Ballroom, nightclub and nearby Scala Cinema adding further civic depth. At the grade-separated crossing of Hurst Street and Smallbrook Queensway, a pedestrian subway provided opportunities for retail. At Dudley Street, a vehicular underpass was formed, providing a balcony overlook, optimistically described by the Birmingham Post as adding 'a Venetian touch'[15].

The façade contributed to the building's civic presence, reflecting wider practices in art and architecture. Roberts was no stranger to contemporary sculpture having visited Barbara Hepworth at her studio in St. Ives. Here he specified a completely steel and glass façade referencing William Crabtree's Peter Jones store on London's Sloane Square, subsequently substituted for precast concrete mullions, sculptural spandrel panels and light sconces by Laing's own architect Sydney Greenwood[16]. Despite this change, Harwood likens the 'ribbon-like' building to a work of 'op art'[17]. The subtle layering of the façade contributes to the overall composition: the glazed wall split horizontally by the abstract sculptural panels reflecting the floor levels; the vertical mullions which divide the spandrels and give a closely-spaced syncopation; the larger staccato of the diagonally spaced light sconces. The resulting façade is a public work of art, as if it is woven from cast materials each reflecting the rhythm and tempo of the city, further articulated by the dramatic curve of the building.

4. PLACING SMALLBROOK RINGWAY CENTRE IN A BROADER THEORETICAL AND PRACTICAL CONTEXT

Art critic and curator Lawrence Alloway discussed two ways 'to put art *in* architecture'[18], the second of which, with its origin in Constructivism,

10. Tim Ingold, *Making - Anthropology, Archaeology, Art And Architecture* (Abingdon: Routledge, 2013), 47.

11. H. Manzoni, "The Inner Ring Road, Birmingham," *Institution of Civil Engineers* 18 (March 1961), 267.

12. John Madin, "Interview with John Madin on January 16th 1969," ed. Anthony Sutcliffe, no. LF71 (1969).

13. Geraint Franklin, "Public Ways, Private Means: James A. Roberts, J. L. Godfrey and Speculative Development Along Birmingham's Ringway 1956-64," *Twentieth Century Architecture* 14, no. Building for Business (2020): 114.

14. Ian Nairn, "Birmingham: Liverpool: Manchester," *Architectural Review* CXXVIII, no. 762 (1960): 110-17.

15. Ian Nairn, *Nairn's Towns*, 2013 ed. (London: Notting Hill Editions Ltd, 1967), 5.

16. Frank Price, "The New Birmingham," *Supplement to The Birmingham Mail*, ca. 1955, 16.

17. Geraint Franklin, "Public Ways, Private Means: James A. Roberts, J. L. Godfrey and Speculative Development Along Birmingham's Ringway 1956-64," *Twentieth Century Architecture* 14, no. Building for Business (2020): 117.

18. Elain Harwood, *Space, Hope & Brutalism: English Architecture 1945-1975* (New Haven and London: Yale University Press in association with Historic England, 2015), 323.

was concerned with 'the 'artistic' use of modern materials, of engineering and architecture'. Such origins found form in Britain in the fifties through sculptors working at an architectural scale. In the exhibition publication for 'This is Tomorrow' curated by Alloway, Richard Matthews wrote of the ways in which painting and sculpture were breaking down conventional form, with architecture next where 'the wall at least is beginning to go'[19]. At Smallbrook, it could be argued that the sculptural nature of the façade contributed to a dematerialisation of the building as wall.

Such common ground was also promoted between the building and the city. Writing in the Team 10 Primer, Aldo van Eyck declared that 'the time has come to conceive of architecture urbanistically and urbanism architecturally […] to arrive at the singular through plurality and vice versa'[20], proposing an affective reciprocity as witnessed in contemporary art, science and philosophy. This was deemed more pressing by the presence of architecture in everyday life, a concept explored through the Smithson's competition entry for the Golden Lane deck housing upon which their 'Grille' was based.

The shift towards the monumental and infrastructural presented new spaces of appearance[21], Frampton's architectural 'megaform' describing 'an element which due to its size, content and direction has the capacity to inflect the surrounding landscape and give it a particular orientation and identity'[21]. The challenge for architects was in making human associations in the new urban landscape. Just as Frost suggested in *Mending Wall*, Frampton too believed that such monumental structures return us to a time when architecture was concerned with the marking of ground, serving as 'civic microcosms [that] function as identifiable spaces of public appearance'[22]. This was arguably the case at Smallbrook Ringway Centre, where civic ground was evident in the individual shop front, animated street façade, and dynamic massing as much as it was in the hinterland of entertainment establishments and industry and engineering of the ring road.

5. CHALLENGING VALUE SYSTEMS

The limited protection afforded to Smallbrook Ringway Centre as a locally rather than nationally listed building has implications for embodied carbon and embodied memory. Historic England's listing refusal narrowly defines what is and what is not deemed worthy, their advice report[23] acknowledging that the Ringway Centre is 'impressive in both its scale and the way it responds to the topography of the site', yet critical of;

'the sheer length of the structure [which] means that there is […] an element of monotony in the design. The executed design also differed from architect James Roberts's intended scheme. […]The section over Hurst Street is the only part that somewhat resembles Roberts' original intention.'

This overlooks the ways in which art, architecture, the street and highway coalesced as advocated by Alloway and van Eyck, deferring to obsolete notions of individual architectural genius. Their evaluation seems at odds with the contemporary context. As Pendlebury et al note, 'a particular fabric, object or environment […] acts as the bearer of cultural and historical

19. Lawrence Alloway, "Real Places," *Architectural Design* 28, no. 6 (1958): 249.

20. Whitechapel Gallery, *This Is Tomorrow,* 2019 ed. (Whitechapel Gallery Ventures Limited, 1956).

21. Alison Smithson, ed., *Team 10 Primer* (Cambridge, MA: MIT Press, 1968), 102.

22. Hannah Arendt, *The Human Condition,* 2018 ed. (Chicago: The University of Chicago Press, 1958), 204.

23. Kenneth Frampton, *Megaform as Urban Landscape* (Michigan: The University of Michigan, 1999), 40-41.

meanings which are projected onto it by individuals and groups in society at different times.'[24] The persistence, coherence, persuasiveness and reach of those projections or arguments can have a major bearing on the longevity of the built environment and how heritage is considered.

The search for continuity in a city in pursuit of progress is an underlying tension of this paper with implications for civic life. In discussing a controversial retail scheme on London's Oxford St, Henley argues that the debate is about embodied carbon as well as embodied memory, and that 'the shift in reading the city as urban-space to built-form will have a hugely detrimental effect on our understanding of […] *the place,* and bring with it a dramatic loss of embodied memory'[25].

Together with a concern for embodied and whole life carbon, embodied memory has formed the basis of a public campaign for the adaptive reuse of Smallbrook Ringway Centre, promoting dialogue as a form of fruitful resistance.

6. DESIGN AS ACTIVISM

In 2022, Save Smallbrook, a coalition of Brutiful Birmingham, Birmingham Modernist Society, Zero Carbon House, and Twentieth Century Society, published a counter proposal for the adaptive reuse of Smallbrook Ringway Centre. Rather than a passive response to the planned scheme, which proposes the demolition of the existing building to be replaced with 1800 apartments in towers of up to 54 storeys, the coalition proposed the retention of and addition to the concrete structure for retail and residential use.

At ground level, the counter proposal reanimates the commercial frontage of the building through new shop fronts and four residential entrances, contributing to the everyday life of the street. Previously lost passages and streets are remade, extending traces of the historical street pattern through the lower levels. The main body of the building is converted to residential uses, the refined facade incorporating winter gardens that provide an environmental and social threshold between interior and exterior. At roof level, further apartments are provided in a three-storey addition using the structural capacity of the existing frame. Over, three towers rise to twenty storeys reflecting the massing of Roberts' nearby Rotunda, their form an enlarged version of the lozenge-shaped escape staircases to the rear. Around 450 apartments are proposed in a mix of sizes to meet city planning requirements, balancing the existing building and context with an appropriate density.

These illustrations formed part of a report[26] with commentary by the group, issued to Birmingham City Council along with an open letter signed by Stirling Prize-winning architects and other prominent stakeholders. It was also the subject of several articles in the Birmingham Post and a documentary film, a public meeting, public engagement at Birmingham Pride and at Extinction Rebellion housing demonstration, as well as meetings with the West Midlands mayor. The counter proposal placed design at the centre of civic and heritage activism, reinforcing Wainwright's plea that 'the

24. S. Mee, "Advice Report, Case Name: Ringway Centre, Smallbrook Queensway, Birmingham, Case Number: 1476808" (Historic England, 2022), 7.

25. John Pendlebury, Neveen Hamza, and Adam Sharr, "Conservation Values, Conservation-Planning And Climate Change," *disP - The Planning Review* 50 (2014): 43.

26. Simon Henley, "M&S Oxford St Is About Embodied Memory as Well as Embodied Carbon," Architects' Journal, https://www.architectsjournal.co.uk/news/opinion/ms-oxford-st-is-about-embodied-memory-as-well-as-embodied-carbon.

27. Michael Dring, Joe Holyoak, John Christophers, Coco Whitaker, Mary Keating, Jenny Marris, and John Bell, "Re-Imagining Smallbrook Ringway - a Counter-Proposal for Adaptive Re-Use," (Birmingham: Birmingham Modernist Society, 2022), https://c20society.org.uk/news/alternative-plans-tabled-for-birminghams-threatened-ringway-centre

Something there is that doesn't love a wall,
That sends the frozen-ground-swell under it,
And spills the upper boulders in the sun;
And makes gaps even two can pass abreast.
The work of hunters is another thing:
I have come after them and made repair
Where they have left not one stone on a stone,
But they would have the rabbit out of hiding,
To please the yelping dogs. The gaps I mean,
No one has seen them made or heard them made,
But at spring mending-time we find them there.
I let my neighbour know beyond the hill;
And on a day we meet to walk the line
And set the wall between us once again.







A – Smallbrook Ringway Centre, James Roberts, 1962 (hatched), with Scala House 1962-64 to west
B – Bethel Presbyterian Church of Wales, James Roberts, 1968
C – Sentinels residential towers, James Roberts, 1968-70
D – Albany Hotel, James Roberts, 1960-62
E – Albany Banqueting Suite, James Roberts, 1975
F – Rotunda offices and bank, James Roberts, 1965
G – Centre City offices, R Seifert & Partners, 1975
H – Norfolk House, Hurley Robinson & Partners, 1960
I – Station Street includes Electric Cinema, Bertie Crewe, 1909 (reworked1937, 1982, 2004), Crown Inn Thomas Plevins, c.1881, Old Rep Theatre, S.N. Cooke, 1913
J – New Street Station, Kenneth J. Davies for British Railways, 1967 and Birmingham Shopping Centre, Cotton Ballard Blow, 1970
K – Bull Ring Shopping Centre, Laing with Sydney Greenwood and T.J. Hirst, 1967, based on Roberts' scheme of 1958
L – St. Martin's Church, 1263, outer walls strengthened 1690, brick clerestorey added 1733, vestry 1760, restored 1855, partially rebuilt 1875 by J.A. Chatwin
M – Wholesale Markets

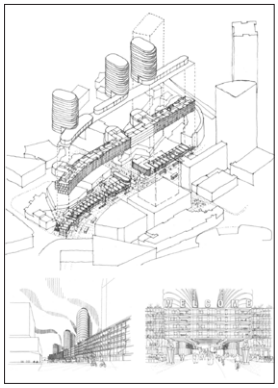


Figure 1. Excerpt from "Mending Wall" Robert Frost, in North of Boston, 1914.

Figure 2. Plan of Smallbrook Ringway Centre (A) in context, with adjacent buildings and indication of those demolished in red to make way for the development along Smallbrook Street. Source: Dring, M (2024)

Figure 3. Photograph of James Roberts' Smallbrook Ringway Centre looking east along Smallbrook Queensway. Source: Dring, M (2022)

Figure 4. Photograph of façade details showing cast sculptural spandrels, vertical mullions, and light sconces. Source: Rowan, D (2023)

Figure 5. Illustrations for the adaptive reuse of Smallbrook Ringway Centre. Source: Dring, M (2022-24)

city could become a model of creative post-war conservation'[27]. It offers a framework for thinking about heritage concerned neither with preservation nor progress, instead calling for what St. John Wilson describes as 'a paradoxical interpretation of tradition as the springboard for innovation'.[28]

In September 2023, the Planning Committee voted 7 to 6 to approve the submitted scheme, a decision that was successfully challenged by the campaign group on shortcomings of the process with regards heritage and climate impact. The scheme was returned to the committee in January 2024, once again approved by a margin of 7 to 4. At the time of writing, the campaign group are considering their options for further legal challenge.

7. CONCLUSION

In contrast to conventional historical research which defers to the intention and authority of the author of the work (of art, architecture, literature) in question[29], the making of the counter proposal offers a way of looking at the building and context 'in time' rather than 'through time' diachronically[30]. Architectural design for adaptive reuse can be viewed as a form of critical activism.

This raises important questions about renewal, not as a technical process usually associated with regeneration but 'with the nature of a refoundation'[31] in favour of the intensive continuity of the city. If conservation and progress inhabit either end of the same spectrum, then too great a concern for either risks flattening the possibilities of creative interpretation. The renewal of Smallbrook Ring Centre offers the potential for the reconciliation of differences between society, the environment and technology, resistant to the autonomy of modernist architecture. The unification of art, architecture and infrastructure contributes to its monumentality, yet ultimately contributed to its demise, deemed by heritage experts as 'monotonous' and 'repetitive', dismissing the complex sculptural dimension of the work.

The collaborative (and compromised) design and construction process involved in making buildings such as Smallbrook Ringway Centre ought to foreground the found condition over and above the architect's original intention. The fact that Roberts and members of his team disagreed with the contractors change of specification is of course relevant, yet the conservation, interpretation and renewal of modernist architecture demands an updated set of criteria and broader imagination, particularly where heritage value is often negotiated despite standards that suggest otherwise – to conserve or not is a political act.

The lifecycle of the building including its maintenance and adaptation ought to be considered in a much longer temporal dimension for reasons of embodied carbon and memory. Mitigation of climate change through re-use adds further weight to the heritage position, yet the empirical nature of this argument must not be allowed to overshadow equally important arguments concerned with the coherence of 'remembered space'[32] [33] and our civic life. ■

28. Oliver Wainwright, "'If the Ringway Goes, I'm Leaving' – the Fight to Save Birmingham's Brutiful Masterpieces," (2022), published electronically September 12, 2022, https://www.theguardian.com/artanddesign/2022/sep/12/ringway-birminghams-brutiful-masterpieces-clint-eastwood-wrecking-ball.

29. Wilson, *Architectural Reflection - Studies in the philosophy and practice of architecture,* 67.

30. Stephen Parcell, "The World in Front of the Work," *Journal of Architectural Education* 46, no. May (1993): 250.

31. David Leatherbarrow, *Building Time - Architecture, Event and Experience* (London: Bloomsbury, 2021), 10.

32. Peter Carl, "Renovatio and the Howling Void," in *Delayed Space: Work of Homa Fardjadi and Mohsen Mostafavi*, ed. Homa Fardjadi and Mohsen Mostafavi (New York: Princeton Architectural Press, 1994), 21.

33. Dalibor Vesely, *Architecture in the Age of Divided Representation,* 2006 ed. (Cambridge, Massachusetts: MIT Press, 2004).

BIOGRAPHY

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NEW OLD LONDON: MODERN LARGE-SCALE HOUSING FOR THE TRADITIONAL CITY

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ABSTRACT

Like many other European systems, in the aftermath of WWII (1945-1975), England's welfare state had a tremendous role in the provision of large-scale housing for its citizens. Following the path set by the Barlow Report (1940), not only were entirely New Towns built, but also existing urban areas refurbished. London will be no exception in the latter case. However, unlike what could be expected from the Modern spirit, its interventions will not normally follow the tabula rasa principle. Architects and city councils will embark on an adventurous and almost paradoxical marriage between standardized modern mass housing and the contextual specificities of the existing urban fabric. In other words, the fusion of new and old, resulting in monumental objects that can be both alien and familiar. Using the paradigmatic examples of the Claredale Street scheme (1954-1959, London, Denys Lasdun) and the Brunswick (1960-1974, London; Patrick Hodgkinson) as case studies, this paper aims to provide an in-depth analysis of the two moments that characterized this fusion. In addition to the design analysis, the paper also aims to draw valuable lessons from these case studies on the question of "legacy or waste". Although both schemes are now listed and recognized for their exceptional architectural qualities, they were once run down and considered 'waste.' By documenting the buildings' life and with the support of first-hand testimonies by its residents, the paper shows how issues of management, maintenance, and community involvement can work for or against the recognition of a building's valuable legacy. In sum, our goal will be threefold: firstly, to demystify the idea of Modern Architecture as exclusively "un-contextual"; secondly, to identify the characteristics that make these particular buildings monumental; and thirdly, to reveal the important role played by the inhabitants in the uplifting of the architecture's legacy.

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1. TRIUMPH OF THE LIVING: TERRITORY AND PLANNING IN ("PRE") POST-WAR BRITAIN

In Felix Nussbaum's (1904-1944) "Death Triumphant" (1944) the impact of World War II screams its visceral presence. In truth, unlike the first, the second was to have a heavy told on the everyday lives of ordinary people. Now, war did not only reclaimed our loved ones, but also our buildings, our streets, and our own lives.

Concerned about the devastation caused by the war, the British began planning for the improvement of their territory long before the fighting was over. Instead of a series of piecemeal measures, they tackled the problem with a holistic and top-down approach. The publishing of the "Barlow Report" (1940), the establishment of the Ministry of Town and Country Planning (1943), and the implementation of the "New Towns Act" (1946), were some of the milestones which paved the way for a structured decentralisation through the creation of new and self-sufficient towns, capable of promoting a more balanced occupation of the territory.[1] Within this "meta" concept, London would be no exception to the rule.

In 1943, Patrick Abercrombie (1879-1957) and John Henry Forshaw (1895-1973) would develop the "County of London Plan" – limiting the residential densities for what is now known as inner London – and a year later, in 1944, the same Abercrombie would publish the "Greater London Plan" – establishing the New Towns around it.[2] As far as the existing fabric was concerned, both plans recognised the opportunity to promote new housing by redeveloping areas that had either been affected by air raids or identified as insalubrious.

2. HIGH-RISE WITH A TWIST: DENYS LASDUN CLAREDALE STREET SCHEME

Before going any further, an important detail of the "County of London Plan" needs to be pointed out: not only did it set densities, but also heights. The fervent and profound fascination for high-rise buildings of the CIAM III (1930) would spread like wildfire and also have here an impact. The plan would establish the construction of 7-10 storey housing blocks in the inner zone of London,[3] and the institution responsible for its implementation – the London County Council (LCC) – would have some of its members enthusiastically defending it.[4]

Cherished by some within the LCC, the concept of the "mixed development" – i.e. estates in which high-rise blocks of flats for smaller families coexisted with low-rise blocks of maisonettes for larger ones – was to become the "norm" for the first 20 years or so after WWII. It was within this fascination with mixed developments – however, with a twist – that Denys Lasdun's (1914-2001) Claredale Street scheme (1954-1959, London) was designed.

2.1. BEGINNINGS

Originally consisting of two bars and a tower,[5] the Claredale Street scheme was planned as a council estate set to occupy an area of Bethnal Green

1. Leonardo Benevolo, *Historia de la arquitectura moderna* (Barcelona: Gustavo Gili, 1982), 756–57.

2. Simon Pepper, "The Beginnings of High-Rise Social Housing in the Long 1940s: The Case of the LCC and the Woodberry Down Estate," in *Architecture and the Welfare State* (Abingdon, and New York: Routledge, 2015), 75–77; Benevolo, *Historia de la arquitectura moderna*, 755–56.

3. Pepper, "The Beginnings of High-Rise Social Housing in the Long 1940s," 75–77.

4. Pepper, 73–75.

5. The two bars were demolished after the year 2000.

partially destroyed by air raids.[6] Following the typical approach, its 160 dwellings were divided into 96 larger ones in the bars (54 three-bedroom and 42 four-bedroom maisonettes) and 64 smaller ones in the tower (8 bed-sitting-room flats and 56 two-bedroom maisonettes).[7] It is in the tower – named as Keeling House – that the architect's genius was stronger.

Despite its imposing presence in the landscape **(Fig. 1)**, this 16-storey tower stemmed from a desire to connect with the surrounding context. Knowing that it would house families from the nearby terraced houses – with its small backyards and communal street life – Lasdun decided to give them an emulation of that same reality through the perfecting of his "cluster block" idea:[8] the apartments were mainly designed as maisonettes, optimising the sense of the traditional terraced house; the access to the apartments was provided by exterior galleries, planned to replicate the spirit of the street; intermediate "drying platforms" were created to replicate the backyard, where clothes could be hung to dry, children play and neighbours chat; and its shape was divided into four, slightly rotated, smaller volumes, in order to reduce the noise and augment the sunlight in the apartments whilst diminishing the impact of the building in the landscape.[9]

2.2. TROUBLED TIMES

Although Lasdun's famous "cluster blocks" were published in several architectural periodicals – suggesting a certain recognition – their reception by common people was less warm: almost immediately after their completion, some of the apartments began to have infiltrations;[10] the galleries and the drying platforms were too windy for any conversation to be pleasantly held;[11] and, more importantly, despite the architect's best efforts to emulate their former homes, some of the tenants were not pleased with its look.[12]

As time went on, the structural problems increased, and in 1984 the council was forced to carry out major renovation work. Still, from then on, the downward spiral only accelerated. The open circulation system was prone to mischief, and, more importantly, the structure continued to deteriorate, calling into question the effectiveness of the refurbishment. The external cladding began to fall, and by 1992 tenants were required to vacate.[13] In 1993 the Council was planning its demolition.[14]

2.3. AFTER LIFE

Nonetheless, despite some of its problems, it seemed that the tenants had grown fond of the building.[15] The maisonette layout was much appreciated, and the drying platforms functioned in part as a useful communal multifunctional space.[16] Furthermore, people recognised themselves as a community.[17] In the end, it seems that the main criticisms to the building had more to do with its deterioration – consequent of the lack of maintenance – than with the hatred for its architecture. Fortunately, the demolition was prevented in that same year of 1993 due to the building's listing as Grade II*.[18] In 1999 it was bought by a private promoter, and in 2000 its renovation was completed with the aim of selling the apartments.[19] This is where a new cycle begins.

6. "Housing, Bethnal Green, London," *The Architectural Review* 127, no. 759 (1960): 305; Denys Lasdun, National Life Story Collection: Architects' Lives, interview by Jill Lever, 1997, 1996, https://sounds.bl.uk/sounds/sir-denys-lasdun-interviewed-by-jill-lever-1001572450800x000013.

7. "Housing, Bethnal Green, London," 305.

8. Lasdun, NLSC: Architects' Lives.

9. Lasdun.

10. LaD/8/4, RIBA – Drawings and Archive Collections.

11. John R. Gold, *The Practice of Modernism: Modern Architects and Urban Transformation, 1954-1972* (London: Routledge, 2007), 211.

12. E. W. Cooney, "Living in Flats – Progress Report." – LaD/10/3, RIBA – Drawings and Archive Collections.

13. Amanda Baillieu, "Repairs Blamed for Bad Condition of Lasdun Tower Block," *Building Design*, October 9, 1992.

14. *Building Design*, July 23, 1993.

15. Lasdun, NLSC: Architects' Lives.

16. Graham Harrison interviewed by Jaime Silva, 2023.

17. William Curtis, *Denys Lasdun: Architecture, City, Landscape* (London: Phaidon, 1994), 51.

18. Historic England, "Keeling House, Bethnal Green - Official List Entry," Historic England, accessed February 23, 2023, https://historicengland.org.uk/listing/the-list/list-entry/1242108.

19. "Born Again: The High Rise Slum," *The Times Weekend*, July 1, 2000.

First, came a fresh middle class mainly seduced either by the views, the apartments layouts, or a mysticism emanated by the building.[20] Later, as the value of modern architecture became more recognised, a wider group of people arrived desiring to be part of Lasdun's legacy.[21] As for the initial communal goal, it has now been established through a common cherishing of the architecture and a tireless concierge, who passionately links contacts and supervises the building **(Fig. 2)**.[22]

3. URBANITY FROM WITHIN: PATRICK HODGKINSON'S BRUNSWICK

But it was not all roses in the mixed development's department. As soon as high-rises started to pop in the British landscape, their reality began to contradict the initial aspirations of architects and planners. As early as 1955, at a RIBA symposium, a survey presented by Margaret Willis – a sociologist at the LCC – revealed that two-thirds of high-rise tenants would prefer to live in a single-family house with a small garden.[23] As testified in Stephen Willats (1943) documental work of art – "Living with Practical Realities" (1978) – a sense of isolation, loneliness and anonymity seemed to torment the residents' psyche.

Faced with this reality, the new generation of architects, educated after WWII, began to question this solution. Contrary to the prevailing tabula rasa, they felt that the new housing should be even more connected to the traditional models to which people were accustomed. The intricate, low-rise, high-density solution was now the answer.[24] Patrick Hodgkinson's (1930-2016) Brunswick (1960-1974) would become one of its prime examples.

3.1. BEGINNINGS

However, unlike the Claredale Street scheme, the Brunswick would be commissioned by a private developer and the design process would be anything but straightforward. The plot had been purchased in 1958 with the intention of creating a mixed-use development to replace its derelict and partially war-damaged Georgian terraces.[25] After several unsuccessful attempts, in 1960, the promoters hired the office of Leslie Martin (1908-2000)[26] – the former chief architect of the LCC – probably in the hope of speeding up the process. Patrick Hodgkinson was working for Martin at the time and put in charge of the part of the plot that was to become the Brunswick. In 1963, Hodgkinson was given full responsibility for the project.[27]

The proposal was radical, though not new to Hodgkinson: an interlocking low-rise and high-density system with aspirations to be both building and urban ground. Two stepped volumes for housing – stopping at the height of the surrounding buildings in its exterior – faced each other and created, in the middle void, a long commercial public plaza set above a cinema and parking lot. Although Hodgkinson originally planned it as a classless "liner",[28] its apartments were to be designed, at one moment, for an established middle class, and at the end, as social housing.[29] The final planned solution[30] comprised 560 apartments (mainly raging from the bed-sitting-room to

20. Stephen Wilson interviewed by Jaime Silva, 2023.

21. Lauren Karrys interviewed by Jaime Silva, 2023.

22. Graham Harrison interviewed by Jaime Silva.

23. Pepper, "The Beginnings of High-Rise Social Housing in the Long 1940s," 84.

24. Mark Swenarton, "High Density without High Rise: Housing Experiments of the 1950s by Patrick Hodgkinson," in *Architecture and the Welfare State* (Abingdon, and New York: Routledge, 2015), 237.

25. Mark Swenarton, "Politics, Property and Planning: Building the Brunswick, 1958–74," *Town Planning Review* 84, no. 2 (2013): 200–201, https://doi.org/10.3828/tpr.2013.12.

26. Swenarton, 203–4.

27. Swenarton, 203–9.

28. Clare Melhuish, "Towards a Phenomenology of the Concrete Megastructure: Space and Perception at the Brunswick Centre, London," *Journal of Material Culture* 10, no. 1 (2005): 13, https://doi.org/10.1177/1359183505050092.

29. Patrick Hodgkinson, "Foundling Conception: Notes by Patrick Hodgkinson on the Development of the Design of the Brunswick Centre," *The Architectural Review* 152, no. 908 (1972): 216–18.

30. Only two of the original three phases were built.







Figure 1. Denys Lasdun, Claredale Street scheme (Keeling House), London, England, 1954-1959. © Jaime Silva, 2023.

Figure 2. Denys Lasdun, Claredale Street scheme (Keeling House), London, England, 1954-1959. From left to right: Stephen Wilson (resident from 2001 to 2023), Lauren Karrys (tenant since 2021), Graham Harrison (concierge). © Jaime Silva, 2023.

Figure 3. Patrick Hodgkinson, Brunswick, London, England, 1960-1974. © Jaime Silva, 2023.

the two-bedroom flat).[31] Interestingly, as in the case of Keeling House, its contextual aspirations were far from serene. Although low in height, its massive scale and contrasting materiality was inevitably at odds **(Fig. 3)**. While Keeling House's monumentality was established through a vertical imposition, at the Brunswick, it was a horizontal one.

3.2. TROUBLED TIMES

Unfortunately, as with Lasdun, there were many problems that began to emerge as soon as it was completed: the poor construction led to flooding in the apartments;[32] the slightest noise from the elevated terraces was amplified by the architecture and echoed unpleasantly throughout the entire complex;[33] and the success of the commercial plaza was more than short-lived, with moments when many shops were closed.[34]

31. Neave Brown, "Brunswick Centre, Bloomsbury, London: Criticism by Neave Brown," *The Architectural Review* 152, no. 908 (1972): 214.

32. Clare Melhuish, *The Life and Times of the Brunswick, Bloomsbury* (Camden History Society, 2006), 20.

33. Melhuish, *The Life and Times of the Brunswick*, 70.

34. Stuart Tappin, "Living in the Brunswick Centre: A Personal Account," *Journal of Architectural Conservation* 13, no. 2 (2007): 181, https://doi.org/10.1080/13556207.2007.10785004.

In addition to these problems, until the early 2000s the building was a constant target of vandalism, deviance, and homelessness. To deal with it, access to the elevated terraces and upper galleries was closed to the public in 1991.[35] Furthermore, in line with this concern, the grand staircase and bridges that connected the plaza and the elevated terraces were demolished. As it became increasingly dilapidated, there were many times in the 1990s when its disfigurement was planned with unsympathetic projects.[36]

3.3. AFTER LIFE

Fearing the destructive changes these plans would bring, the 20th Century Society fought to have the building listed. Neck-and-neck with the imminent disfigurement threatened by a redevelopment scheme approved in 2000, the building was finally granted Grade II listing in that same year.[37] However, its value was not only recognised by the experts, but also by the inhabitants. For them, the main problem was not the architecture *per se*, but the dilapidation into which it had fallen. Thus, around the time of the listing, its inhabitants were also fighting on the public front. Under the chairmanship of Stuart Tappin, the Tenants and Residents Association organised a major art event with the dual purpose of demonstrating their love for their building and denouncing the state of disrepair it had been left in.[38] Finally, in 2005-2006, the commercial plaza would be completely renovated, and the building at last painted, as originally intended. This was the great turning point in the life of the Brunswick.[39]

Today, almost 20 years after its renovation, the vibrancy of this once empty plaza has contributed greatly to the enhancement of the entire building. Far from the days of dodginess, it is now recognised by the general outsider as one of Bloomsbury's vibrant commercial centres. Although infiltration and dampness continue to persist, both the residents and tenants seem content with their peaceful and restrained existence as an operative community.[40]

4. LEGACIES DISGUISED AS WASTE: CONCLUSIONS

Both the Claredale Street scheme and the Brunswick confirm that not all Modern attitudes are autistic. In the case of London, far from the Corbusian tabula rasa, there were many architects who, in the post-war period, rehearsed the fascinating marriage between new and old, between modern and traditional. In the particular situation of our case studies, this marriage can be seen in both their spatial and formal attitudes. Spatially, they recognise the value of the urban milieu as a communal setting *par excellence*: Keeling House with its galleries and drying platforms; and the Brunswick, through its more ambitious plan to create a larger urban landscape, relating a plaza, elevated terraces, and galleries. Formally, they value both local volumes and finishings: Keeling House, with its broken tower and punctual claddings in brick; and the Brunswick, with its low height and the originally planned, but not executed, painting in the traditional white cream of Regent's Park.

However, regardless of these harmonisation attempts, it is inevitable to note that, paradoxically, both buildings have a monumental presence. Despite their contextual features, the contrast created by the Modern spirit

35. Melhuish, *The Life and Times of the Brunswick*, 49.

36. Melhuish, *The Life and Times of the Brunswick*, 50–51.

37. Melhuish, *The Life and Times of the Brunswick*, 54–56.

38. Stuart Tappin interviewed by Jaime Silva, 2023.

39. Swenarton, "Politics, Property and Planning," 219.

40. Stuart Tappin interviewed by Jaime Silva.

is too visceral to remain unnoticed and seems to be the direct cause for the monumentality. The reason might be twofold. First, the Modern attitude to scale. The need to build as many dwellings as possible, recurring to standardisation, prefabrication and repetition, results in buildings with dimensions and rhythms rarely seen before. Second, and no less important, the use of exposed/painted concrete. An amorphous material by nature, it has the power to create "objects" with almost infinite continuous surfaces. While the terraced houses have a thigh texture – in a dance between windows, doors, and small bricks – the one of the case studies, due to their employment of concrete, is way looser: the Keeling House, with its large and primordial structural grid running through the whole building; and the Brunswick, with the infinite and continuous surface of its heavy balconies.

Finally, some brief comments must be made on the question of legacy or waste. It is our belief that, for a moment in their lives, these buildings existed as legacies disguised as waste. Today, they are recognised as milestones of Modern housing in London. But one can't help wondering, what led to their momentary disregard? In truth, lack of maintenance and the resulting state of disrepair seem to have been the key. In the contradiction of this path, a huge acknowledgment must be given to the people who inhabit them. In these two cases, they are a great example of how dwellers can have a meaningful impact on the recognition of a building's legacy, either after or before its refurbishment. At Keeling House, it is the sense of community growing around Lasdun and his unique apartments that has contributed to the building's increasing cultural and monetary value. And, at the Brunswick, it was in part the activist attitude of its inhabitants that ultimately led to the building's partial refurbishment and larger recognition of its legacy.

Waste? Not at all. Legacy? Without a doubt.[41] Fascinating mutations between old and new, flavoured by the love of the ones who inhabit them.[42] ■

41. Ana Tostões, "Wake Up, Sleeping Beauty!," in *Modern Heritage: Reuse, Renovation, Restoration* (Basel, and Lisbon: Birkhäuser, and Docomomo International, 2022), 8–11.

42. The authors are highly thankful for the help provided by Stephen Wilson, Lauren Karrys and Graham Harrison, from Keeling House, as well as Stuart Tappin, from the Brunswick.

BIOGRAPHIES

Jaime Silva is an architect and PhD student currently conducting research on collective housing at IST-University of Lisbon (IST-UL) with a scholarship from FCT. He obtained his Master's degree at IST-UL, complemented with an exchange program at EPFL. In 2019, he was awarded the Álvaro Machado Prize and in 2021, together with Manuel Alves Campos, he won a special mention in the ReUse Italy competition. He has worked as an architect in the office of Eduardo Souto Moura and as a teaching assistant for the Theory of Architecture classes at IST-UL. He is a member of the CiTUA research group.

Ana Tostões is an architect, architecture critic, and historian. She is Full Professor at Técnico – University of Lisbon, where she serves as the Chair of the Architecture Scientific Board and is responsible for the PhD program. She is the leader of the Heritage research line at the Center for Innovation in Territory, Urbanism, and Architecture (CITUA). Invited professor at the University of Tokyo, the University of Navarra, FAUP, and KU Leuven, among others. She was the President of Docomomo International and as the Editor of the *Docomomo Journal* (2010-2021). She has been distinguished with the Commander degree of the Order of Infante Dom Henrique.

IBIRAPUERA GYMNASIUM: RENEWAL OF USE, PRIVATE CONCESSION AND PRESERVATION IN SÃO PAULO

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ABSTRACT

The renewal of use of large modern architectural complexes in São Paulo faces new challenges arising from the concession processes to the private sector. Unlike the selection of projects for public buildings through competitions, bidding for concessions in Brazil does not judge the quality of architectural intervention projects in these assets, whether listed or not. The development of projects, programs and works are the responsibility of the concessionaire, being guided by the economic-financial balance of the winning proposal in the bidding. This paper presents the case of the Ibirapuera Gymnasium (São Paulo, 1954), where the concession was blocked through a social movement for its preservation, after the listing was denied by the Council for the Defense of the Historical, Archaeological, Artistic and Tourist Heritage of São Paulo State - CONDEPHAAT in 2020.

Initially, introductory historiographical and documentary research will be presented on the project, work, author, and the context of the IV Centenary of São Paulo. Next, the denial process by CONDEPHAAT and the subsequent social movement for listing will be discussed. The conflict between the adopted model of economic sustainability and preservation of the Gym will be discussed, following the Conservation Plan method.

1. INTRODUCTION

This paper deals with the dispute over the preservation of the Ibirapuera Gymnasium, a Sports Complex located in São Paulo, Brasil. Between 2020 and 2021, the State and Municipal governments attempt to make possible its concession to the private sector, without commitment to the preservation of its architecture and sporting uses. The paper is structured in three parts. The first deals with the assessment of the cultural value of the complex and the debate held at the Council for the Defense of the Historical, Archaeological, Artistic and Tourist Heritage of the State of São Paulo / Condephaat due to the request for its listing. The second part contextualizes the project proposed to the Complex by governments, identifying there the hidden reasons for Condephaat's refusal of listing and reporting on the movements of sectors of society that managed to block the project at the end of 2021. The third part discusses the new parameters of use based on the concession of public equipment to private companies, in Brazil and abroad, which change preservation and adaptation practices for new uses.

2. HISTORY AND VALUES OF THE IBIRAPUERA SPORTS COMPLEX

The Constâncio Vaz Guimarães Sports Complex, known as Ginásio do Ibirapuera, was built for the commemorative events of the IV Centenary of the City of São Paulo, on a plot of vacant land municipalized in 1891 and destined for the construction of Ibirapuera Park in 1926. Two decades then the Organizing Committee of the IV Centenary was created, headed by Ciccillio Matarazzo, a businessman committed to modern art and architecture (founder of the Museum of Modern Art and the São Paulo Biennale).

The Commission was responsible for the projects of the permanent pavilions, for which it hired Oscar Niemeyer, while the sports equipment consisting of the Gym, Swimming Pool and Velodrome were under the responsibility of the Department of Sports of the State of São Paulo DEESP, which commissioned the architect Ícaro de Castro Mello for the project.

The Commission's project occupied most of the land designated for the park, while the Sports Complex was concentrated in the northeast sector. Its belonging to Ibirapuera Park is clear, despite today being separated from it by Avenida Pedro Álvarez Cabral and constructions built later. However, this condition was not recognized by the Park's listing in 1992 (Condephaat, process 257/87), which was limited to the sector south of the avenue.

Only in 2017 did the analysis to start the process of listing the Sports Complex by Condephaat begin, resulting in a Preliminary Dossier prepared by architects José Zagato and Silvia Wolff and presented in 2020 to the council. It highlights the qualities of the Sports Complex as a memory of social groups and a landmark in the architecture and engineering of sports facilities, which would justify the opening of the listing process.

On October 20, 2020, the request to open the process received a contrary opinion from the Reporting Councilor, architect Pedro Taddei Neto, who considers the arguments presented by Zagato and Wolff insufficient to justify the opening of the listing process, due to "the lack of uniqueness of

its architecture and its obsolescence for current functional parameters. When discussing this opinion, architect Renato Anelli, author of this communication, Counselor representing the Institute of Architects of Brazil (2019-2021), requested views of the process and issued a favorable opinion on the listing.

Anelli structured his opinion based on the opening statement of the 1964 Venice Charter, analyzing the Sports Complex "for the intrinsic value of its architecture and its urban insertion; for the testimony of the historical moment in which it was produced and for the cultural significance it acquired over time".

It argues that the buildings designed by Oscar Niemeyer and his team, and by Ícaro de Castro Mello, were built at a time of strong international projection of Brazilian Modern Architecture and interpreted the monumental purpose of Ibirapuera Park for the IV Centenary in a monumental key, following the principles of the new monumentality of Giedion, Sert and Léger. The structural boldness and formal clarity of the buildings constitute ways of highlighting monumentality in the urban landscape, a common procedure for public facilities of that period.

The opinion interprets the spatial and aesthetic unity with Ibirapuera Park: the prominent role that the circular shape and domed roof of the gym play in the horizontal set of rectangular pavilions and marquee, in counterpoint to the dome of the Palácio das Artes and the verticality of the Obelisk.

The third argument explored its significance for sport and culture. With the celebrations of the IV Centenary and the construction of the gymnasium, swimming pool and athletics track over, the complex became a reference for São Paulo's sportspeople, especially due to its role in public programs to train athletes for high-performance sports. The tip of a network of public, state and municipal facilities in the main medium-sized cities in the state of São Paulo.

Regarding the argument of obsolescence, Anelli recalls that since the Charter of Athens of 1931 until more recent documents, there are criteria for the recovery and adaptation of historic buildings to new parameters of use, with several successful Brazilian examples. He also recalls the national public competition for projects for the modernization of the Sports Complex held in 2003, where the winning project by Hector Vigliecca's team respects the cultural characteristics of the architectural complex while adding 45% of the built area.

Presented at a meeting of the Condephaat board on November 30, 2020, Anelli's opinion was defeated in a vote by 16 votes to 8. A public campaign was immediately launched in defense of the preservation of the Ibirapuera Gymnasium and Sports Complex.

3. THE PROPOSAL OF PIU GINÁSIO DO IBIRAPUERA AND THE SOCIAL PRESERVATION MOVEMENT

Even though it was hidden from the opinions and debates held at Condephaat, the main reason for blocking the listing is found in the Urban Intervention Project PIU Ginásio do Ibirapuera, being prepared by the City

of São Paulo since February 2020. Urban instrument created by the Zoning Law From 2016, the PIU began to be used to grant public equipment to the private sector, a subject that will be analyzed in the third part of this communication. Despite being an equipment built and managed by the State Sports Secretariat, the Sports Complex is Municipal property.

In February 2020, the State Government expressed interest in developing a PIU in this area, initiating a series of studies and public hearings to debate the proposal prepared by a Technical Group of representatives from both governments. The proposal presented at the hearings aimed to allow the concession of the project to the private sector, which would be led by the State Government, where the proposed uses were incompatible with the preservation of existing buildings.

An architectural design carried out "solely for the purpose of evaluating the viability of the project" showed that the volume of the gymnasium would remain intact, but without maintaining its sporting use. On the remainder of the land, a multi-purpose arena for 20,000 spectators would impose itself on the landscape as its main use. At the hearing on September 21, 2020, the concession notice was publicly presented, modeled without the requirement to preserve any building.

The opening of the listing process by Condephaat was defeated to make this project viable, using a majority of votes obtained by changing the composition of the board in April 2019, by decree of governor João Dória. The representation of universities was drastically reduced from 14 representatives to 4, leading institutions and advisors that guaranteed a majority to impose the government's will.

Anticipating the defeat that would occur, based on the request for views by counselor Anelli, the IAB, Docomomo and representatives of the universities on the Council's collegiate body looked for other actors to mobilize in defense of the Sports Complex. Among several of them, the Sports for Democracy group stands out, which fully joined the movement. Even before the vote, on November 26, a request for listing was filed with Conpresp, the municipal body for the preservation of historical heritage.

When the vote that prevented the listing was over, posts were sent out on social media, Olympic medal-winning athletes spoke out in the media, and journalists from the group opened up space to reach public opinion. In mid-December, on the eve of Christmas, sportspeople, architects and teachers filed a Popular Action to prevent the opening of the Sports Complex concession process, obtaining an injunction from judge Liliane Keyko Hioki on the 17th, before the forensic recess.

In her order the judge states:

"The danger of damage is shown by the definitive loss of the entire Complex, with all its history and architectural and urban values, if the bidding process is allowed to continue, especially because, as said, if the structure is demolished, the history will be lost."

In November 2021, one year after the defeat at Condephaat, the National Institute of Historical Heritage IPHAN decided to provisionally

list the Ibirapuera Sports Complex, initiating studies for its definitive listing by its Advisory Council.

On April 30, 2024, the Court of Justice of the State of São Paulo condemned the current president of Condephaat and another group of public agents for administrative improbity, in the second instance, for the demolition of a listed property in 2010 (TJSP case 0047489 -60.2011.8.26.0224). Before assuming the presidency of Condephaat, architect Carlos Faggin signed a report justifying the demolition, which allowed the demolition of the property to expand a shopping center parking lot in the city of Guarulhos.

4. NEW PARAMETERS OF USE BASED ON THE CONCESSION OF PUBLIC EQUIPMENT TO PRIVATE COMPANIES: PRESERVATION AND ADAPTATION

From 2017 onwards, the concession of large public facilities to the private sector in São Paulo adopted the PIU urban planning instrument to establish the terms of reference for the bidding. Despite establishing that the concession has a limited term and the assets granted return to public assets when it ends, the concessions defined flexible limits for interventions, including allowing demolitions and new constructions.

The proposal for a PIU is composed of Urban Regulation, Economic Modeling and a Democratic Management Model. A Reference Project accompanies the proposal, which will not be the final project since the winner of the bid has the autonomy to prepare their project and change it in accordance with the Economic Modeling. The importance of the latter is given by Brazilian legislation, where the execution of concession contracts must maintain the economic-financial balance of the notice or rebalance it in the case of justified changes. The Pacaembu Stadium and Anhembi Park concessions illustrate the treatment of equipment architecture by the concessionaires.

Pacaembu is a sports complex consisting of a football stadium, swimming pool, gym, and courts, opened in 1940 and was listed at municipal (1988 and 2002) and state (1998) level.

The concession was made due to the underutilization of the equipment, which occurred after the inauguration of the Arena Corinthians Stadium, used for the 2014 World Cup. New uses, especially cultural and commercial ones, were encouraged, as long as the protected heritage was preserved. The reference project suggested replacing a grandstand built in the 1970s with a horizontal building with multiple uses, a volume that was respected by the concessionaire. However, the concessionaire decided to build event halls under the original listed stands, which required their demolition, excavation of the ground and reconstruction with a new structure. Project approved by preservation bodies, although subject to criticism by experts in the field.

The Anhembi exhibition pavilion was less fortunate. Opened in 1970, the aluminum space structure covering around 70 thousand m^2 was an innovative work that placed Brazilian engineering and architecture at the forefront in the





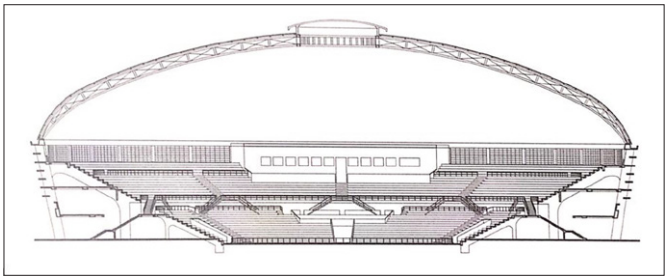




Figure 1. Ibirapuera Gymnasium view from the Ibirapuera Park's Lake. Author Renato Anelli, nov/2020

Figure 2. Ibirapuera Park during its construction, with the Gym in the upper right corner. Author Wernwe Haberkon 1953c.

Figure 3. Gym Sectional Drawing.

Figure 4. Movement of athletes embracing the Gym in defense of its preservation. SP TV, 02/12/2020.

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world. In 2015 it was already considered outdated, as it did not allow flexible subdivisions, compatible with contemporary use parameters.

In 2017, before the opening of the concession bidding, Conpresp decided not to list the complex, contradicting the opinions of the body's technical area that defended the list. After the bidding was carried out without the limits of listing in 2021, the winner presented a proposal that incorporated the Pavilion adaptation and preservation project carried out by MMBB in 2016 (illustration). However, the concessionary abandoned this option in 2023 when he reviewed the project and decided to demolish it. A similar fate to that intended for the Ibirapuera Gymnasium.

Architect Pedro Moreira used the example of Anhembi at the Docomomo Germany conference, held in Berlin, in March 2024, whose theme was "Sustainability and Large Structures of the Modern Movement". Showing photos of the mountain of scrap formed by the aluminum tubes, Moreira discussed the threats of demolition of the SEZ sports complex (East Berlin,

1977-1981), where the same privatization policy adopted here is repeated, combined with the postponement of its listing to eliminate barriers to the entrepreneur's freedom to carry out his business.

It is clear that the main problem lies in the radical change of program that implies the transfer of these complexes to private management, whether by sale or concession. These are not just technical aspects of conservation or adaptation to new uses, as proposed by the bibliography on historical heritage preservation, but rather the viability of a business that imposes itself on the public interest. ■

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BIOGRAPHY

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REVISITING MERIHAKA'S PARKING STRUCTURES P1 AND P2

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ABSTRACT

In the Merihaka residential area (a Finnish Docomomo site in Helsinki built 1973–1986), planning work is currently underway. Individual landowners, alongside the city, seek space for new residents and revenue to cover increasing repair costs. There are efforts to identify buildings suitable for demolition. Parking structures P1 and P2 have been assessed as being in poor condition and are being considered for demolition.[1] The garages are situated at the edges of Merihaka and were designed by Peter Bieber, a member of the planning trio Bieber–Ilonen–Savolainen, between 1975 and 1983. A historical survey (conducted as part of the ongoing zoning project) supports the notion that, compared to other buildings in Merihaka, the parking facilities hold lesser architectural significance. It describes the parking garages as 'non-buildings'.[2]

Further examination of the historical building survey, as well as new interviews and studies on-site, reveal that the matter is not straightforward. The parking structures are integral to the Merihaka area and reflect ideas of its time, system structures, and separation of functions.

In this text, I revisit the historical survey, evaluate parking buildings on-site and the system thinking of their time. I examine parking garage P1 via a scale model I built in 2022. The scale model was part of a project titled "Stripped Frame," executed together with architect Kaisa Karvinen and funded by the Kone Foundation.

Merihaka parking garages connect to a broader conversation on preserving modern everyday buildings. Not seeming as refined architecturally, they are part of their context. The parking halls serve as parking space for the residents and, in addition, as occasional temporary cultural use. People are drawn to their harsh but interesting brutal architecture. The criteria for evaluating the architecture of modest and monotonous modern buildings are still being determined.

1. INTRODUCTION

The Merihaka residential area was built in Hakaniemenranta, the eastern part of Helsinki city centre, during 1973–1986.[3] A modern concrete fortress of blocks of flats covered the hitherto nearly uninhabited industrial waterfront. By separating pedestrians and cars in Merihaka, the architects *Bieber–Ilonen–Savolainen* sought to create a safer and more pleasant traffic environment. On the edges, attached to the car deck, the separate parking buildings, P1 and P2, are located.

Merihaka has remained unchanged until now, but many parts of it are in need of repair. Private landowners and the City seek solutions to accommodate new residents to fund refurbishments. Parking buildings P1 and P2 face demolition, making room for residential structures.[4]

Examining the historical survey –a guideline for city planners– is particularly interesting, as it aligns architectural perspectives with those of the City and private landowners. Some buildings are seen as having architectural value, but the parking buildings are not considered to be of any significance. The survey states that the idea of a noise barrier is outdated and, as buildings, they are "non-buildings" and even frightening. These statements are based on the belief that spaces below the deck and the parking buildings are unpleasant and an architectural failure. Yet, it is stated that the measurement system that defines the whole area starts at the south-west corner of the parking hall P1.[5] The survey assessed buildings differently depending on the time of completion–which is part of the reason why the parking buildings were considered of lesser significance, having for the most part been completed in the 1980s. One might wonder about the criteria of worthy and inferior buildings in a case of such a unified area.

2. ON ORIGINS OF MERIHAKA AND THE PARKING BUILDINGS

The early sketches depict Merihaka as a dominant and modern "island" on the shoreline of Hakaniemi. In the 1950s the industrial sector freed the land to new use.[6] In 1965 the Finnish Architectural Review featured a plan which resembled the present-day Merihaka (Architects Erik Kråkström, André Schütz and Kirmo Mikkola assisted by architecture student Juhani Pallasmaa). The traffic was separated into two levels; above the deck office high-rises and below car decks. The plan was based on a rectangular measurement system.[7]

The plans of Kråkström et al. were never executed, and in 1969 design for present-day Merihaka started. In 1968 Haka, building developers, bought the land and invited Architect Sulo Savolainen to put together a group of architects, and in 1969 Savolainen invited architect Arvi Ilonen, whom he knew from university, and Peter Bieber from Berlin. Bieber had won competitions earlier and was therefore deemed competent by Savolainen and Ilonen.[8] Office towers were traded for residential buildings to provide homes and services for ordinary city dwellers. The architects negotiated the deck's elevation to be high enough for the sub-deck parking space not to turn into a low-ceilinged cellar.[9] Additionally, the plan included two separate parking

1. "Merihaka Development Plan," Helsinki City Planning Department, accessed February 02, 2024, https://www.hel.fi/fi/kaupunkiymparisto-ja-liikenne/kaupunkisuunnittelu-ja-rakentaminen/suunnitelmat-ja-rakennushankkeet/merihaka.

2. Arkkitehtitoimisto Okulus Oy, "Merihaka: Kaupunkirakenne- ja ympäristöhistoriaselvitys," in *Merihaka: Urban Structure and Environmental History Study* (Helsinki, Finland: Publications on Urban Environment, 2020), 259, accessed February 02, 2024, https://www.hel.fi/static/liitteet/kaupunkiymparisto/julkaisut/julkaisut/julkaisu-30-20.pdf

3. Merihaka is not formally protected but is included in Finland's Docomomo listing (Docomomo Suomi Finland ry, 2017, 206–207): "Alongside East Pasila, Merihaka is one of two 1970s' residential areas in Helsinki where the ideas for a compact city were applied. Architecturally Merihaka is the more detailed and in its cityscape aspects, the more thought-out one."

4. "Merihaka Development Plan," Helsinki City Planning Department

5. Okulus Oy, "Merihaka: Kaupunkirakenne- ja ympäristöhistoriaselvitys," 259-93.

6. Anja Kervanto Nevanlinna, "Teollisuusalueet modernisoinnin välineinä," in *Voimat, jotka rakensivat Helsinkiä 1945–2010, Helsingin historia vuodesta 1945* (Helsinki: Otava, 2012), 197.

7. Erik Kråkström, "Proposal of the planning of Kone ja Silta area," *Finnish Architectural Review* 10–11 (1965), 232.

8. Okulus, "Merihaka: Kaupunkirakenne- ja ympäristöhistoriaselvitys," 47.

9. Silja Ylitalo, "Poikkeuksellinen kokonaisuus," *Arkkitehtiuutiset by Finnish Association of Architects SAFA,* no. 3 (2023): 20.

halls attached to the high deck structures and with lower storeys, situated as noise barriers between the heavy traffic of Sörnäisten rantatie.[10]

The work of the three original architects was interrupted by the recession of the 1970s, and in the 1980s, they were too busy to return to the project. The work was eventually completed by Architect Unto Toikkanen of the Kulutusosuuskuntien Keskusliitto (an association of cooperative movements).

2.1. ARCHITECT PETER BIEBER AND THE PARKING HALLS

Of the original designers, Peter Bieber was the principal designer of the parking halls. The first part of the P1 was completed in 1975 in accordance with his plans. Unto Toikkanen continued the work in the 1980s, and the second part of the P1 was completed in 1980, and the P2 in 1983. Toikkanen followed Bieber's designs fairly accurately.[11]

2.2. THE 7,5 M COORDINATES

The measurement grid, starting from the southwest corner of parking building P1, spans 7.5x7.5 meters and fits within three 2.4-meter parking slots with the required structures. This modular measuring system extends throughout Merihaka.[12]

3. ON SITE: THE PARKING HALLS IN THE CITYSCAPE

The parking halls P1 and P2 are located at the perimeters of the area, and they are a significant part of the public space when approaching Merihaka, located between the heavily trafficked Sörnäisten rantatie and the sea. The parking halls act as an urban barrier, and as one ascends onto the deck, one will find it much more peaceful than at street level.

3.1. EXCLUSIVE ELEVATIONS AND SYMPATHETIC SQUARES

The pedestrian is meant to enter Merihaka via an overpass (Näkinsilta), from the west, where the P1 west façade is visible from a long distance away. The overpass takes one to the upper deck, and not far from where the pedestrian overpass leads is a square in front of the red and green façade from which one can enter P1.

Parking hall P2 is located facing the visitors coming from the north-east. There is a small green area in front of the concrete building that resembles an entrance square. Trees provide shelter from the traffic, and on the eastern side lies the sea. The façade looks closed off from the ground level, but it can be accessed through the car park below the deck or by ascending the stairs to the deck. On the deck it can be observed that the façade of P2 looks concordant with the outside of the commercial pavilion. They were both designed by Peter Bieber. The door to P2 from the deck is presently closed off.

The parking buildings can be found when following Haapaniemenkatu (the car lane running under the area) that leads below the deck. To locate the separate parking buildings, one needs to navigate toward the edges of the area.

10. Okulus Oy, "Merihaka: Kaupunkirakenne- ja ympäristöhistoriaselvitys," 91.

11. Okulus Oy, "Merihaka: Kaupunkirakenne- ja ympäristöhistoriaselvitys," 195.

12. Okulus Oy, "Merihaka: Kaupunkirakenne- ja ympäristöhistoriaselvitys," 93.

4. ON SITE: THE ARCHITECTURE OF P1 AND P2

There is no visible distinction between the phases of the parking buildings built in the 1970s and 1980s. Everything is built according to Peter Bieber's original plans. The outside of the buildings, adhering to the deck, does not necessarily imply that behind the rigidity of the modular appearance, there is lots of daylight, patina, details, and raw space.

4.1. ON DAYLIGHT

Once inside the parking halls, there is daylight. From the outside one would not expect such interesting direct and indirect natural light inside the halls. There is a light shaft inside each parking hall and there are large openings in the façades, elements which only cover the lower part of the wall, while the upper part of the wall is open. The buildings are uninsulated, and light enters freely, reflecting indirectly from the surface of the concrete or through the façade, creating graphic shadows. Underneath the high deck structure, there is not nearly as much daylight as there is inside the parking buildings.

4.2. THE HORIZONTAL VIEWS

The ceiling height is low, and the free headroom reaches only 2,2 m, while at openings only 2 m. Furthermore, the dimensions have been optimised for car park use. Every floor consists of two levels, allowing the car ramps to ascend one half-storey at a time. This kind of variation can be seen as a challenge when planning the reuse of a building. Even so, one could see it as part of the nature of the building. There is variation because of the half-storey mounting ramps cooperating with daylight. These qualities make horizontal views an integral part of the architecture, and the lack of vertical space is copiously made up for by the horizontal. There is a rhythm created by the repeating walls and elements.

4.3. THE DETAILS, MATERIALS, COLOURS AND THE PATINA

The buildings adhere to a 7.5 x 7.5-metre system, but when applied in reality, slight deviations at the joints persist. In parking halls P1 and P2, these are indicative of the restraints of the system and the execution; some of which are perhaps unintentional. In P1, small pieces of concrete are found beneath each ceiling joist, while in P2 there is a beam running perpendicular to the joists. This may have been added during the construction itself. The floorplan of P2 is not entirely rectangular. It slopes at the corner where it aligns with Sörnäisten rantatie. From the same spot, it can be observed how the elements on the west side do not abut, but there remains a small crack through which light filters in. Concrete, the predominant material, has developed a weathered appearance with varying patinas under different lighting conditions. Its colours have faded to different extents. It could serve as an ideal backdrop for galleries or short-term cultural events.

5. COMPACT CITY AND SYSTEM ARCHITECTURE

Architect Sulo Savolainen believed the segregation of cars and pedestrians to be a necessity due to the unprecedented amount of floor area available. By

placing cars under the deck, more space was made available in the courtyards for pedestrians.[13] The increase in car numbers was a major factor and the decks were intended to reduce their negative impact. Yet architect Peter Bieber commented in Helsingin Sanomat, in 1992, that the solution followed compact city ideas.[14]

Additionally, structural systems did influence Merihaka as they are most clearly visible below the deck and in the parking halls, where structures are uninsulated and therefore in plain sight.

Anonymity was vital to the new generation of architects at the end of 1960s and 1970s. It was considered that the architect's moral obligation was to find minimal solutions and employ structural systems which would act as a neutral backdrop to human activity. Reinforced steel was seen as the ideal material for this purpose. For instance, in Finland, the so-called Constructivists[15] took these principles seriously. In 1968, the heating plant designed by Architect Erkki Kairamo was featured in the Finnish Architectural Review as an example of design born out of sheer function. The building was described as a *non-building*; there only to protect the factory process.

So, one non-building in Hyrylä, and another in Merihaka. Systems and the respect for function were part of the ideals of the era. It is also significant that members of the first planning team, led by Architect Erik Kråkström, included the constructivists Juhani Pallasmaa and Kirmo Mikkola.

6. P1 IN CONCRETE SCALE MODEL

In 2021–2022, I worked on a research and exhibition project titled "Stripped Frame" with my colleague, Kaisa Karvinen. The exhibition entailed creating concrete scale models of 1960s and 1970s buildings, which revealed the architecturally essential concrete frame beneath the layers. The P1 scale model was unique in itself as it, in reality, exposed its frame, resulting in a cold building. At the same time, the model highlighted its form, normally inseparable from the deck, and the concept of a 7.5x7.5 structural frame containing the function, a "non-building," transformed into an object. A scale model reveals how concrete is not a neutral material. In the model, the system and the material forge an object with unique characteristics.

The scale model helped me to understand the parking halls' materiality, structural monotony, and connection to the Merihaka area as a whole. For an architect conducting a historical survey, a scale model could be a useful tool for analysing an existing structure.

7. THE CONCLUSIONS

As I revisited the material of the Merihaka historical survey on the parking halls, as well as the area today and the scale model, it became evident that the parking halls are an integral part of the Merihaka area and their quality is architecturally significant.

In the historical survey, it is stated that the parking halls are "non-buildings"; only serving to block the noise and act as the starting point for the abstract, systematic dimensioning. Regardless of whether this is true, it does not mean they are inferior, but rather that they were typical buildings of

13. Mikko Sauli, "Politiikkaa, betonia ja leijonan karjuntaa," *Yle News* (September 2, 2023): 10-18, accessed May 04, 2024, https://yle.fi/a/74-20047994.

14. Anu Nousiainen, "Yhden ajan ihanteet samassa paketissa," *Yle News* (October 12, 1992): 2, accessed May 04, 2024, https://www.hs.fi/kaupunki/art-2000003180605.html.

15. Architects Kirmo Mikkola and Juhani Pallasmaa were advocates of constructivism in the late 1960's. Koho (1994), 30–31.







Figure 1: Architects Bieber–Ilonen–Savolainen, Merihaka, Helsinki, Suomi, 1973–75. The construction site of the residential Merihaka area in the 1970s. The P1 in the front. © Työväen arkisto [workers' archive] 44498, 1973–75.

Figure 2: Architect Peter Bieber, Merihaka parking hall P1, Helsinki, Suomi, 1975 (and architect Unto Toikkanen 1983). A long horizontal view throughout the 1970s' and 1980s' parts.© Karita Rytivaara 2022

Figure 3: Architect Peter Bieber, Merihaka parking hall P1, Helsinki, Suomi, 1975 (and architect Unto Toikkanen 1983) Scale model (Karita Rytivaara 2022) based on P1 concrete structure. The reality of how an abstract system meets the material reality is revealed in a scale model. © Karita Rytivaara 2022

that era. Considering how well preserved the Merihaka area is as an original entity, the arguments are not strong enough to categorise garages as inferior.

7.1. VALUES IN CITYSCAPE

Merihaka is a landmark in the citycape of Hakaniemenranta. It is challenging to separate the various buildings according to their designers and the time of completion.

The area is not easily accessible on foot from Sörnäisten rantatie direction, where parking halls close Merihaka off from the rest of the city. In the words of the historical survey, "the principles for these are understandable, but they make for abominable non-architecture".[16] It is, however, this barrier that makes Merihaka a typical area of its time. The

16. Okulus Oy, "Merihaka: Kaupunkirakenne- ja ympäristöhistoriaselvitys," 91.

separation of functions is characteristic and makes the courtyards peaceful. Parking halls P1 and P2 do still act as noise barriers. In the historical survey, the areas designated for cars are deemed inferior, yet demolishing these would destroy an intact ensemble. Parking areas are an integral part of Merihaka. What will remain of Merihaka, if these are subtracted?

7.2. ARCHITECTURAL VALUE

Looking at P1 and P2 as individual buildings, one observes a relation to the surrounding Merihaka at every angle. The design is based on the separation of functions and the 7,5-metre dimensioning. The shopping centre's façades continue the green and red colour scheme of the garage façades on the deck. It is noteworthy that the commercial pavilion has been classified as architecturally significant, unlike the parking halls, but they are connected in their architecture and were both designed by Architect Peter Bieber.

As buildings, the parking halls are sparse and raw. This does not make them architecturally inferior, but in fact, surprisingly fun once you find them in the "underworld". Daylight from different directions creates beautiful shadows and photogenic spaces. The structures are mostly cast on-site, but for instance, the intermediate floors and façades are made of elements. The seams between different techniques give the buildings an original look. Time has given them a patina. Different shades of concrete and painted areas between car bays have a weathered, visually captivating aesthetic. Even though the buildings were made for cars, they offer an experience.

The parking halls were, for the most part, completed in the 1980s, but the more recent parts adjoin Peter Bieber's original design effortlessly, and it is virtually impossible to discern the difference.

7.3. THE REUSE OF THE EVERYDAY MODERN

Architect, Professor Wessel de Jonge describes in his article "Sustainable Renewal of the Everyday Modern", that modern building heritage deserves to be seen, even if not listed. Architectural quality typical of a particular era should be considered in evaluation.[17]

Breaking down ensembles like Merihaka and separating their parts is challenging. One may consider in-fill construction, if it is done with true respect to the existing heritage.

Turning parking halls for instance into housing would be challenging as they are unheated concrete structures with little headroom. Reusing them would be more feasible if the horizontal views and the quality of the material were considered assets. Answers may be found in the previous temporary use of the parking halls. where parties, photo shoots and exhibitions have taken place without requiring significant alterations to the existing buildings.[18] Sulo Savolainen states how colours could be used to help orientation below the deck, and more daylight could be introduced through new lightwells.[19]

Furthermore, it is significant that the residents value the area highly and that according to an ethnographic survey, they enjoy living there, and do not wish for demolitions, for example.[20]

17. Wessel de Jonge, "Sustainable Renewal of the Everyday Modern," *Journal of Architectural Conservation* 23, no. 1–2 (July 2017): 62.

18. The original entrances from the deck could be reopened since they are locked.

19. Sauli, "Politiikkaa, betonia ja leijonan karjuntaa," 10-18.

20. Ylitalo, "Poikkeuksellinen kokonaisuus," 20.

It is important to ask ourselves, *what will we gain after the building is demolished*? Regarding Merihaka, the demolition of the parking halls and replacing them with new buildings would disrupt the perimeter[21], and the new houses would conflict with the existing ones. Not to mention the ecological impact. The newbuild would be situated next to the heavily trafficked Sörnäisten rantatie, where there is, now, the so-called noise barrier. There is also the risk of a chain reaction. The next time there are buildings in disrepair, and in need of resources, it would become increasingly easy to demolish something of "lesser significance". ■

21. Architects have reacted to the new plans in Merihaka since 2022. For instance, architect Kaisa Karvinen featured in Finnish broadcasting company YLE Kulttuuricocktail (a cultural programme), commented on how the demolition would make the characteristic perimeters "leak".

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BIOGRAPHY

Karita Rytivaara is an architect, university teacher and researcher concentrating on restoration, renovation, post-war modernism and historical surroundings. Modern everyday architecture has been at the centre of her research, and on her latest project, she collaborated with Architect Kaisa Karvinen to produce "Stripped Frame", exploring 1960's and 70's buildings, which was funded by the Kone Foundation. She constructed scale models studying the concrete frames and published a peer-reviewed article "Layers of the Invisible" at the 5th Alvar Aalto Researchers' Seminar. She has also worked on projects at the R Schnitzler architecture office. She has been teaching architecture history at Aalto University since 2019.

BEYOND CIAM: TRANSNATIONAL NETWORKS OF LATE MODERNISM

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#25

ABSTRACT

This session aims to gain a better understanding of the forums of reflection and discussion of late modernism and the transnational networks that made them possible. The new generation of architects that graduated after World War II questioned the utilitarian approach of the founding members at CIAM, leading to its dissolution in 1959. Along with this process of dismantling modernism's core institution, other networks of discussion emerged to address the changing needs of the postwar world. Team 10 followed the steps of CIAM with a whole new format and different aims that included the users' social and psychological demands. Almost in parallel, other associations such as the International Union of Architects and the Union Internationale des Femmes Architectes somewhat diluted the technical content of their meetings to better connect professionals from all over the world. Also, the geopolitics of the postwar period fostered the emergence of transnational networks beyond Europe that helped address architectural issues from a specific local and regional perspective. Mapping the conferences, journals, and academic and editorial networks that followed the end of Ciam will provide a more comprehensive account of late modernism and the cross-connections between countries, institutions and individuals that contributed to a richer, more complex approach to architecture in the postwar period.

1. INTRODUCTION

CIAM conferences came to an end in 1959, after the meeting in Otterlo, which the group's founding members did not attend. Eventually, the younger generation grouped around Team 10, self-defined as "a small family group of architects who have sought each other out because each has found the help of others necessary to the development and understanding of their own individual work."[1] Thus, the quest for a universal design method underlying the CIAM ethos was slowly replaced by an ad-hoc approach that took into account the cultural and physical particularities of the site as well as the social and psychological needs of its inhabitants. But besides the Eurocentric Team 10, other exchange networks fostered architectural debate, incorporating a wide array of regional and local approaches.

In line with subtheme 8: *Modernity and Diversity*, this session analyses the ways conferences, journals, and personal and educational networks fostered exchange between architects and regions and nurtured the architectural debate beyond central Europe. It explores the networks and forums for reflection on the future course of architecture that proliferated once the unifying patronage of CIAM disappeared. While CIAM and Team 10 have been extensively researched, further channels and events through which avant-garde ideas evolved and disseminated in late modernism have yet to be explored and incorporated into the historiography of modern architecture.[2] This session expands on the topics explored by the research project RETRANSLATES_Redes transnacionales de la arquitectura española. Lecturas críticas de su difusión y recepción desde el exterior, sponsored by a Spanish Ministry of Science and Innovation three-year grant (2023-2025).

2. CONNECTING THE POSTWAR WORLD

Even before the end of CIAM, the post-war debate demanded a reconsideration of design methods, means and aims. As early as 1951, the *Darmstädter Gespräche* summoned creatives in devastated Germany to reflect on 'Mensch und Raum'. Architects such as Willem Dudok and Hans Scharoun delivered schemes for schools and dwellings to support the social and psychological needs of human beings.[3] Here, broadminded humanism replaced myopic functionalism.

A few years later architects of the post-war generation began to question CIAM's earlier solutions for architecture and the city that were based primarily on efficiency, industrialisation, and technology, for what these younger architects perceived as CIAM's failure to address basic human needs. Against this backdrop a group of young architects organised the 10th CIAM conference in Dubrovnik, Croatia, in 1956. Le Corbusier, Gropius, Van Eesteren, and other members of the old guard refrained from attending, easing the way to a more democratic organisation based on individual contributions rather than on CIAM's previous country delegations. According to Aldo van Eyck, the goal was a more plural approach to "the archaic principles of human nature".[4] Eventually, this generational shift

1. Alison Smithson, *Team 10 Primer* (Cambridge, Massachusetts: MIT Press, 1968).

2. Max Risselada and Dirk van den Heuvel (eds.), *Team 10 1953 – 1981: In Search of A Utopia of the Present* (Rotterdam: Nai Publishers, 2005).

3. The meetings texts are featured in Otto Bartning, *Mensch und Raum: Das Darmstädter Gespräch 1951* (Braunschweig: Vieweg, 1991). A comprehensive account of the architectural designs can be found in Michael Bender and Roland May, *Architektur der fünfziger Jahre: die Darmstädter Meisterbauten* (Stuttgart: Karl Krämer Verlag, 1998).

4. Francis Strauven, *"Aldo van Eyck – shaping the new reality from the in-between to the aesthetics of number"*, lecture dictated 7 May 2007, in Study Center Mellon Lectures, Canadian Centre for Architecture. Accessed 7 June 2024, https://www.taak.me/wp-content/uploads/15/in-betweenness_Aldo-van-Eyck.pdf

spelled the end of CIAM as announced at the following meeting in Otterlo, held in September 1959.[5]

Team 10 was a loose organisation characterised by fluctuating membership that aimed to address the architectural problems of the post-war period: the reconstruction of cities, large housing schemes, or new campuses designed to democratise higher education. Lacking an executive committee and formal membership, an 'inner circle' quickly emerged to set the agenda for the meetings that took place between 1960 and 1981. This core group included Alison and Peter Smithson, Jaap Bakema, Aldo van Eyck, Shadrach Woods, Georges Candilis, and Giancarlo de Carlo. Other architects, mainly European, came and went. Larger meetings were held at Bagnols-sur-Cèze, France (1960), Royaumont, France (1962), Berlin (1965), and Urbino, Italy (1966) around the social, cultural, and environmental aspects of the human habitat specific to the location.

Along with the reconsideration of urban design through the lens of Patrick Geddes's design methods and theories, new viewpoints emerged that had not been central to CIAM discourse. During the early 1970s, topics such as introducing modern infrastructure in historic city centres or citizen participation in the design process eventually permeated both Team 10's theoretical debate and the projects presented in the meetings. Team 10's predominantly European membership, the rise of postmodernism, internal tensions between the Smithsons and Aldo van Eyck, and the premature death of Jaap Bakema led to the dissolution of Team 10 before its last meeting could occur in Lisbon (September 1981). Nonetheless, Team 10 inaugurated transnational networks that sensitised modernism to qualities of place, climate and culture. In his paper for this session, Guido Campi discovers one such reorientation in Horst Rittel's concept of Design Methods, and its impact in the 1960s and 1970s on Cornelia and Eduardo Vargas and Raúl Di Lullo, three young architects working collaboratively and transnationally in Central Europe and South America's southern cone.

Parallel to—yet less militant than—CIAM, the Union Internationale des Architectes (UIA), was founded in 1948. The UIA was a non-governmental, democratic association that welcomed architects' associations from all countries without distinction of nationality, ideology or architectural doctrine.[6] Held in Lausanne in 1948, its first General Congress reflected on real and present post-war problems. The organisation met every three years, mostly in Europe, and its pan-professional nature excluded ideologically driven approaches, even as Cold War tensions persisted. Pierre Vago –a pupil of Auguste Perret and the organisation's first Secretary– helped expand the UIA towards Eastern Europe, securing the collaboration of Bulgarian architect Luben Tonev and Polish CIAM member Helena Syrkus.[7] This eastward reach bore fruit in many projects such as the winning entry for the Palace of Youth and Sports, designed in 1970 by Ljerka Lulić, Jasno Nooso, and Dinko Zlatarić for a site in

5. Eric Mumford, *The CIAM Discourse on Urbanism 1928-1960* (Cambridge Ma.: MIT Press, 2000).

6. Katherine Zubovich, "Debating Democracy: the International Union of Architects and the Cold War Politics of Expertise," *Architectural Expertise* 4 (2016): 104.

7. Zubovich, "Debating Democracy": 106.

Prishtina (Yugoslavia), which Edmund Drenogllava discusses in his paper for this session.

The urgency of city reconstruction after World War II fuelled an initial consensus under the patronage of Patrick Abercrombie, who was the UIA's first president and the author of London's post-war master plan. However, this same urgency endowed urban planning with new political dimensions and the debates were quickly coloured by Iron Curtain tensions. The East-West dispute centred subsequent meetings in Europe, which mainly debated the role architects should play in post-war society.

But the tenth conference in Havana in 1963, titled "Architecture in Developing Countries" shifted the focus away from Europe.[8] It also helped to expand the UIA network beyond Europe and North America to include Latin American membership. US-Cuba relations following the Bay of Pigs invasion in 1961 and the presence of Fidel Castro at the speaker's podium confirmed the political dimension of the meeting.[9] But the conference's focus on an architecture of limited resources transformed CIAM's celebration of high technology and functionalism. With 2000 professionals and 500 students in attendance, along with many critics and writers of the architectural press, the conference fostered regional and transnational networks.[10] Latin America would soon gain momentum within the organisation, with subsequent conferences in Buenos Aires (1969) and Mexico City (1978) and several presidents hailing from the region: Héctor Mardones-Restat (Chile, 1957-1961), Ramón Corona Martín (Mexico 1969-1972), Sara Topelson de Grinberg (Mexico, 1996-1999), Jaime Lerner (Brazil, 2002-2005), and José Luis Cortés (Mexico, 2021-2023).[11]

Also in 1963, female professionals founded the Union Internationale des Femmes Architectes (UIFA) "to establish friendly relations and exchanges among women architects and town planners in all countries; consolidate their efforts to ensure that careers in these fields are opened to women; collect information concerning their status and professional life; provide opportunities for women architects to express and diffuse their ideas".[12] Not officially connected to the UIA, the UIFA was largely the result of the efforts of Solagne d'Herbert de la Tour, a Romanian architect who had suffered gender inequality in Paris.[13] In 1960 she founded the Union Française des Femmes Architectes (UFFA) following previously established models in Finland (1948), Japan (1953), and Italy (1957). From the beginning she engaged women around the world working in the design professions to centre their specific needs and perspectives. The association's first international congress, titled 'Women Architects in the World", was held in Paris in 1963, and it was attended by some 100 architects from 22 countries.[14] Since then, around 20 more meetings have taken place every two or three years expanding the initial women-centred themes to topics such as society, identity, heritage and environment preservation, or climate change.[15] Although initiated in Paris, they soon expanded to the East, when the third congress was held in Ramsar, Iran

8. UIA, "World Congress of Architects", accessed May 5, 2024, https://www.uia-architectes.org/en/architecture-events/world-congresses-of-architects/page/3/

9. Peter Speakman, "International Union of Architects Congress, Havana (Cuba) and Mexico City, 1963", 16mm footage, 24.59 minutes, black and white, silent, 1963. National Library of Scotland, reference nr. 9928.

10. M. Grosman, "El congreso de la UIA, La Habana", *Obrador* 1 (1963): 60.

11. UIA, "UIA Presidents", accessed May 6, 2024, https://www.uia-architectes.org/en/uia-presidents/

12. Women Writing Architecture, "International Union of Women Architects", accessed May 6, 2024, https://womenwritingarchitecture.org/people-and-organisations/international-union-of-women-architects/

13. Paula Dedecca, "UIFA, UIA, IAB: diálogos transnacionais sobre a mulher arquiteta (1960-1967)", *Cadernos Pagu* 67 (May 2023), https://doi.org/10.1590/18094449202300670012

14. Dedecca, "UIFA, UIA, IAB": 7.

15. L'Union Internationale des Femmes Architectes (UIFA) and The International Archive of Women in Architecture (IAWA), *"THE WOMAN ARCHITECT AND HER FIELD OF INFLUENCE: CONTRIBUTING TO THE CONSTELLATION"*, July 26 -31, 2015, 18th UIFA Congress, Washington, DC. Accessed May 8, 2024, https://www.uifa2015.com/

(1976) as part of the Pahlavi rulers' efforts to modernise the country.[16] *Shahbanu* Farah Diba, the empress, who had left her architectural education in Paris unfinished, attended and promoted the conference.[17] Influenced by the UIFA, the UIA gradually included more women on their working commissions and representative bodies and addressed gender-related problems.

This trend of transnationalism also pervaded the architectural press in the 1970s and 1980s. Some older, more established publications such as the *Journal of the American Institute of Architects* (*JAIA*) and *RIBA Journal* attempted, with limited degrees of success, to internationalise their content by incorporating examples of what *JAIA* simplistically branded as "World Architecture". But parallel to developments in Team 10, the UIA and the UIFA, newly established periodicals were more meaningfully transnational and collaborative. Such was the case of New York based *Oppositions* (1973-1984), which depended on pan-national participation. Moreover, *Oppositions* collaborated regularly with *Arquitecturas Bis* (1974-1985), based in Barcelona. Both journals broadly emphasised architectural theory and criticism more than reporting on discreet buildings or topics in professional practice. The Indian journal *Design* (1957-1988), as Pappal Suneja highlights in his paper for this session, followed these same tendencies, even though *Design*'s scope was more *intra*-national than *inter*-national.

3. TRANSNATIONAL RELATIONS IN REGIONAL CONTEXTS

On a regional scale, transnational networks had already thrived even before Eurocentric institutions expanded to include other parts of the world. Founded in 1920 in Uruguay, the Congresos Panamericanos de Arquitectos provided a forum to debate issues in Latin America.[18] Although initially a grouping of professional associations from 32 countries in South America, in 1965 they also included all North American countries to become a fully Panamerican Federation of Architects' Associations. Their conferences occurred regularly and often focused on professional topics, such as university campuses or the architecture of health, but they also discussed questions related to collective American identity.[19] The need for a 'national architecture' fully emancipated from European trends was already at the core of the debate when these meetings were launched in the 1920s—years before CIAM's inauguration—and it permeated discussions throughout the 20th century. Hosting the conference in different cities across the region exposed participants to the continent's collective architectural heritage and the diversity of its landscapes, building traditions and current practice. Together with the Panamerican Exhibitions of Architecture and Urban Planning held in parallel with the meetings, they disseminated American architecture and nurtured a nuanced, multifaceted continental identity.[20] In his paper for this session, Óscar Andrade Castro explores one such instance, architect Alberto Cruz's and poet Edison Simons' transnational

16. Robert Steele, "The Pahlavi National Library Project: Education and Modernization in Late Pahlavi Iran," *Iranian Studies* 52, no. 1-2 (March 2019): 85-110.

17. Dedecca, "UIFA, UIA, IAB": 10.

18. Ramón Gutiérrez, Jorge Tartarini and Rubens Stagno, *Los Congresos Panamericanos de Arquitectos 1920-2000. Apuntes para su Historia* (Buenos Aires: CEDODAL, 2007).

19. Ángela Sánchez Negrete, "Ámbitos de validación del pensamiento sobre Arquitectura Nacional entre 1910 y 1940", *Cuadernos del CEHAU-NEA* (December 2006): 7-18.

20. José Antonio Flores Soto, "La modernidad importada de América: España en el VI Congreso Panamericano de Arquitectos, un vacío gráfico", *Ciudad y Territorio. Estudios Territoriales* 185 (2015): 482-498.

journey in the late 1960s from Valparaíso to Vancouver in search of a unified, pan-American identity that they called, poetically, "Amereida".

A similar transnational network was that of the Commonwealth Association of Architects, which emerged from the meeting of Commonwealth architectural institutions, held in London in 1963.[21] Since then they have met every two years in cities in former British colonies. Organised in five regions, Africa, Asia, Europe, America, and the Pacific, they operate through a council and two working committees dealing with education and practice. Although their main aim is to work for the advancement of architecture, they have been especially active in architectural education, where they have carried out extensive surveys and have committed to raising the standards of professional training in the field.[22]

On a far smaller scale, the Pequeños Congresos, which is the focus of Ana Esteban Maluenda's paper for this session, were small meetings in Spain, initially intended to connect professionals working in Madrid and Barcelona who were in search of a modern approach to architecture that would be sufficiently potent to contest the heavy-handed academicism that prevailed during the early years of the Franco regime. These "small conferences" took place between 1959 and 1968 almost every year in different locations. Their initial aim was to visit and discuss contemporary architecture and to address specific themes related to these visits, such as architecture and tourism or affordable housing. Initially, these conferences attempted to connect professionals based in Madrid and Barcelona, Spain's primary cultural centres, but they soon expanded to other regions such as the Basque Country and Andalusia, thereby painting a multifaceted portrait of Spanish modernism. Portuguese colleagues also participated in the Spanish meetings, and in 1967 the conference travelled to Portugal.[23] These connections later expanded to include the rest of Europe and North America. In order to frame these discussions within the international debate the organisers invited Georges Candilis, Giancarlo de Carlo, Aldo Rossi, Peter Eisenman, and Vittorio Gregotti to discuss the challenges facing Spanish architecture from an outsider's perspective.[24] These invitations facilitated further connections between Europe and North America, and many of these foreign architects later collaborated with Rafael Moneo, Ignasi de Solà-Morales, and Antón Capitel (among others) in venues like *Oppositions*.

4. CONCLUSION

While CIAM was dominated by a focus on issues specific to the context of central Europe, and the solutions it proposed tended to emphasise formulaic and functionalist approaches to the interface between people and technology, it opened the door for Team 10's more nuanced and place-based ad-hoc approach. In turn, the grassroots and informal collaborations that characterised Team 10 laid the groundwork for the development of other transnational networks across the globe during the 1970s and 1980s. Organisations such as the UIA, the UIFA, the Congresos Panamericanos

21. Commonwealth Association of Architects, "Our History", accessed May 1, 2024, https://commonwealtharchitects.org/our-history-new/

22. RIBA, "CAA Elections: Call for Nominations", accessed May 1, 2024, https://www.architecture.com/knowledge-and-resources/knowledge-landing-page/commonwealth-association-of-architects-elections-call-for-nominations.

23. Raúl Martínez Martínez and Tiago Lopes Dias. "Los pequeños congresos, 1959-1968: debates paralelos", in *La cultura arquitectónica en los años de la Transición*, ed. Carlos Sambricio (Sevilla: Editorial Universidad de Sevilla, 2022), 65-80.

24. Nuno Correia. "Los Pequeños Congresos, 1959/1968, Tras los pasos del Team X" in *Destino Barcelona, 1911-1991, Arquitectos, viajes e intercambios, ed*. Josep Maria Rovira, Enrique Granell, Carolina B. García (Barcelona: Fundación Arquia, 2018), 207-219.

de Arquitectos, the Commonwealth Association of Architects, and Spain's Pequeños Congresos transcended both regional and national borders, and opened new forums in which ideas could be exchanged fluidly and openly. In print format, new publication venues such as *Oppositions, Arquitecturas Bis* and the Indian journal *Design* paralleled the collaborative nature of these congresses. Not only did these collaborations move beyond the geographic confines of central Europe, they also made room for women and other minorities to express their voices, especially those working in geographic regions outside of central Europe and North America. These transnational networks of late modernism took advantage of the collaborative models established by CIAM and Team 10, and they found innovative ways of implementing these ideas in an increasingly pluralistic world. ■

BIOGRAPHY

Marta García Carbonero holds a Master in Architecture and a PhD from the Universidad Politécnica de Madrid, and a Master in Garden and Landscape History from the School of Advanced Studies, University of London. Her PhD thesis on 20th Century European cemeteries was awarded the Universidad Politécnica de Madrid Prize for outstanding dissertations. She is an Associate Professor of architecture and landscape history at UPM's School of Architecture. She has edited the books *Heterotopias* (2012) and *Plant Architecture* (2018) and is secretary of EAHN-European Architectural History Network.

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SITUATED AND CREATIVE. TWO ACTS ON HOUSING DESIGN, PARTICIPATION, AND METHODS IN LATIN AMERICAN LATE MODERNISM

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ABSTRACT

In this presentation, I analyse two histories of designers influenced by the Design Methods discourse, active in the post-CIAM Long Sixties. Cornelia and Eduardo Vargas and Raúl Di Lullo applied methods in housing design in Latin America. Influenced by systems, operations research, and cybernetics, Design Methods aimed at systematising the design process. One relevant advocator of this discourse was Horst Rittel. He taught in academic contexts attended by the Vargas and Di Lullo: Ulm and Berkeley, respectively. Both cases represent the shift from a pure "systems approach" to what Rittel would call second-generation Design Methods. Here, design would be an argumentative activity, where designers were part of a broader set of stakeholders. This is visible as users of these housing projects are directly involved in the design, construction, and sponsoring of their homes. Firstly, I will show the Vargas's massive cooperative housing project in Valparaíso, Chile. From 1960 on, future dwellers built their homes, working side by side with the architects, using a cooperative system. Secondly, Di Lullo designed, from the 1970s on, models of evolutionary housing in Argentinian context. Using a geometrical tool based on the semi-lattice, he proposed a system for the dwellers to expand their homes as their lives change, choosing between different growth alternatives. In the 1970s, methods figures such as Rittel responded to the critique of the universality and rigidity of the discourse. Therefore, he differentiated between design and science, stating that design deals with Wicked Problems. These are ill-defined and malignant and rely on the good political judgment of designers. The analysis of sources and oral interviews evidences how the Vargas and Di Lullo acknowledged the *wickedness* of housing design, proposing contextually situated and creative solutions. This reflects their belief in a scientific, but principally politically committed and participatory *other* Late Modernism.

1. INTRODUCTION

If there are reasons to talk about the Design Methods Movement, I suggest that one of them is the dissemination of its ideas in Latin America. This loose assembly of international researchers[1] lasted from the late 1950s to the late 1970s. They wanted to optimise the design process with techniques from systems disciplines such as operations research and cybernetics. Nevertheless, in the early 1970s, it was already evident that design problems were not science problems. Horst Rittel, mathematician, physicist, and leading defender of Design Methods, had to learn that design was more complex than what he had imagined.[2] From this realisation emerged his concept of Wicked Problems: design offered "ill-defined" and "malignant" problems[3] that relied on the designer's good political judgment. These could not be solved with conventional methods of sciences. How to *tame* them would be achieved by second-generation Design Methods.[4] With this notion, Rittel described the task of designers who acknowledged that they were part of a broader societal group making design decisions. This opposed the bird-eye view of traditional design and planning, where architects monopolised decisions.

The object of this presentation is the work of architects who applied such methods to social housing design, which shows two moments of the expansion of this Late Modernism discourse. Cornelia and Eduardo Vargas studied at the HfG Ulm in Germany. There, they had contact with post-war scientific design methods, whose advocators were Max Bill and Horst Rittel, among others. In Chile, in the early 1960s, the Vargas led the construction of a massive cooperative housing project. In turn, architect Raúl Di Lullo developed housing design methods with an approach of a later phase of the methods discourse, when Rittel and Christopher Alexander were disseminating it in the context of the "Berkeley Bubble."[5]

The Vargas's and Di Lullo's trajectories did not intersect. However, both stories depict how the architectural thinking advocated by the CIAM was contested. After the dissolution of the prestigious congress, housing theories moved away from early rigid functionalism towards a more nuanced and socially aware design practice. The Vargas and Di Lullo are examples of the structuralist line of thought in post-Team X architecture.

Systems sciences contributed, during the Long Sixties,[6] to the formation of a new object of reflection in architecture, the design methods. Later, this was criticized for its claims of objectivity and universality. How did systems designers in Latin America counter this by addressing local complexities? What are the resonances of design methods figures such as Rittel or Alexander in these territories? Are there thematic networks based on these ideas?[7] Published and unpublished sources and oral interviews expose how the Vargas and Di Lullo tackled the *wickedness* of housing design, proposing context-situated and creative solutions. This reflects their belief in a scientific, but principally politically-committed and participatory *other* modernism.

1. Alise Upitis, *Nature Normative: The Design Methods Movement, 1944-1967*, PhD diss., (Massachusetts Institute of Technology, 2008), 7.

2. Gui Bonsiepe, email message to author, August 23, 2023.

3. Horst W. Rittel and Melvin M. Webber, "Dilemmas in a General Theory of Planning," *Policy Sciences* 4 (1973): 160.

4. Horst W. Rittel, "Second-generation Design Methods," in *Developments in Design Methodology*, ed. Nigel Cross (New York: John Wiley & Sons, 1984), 317–27.

5. Harold Nelson, "Systemic Design as Born from the Berkeley Bubble Matrix," *CONTEXTS* 1 (2023), accessed September 21, 2023, DOI: 10.58279/v1001.

6. Arthur Marwick, "The Cultural Revolution of the Long Sixties: Voices of Reaction, Protest, and Permeation," *The International History Review* 27 (2005): 780–806.

7. Some designers active in Latin America criticised, developed, or rejected Rittel's ideas. Ulmian graduate and professor Gui Bonsiepe refers to his work in some of his first articles on industrial design and later distances himself. See, for example, Gui Bonsiepe, "VI/VI/SEC/CION del diseño industrial (Part 1)," *AUCA* 24-25 (1973): 7–12). In Berkeley, some Latin American pupils continued Rittel's lines of thought. For instance, Venezuelan designers Enrique Vila Planes, Teresa Guevara, and Domingo Acosta, in fields such as planning, seismic architecture, or sustainable design, respectively. See Enrique Vila Planes, *Planificar/Diseñar (P/D) tecnopolítico: La "Teoría de P/D" de Horst Rittel* (Caracas: 2017); Teresa Guevara Pérez, *Arquitectura moderna en zonas sísmicas* (Barcelona: Gustavo Gili, 2009); and Domingo Acosta, *Diseñar en el Antropoceno: La arquitectura más allá de la sostenibilidad* (Editemos: 2020).

2. COOPERATIVE HOUSING: THE VARGAS

German designer Cornelia Koch and Chilean architect Eduardo Vargas met at the HfG Ulm, Germany. They were both "Billists", a group of students who kept meeting Max Bill after his resignation as head of the school.[8] Concrete art,[9] scientific design, the re-democratization of Germany, internationalism, and mass production are just a few of the keywords that characterised the intellectual climate at the post-war school of design. Cornelia was studying at the Information Department, and Eduardo had just finished the preliminary course when they got married and left for Zurich to work at Max Bill's office.[10]

In 1960, the Vargas settled in Valparaíso, Eduardo's city of origin. They embarked on the enormous project of cooperative and self-construction housing in Los Placeres Valley. Within four years, and working side by side with future dwellers, the young couple built 1,200 housing units. This piece of land was purchased by the Chilean state and it became the home of 11,000 people. The cooperative system was inspired by similar ones in Switzerland, which Max Bill was an advocate of.[11] Significantly, the construction had the support of many local and international stakeholders.[12]

Many of Max Bill's principles are evident in the cooperative villages. In the building site, cooperative members constructed prefabricated elements such as polyester sheets reinforced with fiberglass, fences, and furniture.[13] The modular geometry of the whole emerged from its prefabricated nature. Bill's modernism established a coherence between artistic products and mass production, an idea that differed from Modernisms propagated in Latin America, based on the synthesis of arts. Moreover, the cooperative villages are also a concrete design visually. In the macroscale, they resemble a concrete composition, such as those of paintings. In the microscale, the image is dictated by the *unmistakability* of architectural elements: a wall is a wall, a roof is a roof, and a door is a door.

In 1965, Eduardo travelled to Ulm to a debate about low-income housing in the so-called Third World. In Zürich, he designed with Bill a communal centre for the cooperative villages.[14] Located in the centre, it would provide infrastructure to secure the communal autonomy at a regional level. This cybernetic idea of self-management reveals how urbanism was an analogical precedent of collaborative networks such as the internet.[15] However, in 1973, the socialist democratic government of President Salvador Allende was overthrown by a military coup. In this context, the villages lost their cooperative status, and a significantly more modest version of the communal centre was built.[16]

Regarding Rittel's ideas, the cooperative villages manifest a new modernity whose warhorse was the *method*. Postulated years later, second-generation Design Methods are already visible here. The Vargas were stakeholders of a broader set of actors. With them, future dwellers took design decisions, and self-constructed their homes. The expanded productive apparatus of funding institutions and cooperatives reveals design as an argumentative process, probably one of Rittel's most important contributions to design theory.[17]

Chilean architect Andrés Weil also references Rittel's thinking.

8. "Eduardo Vargas Herrera," Mapa Valpo, accessed April 15, 2024, https://mapa.valpo.net/content/eduardo-vargas-herrera

9. Focused on the communicational process with the audience, Concrete Art is supposed to be understood and can be explained following rational rules. This builds a clear bridge between artistic and technical objects.

10. Mapa Valpo, "Eduardo Vargas Herrera".

11. Mapa Valpo, "Eduardo Vargas Herrera".

12. For example, the CORVI (Chilean Housing Corporation), which created the first national housing rationalisation of plans between 1953 and 1975. The ASIVA (Business Association of the Valparaíso Region) acted as supplier, as well as the Fundación Berlin, the IVICA (Caritas Housing Institute), and the Economic and Technical Cooperation Agreement between Chile and the Federal Republic of Germany. See Sebastián Vicencio, "Libro: Historias de Villa Berlín", Blogspot, accessed April 15, 2024, https://sebavicencio.blogspot.com/2017/04/libro-historias-de-la-villa-berlin.htm

13. Vicencio, "Libro: Historias de Villa Berlín".

14. Mapa Valpo, "Eduardo Vargas Herrera".

15. David Maulén de los Reyes, "Interfaz y heterarquía: diseños de interacción locales para la independencia colaborativa descentralizada," *RChD: creación y pensamiento 1* (2016): 73, accessed April 15, 2024, DOI 10.5354/0718-2430.2016.44313.

16. Valentina Flores, interviewed by author, March 29, 2024.

17. Eduardo acknowledged Rittel's influence on his work. He had, according to his daughter Sofía, "received a

The further planning, design, and teaching trajectory of the Vargas reflects their commitment with collaborative design systems. Eduardo was appointed to the State Housing Office, where he spearheaded the construction of 30,000 houses and led the reconstruction after a violent earthquake. Later, as head of the biggest Chilean television channel, he sextupled the signal scope and implemented an educational approach in mass media. As professor of Architecture and Urban Planning at the Universidad de Chile, he transferred design methods into active pedagogy, where students were immersed in real-life problems.[18]

Unfortunately, Chile in dictatorship was no longer a safe place for designers of such critical and socially committed visions. From 1975 on, the Vargas lived in exile in Hannover, Germany, where Eduardo taught Theory of Architecture with a focus on Design Methods in the Global South. Following Alexander, he urged students to work, for instance, with local dwelling patterns of their countries of origin.[19] Cornelia, in turn, worked as interior designer, photographer, and painter. In the 1990s, they returned to Chile to teach architecture and urge students to create a "South that does not exist yet."[20]

3. EVOLUTIONARY HOUSING: DI LULLO

In 1963, Rittel and Alexander were recruited as professors at the College of Environmental Design in Berkeley.[21] Here, Argentinian architect Raúl Di Lullo enrolled as a master's student in 1970,[22] when the "systems approach" was at its peak. He engaged in design methods, and he started developing them to include dwellers in the process of evolutionary housing. Back in Argentina, the 1976's dictatorship fired him as head of his Architectural Studio at the Universidad Nacional de Tucumán, possibly due to the participatory and social approaches he was implementing there. He settled in the Netherlands and started teaching and researching at Bouwcentrum International in Rotterdam.

For Di Lullo, housing was a dynamic organism within a *plastic* environment. This countered static modern housing based on imposed universal typologies where designers and sponsors monopolised decisions. He proposed a system to incorporate users and time in the design process. Concerned with the unsolved question of modern housing, he wanted to improve the two most frequent housing environments: individually designed houses and modern collective housing schemes. Both models allowed only *linear* growth, if any at all. Di Lullo's proposal of evolutionary housing offered users the possibility of choosing alternative courses of action to expand their dwellings, for them to be part of the decision-making process. Also, this would result in a more varied and complex housing environment, which could change as the needs of people would change.[23]

Di Lullo's method is based on the semi-lattice, a generative graph used to decompose design problems. With it, the architect could design a housing core unit and a repertoire of growth possibilities. From it, dwellers would choose how to expand their houses over time. With this approach,

clear methodology based on new scientific research that influenced his work." She relates the planning and participation aspects of his work with Rittel's writings. She also informes that Rittel's theories were relevant to Eduardo, to the point that he gave each of his children the book "Planen, Entwerfen, Design", which compiles Rittel's writings (Sofía Vargas Koch, Personal communication, September 11, 2023).

18. Mapa Valpo, "Eduardo Vargas Herrera".

19. Eduardo Vargas, "…Lehre gesprochen", *ARCH+*, no. 73 (1984).

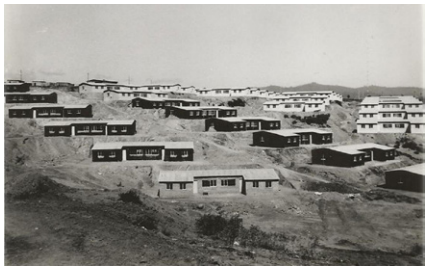
20. "Nota Inicio Escuela de Arquitectura Universidad de Los Lagos", Youtube Video, 6:04, posted by "Arquitectura Ulagos", January 23, 2019, accessed April 15, 2024, https://www.youtube.com/watch?v=dVrBLg3KNAc&ab_channel=ArquitecturaUlagos

21. Hugh Dubberly and Chanpory Rith, "Why Horst W.J. Rittel Matters," *Design Issues* 22, no. 4 (2006): 1.

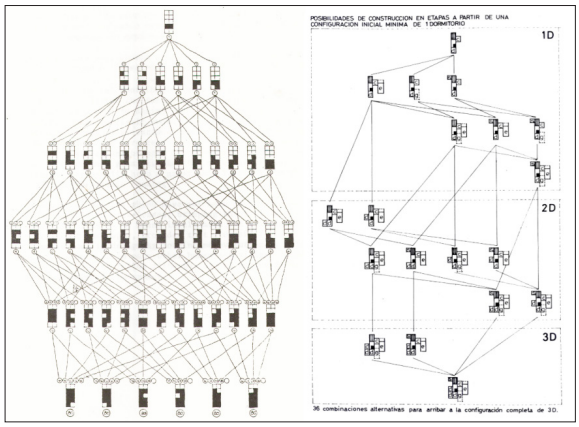
22. Around that time, Alexander had returned from participating at the PREVI (*Proyecto Experimental de Vivienda* - Experimental Housing Project) in Lima, Peru. In this international competition of low-income housing, some members and guests of Team X also participated, such as Aldo Van Eyck, Candillis, Josic, Woods, and James Stirling, as well as *Ulmer* professor Herbert Ohl.

23. Raúl Di Lullo; *Evolutionary housing design: An instrumental contribution* (Rotterdam: Bouwcentrum International Education, 1981), 7-14.

24. Christopher Alexander, Sara Ishikawa and Murray Silverstein, *A Pattern Language* (New York: Oxford University Press, 1977).







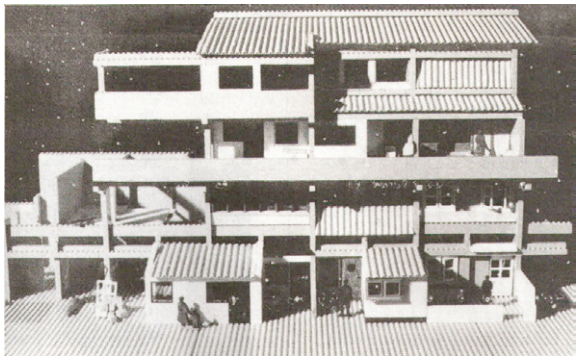


Figure 1. Cornelia and Eduardo Vargas, Cooperative Villages, Valparaíso, Chile, 1960-1964 (author unknown). © *Historias de Villa Berlin*, Carlos Jorquera Velasquez (Ed.).

Figure 2. Cornelia and Eduardo Vargas, Cooperative Villages, Valparaíso, Chile, 1960-1964 (author unknown). © *Historias de Villa Berlin*, Carlos Jorquera Velasquez (Ed.).

Figure 3. Raúl Di Lullo, scheme of the grid method and implementation of it in a single-family home. © Courtesy of Raúl Di Lullo.

Figure 4. Raúl Di Lullo and Edgardo Martínez, Conventillo, Argentina and Uruguay, 1980. © Raúl Di Lullo, *Evolutionary housing design. An instrumental contribution.* Rotterdam: Bouwcentrum International Education, 1981.

Di Lullo designed public housing competitions, single-family homes, and prefabricated housing schemes, and developed robust theoretical and implementation material.

Di Lullo tried some of his methods explorations in a proposal of a *conventillo*, historical tenement typology common in Latin American cities. Located in dense, central, and dilapidated areas, families used to live there in small rooms surrounding a communal courtyard. Di Lullo's reinterpretation would improve the low environmental quality of the type, but maintaining patterns[24] such as the semi-public patio, verandas, galleries, or the bright sunny exteriors opposing the shady interiors. From a "container unit", families could expand it to the sides, upwards, or to the front, for example, to build a small shop as an extra source of income.[25] This project also references John Habraken's methodological proposal of *zones and margins* for the formulation of agreements in housing participatory design.[26]

Di Lullo disseminated his systems-oriented design approach in his low-income housing Studio at Bouwcentrum International and in international workshops organised by this institution in Indonesia and in African and Latin American countries. In the 1990s, he settled in Tucuman, Argentina, where he taught in his Architectural Studio, led the Architectural

25. Raúl Di Lullo and Edgardo Martínez, "Urban Collective Housing," *Open House*, 6 (1), (1981): 3-12.

26. Raúl Di Lullo, "Pulsiones del Hábitat: Arquitectura, Vivienda y Espacio Público Urbano," *Ciencia e Investigación. Reseñas* 12 (2024): 40.

Theory chair and founded an interdisciplinary research laboratory.[27] For him, the central component of what he calls the "habitat drive" is the adaptation of the *shelter* to the user's needs over time.[28] This is visible in his pedagogy, research, and practice. In 2005, he and his team won the national competition for their project for the rehabilitation of the historical centre of Jujuy, Argentina.[29] This *system of urban objects* reflects his ideas of change and flexibility, focused this time on public space, as a vital collective container.

4. CONCLUSIONS

The Vargas's cooperative villages became a paradigm of design for people's autonomy, also due to pre-existing social and political conditions.[30] This case unveils a critical digestion of design methods, the search for a participatory design and construction process, and the awareness of the political responsibility of designers.

As opposed to the Vargas's cooperative villages, Di Lullo's proposals of evolutionary housing remained unbuilt. Probably its sophisticated implementation methods ended up reaffirming mechanist approaches that they were a critique of. Nevertheless, both stories correspond to a Late Modernism that opposed universalising methods and considered the *wickedness* of Latin American territories. The creative treatment of context in these examples challenges centre-periphery narratives, apart from providing insights, operational tools, and inspiration for a much-needed re-democratisation of design. ■

27. The *Laboratorio de Investigaciones para la Gestión y el Desarrollo del Hábitat y el Medio Ambiente* (LIGHaM) registered the metropolisation of the city of Tucumán and published several series of books on Strategic Urban Planning and public space.

28. *Laboratorio de Investigaciones para la Gestión y el Desarrollo del Hábitat y el Medio Ambiente* (LIGHaM).

29. Rolando Schere, *Concursos, 1825-2006* (Buenos Aires: Sociedad Central de Arquitectos, 2006), 594-5.

30. The Chilean 1960s witnessed the emergence of a Christian Democracy, the predecessor of Allende's socialist democracy, that combined with the strong feeling of community of the valleys of Valparaíso, enabled the success of this endeavour.

BIOGRAPHY

Guido Campi graduated as an architect at the Universidad Nacional de Tucumán (Argentina) and worked in architectural offices and low-income housing programmes. He obtained a master's degree in architecture at Dessau International Architecture (Germany). Since 2021, he is a Ph.D. candidate at the Bauhaus University Weimar, working on systems design and participation in the context of Latin America in the 1960s. He is a scholarship holder of the Friedrich Ebert Foundation and participated as a speaker in international conferences presenting his work on systems design in Latin America, oral history in architecture, and history of queer spaces.

EXPLORING BEYOND BORDERS: THE SIGNIFICANCE OF PEQUEÑOS CONGRESOS IN THE VALUATION OF SPANISH ARCHITECTURE

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#25

ABSTRACT

The *Pequeños Congresos* (Small Congresses) were pivotal meetings held by Spanish architects during the 1960s to address contemporary issues in Spanish architecture and to foster professional connections in an era when communication was far more challenging than today. Initially, these gatherings had a national focus, but they soon evolved to include keynote speakers who introduced cutting-edge international topics.

The development and impact of these meetings are recorded in the archives of Carlos de Miguel and Oriol Bohigas, as well as periodicals from that era. Rather than presenting the *Pequeños Congresos* merely as an effective means of international engagement, this paper portrays them as the genesis of a network of global contacts that Spanish architects would later cultivate, eventually establishing themselves as international leaders in the field.

Building on earlier research that has explored the content and context of these meetings, this paper seeks to further examine the critical role these congresses played in building a global network, ultimately elevating Spanish architecture to a prominent position on the world stage.

1. INTRODUCTION

Shortly after the Otterlo meeting, which led to the dissolution of CIAM, Oriol Bohigas, a prominent figure in the Catalan architectural community, wrote a letter to Carlos de Miguel, editor of the Madrid College of Architects (COAM) magazine, expressing his disappointment in the lack of communication between architects in Spain's two main cities. As Bohigas later recalled, Catalan architects

> *did not have many relations with architects in the rest of Spain, who were moving along other paths of promotion and self-training. During the summer of 1959, taking advantage of a visit to Madrid, I had a conversation with Antonio Perpiñá, a Catalan architect who lived in Madrid and had been in demand by the new waves of official town planning, and with whom we had been collaborating since '55 on the housing complex in Calle Escorial. I told him about the lack of contact between Barcelona and Madrid and proposed that we organise some meetings or other ways of getting in touch. Perpiñá suggested that I talk about it with Carlos de Miguel.*[1]

On his return to Barcelona, Perpiñá suggested Bohigas write a letter to Carlos de Miguel expressing his admiration for Madrid's architectural works. Above all, Bohigas expressed his concern about the disconnect between architects in Madrid and Barcelona. He proposed organising a meeting in Madrid to visit and discuss the latest projects.[2]

It seems likely that as soon as he received the letter, De Miguel invited fourteen architects to a dinner at the Gambrinus restaurant.[3] The very next day, he sent Bohigas a proposal drafted during that dinner.[4] Within barely a month, the two instigators had encouraged 30 and 40 architects from both cities to participate, giving birth to the *Pequeños Congresos* (Small Congresses, P.C.).[5]

This paper delves into the significance of these meetings, based on documents from Carlos de Miguel and Oriol Bohigas's archives, as well as periodicals from the era.[6] Rather than presenting the P.C. as merely a means of international engagement, this paper argues that they were the genesis of a global network that ultimately positioned Spanish architecture on the world stage.

2. THE MADRID-CATALAN BINOMIAL (1959-1960)

The first *Pequeño Congreso* in Madrid (1 P.C.) aimed to discuss contemporary architectural works presented by the architects. Over the course of three days, participants visited peripheral housing developments, university projects, and other notable sites in the surroundings of Madrid, such as the recently completed Valle de los Caídos.[7] Debates focused on urban planning, social and economic data integration, and adapting to new living standards.[8]

The success of the meeting was evident from Oriol Bohigas's comments after the meeting, who defined it as one of the "most important meetings

1. Oriol Bohigas, *Entusiasmos compartidos y batallas sin cuartel. Dietario de recuerdos II* (Barcelona: Anagrama, 1996), 250-251.

2. Oriol Bohigas, "Letter to Carlos de Miguel, 16 September 1959." Bohigas Papers.

3. The architects invited were Rafael Aburto, Francisco Cabrero, José Antonio Corrales, Miguel Fisac, José María García de Paredes, Mariano Garrigues, Fernando Higueras, Luis Moya, Antonio Perpiñá, José Luis Picardo, Francisco Javier Sáenz de Oíza, Alejandro de la Sota, Antonio Vázquez de Castro y Ramón Vázquez Molezún.

4. Carlos de Miguel, "Letter to Oriol Bohigas, 23 September 1959." Bohigas Papers.

5. The denomination *Pequeños Congresos* (Small Congresses) appears in the final programme sent by Carlos de Miguel to Oriol Bohigas. Carlos de Miguel, "Pequeño congreso. Programa final," 2 November 1959. Bohigas Papers.

6. Ana Esteban Maluenda, "Encuentros entre arquitectos. Congresos, charlas y conferencias," in *La modernidad importada. Madrid 1949-1968: cauces de difusión de la arquitectura extranjera*. Doctoral thesis (Madrid: Universidad Politécnica de Madrid, 2007), 171-206, https://doi.org/10.20868/UPM.thesis.45735. Nuno Correia, "Los pequeños congresos, 1959-1968. Tras los pasos del Team X," in *Destino Barcelona, 1911-1991. Arquitectos, viajes e intercambios*, ed. Josep Maria Rovira, Enrique Granell and Carolina B. García (Barcelona: Fundación Arquia, 2018), 206-219. Raul Martínez Martínez and Tiago Lopes Dias, "Los pequeños congresos, 1959-1968: debates paralelos," in *La cultura arquitectónica en los años de la Transición*, ed. Carlos Sambricio (Seville: Editorial Universidad de Sevilla, 2022), 65-80.

in our professional circles."[9] Rafael Echaide noted that the *Pequeños Congresos* were a meeting point for two generations of Spanish architects united in finding solutions to contemporary challenges.[10] At the end of the second meeting, which was held in Barcelona, Carlos Flores emphasised that one of its main objectives was "to ensure [...] that architects from the different Spanish regions coordinate their efforts and acquire a broader and more complete vision of the different problems related to the profession."[11]

The 2nd P.C. in Barcelona followed a similar format, with visits to recent and historical buildings, including some of which were examples of GATCPAC and Catalan modernism. According to Bohigas,[12] it is noteworthy that that meeting saw attendance from architects outside Madrid and Barcelona, such as those from the Basque Country and Córdoba. As soon as the meeting ended, Carlos Flores highlighted the expanding interest in *Hogar y Arquitectura*, stating that one of the aims of these meetings was to "achieve [...] that architects from the different Spanish regions coordinate their efforts."[13]

3. PENINSULAR EXPANSION (1960-1961)

Years later, Bohigas recalled that, although the proposal was launched from Madrid and Barcelona, from the beginning they had had a peninsular network of architects in mind: "We immediately attempted a peninsular expansion: in October 1960 in the Basque Country, in October 1961 in Córdoba and in the spring of 1963 on the Costa del Sol."[14]

The 3rd P.C. was held in the Basque Country for several reasons, including the presence of architects from the region at the 2nd P.C., the inclusion of Gonzalo Vega de Seoane on the newly appointed committee of the meetings and because San Sebastián was a city associated with the tradition of the modern movement.

As a novelty, during this congress the number of site visits was reduced and, at the proposal of Federico Correa, a session was introduced in which an architect presented his project followed by a discussion, following the method used by Team 10.[15] The building analysed was Coderch's Torre Valentina, presented the previous year at CIAM. This allowed for debates addressing specific Spanish issues but aligned with contemporary forums.

Rafael de La-Hoz Arderius, who would lead the 4th P.C. in Córdoba, was another member included in the P.C. Committee. In line with La-Hoz's latest work, the congress was devoted to affordable housing and industrialised construction,[16] anchoring national and international debates.[17]

4. INTERNATIONAL EXPANSION AND DECLINE (1963-1968)

In February 1963, the board was convened to discuss the urban planning issues related to tourism at a meeting to be held between various locations between Seville and the coast of Malaga. Although there is no record of foreign architects attending, inclusivity was in the spirit of the organising group. They invited people to obtain "slides of works done in Spain and abroad on these problems, for the proper documentation of all and to make

7. The itineraries of the visits are described in detail in two articles published by César Ortiz Echgüe in the Portuguese journal *Binário*: César Ortiz Echagüe, "40 anos de arquitectura espanhola," *Binário*, no. 25 (October 1960), 325-330. César Ortiz Echagüe, "40 anos de arquitectura espanhola (Conclusão)," *Binário*, no.27 (December 1960), 437-444.

8. Cuadernos de Arquitectura, "Encuentros de arquitectos en Madrid," *Cuadernos de Arquitectura*, no.37 (July 1959), 48.

9. Oriol Bohigas, "Reunió d'Architectes a Madrid," *Serra d'Or* I, no.2-3 (1959), 8.

10. Rafael Echaide, "Espanha – Os Pequenos Congressos," *Binário*, no.31 (April 1961), 197-202.

11. Carlos Flores, "Pequeño Congreso en Barcelona," *Hogar y Arquitectura*, no.28 (May-June 1960), 34.

12. Oriol Bohigas, "El segon P.C. a Barcelona / Itineraris d'arquitectura / Mutilacions a l'arquitectura d'En Domènech," *Serra d'Or* II, no.6 (June 1960), 31.

13. Carlos Flores, "Pequeño Congreso en Barcelona."

14. Oriol Bohigas, "Entusiasmos compartidos y batallas sin cuartel", 252.

15. Federico Correa, "Memoria personal del Team 10," *El Croquis*, no.36 (1988), 5-13.

16. The lecture on social housing was given by Rafael de La-Hoz Arderius and later published as: Rafael de La-Hoz, "La vivienda social," *Arquitectura*, no.39 (March 1962), 2-15.

17. Arquitectura had just translated and published in its pagues Reyner Banham's well-known article: "Stocktaking" as: Reyner Banham, "Balance 1960: la tradición, la tecnología," *Arquitectura*, no.26 (1961), 2-18.

the best use of them."[18] Even the President of the Consejo Superior de Arquitectos advocated for the promotion and regulation of "the influx of foreign architects and technicians [...] [since] it would be good to take advantage of these meetings to gather more opinions."[19]

The programme followed a similar pattern to that of previous meetings: the first day, to go through the interventions before the tourist boom; the second, with a tour of the entire coast to observe recent architecture; and the third, to study the plans and interventions that had been planned and draw a series of conclusions based on the findings.

That same winter, the Catalan group expanded these discussions on the urban impact of tourism at a new meeting which took place in Tarragona. Bohigas recalled this P.C. as a clear turning point: "From this fifth P.C. onwards, the expansion had more international pretensions: we began to invite our foreign friends; I am referring, of course, to Correa's friends and, secondarily, to my own."[20] Thus, the usual series of lectures, with interspersed visits, was rounded off with the lecture by Georges Candilis on his project for the coast of Languedoc-Roussillon.[21] In addition, the following also attended:

> *Aldo Rossi [who] enlightened us with a preview of what was to be his book L'Architettura della Città, which would not be published until 66 [...].*
> *From England came Colin St. John Wilson with his two enormous and almost eternal projects: the Liverpool Town Hall and the British Library [...]. From Portugal came Nuno Portas, who discovered for us [...] the magnificent and then practically unknown work of Álvaro Siza Vieira.*[22]

Precisely this congress would give rise to a monographic issue of *Arquitectura* on Tourism, which began with a comment by Juan Antonio Ridruejo: "Today's Small Congresses are less spontaneous than the first ones and less informal. But perhaps that is why they are more articulate because it is well known that architects, whose profession is the discipline of forms, usually lack discipline in verbal communication." He goes on to explain the underlying theme of the meeting: "Tourism was discussed, as tourism had also been discussed at the previous congress, held in Malaga [...] And why was tourism discussed? [...] Firstly, because it gives us a lot of work."[23] The issue was addressed in several of the sessions that were held,[24] as Bohigas commented that Candilis devoted an interesting paper to "The Tourist Organisation of Languedoc," in which he asked his colleagues to collaborate from their position as architects in "this normal act of evolution of a Society" that constitutes tourism.

In the following meetings, Bohigas continued by saying:

> *For the seventh PC, in December '65, it was Segovia's turn with Giancarlo de Carlo as the main guest. The theme was the conservation and rehabilitation of ancient cities [...].*

This article led to an interesting discussion on the necessary balance between tradition and technology in architecture, published as: Antonio Fernández-Alba et al., "Para una localización de la arquitectura española de posguerra," *Arquitectura*, no.26 (1961), 20-32. Bohigas remembered that he attended a similar discussion during the 6th Conference of the International Union of Architects in London: Oriol Bohigas, "Rogers i "Casabella", un nou camí de l'arquitectura? / Actualitats," *Serra d'Or* III, no.9 (1961), 27.

18. Directiva madrileña de los P.C., "Resumen de la reunión," 28 September 1962. Carlos de Miguel Papers.

19. Presidente del CSAE, "Carta a Carlos de Miguel," 10 April 1963. Carlos de Miguel Papers.

20. Oriol Bohigas, "Entusiasmos compartidos y batallas sin cuartel", 252.

21. Georges Candilis, "La organización turística del Languedoc," *Arquitectura*, no.65 (May 1965), 58-66.

22. Oriol Bohigas, "Entusiasmos compartidos y batallas sin cuartel", 252-253.

23. Juan Antonio Ridruejo, "Editorial," *Arquitectura*, no.65 (May 1964), 3.

24. In the same issue of *Arquitectura*, no.65 (May 1964) were published: Joaquín Gili, "Tamariu," 4-12. Temes Riancho, Vicente et al., "Proyecto de ordenación turística de la Albufera y playas del Saler," 13-21. Pedro Pinto, "Turismo de cercanías. El ejemplo de Madrid," 22-31. Federico Correa, "Cadaqués," 32-40. Juan Gómez y González de la Buelga, "Plan General de Ordenación Urbanística de la Costa del Sol Occidental," 41-50. Jacinto Ros, "Algunos aspectos económicos del urbanismo turístico," 51-56. Luis Carreño, "Aspectos sociológicos del turismo," 56-57.

> *In the winter of '67, the Small Congresses crossed the border and we went to Portugal to review all the works of Álvaro Siza, which had a great impact on all of us and made this architect, still little known abroad [...]. In February '68 I wrote a review of the congress [...] From this outline later came a longer article which, according to what Siza himself told me, was the first to be published outside Portugal,25 with very complete documentation and an attempt to situate him in the most advanced European culture.*[26]

He also mentions another instance in 1968 "in Vitoria, with the presence of Peter Eisenman," and a last mention "in 1972 in Sitges, at the Hotel Calípolis," of which no documentary trace has been found beyond this sentence.[27] When Bohigas gave a lecture at the Barcelona Conference 'La arquitectura española en los años sesenta (Spanish architecture in the 60s)' in 2002, he also referred to another in Platja d'Aro, which would have been held in 1971.[28]

5. THE INTERNATIONAL P.C. NETWORK

In summary, beyond individual initiatives, the *Pequeños Congresos* (P.C.) played a key role in establishing one of the first somewhat global international networks that connected Spanish architecture with international counterparts. The inclusion of a foreign keynote speaker at each meeting from the 5th P.C. onwards facilitated the successive participation of notable figures, whose contributions enriched the discussions.

Originally initiated in Barcelona and Madrid to unite Spanish architects scattered across the country, the network gradually expanded to include well-established figures such as Georges Candilis, Giancarlo de Carlo, and Aldo Rossi, as well as emerging architects like Álvaro Siza and Peter Eisenman. The subsequent career path of Spanish architects who gained unquestionable international prestige, such as Rafael Moneo, became intertwined with the Italian and American circles with whom they shared discussions and forged early friendships, eventually taking their influence beyond Spain.

Although the P.C. lasted only a decade, it served as a crucial meeting point for both Spanish and international architects, laying the foundation for future collaborations and solidifying the prominence of Spanish architecture following the country's transition to democracy. ■

25. Carlos Flores had already devoted a large part of the January-February 1967 issue of *Hogar y Arquitectura* to describing the work of Álvaro Siza Vieira.

26. Oriol Bohigas, "Entusiasmos compartidos y batallas sin cuartel", 253-255.

27. Oriol Bohigas, "Entusiasmos compartidos y batallas sin cuartel", 255.

28. The author of this article attended the congress and has notes of Bohigas' entire lecture.

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BIOGRAPHY

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FROM VALPARAÍSO TO VANCOUVER: PAN-AMERICAN NETWORKS AND POETIC VISIONS OF A UNIFIED AMERICA

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#25

ABSTRACT

Between November 1968 and February 1969, architect Alberto Cruz and poet Edison Simons embarked on a Pan-American journey from Valparaíso to Vancouver to proclaim "Amereida," a poetic vision of the American continent formulated in the early 1960s at the Valparaíso School of Architecture. Travelling along the Pacific Coast, they activated a transnational network, inviting others to contribute and participate in their continental poetic project. The paper examines their journey, spanning stops in Bolivia, Peru, Colombia, Panama, Mexico, the United States, and Canada, engaging with architects, artists, poets, and thinkers of diverse disciplines. The paper aims to understand how Cruz and Simons established cross-connections through unique encounter practices, including the "Phalène," the "Entreacto," and the "Hunting of the Poet." Likewise, the paper identifies the Amereida Review and the Amereida Workshop as channels of collaboration for inviting others to participate in their poetic project. By examining the journey to Vancouver, the paper sheds light on an attempt to catalyse a Pan-American network, transcending institutional frameworks, fostering interdisciplinary dialogue among poets, architects, educators, and artists, and disseminating their ideas from a distinctly poetic perspective.

1. AMEREIDA: A POETIC VISION OF THE CONTINENT

Alberto Cruz and Edison Simons formed part of a group of artists based at the Catholic University of Valparaíso (UCV) in Chile.[1] In 1952, this group established the UCV Institute of Architecture, a space in which they formulated an artistic position based on the relationship between poetry and architecture.[2] UCV Institute of Architecture members lived in Europe and formed significant connections. Godofredo Iommi, in particular, connected with poets, artists, and philosophers around the Revue de Poesie in Paris. In Germany, Iommi's dialogue with Italian philosopher Ernesto Grassi led to the formulation of Amereida, a poetic vision of the American continent. Echoing Mexican historian Edmundo O'Gorman's ideas, this vision questioned America's origin, challenging the notion of discovery and understanding the continent's appearance as a finding.[3] This distinction marked a condition of openness and gratuitousness to construct a relationship with the continental expanse different from those of conquest and dominion. Iommi proposed introducing the Latin poetic tradition to American soil, conceptualising Amereida as the Aeneid of America, interpreting Virgilian pietas as pure openness, a sign of America's origin and possible destiny.

Amereida marked a turning point in the Valparaíso group's artistic project, triggering a series of events during the 1960s, including the first Travesía of Amereida and the journey to Vancouver. Iommi proposed carrying out the first Travesía of Amereida in 1965, a poetic journey traversing South America from Punta Arenas to Santa Cruz de la Sierra.[4] Cruz and Simons were part of the group that set out on this journey, conducted under the rules of the Phalène (moth) or poetic act. The Phalène is a mode of poetry in action proposed by Iommi where the poet invites —through his present body and lively voice— to participate in an open poetic game to unleash poetry made by all.[5] (**Fig. 1**) As in the first Travesía, the Phalène became a central practice in Cruz and Simons' journey years later.

Two years after the first Travesía, the question of America became central to the UCV School of Architecture, leading the professors and students to write a manifesto and initiate a university reform movement in 1967. At the core of their proposal was a new understanding of the university as a community beyond institutionalism in the unity of life, work, and study, alongside a focus on the American continent.[6] To bridge the gap with the Latin American reality within the university, Godofredo Iommi created the Amereida Workshop, a seminar open to the entire university, fostering debates around the themes of Amereida. These events culminated in the foundation of Ciudad Abierta (Open City) in 1970, a community where the group explored the unity of life, work, and study in light of the poetics of Amereida. Like the Phalène, the Amereida Workshop became integral to Cruz and Simons' journey.

2. A JOURNEY WITHOUT DISTANCE AND THE POSSIBILITY OF AN AMERICAN EPIC

During this vibrant period for the Valparaíso group, Cruz and Simons organised their journey to establish a Pan-American network focused on Amereida. Cruz points out alongside Simons, "they set out to invite the students of architecture

1. Alberto Cruz (1917-2013) was a Chilean architect, a founding member of the UCV Institute of Architecture, the UCV School of Architecture, and the Ciudad Abierta of Amereida. Edison Simons (1933-2001) was a Panamanian poet and translator who participated in many actions of the Valparaíso group around the poetic proposal of Amereida.

2. The UCV Institute of Architecture was formed by the poet Godofredo Iommi, the architects Alberto Cruz, Miguel Eyquem, Francisco Méndez, Fabio Cruz, José Vial, Arturo Baeza, Jaime Bellalta, and the sculptor Claudio Girola.

3. Edmundo O'Gorman, *La invención de América* (México: Fondo de Cultura Económica, 1958).

4. Participating in this journey were the architects Alberto Cruz and Fabio Cruz; the poets Godofredo Iommi, Edison Simons, Michel Deguy and Jonathan Boulting; the sculptor Claudio Girola; the philosopher François Fédier, the painter Jorge Pérez-Román and the designer Henry Tronquoy.

5. Godofredo Iommi. "Lettre de l'Errant," *Ailleurs* I (1963): 14–24.

6. Godofredo Iommi, "Voto propuesto al Senado Académico 1969," in *Fundamentos de la Escuela de Arquitectura Universidad Católica de Valparaíso 1971*, (Viña del Mar: Escuela de Arquitectura UCV, 1969).

schools, those from Lima to Vancouver, to come and build this Ciudad Abierta."[7] The journey reveals the group's intentions to activate intercontinental and interdisciplinary connections across the Americas, inviting them to participate in the poetic project of Amereida. Consequently, the journey raised a broader question about the entirety of the American continent.

While Amereida draws from the Latin poetic tradition, the inquiry about America is more encompassing, spanning the continent from pole to pole. Regarding this, the poet Manuel Sanfuentes notes:

> *To speak of America as a unity in which North and South coincide in the same experience of colonial "discovery" highlights the joint factors, both favourable and unfavourable, of the "discovery" of the New World. [...] This imprint, for both North and South, constitutes for the whole of the Americas a radical irruption from which all the cultural and institutional structures that today make up Latin America, the Caribbean and North America —the United States and Canada— are derived.*[8]

The poem Amereida raises the question of American continentality in a series of theses later developed in a historical study titled Towards a Latin American Perspective of the Pacific Ocean. The Thesis of the Inland Sea asserts that American continentality is bound to the Pacific Ocean, stating that "a projection and an oceanic conception presuppose dominion of the continental inland sea. The term 'inland sea' refers to the area between the two great oceans surrounding Latin America."[9] The relationship between continental interiority and oceanic projection distinguishes North America from South America. The study argues that while "North America advances from its Atlantic edge and gradually dominates an immense territory to the Pacific edge, conquering a continentality," Latin America -inhabited on its edges around a great inland sea- has not gained its continentality and the Pacific Ocean "manifests itself as a lack."[10] For Iommi, the conquest of continentality goes hand in hand with the constitution of an American epic, highlighting from the notion of myth a crucial distinction between Anglo-Saxon America and Latin America:

> *Among the American languages, only in Anglo-North American does the Pacific Ocean shine and in a very particular way, especially in the famous epic novel 'Moby Dick' by H. Melville, to the point of constituting [...] a real word or myth. [...] In contrast, the Hispanic-American language lacks an authentic poetic word that becomes myth […].*[11]

Under these poetic premises, Cruz and Simons embarked on their journey facing the Pacific Ocean by travelling along the continental edge between November 20, 1968, and February 15, 1969. They aimed for "a journey that is not a going towards / a journey without distance," proposing an itinerary where each place was visited twice, making the route cyclical.[12] Their route included Valparaíso, La Paz, Lima, Bogotá, Cali, Panama, Managua, Mexico, Cuernavaca, Tula, Los Angeles, Laguna Beach, Irvine, San Francisco, Seattle, and Vancouver.

7. Alberto Cruz, "De las Relaciones entre Estudiosos," Wikicasiopea, Escuela de Arquitectura y Diseño PUCV, accessed June 8, 2024, https://wiki.ead.pucv.cl/De_las_Relaciones_entre_Estudiosos

8. Manuel Sanfuentes, "Cuarta Parte: Andar al encuentro," Wikicasiopea, accessed May 1, 2024, https://wiki.ead.pucv.cl/Taller_de_Amereida_2020

9. Escuela de Arquitectura UCV, "Para un punto de vista Lationamericano del Océano Pacífico," *Revista de Estudios del Pacífico* no. 2 (September 1971): 7-27.

10. Escuela de Arquitectura UCV, "Para un punto de vista".

11. Escuela de Arquitectura UCV, "Para un punto de vista".

Although the Pan-American highway was not an apparatus that made such a journey possible, as they mainly travelled by plane, this infrastructure strongly resonates with some of the group's ideas. The highway is an infrastructure that sought to unify the Americas, comprehending its continuity from pole to pole. Moreover, the Pan-American highway somehow verifies the poetic thesis of the Interior Sea, as it crosses North America through its axis in two roads, denoting the dominion of its interior continentality. While in South America, this route runs along the Pacific edge, transversally crossing the Valparaíso-Buenos Aires axis to continue south along the Atlantic coast without truly entering the continent's interior but rather clinging to its edge.

3. PRACTICES OF ENCOUNTER: THE PHALÈNE, THE ENTREACTO, THE HUNTING OF THE POET

Cruz and Simons structured their journey around three practices to foster encounters with others: the Phalène, the Entreacto, and the Hunting of the Poet. A primary practice was the Phalène, triggering collective festive and unforeseen poetic events along the route. Cruz and Simons conducted approximately twenty-four Phalènes. The chronicles of the Vancouver journey depict diverse participants, including students, professors, poets, artists, friends, and chance encounters. Photographic records portray the use of masks and readings of the poem Amereida in diverse settings. During their journey, Cruz and Simons conducted over 70 gatherings under a format they termed the Entreacto, which were oral presentations of Amereida.[13] (**Fig. 2**) They organised these sessions with professors and students from various faculties and schools, including the National University of Colombia, the University of Los Andes, Javeriana University, the National Autonomous University of Mexico, the University of San Marcos, the University of Managua, the University of California, the University of British Columbia, the University of Washington, and the Universidad Mayor de San Andrés. (**Fig. 3**) The tone of these gatherings centred on the exposition of Amereida, as exemplified in an invitation to members of the Department of Letters at the University of Washington: "Is there epic poetry in America? A group of poets, architects, painters, sculptors, philosophers are celebrating this possibility in South America. Two of them, Alberto Cruz and Edison Simons will explore the meaning and range of this experience."[14] Other Entreactos occurred during personal visits to architects, philosophers, historians, poets, anthropologists, and artists.

Two significant Entreactos occurred with poet Robert Duncan and philosopher Ivan Illich. The meeting with Duncan in San Francisco represented the convergence of two distinct experiences in architectural education, Black Mountain College and the Valparaíso School of Architecture, advocating for a sense of community, alternative institutional perspectives, and redefining the boundaries of architecture through interdisciplinary projects. The encounter with Ivan Illich, Valentina Borremans, and Tarcisio Ocampo at CIDOC (Centro Intercultural de Documentación, Cuernavaca, Mexico) channelled the interest in the university reform initiated at the Valparaíso School of Architecture in 1967. CIDOC's interest in the reform

12. *Map of the journey to North America*, circa 1968, Archivo AHJVA e[ad], Viña del Mar.

13. Alberto Cruz and Edison Simons, "Viaje a Vancouver," *Revista de poesía Amereida*, no. 1 (1969).

14. *Typescript by Richard Sawrey inviting to an Entreacto*, 10th January 1969, Archivo AHJVA e[ad], Viña del Mar.

stemmed from understanding how a regional movement could impact upon the entire country's university structure due to the "radicality of the positions" and comprehending why the movement garnered broad support from students, professors, workers, and the general public.[15]

The third practice Cruz and Simons conducted was the Hunting of the Poet, "searching for an unknown poet from any point in the city."[16] While not all attempts were successful, notable encounters that did materialise include those in Mexico City with Héctor Olea G., Vancouver with Edwin Varney, and Seattle with Paul Hunter and Tom Parsons.

4. CHANNELS OF COLLABORATION: THE AMEREIDA REVIEW AND THE AMEREIDA WORKSHOP

Cruz and Simons utilised two collaboration channels to foster the network: the Amereida Review and the Amereida Workshop. They articulated the invitation to collaborate in a brochure produced during their stay in Vancouver: "Bring word to the review of Amereida, bring work to the workshop of Amereida, bring and sing, in the round, that is bound, from Alaska to Cape Horn, renew what is torn."[17] (**Fig. 4**) The Valparaíso group published the Amereida Review in collaboration with the Revue de Poésie, the project Godofredo Iommi carried out with his network in Paris. The first issue of the Amereida Review, containing chronicles of the journey to Vancouver, was published in February 1969.

Documents from the journey describe that "the Amereida review comes to inaugurate a void so that everyone can approach the action of life in a round that extends its American invitation to those who believe in the demand for a public language."[18] The idea of the "round" refers to a characteristic collective dimension of the Valparaíso group, which crystallised in Ciudad Abierta as a collective working format where multiple disciplines converge around a work originated after a poetic act.[19] In this sense, the Valparaíso group determined that "this journal engages in the responses that each person sends, based on what is most intimate to them, according to their profession, occupation, or activism, in any colour of life [...]."[20] Cruz and Simons provided an address in Viña del Mar to receive contributions.

Regarding the Amereida Workshop, Cruz and Simons organised this seminar at the School of Architecture of the University of Los Andes, together with architects Jaime Valenzuela and Carlos Avendaño. During the event, they carried out a public debate on the ideas of Amereida, together with readings of poems by Godofredo Iommi. The Amereida Workshop continues to be present at the UCV School of Architecture. Organised by school poets, the workshop addresses the themes of Amereida and invites architects and designers to present works created in light of this poetic vision of the continent. All students and professors of the school attend this workshop every Wednesday in Ciudad Abierta.

5. POETIC JOURNEYS ACROSS AMERICA AS AN EPHEMERAL NETWORK

The journey to Vancouver traversed America, delineating a significant segment of the Pacific continental edge. This trajectory is part of a larger drawing

15. José M. Bulnes and Vittorio di Girolamo, "Valparaíso Crisis de la Universidad Católica Junio-Agosto 1967. Documentos oficiales y reacciones de prensa", *CIDOC Dossier*, no. 8 (1968).

16. Cruz and Simons, "Viaje a Vancouver".

17. *Invitation brochure with poem*, Archivo AHJVA e[ad], Viña del Mar.

18. *Typescript about the Amereida Review*, Archivo AHJVA e[ad], Viña del Mar.

19. Oscar Andrade, "Ronda: Architectural education and practice from the construction of a milieu in common: The PUCV School of Architecture and Design and Ciudad Abierta, Chile", PhD diss. (Delft University of Technology, 2021), 224.

20. Typescript about the Amereida Review. Archivo AHJVA e[ad].







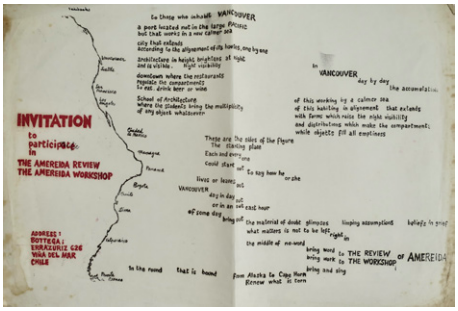


Figure 1. Phalène celebrated during the journey to Vancouver. © Fundación Alberto Cruz Covarrubias.

Figure 2. Alberto Cruz (left) during an Entreacto. © Fundación Alberto Cruz Covarrubias.

Figure 3. Poster of an Entreacto at the University of Los Andes in Bogotá, Colombia. © Fundación Alberto Cruz Covarrubias.

Figure 4. Invitation brochure to participate in the Amereida Review and the Amereida Workshop. © Fundación Alberto Cruz Covarrubias.

that encompasses the routes of preceding journeys, such as that of 1965, and subsequent journeys, like those conducted by the School of Architecture UCV from 1984 to the present. The routes of these journeys can be read as a whole, as they are all poetic actions that answer to a call in common: Amereida. In this sense, the journey to Vancouver cannot be understood as an isolated experience but rather as an event linked to a broader string of poetic journeys across the American continent undertaken by the Valparaíso group.

Comprehending these journeys as the iteration of the same action allows us to extend the essential characteristics of the journey to Vancouver to the set of journeys carried out by the Valparaíso group. As a means of traversing the American expanse, these retain the collective sense of the round, engaging in open and multifaceted dialogue across disciplines and trades. Moreover, this action is heterogeneous in its constitution, escaping institutional categories to involve educational institutions, individuals, and anyone else interested or coincidentally involved in the poetic act that reveals the expanse of the Americas.

The poetic journeys of the Valparaíso group unlock the gateway to understanding a network that extends beyond the mere concept, revealing a form of circumstantial or ephemeral interconnection. Considering that these poetic journeys are fulfilled in the action of departing rather than in the act of remaining, the encounter occurs anew on each journey. Thus, each journey entails its cartography of personal encounters around the poetic endeavour of Amereida. While on the road, the network becomes a state of encountering the American expanse and its people to sustain the open invitation to think, experience, and construct a poetic America. ■

BIOGRAPHY

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UNVEILING POST-INDEPENDENCE DISCOURSE OF MODERN INDIAN ARCHITECTURE: INSIGHTS FROM *DESIGN MAGAZINE* (1957-1988)

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ABSTRACT

The Indian journal *Design* (1957-1988) emerged during a period of political transitions and a burgeoning awareness of the quest for a new cultural identity. Its scope encompassed discussions on architecture, interior design, landscape architecture, furniture design, textile design, and industrial design. India endeavored to reconcile traditional and modern architectural approaches, driven by its status as a nascent democratic nation eager to both showcase and develop its evolving identity. This era witnessed the emergence of a nuanced discourse that exemplifies the evolution of Indian modernity. *Design* served as a vital platform for these discussions, ultimately shaping mid-20th-century Indian architecture and design. Since its inception in 1957, *Design* being a path-charter marked a departure from previous architectural discourse for a ten year old young India. It catalyzed a fresh interpretation of tradition, drawing inspiration from millennia of artistic achievements across various Indian civilizations. In the post-independence era, there was a collective impetus to preserve the tradition of creativity that had characterized Indian culture. While India had previously produced stupas, sculptures, architectural marvels, and entire cities, alongside remarkable treatises on aesthetics and beauty, there was a palpable sense that contemporary endeavors should strive to surpass these historical benchmarks.

This paper delves into the historical significance of *Design* as a vehicle for critical discourse in Indian architecture and the shaping of the built environment during the postcolonial era. Through the lens of *Design*, this analysis examines how these channels of communication fostered cross-cultural dialogue, enriching the architectural debate. However, the focus is expanded to explore how Indian cultural diversity was expressed in the journal content, aligning with networking across cultures and identities.

1. INTRODUCTION

In 1952, a small office in Bombay's Ballard Estate became the site of a new publishing unit. This literary venture initially focused on the field of construction, architecture, urban forms, environment and art. First, on 1st January 1953, *The Indian Builder* was launched, covering construction and civil engineering. Next, four years later, *Design*, "a review of architecture applied and free arts"[1] — appeared (eventually, it was called the magazine of arts and ideas). This initiative, of producing a magazine dedicated to architecture, was the brainchild of Patwant Singh (1925–2009). The son of a builder, Singh gained experience working on construction sites, but his "urge to communicate his thoughts, and influence things around him, led [to the beginning of] a career in writing and publishing."[2] Besides being trained as an architect and builder, he also was an "architectural journalist, writer, editor, historian, publisher, conservationist, political commentator and philanthropist."[3] Patwant served not only the publisher, but also the editor of *Design* for three decades, until the journal was discontinued in 1988.

From its inception, *Design* played a crucial role in connecting architecture with other disciplines, fostering both 'intranational' and 'international' networks. The editorial policy emphasized that designers cannot work in isolation from practitioners of other arts, "[acknowledging] architecture's pre-eminence in the arts, its editorial policy was based on the belief that designers cannot work in isolation from practitioners of the other arts."[4]

Though a hardcore architecture magazine, it raised awareness about allied disciplines such as "interior, landscape, furniture, textile and industrial designing as well as painting, sculpture, crafts and weaving etc."[5] According to the editor, this overlap and cross-connection was essential for creative experiences to be shared and absorbed holistically.

2. A TRANSNATIONAL AGENT

Design resonates very well as a transnational architectural co-producer. For this, I refer the international correspondence by architects, artists, art historians, critics, etc. as transnational agents in co-production, perception, and interpretation of architecture. The Editorial Board members included both national and international names. Indeed, it was a 'transnational network' of people across the globe. Some big names associated included Eero Saarinen, Siegfried Giedion, Richard Neutra, Charles Fabri, Isamu Noguchi, Walter Gropius, Achyut P. Kanvinde, Habib Rahman, Marcel Breuer, Piloo Mody, and Peter Blake, amongst others.

This diverse panel facilitated a cross-cultural exchange of ideas, helping to integrate global architectural practices with Indian traditions. Such "networking was crucial for developing a modern [Indian] architectural identity that was inclusive of the country's multicultural heritage".[6]

This case of an Indian architecture magazine, *Design,* in a national context supported by a global network tends to engage professionals and their associations in this process of transnationalism. Architecture, being considered as the mother of all arts, encompasses no boundaries. Shawhin

1. See Cover *Design* vol. 1, no. 1 (Jan 1957), accessed March 24, 2024, http://www.bauhaus-imaginista.org/articles/6220/habib-rahman.

2. Roopinder Singh, "Tribute to Patwant Singh," *The Tribune* (August 9, 2009).

3. *Sarbjit Bahga,* "A Tribute to Patwant Singh: The Voice of Modern Indian Design," World Architecture Community (2017), accessed March 25, 2024, https://worldarchitecture.org/architecture-news/cvvce/a_tribute_to_patwant_singh_the_voice_of_modern_indian_design.html

4. Patwant Singh, "This is not Farewell: Editorial Note," *Design* vol. 32, no. 4 (Oct-Dec, 1988): 10.

5. Singh, "This is not Farewell: Editorial Note".

6. "A Cultural Diversity Management Framework for Enhancing the Performance of Architectural Design Firms in Egypt," *European Journal of Business Management and Research* 6, no. 4 (2021): 368-371.

Roudbari, in her study about transnational transformation of architectural practice, argues that:

> *an understanding of the globalization of the field of architecture cannot operate under any single (nation-based) definition of the architecture profession, a multiplicity of national definitions of the architecture field must be considered in order to grasp the myriad of ways a globalizing profession is shaped by the professionals participating in the process from other countries.*[7]

It can be argued that it is a unique moment in history for a newly independent nation to explore other practices globally.

The editor of *Design* can be credited with choosing great stalwarts of national and international backgrounds.

3. CULTURAL DIVERSITY & NETWORKING

Design was instrumental in expressing and celebrating the rich cultural diversity of India. The content of the journal frequently highlighted various regional architectural styles, indigenous materials, and traditional craftsmanship. This was evident in articles and editorials that explored the fusion of modern architecture with traditional Indian elements. The journal emphasized how local cultural diversity influenced architectural practices and design philosophies, promoting a unique Indian modernity distinct from Western trends.

For instance, *Design* often featured pieces on vernacular architecture, which showcased the traditional building techniques and styles from different regions of South India. One such example is of Laurie Baker from February 1974 *Design* issue. This issue initiated a debate on "Architecture and the energy Crisis"[8], and featured a stirring dialogue by Baker himself on 'Building at a Low-Cost'. These articles underscored the importance of adapting these indigenous methods to contemporary needs, thus maintaining cultural continuity while fostering innovation. Additionally, the journal's content included contributions from various regional architects who brought their local perspectives and expertise, further enriching the discourse on Indian architecture and design.

4. SOCIOPOLITICAL CRITIC

Design sought to explore the role of architecture and design for the public, engaging deeply with sociopolitical issues. It can be viewed as an example of creating its own audience through articles about creative fields and the built environment, rather than solely focusing on designing and executing structures. Its multifaceted role as a sociopolitical critic can be understood through several dimensions:

4.1. CRITIQUE OF POLITICAL DECISIONS AND PRACTICES:

Design did not shy away from critiquing political decisions, particularly those impacting the urban and architectural landscape of India. The journal

7. Roudbari, Shawhin, "The Transnational Transformation of Architecture Practice: Iranian architects in the new geography of professional authority (1945-2012)," Ph. D. Thesis (University of California, Berkeley, 2013), https://escholarship.org/uc/item/66b418vp

8. Laurie Baker, "Building at a Low-Cost," *Design*, vol. 18, no. 2 (February 1974): p 38-39.

addressed issues such as the selection of sites for major events, like the Asian Games of 1982, and the design and construction of five-star hotels, affairs of the Delhi School of Architecture, Le Corbusier's modernist principles, and other controversial decisions of the government. It often critiqued these decisions, framing them within broader sociopolitical contexts. For instance, the journal fearlessly stated, "The glass-fronted skyscrapers and other such grotesque, expensive embellishments are inappropriate and disturbing symbols of a sick society."[9] This type of commentary highlights how *Design* "intertwined [architectural] discourse with a critique of societal values and government policies".[10]

4.2. ADDRESSING CORRUPTION AND BUREAUCRACY:

In its editorials, *Design* frequently tackled the issues of corruption and inefficiency within governmental bodies such as the Public Works Department (PWD). An editorial (India in the mid-Sixties – The Curious years) from May 1965 strongly questioned the corrupt practices within the PWD, suggesting that corruption will only cease if "one-sided contractual conditions are changed whereby engineers and petty officials can legitimately coerce and intimidate contractors into giving bribes in exchange for waiving coercive rules."[11] This direct approach underscored the journal's commitment to advocating for transparency and accountability in public infrastructure projects. (See **Fig 2.** below to read more about this feature)

4.3. PROMOTING PUBLIC WELFARE THROUGH ARCHITECTURE:

Design took a strong stance on the role of architecture in public welfare, often critiquing the neglect of urban maintenance and public amenities. The journal's discussions on the New Delhi Municipal Committee's projects (1966), for example, emphasized the need for high standards in civic design and maintenance. The journal argued that "New Delhi [had] not only failed to set any standards, but had also destroyed [the] existing ones through its cynicism and indifference."[12] This criticism extended to the broader implications of poor governance on the urban environment and public life. (See **Fig 3.** below to read more about this feature)

4.4. CHAMPIONING INNOVATION AND CREATIVITY AGAINST IMITATION:

The journal consistently advocated for innovation and creativity, opposing mere imitation of Western trends. It emphasized that contemporary architectural endeavors should strive to surpass historical benchmarks, drawing inspiration from India's rich cultural heritage. This perspective is captured in the journal's broader mission to "maintain cultural continuity while fostering innovation."[13] By doing so, *Design* encouraged a uniquely Indian approach to modernity, one that respected tradition while pushing boundaries.

To summarize, *Design*'s evolution into a sociopolitical critic can be attributed to several factors: a) Interdisciplinary Approach: The journal's editorial policy emphasized the interconnectedness of architecture with other arts and social sciences. This interdisciplinary approach naturally expanded

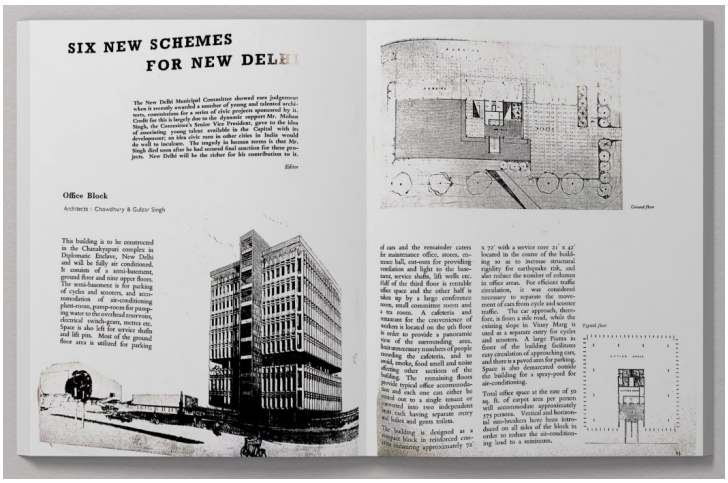
9. Patwant Singh, "This is not Farewell: Editorial Note", 10.

10. A.A.E. Othman and Nadine Ibrahim Fouda, "A Cultural Diversity Management Framework for Enhancing the Performance of Architectural Design Firms in Egypt," *European Journal of Business Management and Research* 6, no. 4 (2021): 368-371.

11. Patwant Singh, "India in the Mid-sixties — The Curious Years", *Design* vol. 9, no. 5, (May, 1965).

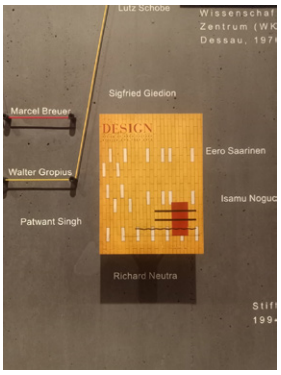
12. Singh, "India in the Mid-sixties — The Curious Years".

13. Aaro Kaasa and Mati Vadi, "How Does Culture Contribute to Innovation? Evidence from European Countries," *Economics of Innovation and New Technology* 19, no. 7 (2010): 583-604. DOI 10.1080/10438590902987222.


SIX NEW SCHEMES
FOR NEW DELH

Office Block

Architects : Chowdhury & Gulzar Singh




Editorial

India in the Mid-sixties - The Curious Years

Fig. 1. Bauhaus Network Wall, Gallery 3, Bauhaus Museum Dessau. *Design* Cover, January 1958, vol. 2, No. 1. Cover Design credits: Chowdhury/Grewal. © Photograph by Pappal Suneja (2019).

Fig. 2. *Design*, Contents and Editorial: "India in the Mid-Sixties – The Curious Years", May 1965, vol. 9, no. 5. © Design Publishers, Amrita Sher-Gil Marg, New Delhi.

Fig. 3. *Design*, Contents page and Editorial: "The Winds of Change," May 1966, vol. 10, no. 5, 76-77. © Design Publishers, Amrita Sher-Gil Marg, New Delhi

its scope to include sociopolitical issues. b) Editorial Vision: Under the leadership of Patwant Singh, an architectural journalist with a broad vision, *Design* embraced its role as a platform for critical discourse. Singh's diverse background as a historian, writer, and commentator enabled the journal to navigate and critique various societal issues. c) Global and Local Networks: The inclusion of both national and international figures on the editorial board facilitated a wide-ranging discourse that transcended purely architectural concerns. This network helped position *Design* as a critical observer and commentator on broader societal trends.

By integrating these elements, *Design* effectively utilized architecture as a lens through which to examine and critique the sociopolitical fabric of post-independence India.

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5. CONCLUSION

On a concluding note, The Indian journal *Design* (1957-1988) significantly influenced both architects and the broader architectural profession in India during a transformative period in the country's history. Its role extended beyond merely documenting architectural trends to actively shaping the discourse on modern architecture through its interdisciplinary and critical approach. The editorial policy of *Design* emphasized the interconnectedness of architecture with other arts and social sciences, encouraging architects to collaborate with professionals from various disciplines. This cross-disciplinary approach not only enriched architectural practice but also broadened the scope of architectural education and training. By featuring contributions from artists, historians, and critics, it helped architects to adopt a more holistic perspective in their work, integrating diverse elements into their designs. *Design*'s fearless critique of sociopolitical issues, including corruption, urban planning, and public welfare, positioned the journal as a critical voice in the architectural community. Its editorials often challenged

architects to consider the broader social and political implications of their work. For instance, the journal's critique of the Public Works Department's (1965) corrupt practices and its emphasis on accountability and transparency influenced architects to advocate for ethical practices within the profession.

Design facilitated the creation of a transnational network of architects, designers, and intellectuals, both within India and internationally. By including prominent figures such as Eero Saarinen, Richard Neutra, and Walter Gropius on its editorial board, the journal fostered a cross-cultural exchange of ideas. This network not only enriched the architectural discourse in India but also positioned Indian architectural innovations on the global stage.

The journal profoundly influenced the architectural profession in India by promoting regional diversity, encouraging cross-disciplinary collaboration, critiquing sociopolitical issues, shaping architectural education, and fostering a transnational network. Through its multifaceted role, *Design* helped to shape a uniquely Indian modern architectural identity, one that respects tradition while embracing innovation. ■

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PRISHTINA SHUNNING CRITIQUE: YUGOSLAVIA'S ENCOUNTER WITH THE RADICAL ARCHITECTURE MOVEMENT

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ABSTRACT
Architectural visions, whether built or not, stand as visual and cultural symbols of a country's aspirations and identity. In the contradictory and ambiguous territory of the Yugoslav microcosm, Prishtina, Kosova's capital, attempted to establish a distinctive architectural character. This research investigates the influence of the Radical Architecture Movement in Prishtina, focusing on the unbuilt proposal for the Memorial Youth Centre *"Boro i Ramiz"* ("Boro and Ramiz") by Ljerka Lulić, Jasno Nosso, and Dinko Zlatarić in 1970. Interrogating Prishtina's case, the central research question explores the permeability of utopic ideas in the European architectural scene of the 1970s. The hypothesis suggests the project embodies a rebellious avant-garde spirit, challenging established socio-political and aesthetic norms. Moreover, this project maps out a more expansive transnational Radical Architecture network of individuals and projects that conceived this philosophy as a global tendency. Despite documentation limitations for "Boro and Ramiz," the research adds another layer to the country's architectural ambitions – concluding that, if realized, might have paralleled other European radical architectural endeavors.

1. INTRODUCTION

In January 1970, a futuristic, *à la* Archigramesque proposal approached the competition for the Memorial Youth Centre "Boro and Ramiz" **(Fig.1)**. That same month, the jury announced the design by the trio Ljerka Lulić, Jasno Nosso, and Dinko Zlatarić with the code "Mosor," as the winner of the contest. This project prompted important questions on the permeability and ease of circulation of utopic ideas in the European architectural scene of the 1960s-1970s, and the transnational exchanges among architects in Yugoslavia.

From this perspective of exports and imports of design rules, state borders become porous, and beyond central and tangential international tradeoffs, the peculiar "intranational" micro-histories within countries such as Yugoslavia, point to unlocking additional contact zones. International knowledge transfers were made possible thanks to the country's in-between political and geographical position. This enabled foreign policies to achieve bilateral accords, while internal affairs to regulate and expand that development.

How architecture was practiced, who and what influenced whom or what, and why, it is a wave that would naturally include Yugoslavia. It is particularly the internationalization of Yugoslav architecture that registered the country as a hotspot, a playground of modern architecture and all its ramifications and exclusively its contradictions that come along. With the downfall of dogmatic design principles, Yugoslav functionalism was highly criticized by Team X at the 10th CIAM meeting held in Dubrovnik in 1956.[1] The Serbian-French architect, Alexis Josic's involvement in the X's meetings and his visiting professorship endeavors, indirectly speak for a broader, yet underexplored transmission of these philosophies into the Yugoslav architectural discourse, indicating that, to some extent, such ideas were in the air at the time.

This is also reflected in Arbër Sadiki's brief description of the architectural and constructive elements, for the envisaged, yet, unbuilt Prishtina's landmark. He places "Boro and Ramiz" in the same historical frame as other radical architectural projects, setting the stage for a deeper examination. This is considered a starting point for the study to explore the emergence of a potential new paradigm in the architectural landscape of the country, inviting further scrutiny of the evolution of architectural theory in the Kosovar context.

2. SURROGATIVE ARCHITECTURE

The after-World War II, Josip Broz Tito's Socialist Federal Republic of Yugoslavia was a confederation of culturally and nationally diverse ethnicities comprised of six republics and two autonomous provinces.[2] As a multi-ethnic, multicultural, multi-linguistic, and multi-religious state, for the "Yugoslav cultural space,"[3] one may speak of there being a diverse territory for cultural, economic, and political exchange among its distinctive ethnicities.[4] This diversity ushered and influenced drastic transformations that were reflected in all spheres of life, including architecture.

1. Congress Materials: CIAM (1956: 10th.: Dubrovnik), 1954-1956, DES-1982-0002-000603297, Box 1, Folder B009, The CIAM Collection, Frances Loeb Library Special Collections, Graduate School of Design, Harvard University, Cambridge, Massachusetts, United States.

2. Noel Malcolm, *Kosovo: a short history* (London: Macmillan, 1998), 327.

3. Ješa Denegri first proposed the term noting that culture and the state were distinct entities.

4. Miško Šuvaković, "Impossible Histories," in *Impossible Histories: Historical Avant-gardes, Neo-avant-gardes, Post-avant-gardes in Yugoslavia, 1918-1991,* ed. Dubravka Djurić and Miško Šuvaković (Cambridge, Massachusetts, London, England: The MIT Press, 2003), 3.

In this game of cultural give-and-takings, Kosovo became a fertile ground for transnational exchanges, partly owing to the absence of The Faculty of Architecture in the country. Until 1978, graduate local architects received diplomas from other universities around Yugoslavia, mostly from the University of Sarajevo, Belgrade, or Zagreb.[5] These architects, Bashkim Fehmiu, Skënder Këpuska, and Sali Spahiu to mention a few, upon their return to their homeland, solely or in tandem with Yugoslav ones, took the opportunity to contribute to the development of Kosovar cities, especially that of Prishtina. This was materialized by the party's ordering to use the Federal Fund of Yugoslavia which was the core catalyzer for granting several supplemental investment resources to promote economic development.[6] This included the financing and the construction of *spomeniks*, public institutions, and cultural and sports centers toward a modernist spirit.

However, it should be noted that this deployment of modernist design as a surrogate cultural agent, allowed Tito to strengthen and disseminate his ideology through architectonic form, creating the professed "socialist modernism." This model became *le grand récit* resulting in the erection of multiple worth-mentioning public modernist structures such as the National Library of Kosova or Press Palace "Rilindja." The modern mentality ingrained in the minds of both professional circles and citizens, shunned the way for the alternative, experimental, and cosmopolitan art of the 1960s and 1970s, pushing these tendencies to exist only in the margins of official culture. The avant-garde projects such as the "Boro and Ramiz" proposal, opposing a unified state-run artistic orientation, risked being treated as "extreme expressions" of Western bourgeois or political subversion.[7]

This project-proposal coincides with the avant-garde movements of the 1960s-1970s, showing Prishtina's need for reorganization, and expression of liberty, as well as a demand for a new alternative and uncensored thought. Such qualities of public institutional architecture, and a more liberal attitude towards programmatic, morphological, and technological experimentation, allow this project for an evaluation of an alternative architectural approach – that of the Radical Architecture Movement – highlighting the potential conception of a new paradigm in the discourse of Kosovar architecture, all of which will be discussed in the subsequent chapter.

3. NOT JUST AN ARCHITECTURAL ABORTION

During the 1960s-1970s individual authors had the necessary space to pursue original and personal architectural beliefs. The "in-between" world of Yugoslavia was interchanging several ideas with the East,[8] however, it leaned more toward Western art.[9] The Yugoslav architects were no longer expected to present only possible socialist realities but could venture into autonomous aesthetics. Here, Vjenceslav Richter's *Sinturbanism*, Andrija Mutnjaković's *Endemska arhitektura*, and Radovan Delalle's *Urbarhitektura* emerge.[10]

This is not surprising considering that the celebrated works of Archigram were not unheard of. The Croatian architectural magazine *Covjek i Prostor* started distributing translations of its homolog *Aujourd'hui*. Firstly in

5. Ilir Gjinolli and Lulzim Kabashi, *Kosovo Modern: An Architectural Primer* (Prishtina: National Gallery of Kosovo, 2015).

6. Rakia Moalla-Fetini, et al., *Kosovo: gearing policies toward growth and development* (Washington, D.C.: International Monetary Fund, 2005), 10.

7. Šuvaković, "Impossible Histories," 5.

8. Radovan Nikšic collaborations with architects from Eastern Europe. See: Lukasz Stanek, *Team 10 East: Revisionist Architecture in Real Existing Modernism,* (Warsaw: Museum of Modern Art in Warsaw, 2014).

9. Šuvaković, "Impossible Histories," 11.

10. Rilind Cocaj, *Between Neo-Avant-Garde Art and Biourbanism. Andrija Mutnjaković: National Library Of Kosovo*. PhD. Diss. (Venice: Università IUAV di Venezia, 2022), 13-14.

1965 with *"Čudesni Archigram"* ("Wondrous Archigram"), and later in 1973 came "*Kontroverze oko Archigrama"* ("Controversies surrounding Archigram") by Darko Venturini. Such alluring new ideas for the younger generation of architects have brought to the forefront personalities, among them the Croatian woman architect, Ljerka Lulić. For the latter, and her compatriot collaborators Jasno Nosso and Dinko Zlatarić, the architect and art critic Antoaneta Pasinović has given them the highest distinctions as the most innovative and experimental young architects in Yugoslavia.[11] Their approach far from earlier Yugoslav concrete utopia, was a clear signal to many architects all over Yugoslavia that a new era had begun.

In fact, in Yugoslavia and elsewhere, such radical ideas mainly originated among students and young practitioners and had a later effect on the views of other generations. As Tzonis and Lefaivre argue, 1968 was the year when such initiatives were conceived.[12] The so-called radical architects of Europe, Superstudio, Archizoom, 9999, and Ettore Sottsass, among others, launched the self-styled Radical Architecture.[13] Inspired deeply by Rossi's fundamental worldviews,[14] this movement consisted of opposition to the sterility of Modernism by proposing a "moderate utopia."[15]

The Croat architect, Andrija Mutnjaković, places the proposal of Lulić, Nosso, and Zlatarić, in the framework of a movement that explores the ideas of futuristic and unconventional architecture.[16] His description makes it evident that the architect is referring to the Radical Movement in Architecture which hypothetically anticipates possible utopic scenarios. Waving the banner of Loosian functionalism, the trio's architectural endeavors show openness and potential primarily in the sphere of experimental-research, revolutionary, and utopian-visionary spirits.[17] The expressive channeling of their desires and necessities within the heart of urban life shows how tangible the ideas of radical architecture were.

Although it never managed to mature, the Radical Architecture Movement was conceived and remained as such to tackle certain values toward the anti-modern aesthetic expression, and the avant-garde aspirations that address the fundamental needs of Prishtina. The proposal of "Boro and Ramiz" acts within the socio-cultural zeitgeist of this movement providing the city with a visionary, youth-centric architectural approach. But even more significant than the philosophical aspect of the building, is its programmatic content, which projects a completely new way of life, and which will be discussed in the following sub-chapter.

3.1. SPATIAL AND COMPOSITIONAL EVALUATIONS

Taking into account its role as a polyfunctional center, a careful approach to the issues of space, flexibility, modular coordination, new construction materials, and construction procedures is seen as of great importance. The public space proposed by Lulić, Nosso, and Zlatarić that takes place in front of the building shows the youthful spirit of the capital through an inviting dynamism **(Fig.1)**. This can be associated as a form of representation of Prishtina's flamboyance and its forward-looking commitment.

11. Antoaneta Pasinović, "Trenutak sadašnjosti i trenutak suvremenosti, u mladoj generaciji suvremenog hrvatskog graditeljstva," Život *umjetnosti: Journal for Modern and Contemporary Art and Architecture*, 14 (1971): 34-46.

12. Alexander Tzonis and Liane Lefaivre, "Between Utopia and Reality", in *Architecture in Europe: Memory and Invention since 1968*, ed. Alexander Tzonis and Liane Lefaivre (London: Thames & Hudson, 1997), 10-23.

13. Simon Sadler, *Archigram: Architecture without Architecture* (Cambridge: MIT Press, 2005), 183-189.

14. Aldo Rossi was a major inspiration on radical architecture groups. The latter were particularly struck by "exalted rationalism" that Rossi's had identified in 1967 in the work of Boullée. For Boullée's influence on Rossi, see more: Pier Vittorio Aureli, *The Possibility of an Absolute Architecture* (Cambridge: MIT Press, 2011).

15. Superstudio, "Discorsi per immagini," *Domus* 481 (1969): 44–45. This concept is further deconstructed in Dominique Rouillard, "Superarchitecture: The Future of Architecture, 1950–1970," *Journal of Architectural Education* 67, no.1 (2013): 119-121.

16. Saša Šimpraga, "55 prištinskih kupola: O arhitekturi Prištine prije i poslije izgradnje Nacionalne i sveučilišne biblioteke", Zarez, May 28, 2014. http://www.zarez.hr/clanci/55-pristinskih-kupola.

17. Pasinović, "Trenutak sadašnjosti i trenutak suvremenosti," 34-46.

In terms of programmatic content, the proposal of "Boro and Ramiz" is a hybrid structure that embodies different functions within itself. For a project in Kosova, won by Croatian architects, the jury composed of Vojislav Damjanović (Serbian), Tomislav Petrović (Croatian), Danillo Fürst (Slovenian), Ljuben Najdenov (Macedonian), Zdravko Čuk, and Andrija Šrek (Serbian), did not spare the type of comments that exalted the structure's "nobility in content and free creativity."[18] This not only confirms the "intranational" character of architectural competitions in Yugoslavia but also underlines the collaborative exchanges in a unified ambition for its built environment.

According to its program plan, the center included three main halls, which in the floor plan, span through a rhomboid-shaped modular system. The sports hall, the music, and the theater hall, all of which were located in the center of the structure provided greater flexibility. These rooms could be utilized independently or could be merged into one large auditorium by sliding the retractable partition walls.[19] Such concepts of versatility in floor plans are on par with, or even precede radical proposals similar to the Centre Pompidou which came a year later, in 1971.[20]

The metallic structural bars show spatial fluidity in both, horizontal and vertical directions, and a strong sense of transparency and diversity in general **(Fig.2)**. Yet, four massive vertical blocks, with the appearance of menhirs, create an effect of stability and determination **(Fig. 3)**. Built on the principle of a combination of square and triangular coordinate modules in floor plans, and in the third dimension built on the concept of a tessellate rotated in space, this architecture bases its plastic effect and effectiveness on constructing a spatial grid composed in a constructivist plastic expression.[21]

The least that can be said about the stylistic influence of "Boro and Ramiz" is that it gave the country the missing archetype of ultra-technological aesthetics. This opposed the stylistic interests of the rival architectural camp of the time, that of modernism, and the historical referencing of postmodernism. This structure stands in the middle, as representative and advocate of socio-political issues, leaning towards experimentation as a utopian visionary solution. However, the most that can be said about its influence was the reincarnation of the visual culture and the rebellious and youthful spirit of the capital to which it belonged, as a sign of the rebirth of national optimism, and as a monument to its time, and no less.

4. CONCLUSIONS

The examination of the transnational and transcultural context of Prishtina during the 1960s and 1970s reveals the impact of shaping factors on architectural development. Based on these factors, the research asserts that this structure shares the same rebellious avant-garde spirit as the ones from both, the East and West sides of the Iron Curtain. This study is one of the possible histories of the radical philosophy in the chronicles of Yugoslavia which suddenly reintroduced the long-dormant theme of Radical Architecture into socialist architectural discourse, that has been

18. Golijanin Grujo, "Natječaj za idejno rješenje omladinskog 'Spomen-doma Boro i Ramiz' u Prištini," *Arhitektura:* časopis *za arhitekturu, urbanizam i primijenjenu umjetnost* 24, no. 106 (1970): 54-62. Zagreb: Library of the Ministry of Culture, loc. 81 Periodicals (old), sign. 05 ARH 1970 106/108, inventory no. 881.

19. Arbër Sadiki, *Architecture of Public Buildings in Prishtina: 1945-1990* (Prishtina: NTG Blendi, 2020), 142.

20. The author's research paper "A comparative analysis between the proposal for the Palace of Youth and Sports "Boro and Ramizi" and the iconic Centre Pompidou" provides further details on the structure's similarities.

21. Pasinović, "Trenutak sadašnjosti i trenutak suvremenosti," 34-46.

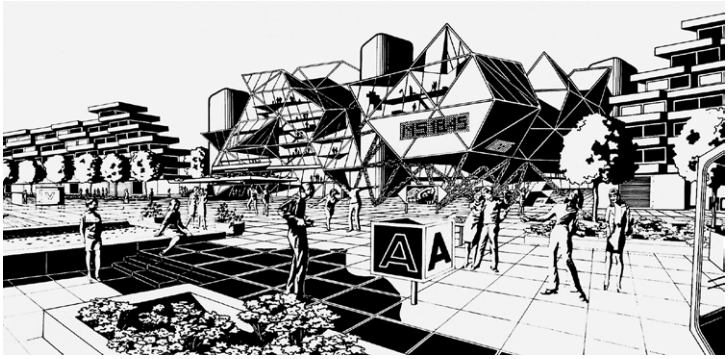


Figure 1. Perspective view of winning proposal for the Memorial Youth Centre "Boro and Ramiz," Prishtina, Kosovo. © Radulj and Novaković, 2023.

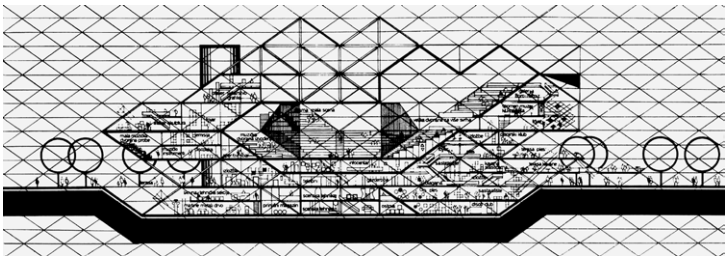


Figure 2. Elevation view of winning proposal for the Memorial Youth Centre "Boro and Ramiz," Prishtina, Kosovo. © Radulj and Novaković, 2023.

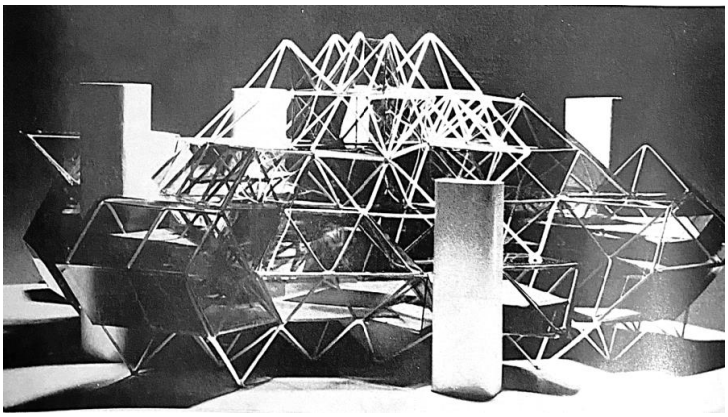


Figure 3. The model of winning proposal for the Memorial Youth Centre "Boro and Ramiz," Prishtina, Kosovo. © Pasinović, 1971.

present in Prishtina, but never really flourished. This is why the problem of this movement can be defined as a problem of (im)possible histories and (im)possible transnational transfers of architecture to culture in historical Yugoslavia. Architectural efforts such as "Boro and Ramiz" strengthen the role of architecture as an interpreter and creator of social narratives. But most importantly, this structure shows a defense of the right to an architectural experiment in the social community of Prishtina. A defense of the understanding that the constitution of the societies in its essence needs an architectural experiment. ■

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AUTHENTICITY IN THE FACE OF CLIMATE CHANGE

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#26

ABSTRACT

Authenticity has been a central notion to conservation since the Venice Charter of 1964 and even before. Docomomo International (DI) has rarely published doctrinal positions. As part of a consultative program agreed with ICOMOS, in 1997, DI published "The Modern Movement and the Word Heritage List. An Advisory Report Composed by the Docomomo's International Specialist Committee on Registers". In its report, DI asserts that all WH criteria apply to modern heritage, with the exception of the criterion of authenticity. In the case of modern heritage, it recommends favoring conceptual authenticity over material authenticity, namely the architect's concept (idea) rather than the fabric. However, whether material or conceptual authenticity, this principle is undermined by the major challenges posed to deal with climate change. We take advantage of this introduction to recall the importance of authenticity in the theory and the doctrine of conservation and to examine to what extent this notion which dominated its practice in the second half of the 20th century is still valid. To better understand the challenges posed by climate change, we will examine three recent projects from the ERA Architects established in Toronto, Ottawa and Montreal.

The severity of climate change as a threat to cultural heritage was first brought to the attention of the international community in 2005. At the outcome of the World Heritage Committee's 29th Assembly, it was resolved to encourage state parties and to set up a working group to begin predicting climate impacts and anticipated their management on both natural and cultural heritage.[1] Since this first efforts, initiatives from various international heritage organizations have continued this work at an accelerated pace, and clearly demonstrated that climate change challenges many of the fundamental underpinnings of our field.

In 2019, the work carried out by the ICOMOS working group on climate action culminated in its publication *The Future of our Pasts: Engaging Cultural Heritage in Climate Action*. The document is the first attempt at systematically and exhaustively listing the means through which cultural heritage can support climate action, and the impacts of climate change to heritage places and their values. Though the document does not delve into the implications of the crisis on established conservation theory, it does however recognize that:

> *climate change will have unprecedented impact on what is now considered to be good Conservation practice. […] Many conservation management and assessment standards, such as the constructs of authenticity and integrity will need to be rethought.*[2]

The World Heritage committee reiterated similar concerns in the 2023 update to its World Heritage and Sustainable Development Policy, stating that:

> *Even with best efforts, real and perceived tensions may develop between proposed climate action pathways and obligations of States Parties under the Convention and their commitments to preserve the Outstanding Universal Value of World Heritage properties, including the conditions of integrity and/or authenticity at the time of inscription.*[3]

Authenticity has been a central notion in architectural conservation since the 1964 *Venice Charter* and even prior to it. Docomomo International has rarely published doctrinal positions. In 1997, the International Specialist Committee/Register (ISC/R) submitted the report entitled "", drawn up in the context the program established in collaboration with ICOMOS, to compensate for the low number of World Heritage List inscriptions representative of the Modern Movement. Rather than establishing an indicative list, the ISC/R examined the validity of the selection criteria recommended by the Intergovernmental Committee for the Protection of Cultural and Natural Heritage. It concluded that all could be applied, except that of authenticity. In the case of the architectural legacy of the modern movement, it recommended favoring conceptual authenticity rather than material-based one. It is important to acknowledge that, over the past thirty years, the concept of heritage as well as the main threats to it, have

1. World Heritage Committee. *Decision 29 COM 7B.a*. 2005

2. ICOMOS – Climate Change and Heritage Working Group. *The Future of Our Pasts: Engaging Culturla Heritage in Climate Action*. p. 16. 2019

3. UNESCO. Updated Policy Document on Climate Action for World Heritage, §38. 2023

considerably changed. In addition, the heritage movement has become decisively globalized.

We take the opportunity of this introduction to recall the importance of authenticity in the theory and the doctrine of conservation and to examine the ongoing validity of this notion, which has dominated the field during the second half of the 20th century. To better understand the challenges posed by climate change, we will examine three projects which have involved the participation of ERA Architects, a leading-Canadian firm specialized in heritage conservation.

The concern for the authenticity of heritage and its early beginnings can be traced back as far as the last decades of the 19th century. At that time, the practice of architecture was professionalized, and the conservation of historical monuments institutionalized in most European countries, supporting national state constructions. It is particularly well expressed by the Italian architect Camillo Boito (1836-1914) who warned his readers against restorations where the old and the new blur:

> *It is shameful to deceive one's contemporaries, but it is even more shameful to deceive posterity.*

He adds:

> *Let's say the monument is a book; well, I want to read it without cuts, without additions and without rearrangements. I want to be sure that everything written there came from the pen or style of the author.*[4]

Boito wanted to ensure that once restored, the monument was always an "original" document and that no confusion could exist as to its "attribution", with contemporary interventions being distinguishable from it. Though he did not specifically refer to the term, he wanted to ensure that the monument remained "authentic"[5].

In 1964, concern for authenticity became the primary ethical principle for architects and technicians of historic monuments meeting for a second time, on an international scale, in Venice. Their first congress, organized in Athens in 1931, had preceded by two years the IVth CIAM held on Patris II in the Greek capital. In its preamble, the Venice Charter establishes that their first duty is to transmit to future generations the monumental works of the past in "all the richness of their authenticity". Although the word is used, no precise definition is given as to the quality it is intended to designate. Nevertheless, Article 9 indicates the fundamental attitude required to "conserve and reveal the aesthetic and historical values of the monument": "respect for the ancient substance and authentic documents"[6].

According to Robert Pane, one of the two authors of the initial proposal for the Venice Charter, the aim was to ensure the survival of the "primitive image" of the monument. Such a goal echoes the restoration theory established for works of art, by art historian Cesare Brandi (1906-

4. Boito, C., Birignani, C. "Restoration in Architecture: First Dialogue". *Future Anterior: Journal of Historic Preservation, History, Theory, and Criticism*, vol. 6, n° 1, 2009: 73.

5. One of the etymological roots of the adjective authentic is the Latin authenticus meaning "original et bien attribué (d'un texte)". Rey, A., Hordé, T. *Dictionnaire historique de la langue française*. Paris : Le Robert, 2006

6. ICOMOS. "International Charter for the Conservation and Restoration on Monuments and Sites (The Venice Charter 1964)", Accessed date May 9, 2024. https://www.icomos.org/images/DOCUMENTS/Charters/venice_e.pdf

1988) for whom "we only restore the fabric"[7]. However, the transition from theory to doctrine lead to a simplified understanding of the principle by focusing on the material object. The point of departure for Brandi's thinking is the phenomenological conception of the work of art as a double individual spiritual experience, that of its creation and that of its temporally distant recognition / recreation / reception. Furthermore, Pane justifies the need for updating of the Athens charter by the emergence of new preservation issues, arising mainly from the existing conflict between urbanization and the conservation of monuments and their surroundings.

Authenticity becomes the discriminating criterion following the recognition of the universal value of heritage by UNESCO, with the adoption of the World Heritage Convention in 1972. It is among the benchmarks set in 1977, by the World Heritage Committee, to guide the selection of cultural properties to be inscribed on the World Heritage List. Unlike the six criteria put forward to judge the universal value of monuments, groups, or sites, each of which is considered a sufficient, but not compulsory condition, authenticity is essential: all cultural property must pass the " test of authenticity".

Many authors have observed the vagueness, if not the polysemy, of the notion of authenticity. The pitfalls and difficulties encountered during the application of the authenticity test raised little debate as long as the heritage was above all monumental and Western, and only ancient.

Unease grew as, in the 1980s, the field of heritage experienced an unprecedented expansion, including in time, and increase in the number of signatory countries to the World Heritage Convention.

In the late 1980s, the preservation of innovative 20th century architecture had become an international concern. In June 1987, a first large-scale European conference on the subject was organized by the French Ministry of Culture. In August 1988, the first newsletter of the International Working-Party for Documentation and Restoration of Early Modern Architecture was published calling for the creation of an international working-party[8]. The organization of a first international symposium was also announced in September 1990, at the University of Eindhoven. During this meeting, representatives of 20 countries decided to found Docomomo International, adopting its constitution[9].

In 1990, with a view to clarifying the criterion of authenticity, the World Heritage Committee opened a research project on the subject. Furthermore, following the ratification of the World Heritage Convention by Japan, a meeting was convened in 1994, in Nara, at the initiative of Japan, to bring clarity to the question.

The Nara Document adopted at the end of the meeting reaffirms authenticity as "an essential qualifier regarding the credibility of available sources of information" to establish heritage values. It nevertheless notes the notion's cultural variability in a globalized world where cultural identity has become an issue[10].

However, over the past thirty years, the concept of heritage has changed significantly. In addition to its diversification, as a reflection of the growing involvement of citizens, it has become dematerialized. The

7. Pane, Roberto, "Conférence introductive", Accessed date May 9, 2024. https://www.icomos.org/public/publications/prima1.pdf. Cesare Brandi, Théorie de la restauration, Paris, Centre des Monuments nationaux/Monum, Éditions du patrimoine, (1963) s.d.[2001].

8. International Working-Party for Documentation and Restauration of Early Modern Architecture Newsletter, n° 1, August 1989

9. Henket, Hubert-Jan, "Introduction". In Henket, H-J., de Jonge, W. *Docomomo Conference Proceedings. First International Conference, September 12th-15th, 1990, Eindhoven*. p. 13. Eindhoven: Docomomo International, 1991.

10. ICOMOS. "The Nara Document on Authenticity". Accessed date May 9. 2024. https://www.icomos.org/en/charters-and-texts/179-articles-enfrancais/ressources/charters-and-standards/386-the-nara-document-on-authenticity-1994

growing role of non-Western countries in the international debate has also led to the adoption of the Convention for the Safeguarding of the Intangible Cultural Heritage by UNESCO in 2003.

Moreover, still in the 1990s, considerations were further transformed through research initiated by the Getty Conservation Institute, based on the realization of the weight that economic, monetary, and abstract values have on the future of heritage assets. At the basis of this research is the acknowledgement that heritage is a construct, rather than an immutable message from the past, as suggested by the Venice Charter. As a social construct, it is specific to a given place and time[11]. Such a conception, which places emphasis on the meanings invested in heritage rather than on its materiality was not new, far from it. In 1903, Aloïs Riegl wrote about the modern cult of monuments: "We modern viewers, rather than the works themselves by virtue of their original purpose, assign meaning and significance to a monument."[12]

For two centuries, heritage has most often been defined by the aesthetic and documentary value of artifacts embodied in their physical reality. Preserving the authenticity of the latter was the major conservation challenge. However, this concern is undermined by the unprecedented challenge posed by climate change, the evidence of which has become evident with the new century, the climate change, as an end in itself, but also in the means deployed to achieve it. On one hand, the need to decarbonize our built environment is now acknowledged as a moral obligation, through mitigation strategies that can both optimize the intrinsic carbon of existing structures and reduce their energy consumption. On the other hand, the necessity to adapt to climate impacts is becoming ever more obvious, with the increased vulnerability to gradual and insidious forces, such as erosion, rising waters, acceleration of freeze-thaw cycles, or new invasive species, as well as sudden and sometimes recurring natural events: flooding, storms, wildfire, and so on. These impacts undermine the physical fabric of places, as well as the longstanding relationship of communities to them.

For the better and for the worse, our built environment is now confronted with the need for unprecedented change to both mitigate and adapt to climate change. Most obviously, mitigation often means modifying the building envelope to increase its performance and limit energy consumption. This very often results in some level of visual transformation. Though this remains a design challenge, it is an accepted fact and a type of intervention that our profession has developed at least some level of comfort with.

Over the past 15 years, ERA Architects has been engaged with a large-scale initiative aimed at rehabilitating housing towers of the 1960s and 1970s, which constitute a significant percentage of the existing housing stock in southern Ontario, particularly in and around the city of Toronto. The Tower Renewal Project's aim is twofold: to improve the energy performance of these buildings, and to update comfort levels for their occupants. While the respective architectural value of these towers is variable, it is nevertheless a consideration of its work.

More ambitious upgrades do however almost necessarily mean more radical physical transformations. One of ERA's most recent Tower Renewal

11. Avrami, E., Masson, R., de le Torre, M. *Value and Heritage Conservation. Research Report*, p. 6. Los Angeles: The Getty Conservation Institute, 2000

12. Riegl, A. "The Modern Cult of Monuments : Its Essence and Its Development". In *Historical et Philosophical Issues in the Conservation of Cultural Heritage*, directed by Stanley Price, N, Kirby Talley Jr., M., Melucco Vaccaro, A., 72. Los Angeles: The Getty Conservation Institute, 1996

projects has been the rehabilitation of the Ken Soble Tower in Hamilton **(Fig.1)**, completed in 2020, the first Passive House housing tower retrofit in North America. This 18-storey tower, built in 1967, had fallen in disrepair, and several options had been contemplated, including its demolition. Its retrofit is EnerPhit certified and has achieved a 94% reduction of greenhouse gas emissions. In addition, the building can also maintain adequate interior temperatures for several days in the event of power outages, building in resilience to increasingly unpredictable climate events[13].

While of modest architectural interest, the building nevertheless constitutes a significant local landmark, and these upgrades have involved extensive visible alterations to it. Original balconies were removed to limit thermal bridging, and the original glazed brick cladding entirely replaced with panelized high performance insulation cladding, considerably altering its original aesthetics. This is considered to be largely offset by the gain of 147 renewed affordable senior housing units. There is value in comparing this example to another recent building envelope rehabilitation, at an opposite end of the spectrum in terms of architectural value, where the original design intent and authenticity warranted exceptional levels of care, time and expense. Mies Van der Rohe's Toronto Dominion Centre in Toronto is considered to be his last major commission before his death in 1969 and epitomizes many of the celebrated characteristics of his work, including bronze-colored glazing set into a matt black steel structure. In 2012, the owner undertook a major renovation of interior spaces combined with a building envelope rehabilitation which spread over several years, reducing the complex's energy consumption by half and achieving LEED Platinum certification for Operations and Maintenance.

The approach to this designated building is considered to embody best practice in terms of its sensitivity and commitment to maintaining the authenticity of Mies's original design and has been described in the Getty Conservation Institute's 2021 Publication: *Managing Energy Use in Modern Buildings: Case Studies in Conservation Practice*[14]. This included, for example, scrupulous efforts to accurately replicate the matt black paint finish of the structure. While this level of rigor, care and cost is laudable for an iconic structure such as this, it is hardly realistic for the mundane buildings that make up most of our building stock.

At a much larger scale, climate change mitigation also means modifying car-centric midcentury urban fabric in favor of more efficient and denser models of transit-oriented development. A case in point is another project ERA has been engaged on for the past few years, to support the development of a Master Plan for the federal Campus of Confederation Heights, in Ottawa **(Fig.2)**. Developed in the 1960s and 1970s as a suburban office campus for several federal departments, following the vision of French planner Jacques Gréber for decentralization of the booming civil service from the urban core, Confederation Heights sought to provide workers with a bright and airy work environment, through modern headquarters set within wide expanses of carefully manicured parkland. Leveraging ideals of infinite resources of space and wealth, this model was entirely reliant on private vehicle access,

13. ERA Architects. "Ken Soble Tower EnerPhit Renewal - A Canadian First, Project summary". Accessed date May 20, 2024. https://www.eraarch.ca/wp-content/uploads/2021/06/20210610_Project-Summary.pdf

14. Cressman, A, et al. "Toronto-Dominion Centre: Toronto | 1967–69." In *Managing Energy Use in Modern Buildings: Case Studies in Conservation Practice*, edited by Bernard Flaman et al., 66–76. Los Angeles: Getty Publications, 2021



Figure 1. The 1967 Ken Soble Tower in Hamilton, Ontario, Canada, in its early days and after the major EnerPhit retrofit completed by ERA Architects in 2021. Extensive transformation of the building's exterior appearance was needed to meet the ambitious efficiency objectives that have reduced its energy consumption by 94%. © Cityhousing Hamilton Archives, 1967; and Doublespace Photography, 2021.



Figure 2. The Confederation Heights Campus in Ottawa, Ontario, Canada, was designed and built in the 1960s and 1970s as part of the federal government's effort to decentralize its growing civil service. Its expansive grounds are now the object of a master planning exercise largely driven by sustainability objectives and aim to introduce increased density and a diversity of use. © Canada Lands Corporation, n.d.

celebrated through a network of scenic drives that magnified the aesthetic qualities of the sculptural office buildings and of their surroundings.

The mandate now at hand is to convert this single-use low density campus into a high-density complete community centered on active mobility and public transit. This paradigm shift forces us to question where balance lies between conserving the qualities of a modernist landscape and providing sustainable densification models for the suburban midcentury form. Here, the morals of climate change mitigation appear to unquestionably outweigh those of authenticity.

While mitigation is something that we have accustomed to incorporating in our work, climate change adaptation is something that our profession is not yet as adept at tackling. Perhaps our discomfort rest with the need to contend with unknowns and anticipate phenomena that may not be completely predictable. Perhaps it also lies in the fact that adaptation will likely entail an even greater degree of physical transformation that we have yet to come to terms with.

Adaptation will warrant even more radical levels of physical transformation to avoid total loss: from modifying existing assemblies and details to accommodate unprecedented climate events, reinforcing structures to ensure resilience against storms, to altogether raising or moving buildings to protect them from erosion or raising water levels. Faced with such existential threats, the notion of authenticity may be destined to become an outdated and irrelevant construct. ■

BIOGRAPHY

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Ève Michelle Wertheimer is a conservation architect and associate with ERA Architectes, based in Montreal. A graduate of the Raymond Lemaire Center for Conservation, she has been involved for over 20 years in the conservation of buildings and landscapes, on a range of projects throughout Canada. Prior to joining ERA, she has held various positions in the public sectors linked to heritage policy development and implementation. Through these multiple lenses, she has been able to explore the relationship between theory and practice as it manifests itself through heritage policy and conservation projects.

PRESERVING AUTHENTICITY AFTER SEISMIC RETROFIT AND REUSE IN JAPAN

TORU AJISAKA
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ABSTRACT

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Earthquakes occur frequently in Japan, and seismic retrofit is necessary to reuse modern architecture. In this study, we analyze the impact of functional improvements and seismic retrofit on the authenticity of modern reinforced concrete buildings selected by DOCOMOMO Japan. The aim is to clarify desirable earthquake-resistant design and design for functional renewal in order to inherit the authenticity of architecture and space.

Methods for seismic retrofit of reinforced concrete modern buildings in Japan include seismic resistant structure, seismic isolation structure, seismic response control structure, improving earthquake resistance by reducing building volume, and improving earthquake resistance by expanding building volume.

Among these methods of seismic retrofit, this study reports on the National Museum of Western Art (DOCOMOMO Japan Selected Building No.059 as an example of seismic retrofit through seismic isolation structures. It also reports on Hibiya Library (DOCOMOMO Japan Selected Building No.117) and the International House of Japan (DOCOMOMO Japan Selected Building No.047) as examples of seismic retrofit through seismic resistance structures. From the analysis of these specific cases, I consider design methods that have little impact on the authenticity of architecture and space.

1. INTRODUCTION: SEISMIC RETROFIT IN JAPAN

There are several methods for seismic retrofit of reinforced concrete buildings in Japan. Seismic resistant structure is a method of countering horizontal earthquake forces by increasing the strength of the building by installing earthquake-resistant walls and earthquake-resistant steal braces. It is a cheaper method than seismic isolation structure and is commonly used. Seismic isolation structure is a method of preventing earthquake forces from being transmitted to buildings by installing a seismic isolation layer, but the construction costs are expensive. Seismic response control structure is a method of absorbing seismic forces and reducing their impact by installing seismic dampers in the structural frame. Seismic retrofit by reducing building volume is a method of improving seismic performance by removing part of the building to reduce its weight. Seismic retrofit by expanding building volume is a method of improving the earthquake resistance of the entire building by adding new, stronger structural parts.

In Japan, the earthquake resistance standards of the Building Standards Act were revised in 1981 due to the impact of the 1978 Miyagi Prefecture offshore earthquake (magnitude 7.4, maximum seismic intensity 5). As a result, buildings built before that time do not meet the current building standards and are called existing non-conformed buildings.

When expanding or changing the Reuse of a building in Japan, it becomes necessary to improve earthquake resistance to current standards. Under Act on Promotion of Earthquake-Resistant Renovations of Buildings, earthquake reinforcement is mandatory for schools, hospitals, inns, gymnasiums, nursing homes, etc. that are used by an unspecified number of people and are above a certain size.

2. REUSE THROUGH SEISMIC ISOLATION STRUCTURE

Among the 290 DOCOMOMO Japan selected modern architectures, improved seismic performance through seismic isolation structures has been adopted in Hiroshima Peace Memorial Museum (DOCOMOMO Japan Selected Building No.014 1955), Kagawa Prefectural Government Office (DOCOMOMO Japan Selected Building No.016 1958), Sagae City Hall (DOCOMOMO Japan Selected Building No.089 1967), National Museum of Western Art, Ministry of Foreign Affairs (DOCOMOMO Japan Selected Building No.059 1959), NCR Building [Nippon Foundation Building] (DOCOMOMO Japan Selected Building No.069 1962), and other buildings.

At first the paper report on the example of the National Museum of Western Art.

The National Museum of Western Art was completed in 1959, based on the design documents sent from Paris by Le Corbusier, with architectural design by Junzo Sakakura, structural design by Kunio Mayekawa, and facility design by Takamasa Yoshizaka.

In 1964, Junzo Sakakura indoord some of the pilotis and added an auditorium and office building. In 1979, after Junzo Sakakura's death, a new wing was built based on a design by Kunio Mayekawa. In 1997, the

National Museum of Western Art not only isolated the main building by excavating underground, but also added a new space (special exhibition room) underground and above ground, which was functionally necessary. Since this was the first seismic isolation method in Japan, the design was done by the Ministry of Land, Infrastructure, Transport and Tourism and Kunio Mayekawa. Unfortunately, at this time, Junzo Sakakura's lecture hall and office building were demolished. This plan added the large volume of the special exhibition room, which was needed, underground in the front garden connected to the seismic isolation layer, and the above-ground extension was also built at a low height behind the main building, minimizing the impact on the exterior. In addition, since the seismic isolation method requires little intervention inside and outside, the authenticity in architecture and space was guaranteed at the National Museum of Western Art. Although the construction costs of excavating underground are enormous, it was an appropriate plan considering that the museum was later registered as a World Heritage Site. This became a pioneering example of improving the earthquake resistance of buildings of the authenticity in architecture and space was guaranteed at the National Museum of Western Art. through seismic isolation structure.

3. REUSE THROUGH SEISMIC RESISTANT STRUCTURE

Of the 290 DOCOMOMO Japan selected modern architectures many have been reused through seismic resistant structures, including the Kanagawa Prefectural Museum of Modern Art (DOCOMOMO Japan Selected Building No.010 1951, Kanagawa Prefectural Library and Music Hall DOCOMOMO Japan Selected Building No.012 1954), The World Peace Memorial Cathedral (DOCOMOMO Japan Selected Building No.045 1953), The International House of Japan, Nanzan University (DOCOMOMO Japan Selected Building No.077 1964), and The Ueno City Hall (DOCOMOMO Japan Selected Building No.183 1963). Among these, we report on the International House of Japan (1955) and Hibiya Library (1957).

The Tokyo Metropolitan Hibiya Library was built in 1957 to a design by Tokyo Metropolitan architect Takeshi Takahashi. In 2002, steel braces were installed to reinforce the building against earthquakes. After that, in 2009-2010, architect Yoichi Hosaka redesigned the building, and construction was carried out in 2010-2011. The steel sashes were replaced with aluminum sashes using a cover method, and the sashes were made thicker than the originals because they needed to be used as smoke exhaust windows. The braces of structure have intervened the interior, and the delicate exterior has been lost, and part of the authenticity has been lost.

The International House of Japan was completed in 1955, jointly designed by three architects: Mayekawa Kunio (1905-1986), Sakakura Junzo(1901-1969), and Yoshimura Junzo(1908-1997). Since its completion, it has been frequently renovated due to its high usage. Yoshimura Junzo designed and expanded the basement restaurant, while Mayekawa Kunio designed and converted the void and the light courtyard into living space, and both have been utilized since. Sakakura Junzo passed away in 1969,

and in 1975 Mayekawa Kunio drew up a detailed design for a complete rebuild and was about to start construction, but due to rising prices during the oil crisis, the main building was renovated and the new building was downsized and expanded. Although it continued to be used after that, due to reasons such as its earthquake resistance not meeting the new standards, the lack of bathroom units in the guest rooms being cramped, a complete rebuild was planned again around 2000. However, following a request from DOCOMOMO Japan, the Japan Institute of Architects, and the Architectural Institute of Japan, and a proposal from the Architectural Institute of Japan to renovate the building using the methods of seismic isolation structure, the plan was changed in 2004 to preserve and renovate the building. However, it was discovered that the foundations of the Iwasaki Koyata House (1930, designed by Oe Shintaro) on the International House of Japan's grounds were on the grounds, and the decision was made to reconstruct it using the methods of seismic resistant structure. Architect Sakata Seizo, who was the supervisor at the time, set the concept that "Preservation is not the goal. Preservation is through renovation to update functionality." Following that policy, we began designing the regeneration. As a result, multi-story shear walls that were necessary for functionality, such as elevator shafts for barrier-free access and partitions between guest rooms. The International House of Japan was reinforced against earthquakes by adding a new, stronger structure for the auditorium, which was added underground. The walls and frames required for the building's function were used as effective earthquake-resistance elements. The building's earthquake resistance was improved without exposing the earthquake-resistance reinforcement elements to the outside or inside.

4. CONCLUSION

In order to continue using modern architectures, it is necessary to improve its functionality. In Japan, further seismic retrofit is necessary. In seismic retrofit through the seismic isolation structure, since no seismic elements (walls, braces, etc.) are needed other than the seismic isolation layer, it is possible to preserve the authenticity of the interior and exterior. However, in the case of the National Museum of Western Art, instead of simply seismic retrofit using seismic isolation structures, the authenticity of the exterior was maintained by creating new spaces and new viewing routes required for functionality underground and behind the original building.

As in the case of Hibiya Library, seismic retrofit through seismic resistant structure involved earthquake-resistant walls and steel braces inside and outside the building, which had a significant impact on the authenticity of the architecture and space of modern architecture. On the other hand, functional renewal is essential to continue using modern architecture. It is very important to utilize the walls and extensions that arise from functional renewal as effective seismic elements. As in the case of the International House of Japan, by combining functional renewal with seismic elements, it is possible to reduce the involvement of exposed structural materials. Unfortunately, in Japan, seismic retrofit through seismic resistant structure,

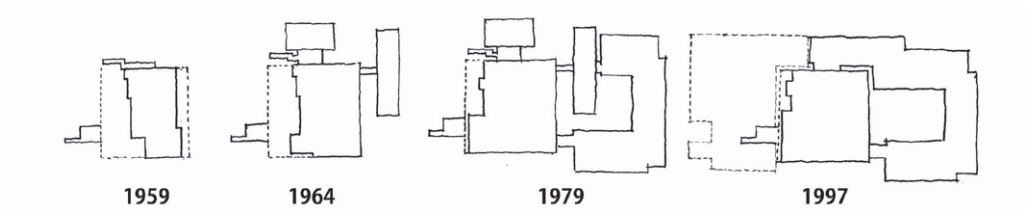


Figure 1. History of renovations at the National Museum of Western Art.



Figure 2. Comparison of Seismic resistant structure and Seismic isolation structure.

including for school buildings, is often only carried out with earthquake-resistance reinforcement design, and steel braces are exposed to the outside.

In order to inherit the authenticity of the architecture and space of modern architecture, architects must first simultaneously design seismic reinforcement and functional renewal, solving both problems. ■

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BIOGRAPHY

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BRIDGING CULTURAL SIGNIFICANCE AND RISK ASSESSMENT: COMPARED ANALYSIS FROM CONSERVATION MANAGEMENT PLANS IN PORTUGAL AND CUBA (1960-1966)

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ABSTRACT

How can we retain the cultural significance of a 20th-century architectural masterpiece while protecting it from the increasing risks due to climate change? Is climate change protection an ultimate challenge or an opportunity to retain the building's authenticity of 20th-century architecture? This paper discusses this question by comparing two iconic masterpieces of 20th-century architecture, awarded with a "Keeping It Modern" by the Getty Foundation for developing Conservation Management Plans (CMPs). This paper aims to address the relationship between cultural significance and risk assessment through the compared analysis of the CMPs for two emblematic 20th-century masterpieces: the Ocean Swimming Pool in Portugal (Álvaro Siza, 1960-1966) and the National Art Schools of Cuba (Ricardo Porro, Roberto Gottardi and Vittorio Garatti, 1961). The Ocean Swimming Pool is an exposed concrete building with an exceptional setting over the seaside rocks, whose authenticity is now strongly threatened by hazards such as coastal erosion and chloride explosion determined by the sea level rise. In turn, the National Art Schools of Cuba is a unique complex with organic brick shapes. Since the complex is next to the coastline, it has been threatened by the risk of flooding since its foundation, and such risk has been continuously increasing due to the climate change scenario. Both the CMPs are supported by a values-based approach, and comparative analyses will focus specifically on i) cultural significance assessment, ii) risk assessment, iii) policies and actions for climate change adaptation. Hence, the discussion of two case studies on distinct continents will allow us to further reflect globally on how to preserve cultural significance in the face of the growing threat of climate change.

1. INTRODUCTION

The concept of authenticity has seen major developments in the last century, following its germination in the 19th-century theories of restoration. The Venice Charter[1] consists of one of the most important documents of consensus until the present day. However, its doctrinal tradition favors the material authenticity of the buildings, ensembles and sites. The Nara Document on Authenticity[2] argues against this perspective, claiming for the preservation of intangible values[3] and expanding the concept of authenticity towards several attributes: (i) form and design, (ii) materials and substance, (iii) use and function, (iv) location and setting, (v) spirit and feeling, (vi) traditions, techniques and management systems.

The conservation of modern architecture poses new challenges to the concept of authenticity. While recent decades have seen a greater trend towards restoring the original design appearance, prioritizing "formal authenticity"[4], of which the intervention in Le Corbusier's Ville Savoye is an example, recent cases demonstrate an evolution, favoring the "progressive authenticity", according to Pamela Jerome[5] for the conservation of the Guggenheim Museum in New York.

Cultural significance, intended as the result of the attributes (what) and the values (why) is directly related to authenticity. Hence, the preservation of tangible and intangible attributes determines the authenticity of a site, being the basis of heritage listing and the definition of conservation strategies[6].

However, these concepts have not always evolved in a curated and rational manner. They are entangled in a dialectic between processes of selection, losses, and transformation of society. Climate change, as a contemporary growing threat, is determining how humanity is going to live in the next generations. The safeguarding of modern architecture should not be absent from this debate, especially in preparing adaptation measures and risk management.

There is a vast literature addressing the cultural significance of heritage sites, as well as climate change adaptation. However, very few studies interrelate cultural significance and risk assessment, briefly addressing the vulnerability of local people, the values threatened[7], and the importance of disaster preparation under cultural significance framework[8] to monitor and reduce their negative impacts.

In this context, this paper aims to foster the relationship between cultural significance and climate change adaptation through a compared analysis of the Conservation Management Plans (CMP) of two 20th-century masterpieces **(Fig. 1)**: the Ocean Swimming Pool in Portugal (Álvaro Siza, 1960-1966)[9] and the National Art Schools of Cuba (Ricardo Porro, Roberto Gottardi and Vittorio Garatti, 1961)[10].

2. METHODOLOGY

The case studies are framed within the "Keeping It Modern" (KIM) initiative, promoted by the Getty Foundation, dedicated to globally safeguarding and preserving modern architecture and focused on the

1. ICOMOS, *International Charter for the Conservation and Restoration of Monuments and Sites*, (Paris: ICOMOS, 1964).

2. ICOMOS, *The Nara Document on Authenticity*, (Nara: ICOMOS, 1994).

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9. *Managing change with a living architect: Conservation Management Plan for the Ocean Swimming Pool by Álvaro Siza (1960-2018)*, ed. Teresa Cunha Ferreira (Porto: University of Porto, 2023).

10. *The National Schools of Art of Cuba Conservation Management Plan*, ed. Davide Del Curto (Milan: POLIMI, 2020).



Figure 1. Above, Ocean Swimming Pool. Photo: Pixel, 2021. © CEAU-FAUP, 2023; Below, National Art Schools of Cuba. Photo: Andrea Garzulino, 2019. © POLIMI, 2020.

preparation of CMPs to improve research and develop best practices for a still-emerging field.

Conservation Management Plans are a multi-staged process anchored in the Burra Charter[11], allowing and promoting active preservation of buildings and places[12]. They provide a cyclical framework in which heritage conservation is carried out by evolving communities' values (values-based approach) into integrated management (holistic approach). The closer the relation of the various rights-holders in assessing significance and developing policies for achieving common agreements on maintaining it, the more efficiently conservation is attained[13].

The Burra Charter methodology for Conservation Planning is supported by the following steps i) understand the place; ii) assess cultural significance; iii) identify all factors and issues; iv) develop policy; v) prepare a management plan; vi) implement the management plan; vii) monitor the results, and review the plan[8]. This paper will focus on steps ii) and iii), namely on cultural significance and risk assessments, and on their possible relations.

3. COMPARATIVE ANALYSIS

3.1. CULTURAL SIGNIFICANCE

The Ocean Swimming Pool (OSP) was designed by the Portuguese architect Álvaro Siza between 1960 and 1966 (with later additions until 1973) for the coastal town of Leça da Palmeira, north of Porto, Portugal. In this early work, Siza adopted expressively modern technology and abstract neoplastic language, building a succession of walls in reinforced concrete over the seaside rocks. The building is listed as National Monument since 2011 and is included in the "Ensemble of Álvaro Siza's Architectural Works" serial property in the World Heritage Tentative List (2017).

The OSP is one of Álvaro Siza's most internationally recognized works, expressing a tectonic shift in his career, from regionalist inspiration towards more abstract design and innovative constructive solutions. The building has been in full use for almost sixty years, becoming a social and cultural landmark for local communities.

Methodology for cultural significance assessment of the OSP resulted from the cross-analysis of different methods and tools: i) document analysis, ii) archival research and literature review; iii) participatory strategies (surveys, interviews, workshops, webinars, social media analysis); iv) fieldwork. These activities engaged a wide spectrum of actors (visitors, staff, managers, users, experts, children, students, virtual community), retaining different values and attributes of the site and allowing the definition of categories of cultural significance (social, economic, political, historic, aesthetic, scientific, age and ecological) and a map of levels of significance (exceptional, high, moderate, some) **(Fig. 2, above)**.

Cuba's National Art Schools (NAS) were built just after Castro's revolution (1961-64) on a design by architects Ricardo Porro, Vittorio Garatti, and Roberto Gottardi in Havana's former golf course. NAS

11. ICOMOS Australia, *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance*, (Burnwood: ICOMOS Australia, 2013).

12. James Kerr, *Conservation Plan, the 7th edition: A guide for the preparation of conservation plans for places of European cultural significance*, (Burnwood: ICOMOS Australia, 2013).

13. Randall Mason, "Assessing values in Conservation Planning: Methodological Issues and Choices", In *Assessing the Values of Cultural Heritage: Research Report*, ed. Marta De La Torre (Los Angeles: GCI, 2002).

translated the will for social renewal into innovative architecture as a synthesis of art, construction, and landscape. The five buildings have hosted original models of education, integrating different forms of art to which each building is devoted: visual arts, drama, music, dance, and ballet. Although independent, these iconic buildings were all made using the same materials (bricks, concrete, ceramic tiles) and techniques (domes and vaults).

The NAS was included in the 100 Most Endangered Sites by the WMF (2000), in the World Heritage Tentative List (2003), and in the National Register of Monuments (2010). However, NAS is yet mainly studied from critical and social points of view, lacking studies aiming at sustainable preservation and management.

Methodology for cultural significance assessment of the NAS resulted from the cross-analysis of different methods and tools: better understanding of constructive history and conservation needs, and comparative discussion among different stakeholders (national/international designers, owner, users). The results (value map, **Fig. 2**, below) have allowed the team to overcome persistent misunderstandings in the historiographical approach to the NAS and to better assess the complex's significance on solid foundations[14].

3.2. RISK ASSESSMENT

The methodology that was followed for risk, vulnerability, and hazard identification for the OSP considers that risk is the potential negative impacts on the asset under assessment due to the occurrence of a threatening event (hazard), which can be of natural or anthropogenic classification. These negative impacts can be seen as the result of the dynamic interaction between the hazard and existing vulnerabilities (e.g. physical, social, economic, or environmental) which represent the susceptibility of the asset to the damaging effects of the hazard, combined with a lack of ability to cope with it.

Given the location of the OSP, the more relevant natural hazards were storm surges and chloride action. In addition, due to climate change, events such as sea level rise were considered.

A storm surge is an abnormal rise of seawater over the predicted astronomical tide level provoked by storms and low atmospheric pressure, already visible over time, **(Fig. 3, at left)**. Due to their morphology, low and sandy coasts are sensitive to this extreme hydrodynamic phenomenon, causing coastal erosion processes.

In the context of climate change and its effects, the world's oceans will warm, and ice melting will continue, leading to a likely sea level rise of 0.19 m and 0.23 m until 2050. Beyond 2050, it is estimated a likely rise between 0.44 m and 0.77 m. The specific sea level rise projections for the west coast of Portugal **(Fig. 3, at right)**, point to permanent tide submersion of 0.44 m in 2050 and of 1.15 m in 2100. The specific tide submersion scenarios for 2050 and 2100 indicate that OSP is likely to be submerged for 9 hours a year.

Given the location and history of the OSP, vandalism, incorrect or improper use, and neglect or lack of maintenance were the three types of anthropogenic hazards considered in the risk assessment.

14. M. Wesam Al Asali, Dania González Couret and Michael Ramage, "Beyond the National Art Schools: Thin-Tile Vaulting in Cuba after the Revolution", *JSAH*, 80, 2021: 321-345.

Regarding the NAS, after documentation and before conservation, the CMP focused on protection from the main risk affecting the complex, that is the flood risk due to river Quibù crossing it and frequently flooding its modernist buildings.

Given these premises, defining the hydraulic risk assessment and mitigation was a priority for the CMP far before any concerns about stability, preservation, or reuse. The risk assessment process involved a multidisciplinary team including conservation architects and hydraulic engineers from Politecnico di Milano and the National Institute "Recurso Idraulico". Given the striking dimension of the complex, the research was based on a GIS platform and a large and multi-scale database[15].

The research focused on Vittorio Garatti's Ballet School as it is the building of the complex at most risk. The result is a digital model predicting the risk of flooding affecting each building by means of different flood scenarios with return periods of 5, 10, 20, and 100 years **(Fig. 4)**.

The model also sets solutions to mitigate such risks, both in short and long-term perspective, taking into account three levels: vulnerability, exposed value and damage[16]. Whether temporary, lightweight, or permanent, affordable flood protection structures can be equally effective.

The project shows that conducting a relatively inexpensive hydraulic investigation can assist flood modeling and risk assessment for conservation projects involving historically significant sites. This information can guide the selection of adaptation and risk reduction measures across Cuba's coastal areas, addressing the impact of rising sea levels and extreme storms due to transient climate change.

3.3. BRIDGING CULTURAL SIGNIFICANCE AND RISK ASSESSMENT

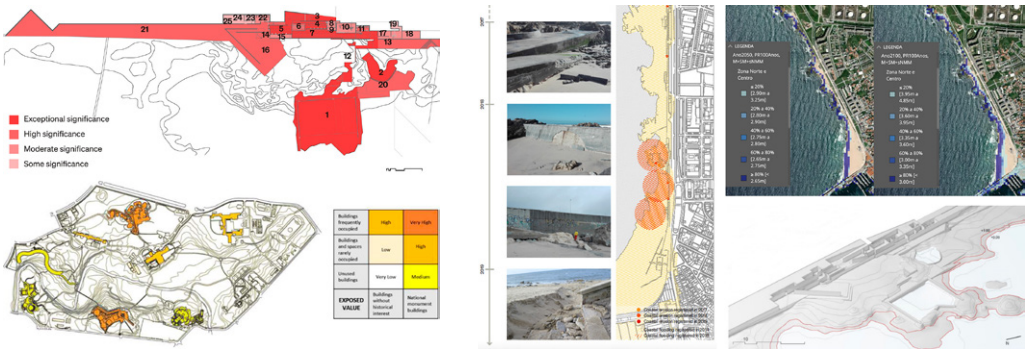
Both Cultural Significance and Risk Assessment cannot be inert operations in a management plan. Their cross-examination is an important step to prevent different "loss scenarios", with permanent deterioration of cultural heritage. This procedure helps to engage managers in visualizing vulnerability states and prompting risk preparedness measures.

In the case of the OSP, hazards were associated with cultural significance values identified in the early stages of the CMP preparation, according to **Table 1**. The table presents a summary of the previously described vulnerability scenarios along with a severity classification using three levels – LOW, MEDIUM and HIGH – considering both the severity of damage and the severity of impact on the cultural values.

A severity level classified as LOW means that damage is either negligible or small enough to be easily reparable, while the impacts to cultural values are also negligible. A severity level classified as MEDIUM means that damage is not negligible and repairing will also involve non-negligible costs. This damage will also have relevant impacts on cultural values, but recoverable after damage repair. A severity level classified as HIGH means that damage is significant and may not be fully repairable. In this case, unfortunately, impacts to cultural values may not be recoverable.

15. Andrea Garzulino, Maria Paula Borgarino and Davide Del Curto, "When GIS Joins the Conservation Management Plan of a 20th-Century Architectural Heritage", *Sustainability*, 13 (37), 2021: 3881.

16. Leonardo Stucchi, Daniele Fabrizio Bignami, Daniele Bocchiola, Davide del Curto, Andrea Garzulino and Renzo Rosso, "Assessment of Climate-Driven Flood Risk and Adaptation Supporting the Conservation Management Plan of a Heritage Site. The National Art Schools of Cuba", *Climate*, 9 (2), 2021: 23.



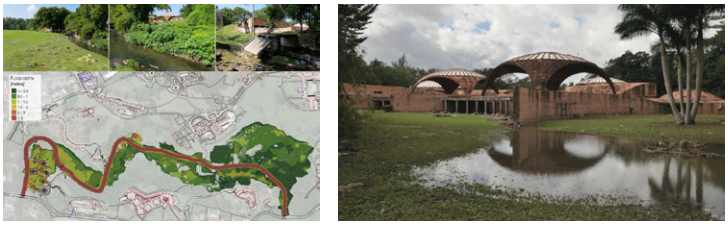


Figure 2. Above, OSP Levels of Significance Map[9], p. 91. © CEAU-FAUP, 2023; Below, NAS Exposed Value Map[10], p. 439. © POLIMI, 2020.

Figure 3. Risk Analysis of OSP: at left, flooding and coastal erosion occurrence9, p. 15[9]. © CEAU-FAUP, 2023; at right, coastal flood scenarios for 2100[9], p. 155. © CEAU-FAUP, 2023.

Figure 4. Hydrogeological risk analysis: above, river Quibù near the Ballet School; below, flood depth with a return scenario of 100 years[10], p. 439. © POLIMI, 2020.

Figure 5. The Ballet School after a storm on 29th January 2019. Photo Andrea Garzulino, 2019. © POLIMI, 2020.

Affected cultural values	Hazard	Vulnerability	Severity
All	Sea level rise	Permanent submersion	HIGH
Aesthetic	Increase of atmospheric carbon dioxide	Acceleration of concrete carbonatation and rebar corrosion	MEDIUM
Aesthetic	Chloride action	Acceleration of rebar corrosion	MEDIUM-HIGH
Economic Aesthetic	Storm surge	Building damage Infrastructural damage	HIGH
Economic Aesthetic	Vandalism	Graffiti Copper theft	MEDIUM-LOW
Economic	Misuse	Equipment damage	MEDIUM-LOW
Economic Aesthetic	Lack of maintenance	Acceleration of asset's degradation	MEDIUM-HIGH

Table 1. Summary of the vulnerability scenarios9, p. 16. © CEAU-FAUP, 2023.

Sea level rise is a high-risk hazard affecting all values because it implies the permanent submersion of the OSP. Climate change is, thus, a permanent issue of concern.

As the table also shows, different hazards may affect aesthetic, aesthetic and economic, or only economic values.

In the first case, the increase of atmospheric carbon dioxide from climate change will accelerate concrete carbonation, leading to the corrosion of steel rebars and causing cracking, spalling and weakening of reinforced concrete elements.

In the second case, the moving force of storm surge may result in building damage. Direct exposure to seawater will seriously compromise

the normal operating conditions of infrastructural networks due to direct contact with water, chlorides or water-suspended sediments clogging the hydraulic and filtering systems. In turn, graffiti harms the asset's image and may be difficult to remove from exposed concrete. Copper theft affects the normal operating conditions of the asset and might lead to serious consequences if not promptly addressed.

Finally, misuse of facilities might lead to equipment damage, unexpected repairs and additional costs, a consequence also of inappropriate maintenance, accelerating degradation.

The discussion between cultural significance and risk assessment of the NAS contributed to the overall reassessment of this modernist masterpiece, highlighting some design fragilities. **Table 2** reflects about potential damage today.

Targets (today)	**Exposed Value**	**Vulnerability**	**Damage (today)**
School of modern and folkloric dance	Very High	Medium	Substantial
School of plastic art	Very High	Medium	Substantial
Student house	High	Medium	Considerable
New school of music	High	Medium	Considerable
Rectorate	High	Medium	Considerable
School of ballet	Medium	High	Considerable
School of music	Medium	High	Considerable
School of dramatic arts	Medium	Medium	Considerable
Warehouses and archives	Low	Medium	Minor
Technical networks, road and infrastructures	Low	Low	Minor

Table 2. Damage ranking (today)10, p. 442. © POLIMI, 2020.

Analysis has highlighted that fragilities in the face of climate change derives from choices made during the twentieth century, at different scales: 1) the modern embankments built to urbanize the mouth of the Quibù river near the coastline, prevents the water from flowing freely into the ocean when the tide rises; 2) in the 1930s, the designers of the golf course modified the natural course of the river within the complex, diverting in three points to create scenic meanders; 3) Vittorio Garatti was fascinated by that landscape and wanted to romantically "hide" his masterpiece in that depressed meander so that the building is only visible from above, entangling the promenade under large brick domes, imitating the shape of the Algarrobo trees. As a result, the Ballet School is surrounded by the river like a peninsula and has been exposed to the risk of flooding since the time of its construction.

The high exposure of the NAS to the risk of flooding is due both to the growing threat of climate change (increasing hazard) and to the high vulnerability of the buildings (especially the Vittorio Garatti Ballet

School) which was determined by past design choices. The challenge for conservation will therefore be to increase the level of protection, without damaging the architectural and landscape qualities that make this iconic complex unique **(Fig. 5)**.

4. CONCLUSIONS

This paper intended to demonstrate that, according to the Burra Charter Conservation Planning methodology, there must be an assessment of the vulnerabilities affecting the cultural significance, to prioritize policies and retain values within a careful management of change.

However, the lack of literature about specific frameworks for risk assessment of the 20th-century heritage relating to cultural significance remains a gap in the field.

The cases presented distinct geographic, geomorphologic, typological and technological features, which have determined different hazards and impacts on built heritage. Future works may compare common frameworks and relate different typologies, construction technologies and geomorphological contexts. ■

BIOGRAPHIES

Teresa Cunha Ferreira holds a degree at the Faculty of Architecture of the University of Porto (FAUP) and a European PhD at the Polytechnic of Milan (2009). She developed her professional experience in heritage public offices among other design, management and consultancy works in interaction with teaching positions at the University of Minho (2009-2017) and FAUP (since 2012). In 2009, she joined the Centre for Studies in Architecture and Urbanism (CEAU) of FAUP (Principal investigator since 2021), where she coordinates a UNESCO Chair and funded research projects such as '*Keeping It Modern*: Ocean Swimming Pool', funded by the Getty Foundation.

Davide Del Curto is an architect and Full Professor of architectural preservation at Politecnico di Milano, Dept. of Architecture and Urban Studies, where he coordinates the Analysis and Built Heritage Diagnostics Laboratory. His research focuses on preventive conservation and 20th-century architecture. He was responsible for national and international research projects conserving and managing historic buildings. Within the Keeping It Modern initiative, he contributed to the CMP for Giancarlo De Carlo's "Collegi" of Urbino University (2015-18) and coordinated the CMP for the National Art Schools of Cuba (2018-20).

Pedro Freitas has a professional degree in Architect and Urbanism from the University of São Paulo (2000-2006) and a Master (2010-2012) and PhD (2014-2018) from the University of Campinas. From 2018 to 2024, he was an Assistant Professor in the Department of Architecture and Urbanism of the Federal University of Sergipe (UFS). Since 2022, he has collaborated with the Center for Studies in Architecture and Urbanism (CEAU) of FAUP (Assistant Investigator since 2024), developing research on education of contextual methods for architectural intervention and participating in different projects related with the preservation and safeguarding of modern architecture.

Andrea Garzulino has a PhD in Architecture, Urban Planning, Conservation of living places and landscape (2015) and is a Research Fellow at the Polytechnic of Milan (since 2014). He has held research grants and collaborates with the TeCMArcH laboratories (since 2009) and LADC (since 2019) of the Department of Architecture and Urban Studies of the Polytechnic of Milan. He has participated in international (Keeping it Modern, Getty Foundation 2019; EuropeAid Eritrea 2017) and national (Castelseprio 2016; Milano Archeologica 2015) research groups, and is the scientific director on the analysis, documentation and management of archaeological areas (Tarquinia Project 2014-2019; Myanmar 2014).

Rui Fernandes Póvoas is a Full Professor at the Faculty of Architecture of the University of Porto (FAUP), where he teaches since 1986. He has habilitation in Architecture from the University of Porto (2014), Ph.D. in Civil Engineering (1991), Master in Structural Engineering (1985), and Bachelor in Civil Engineering from the Faculty of Engineering of the University of Porto (1977). He participates in many professional and scientific societies in the areas of Conservation, Rehabilitation and History of Construction, focusing research on the study of Porto's structural systems of housing from the 17th to 19th century among other subjects.

A COMPREHENSIVE FRAMEWORK TO INCREASE MODELLING CREDIBILITY IN MODERN BUILDINGS ENERGY SIMULATIONS. THE CASE STUDY OF CHAUDERON COMPLEX FAÇADES BY JEAN PROUVÉ IN LAUSANNE (1969-1974)

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ABSTRACT

The urgent need to retrofit the existing building stock is a well-known theme, abundantly dealt with in the scientific literature. Thermal simulations have a key role, assessing the effective energy performance of buildings. At the same time, researchers frequently outlined significant discrepancies between real and simulated outputs, questioning the credibility of the obtained results.

In this context, the present contribution introduces a comprehensive framework for the building energy simulations, ensuring the necessary model reliability. The overall approach is structured into six phases: building audit; initial model definition; initial model validation; sensitivity analysis; model calibration; and calibrated model validation. The validated model is the design premise to propose well-balanced retrofitting scenarios, improving the energy performances, enhancing the internal comfort, and preserving the architectural values.

As operative case-study, Chauderon suspended building in Lausanne (1969–1974), by the Atelier AAA and Jean Prouvé, has been selected. Today, the complex is well-preserved in its original materiality and represents an iconic example of the modern aesthetics, with an expressed need for retrofitting. A focus on the architectural, engineering and technical features that made of Chauderon a unicum in the Swiss panorama allowed to identify the intrinsic value of this object, assessing the pertinence of its preservation.

The final aim of this study is to minimize the risk of inappropriate interventions. The presented workflow is thus intended as a practical guideline, promoting reduced energy demand; higher thermal comfort; heritage preservation; architectural authenticity. A new way for reconciling the aspects of energy saving and architectural preservation is outlined, reconducting these two aprioristically opposed issues as two complementary parts of the same rehabilitation agenda. For high-quality post-World War II building stock, the use of a calibrated and validated model is finally justified and recommended over the simplified modelling approaches still commonly employed today.

1. INTRODUCTION

Today, the extensive energy efficiency of the existing building stock is worldwide recognized as one of the most urgent need to face climate change[1]. Following the current regulations, the retrofitting design primarily targets modern buildings, adopting tools based on thermal modelling and simulations. Generally, the overall aim of the process is to assess the heat flows through the façades, the global energy balance and to reveal the critical elements of the envelopes to be improved or replaced.

As a result of this renovation approach, the integrity of modern buildings is at risk, at a time when their recognition as heritage objects is the topic of an exciting debate around the world[2]. It becomes crucial to recognize their cultural and historical values, avoiding disruptive energy conservation measures and integrating energy efficiency with heritage preservation aims[3]. It is a challenging goal since in modern architecture fully glazed façades or wide curtain walls are at the same time the most iconic components and generally considered - rightly or wrongly - the main sources of heat losses, with thermal transmittance values which are often up to three times higher than those recommended by the current standards.

In addition, researchers are increasingly concerned about modelling credibility and recognize significant discrepancies between simulated and measured energy use in buildings, reaching up to three times the predicted consumptions[4]. Among the main causes there are a widespread preference for simplified models based on static simulation tools and the presence of inputs uncertainties. Effectively, this fact can lead to consistent performance gaps, which are extremely dangerous in the preservation field, where material authenticity and minimal intervention are two leading concepts, as recognized by the international scientific community.

Although the accurate assessment of the energy performances is highly recommended, the performance gap remains today a significant issue and methods for achieving a high accuracy in thermal modelling have not been systematically explored yet.

To fill this gap, new and appropriate workflows are needed. This contribution aims to present a comprehensive modelling framework to control performance gaps in thermal simulations, mainly addressing modern architecture. The method includes dynamic simulations, modelling calibration and validation. The calibration is based on monitored data and sensitivity analysis. The validation follows international standards, to ensure the necessary model credibility. The proposed approach helps in calculating reliable energy performances, minimizing the gaps, and allowing to predict more realistic retrofitting scenarios. A final validated model is in fact the design premise to propose a well-balanced retrofitting solution, improving the current energy performances and reducing the operational costs, while enabling the preservation of the historical values of modern architecture.

1. Among several existing reports, see for example: "Clean Energy Transitions Programme. Annual report 2023", *International Energy Agency (IEA)* publications (2024).

2. Ana Tostões (ed.), *Modern Heritage. Reuse. Renovation. Restoration*, (Basel: Birkhäuser, 2022).

3. An encouraging example in this direction is offered by the restoration and energy efficiency project for the *Cité du Lignon* in Geneva. Franz Graf, Giulia Marino, *La cité du Lignon, 1963 – 1971. Etude architecturale et stratégies d'intervention*, (Lausanne: Infolio, 2012).

4. Pieter De Wilde, "The gap between predicted and measured energy performance of buildings: a framework for investigation", *Automation in Construction*, no. 41 (2014): 40–49.

2. A SUSPENDED BUILDING WITH LIGHT FACADES

As operative case-study, Chauderon administrative complex in Lausanne (1969–1974), designed by the Atelier des Architectes Associés AAA in collaboration with Jean Prouvé, has been selected, **(Fig.1)**. Today, the complex is well-preserved in its original materiality and represents an iconic example of the modern aesthetics. In terms of legal protection, the building is recognized and listed for its cultural interest, but still not protected[5], raising the issue of its authenticity preservation..

Meticulous archival research[6] allowed to identify two main features that make of this complex - which in the architects' intentions was supposed to represent the «idea of the architecture of tomorrow»[7] - a unicum in the Swiss architectural panorama.

First of all, its structural scheme is based on the rare suspended principle[8], representing the sole case of a totally hanging construction in Switzerland[9]. It means that an entire office volume, consisting of five stories, is suspended by means of steel cables to a huge roofing structure. This last bearing part, which is about two meters high, is composed by two main longitudinal steel beams and a series of transversal secondary trusses, from which the cables are hung. The main beams rest on four concrete cores, allowing the charges to finally reach the foundations[10]. The thin steel bars are hidden behind the façade system, being invisible and repaired from weather events. As it appears, thanks to this principle, the charges are firstly carried upwards, meaning that the usual gravitational load-path is completely subverted. A traditional structure was immediately discarded by the architects, because «incompatible with the program»[11]. Effectively, suspended buildings allow to obtain a pillar-free ground floor for pedestrians, flexible underground levels for car parking, and continuous open plans for the offices, as strongly desired by the designers and the client.

On the other side, the façade, which is still in its original materiality, has been conceived in close collaboration with Jean Prouvé. The modular envelope consists of a series of light prefabricated panels, capable to support maximal deformations at the building's corners up to +5 cm[12]. In terms of materials, the panels are formed by an internal metal sheet, an intermediate insulation layer in polyurethane foam and an exterior aluminium sheet. Most panels are finally completed by a transparent portion consisting of a double insulating and bronze reflecting glass with a neoprene joint[13] **(Fig. 2)**.

It results that both this features, which strongly characterize the architectural and technological values of Chauderon complex as well as its material authenticity value, need to be preserved in the event of future retrofitting design.

3. A COMPREHENSIVE MODELLING FRAMEWORK

To ensure the necessary model credibility a comprehensive framework for the building energy simulation is thus proposed. It is structured into six phases consisting of: (1) building audit; (2) initial model definition; (3) initial model validation; (4) sensitivity analysis; (5) model calibration; (6) calibrated model

5. *Commission spéciale pour assurer une évaluation scientifique et indépendante du Patrimoine architectural du XXe siècle, 1920-1975*, Canton de Vaud, final report, 30.08.2019.

6. The AAA fund is kept at the Archives de la Construction Modern ACM, EPF Lausanne.

7. "Immeubles administratifs et commerciaux place Chauderon, Lausanne : Architectes : Atelier des architectes associés AAA", *Das Werk : Architektur und Kunst*, no. 62, (1975): 813.

8. For further details about suspended structures see: Giuseppe Galbiati, "Preserving suspended structures with light façades (1960-1980). Architectural study and retrofitting proposals", PhD diss., (EPFLausanne-UCLouvain, 2023).

9. It is the sole building originally conceived as an entire suspended volume coupled with a lower, traditionally built, basement. Other buildings with partially suspended structural schemes can be found in the country. In Europe other hanging buildings are described in: Giuseppe Galbiati, Franz Graf, Giulia Marino, "L'innovazione leggera di Alberto Galardi e Silvano Zorzi: il Palazzo Olivetti di Firenze", *History of Engineering - Proceedings of the 5th International Conference*. (Naples: Cuzzolin, 2022), 1103-1116; Giuseppe Galbiati, Franz Graf, Giulia Marino, "An "audacious technical object": the Saint Vincent city hall suspended building (1959-1965)", 8th International Congress on Construction History, (Zurich, 2024, under press).

10. For a detailed description of the bearing structure see: B. Janin, T. Girard, "Immeubles administratifs et commerciaux place Chauderon, Lausanne", *Bulletin technique de la Suisse Romande*, no. 3, (1975): 32-35

11. P. Dumartheray, "Immeubles administratifs et commerciaux, place Chauderon, Lausanne - Rapport Final", *ACM, Fonds AAA/*

validation[14]. Steps 4, 5, 6 are iterative, until the final model validation is achieved. This framework is conceived as a general tool to be applied in a case-by-case approach, being able to cover the different buildings' features, **(Fig. 3)**.

CHAUDERON COMPLEX ENERGY MODELLING

The building audit is the first step, aiming to provide a precise building description. In the presented case-study, it helped in overcoming preconceived ideas about the performance of lightweight façades, which are generally considered to be very inefficient. The audit involved several site visits, historical and archival research, as well as interviews with technicians, engineers, and facility management personnel, allowing to define the main building features and the thermal model inputs. Among the different components, particular attention was paid to define Prouvé's façade thermal properties. The thermal transmittance of the envelope, including the prefabricated panels, windows, roof components, and first-floor slab, as well as the linear thermal bridges have been calculated by means of wufi2D and Flixo. The thermophysical properties were derived both from archival documentation and on-site surveys. Also, technical data about the air flows rate and the building occupancy were considered in this phase.

The gathered information constituted the inputs to create the initial model in WUFIplus. Dynamic simulations allowed to define the energy demand for space heating, resulting in 125 KWh/m^{2}y. For a comparative purpose also, quasi-static simulations were performed, leading to an energy demand of 187 KWh/m^{2}y[15]. These results were finally compared with the average of the effective consumptions coming from the owner's bills, equal to 154 KWh/m^{2}y. Consistent performance gaps were found in both cases; the dynamic model was selected to be further implemented.

Due to the consistent deviation from the real energy consumption, the initial model did not represent in a reliable manner Chauderon's energy behavior. In fact, following the ASHRAE 14 guidelines[16], the initial model did not respect the expressed criteria, meaning that the model was not validated.

To validate the model, a calibration phase was necessary, performed by means of sensitivity analysis. The sensitivity analysis generally allows to evaluate the influence of the input parameters on the model predictions. In the present case-study, five uncertain parameters were selected and screened to be improved[17]. They were indoor air temperature schedule for heating; indoor air temperature schedule for cooling; occupant schedules and behavior; fresh air supply; unheated attic temperature. As a result, the sensitivity analysis allowed to assess the major importance of the indoor air temperature schedule for heating, which need to be carefully defined. Following, also air temperature for cooling and fresh air supply play an important role, as well as their conjugate effects.

The subsequent calibration phase allowed to create a first calibrated model, only based on the improved indoor air temperature schedules for heating (annual energy demand for space heating of 145 kWh/m^{2}y) and a second calibrated model based on the improvement of the other screened

AD Décoppet, 1964-1977, série 0029.02, (1976) : 34.

12. R. Willomet, "Immeubles administratifs et commerciaux place Chauderon, Lausanne", *Bulletin technique de la Suisse Romande*, no. 3, (1975): 35-36.

13. For the detailed façade description see: Willomet, "Immeubles administratifs et commerciaux place Chauderon, Lausanne".

14. Wider description about the workflow has been published in: Giuseppe Galbiati, Franz Graf, Giulia Marino, Jean-Marie Fürbringer, "A modelling framework for modern heritage buildings energy simulation", *Journal of Building Engineering*, no. 80 (2023).

15. Static or quasi-static tools are not recommended for historical building thermal modelling, since they often overestimate the effective energy consumptions. The present case-study is in the same trend. See also: R.S. Adhikari, E. Lucchi, V. Pracchi, E. Rosina, "Static and dynamic evaluation methods for energy efficiency in historical buildings", *Proceedings of PLEA2013 - 29th Conference, Sustainable Architecture for a Renewable Future*, Munich (2013).

16. ASHRAE Guideline 14, *Measurement of Energy and Demand Savings, American Society of Heating,* (Atlanta: Refrigerating and Air-Conditioning Engineers, Inc, 2002). The criteria adopted by ASHRAE for assessing the model validity are the MBE (normalized mean bias error), and the CV (RMSE) (coefficient of variation of the root mean square error).

17. Between the different SA approaches, design of experience by means of factorial matrices was used. For details see: Jean-Marie Fürbringer, Claude-Alain Roulet, "Confidence of simulation results: put a sensitivity analysis module in your MODEL: the IEA-ECBCS Annex 23 experience of model

parameters (annual energy demand for space heating of 149 kWh/m²y). The precise set point temperatures, usage times, and the operation tables of the heating system were defined starting from onsite measurements in the different seasons. Thanks to this data the model inputs were completely based on the real profiles, without considering any recommended value expressed by the norms. To be representative as much as possible, tests were performed at three different levels of the building and in offices with opposed expositions, looking toward north and south.

The two calibrated models were finally analyzed in the last step of the framework. Among them, only the second calibrated model was fully validated according to ASHRAE 14.

4. A VALIDATED MODEL FOR FUTURE RETROFITTING SCENARIOS

As a result of the process, the second calibrated and validated model realistically represent Chauderon's thermal behavior. The performance gap between the simulated and the real values is finally reduced to -4%, meaning that this model is suitable to be used as a reliable basis for proposing future retrofitting scenarios. The energy simulations are completely based on dynamic calculations, capable to represent the building as a complex system of several and interdependent interactions.

In a retrofitting perspective, a precisely calibrated and validated model reduces the risk of inappropriate interventions, permitting to preserve the most valuable features of modern realizations. In a panorama still characterized by the difficulty in the legal recognition of the qualities of modern architecture, the proposed workflow offers encouraging results, promoting reduced energy demand; higher indoor thermal comfort; architectural authenticity. In addition, the described tool can be also integrated as a further step into already existing retrofitting methodologies[18].

In the case of Chauderon complex, where invasive solutions for energy savings have been already proposed[19], the workflow application is crucial in supporting future conservative scenarios, aiming to the preservation of the original structure and the façade in their historical materiality, in other words, in its material authenticity. The pertinence of this choice is confirmed by the archival research, demonstrating the uniqueness of the building. At the same time, decisive improvements in reducing the energy needs can be reached[20].

A new way for reconciling the aspects of energy saving and architectural preservation is thus outlined, reconducting these two aprioristically opposed issues as two complementary parts of the same rehabilitation agenda. For high-quality or recognized post-World War II building stock, the use of a calibrated and validated model is finally justified and recommended over the static or simplified modelling approaches still commonly employed today. ■

evaluation", *Energy and Buildings*, no. 30, (1999).

18. Giuseppe Galbiati, Fortunato Medici, Franz Graf, Giulia Marino, "Methodology for energy retrofitting of Modern Architecture. The case study of the Olivetti office building in the UNESCO site of Ivrea", *Journal of Building Engineering*, no. 44, (2021).

19. See the report: az ingénieurs sa, *Programme d'audits des grands consommateurs - Caisse de pension du personnel communal CPCL, Place Chauderon 7, 9, 11 - 1003 Lausanne,* 07 April, 2021.

20. 20. Alternative scenarios for the building retrofitting can be found in: Galbiati, "Preserving suspended structures with light façades (1960-1980). Architectural study and retrofitting proposals".

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Figure 1. Atelier des architectes associés in collaboration with Jean Prouvé, Chauderon Administrative complex, Lausanne, Switzerland, 1969-1974. Aerial view towards the suspended volume. © Archives de la Construction Moderne, EPFLausanne, about 1975.



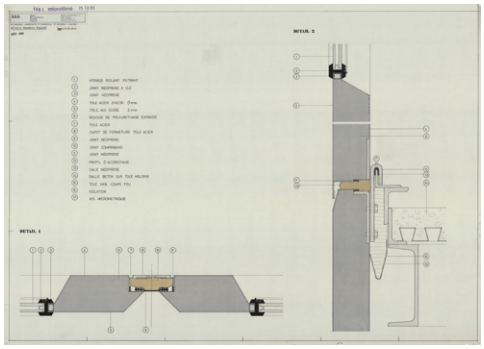
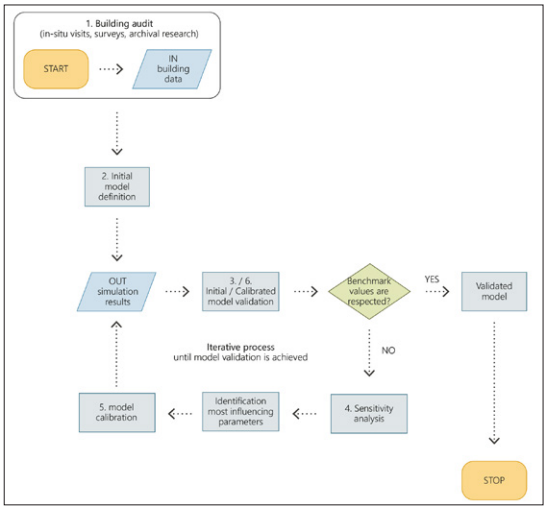


Figure 2. Atelier des architectes associés in collaboration with Jean Prouvé, Chauderon Administrative complex, Lausanne, Switzerland, 1969-1974. Details of the facade's panels © Archives de la Construction Moderne, EPFLausanne, 1970.

Figure 3. The building thermal modelling framework. © As defined by Galbiati, Graf, and Marino.



BIOGRAPHY

Giuseppe Galbiati is an engineer and architect. He studied at the Politecnico di Milano, where he graduated in Architectural Engineering and later at the École polytechnique fédérale de Lausanne and the UCLouvain, where he earned - in cotutelle - his PhD. Galbiati is currently postdoctoral researcher and teaching assistant at the Accademia di Architettura di Mendrisio, USI and UCLouvain. His interests deal with the fields of construction history, architectural preservation, and energy efficiency of existing buildings, developing and testing interdisciplinary methodologies for the thermal retrofitting of the second post-war building stock.

Franz Graf, graduate in architecture at the École Polytechnique Fédérale de Lausanne; Full Professor of Technology at the Accademia di Architettura di Mendrisio in 2005; Associate Professor of Architectural Theory and Design at the École Polytechnique Fédérale de Lausanne in 2007, as head of the Laboratory of Techniques and Preservation of Modern Architecture. His research focuses on modern and contemporary systems of construction and techniques of preservation of 20th-century heritage. Since 2010 he has been President of Docomomo Switzerland and member of the ISC on Technology, and since 2012 member or the "Comité des experts pour la restauration de l'oeuvre" of the Le Corbusier Fondation.

Giulia Marino graduated in architecture from the University of Florence and PhD in science from the École Polytechnique Fédérale de Lausanne. She is professor at UCLouvain, LAB Institute Brussels, and EPFL Lausanne. Her scientific interests are centred on the strategies for the conservation of the modern and contemporary heritage, and on the history of construction techniques and twentieth-century building services. She is Vice President of Docomomo Switzerland since 2015 and ICOMOS Member.

THE SUSTAINABLE SHINE DOME: TOWARD A SUSTAINABILITY PLAN FOR THE NATIONAL HERITAGE LISTED AUSTRALIAN ACADEMY OF SCIENCE BUILDING

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ABSTRACT

This paper presents an account of a two-year investigation 2019-2021 into the challenges and opportunities for introducing cultural, economic, and environmental sustainability measures into the protection and promotion of the National Heritage listed Australian Academy of Science building, Canberra. The study sought to develop elements of a sustainability plan for renewal and replacement of building fabric and environmental systems to ensure progressive energy and emissions reductions as a pathway to a net-zero carbon future. Alongside stratagems quantifiable, the study also sought to mimic the ambitions of the Academy for the building to continue to express 'the national urge to innovate'. To that end the project pursued world leading strategies and innovative approaches from a range of individuals and disciplines including material scientists, futurists, building engineers, heritage consultants, architects, and scientists. The Shine Dome, as the building is currently known, was designed by Roy Grounds in 1954 and the building and interiors completed in 1959. Listed interiors include formed plywood seating reflecting the circular auditorium chamber. In 2019 the Shine Dome was 60 years old and while maintaining basic operating conditions, Academy resources were being challenged to implement strategic capital investment. Expansion of the existing Heritage Management Plan to include a sustainability plan was also deemed critical to guide management of the Shine Dome and to foreground a response to the climate crisis. The project team, consisting of University of Canberra, Australian Academy of Science, GHD, and GML Heritage was awarded an Australian National Heritage grant to undertake the study. This paper contributes to the conference theme of sustainable development and is aligned with the session Authenticity in the face of climate change, telling the story of a modern movement listed building seeking to respond to climate change. The paper also touches on the duality of conceptual and material authenticity.

1. INTRODUCTION

1.1 THE OPPORTUNITY

In the monograph celebrating the 50th-anniversary of the building conceived to house the Australian Academy of Science, Alan Roberts provides a useful setting to the project considered in this paper:

A group of leading Australian scientists commenced discussions in 1952 that led to the foundation by Royal charter of the Australian Academy of Science two years later. Five years on, they opened their headquarters in Canberra, now known as the Shine Dome. Both the formation of the Academy and the building of the Dome were remarkable acts of faith, made against the odds, that would prove themselves totally justified.[1]

This dual ambition at the origin of the Academy - promoting Australian scientific research and giving it expression in a purpose-built headquarters – found translation in the building's concept and realisation. Designed by Roy Grounds in 1954, the building was completed in 1959. **(Fig. 1)**. A national icon ever since, the building has received numerous awards, is on the Register of Significant Twentieth-Century Architecture compiled by the Royal Australian Institute of Architects and was added to the Australian National Heritage List (NHL) in 2005.[2]

Its significance as described in the NHL citation can be summarised as follows: - It is the headquarters of the Australian Academy of Science established to promote Australian scientific research within Australia and globally; - The dome, designed by one of Australia's most noted 20th-century architects, Roy Grounds, is the largest concrete dome in Australia and a rare 20th-century example of a dome; - It is an exceptional example of structuralism with a purity of form and geometry that is rare and is expressed in its layout, interiors and furnishings; - It is directly related to the life and work of scientists instrumental in the establishment of the Academy.

In 2019 the Shine Dome was 60 years old and while maintaining basic operating conditions, Academy resources were being challenged to implement strategic capital investment. In the same year the Academy was host of the Australian node of Future Earth,[3] a global sustainability initiative. It was thus also important to the Academy to foreground a response to the climate crisis using their headquarters as a showcase of scientific innovation.

To this end, a research team was formed to expand the existing Heritage Management Plan to include a sustainability plan. Led by University of Canberra, it included Australian Academy of Science, GHD as lead technical consultant, and GML Heritage as lead heritage consultant. The team was successful in its application for an Australian National Heritage 2019-20 grant to fund the study.

The Sustainable Shine Dome project, as the study was called at the time, aimed to provide pathways for the Academy to conserve, protect and sustainably manage the Shine Dome. Project outcomes were to contribute to meeting Australia's Environment Protection and Biodiversity Conservation Act national heritage management principles.[4] Project completion would contribute to meeting grant program objectives of

1. Alan Roberts, *A Big, Bold, Simple Concept. A History of the Australian Academy of Science Dome* (Canberra: Australian Academy of Science, 2010), ix.

2. "The full Commonwealth of Australia Gazette listing" was published on 21 September 2005, accessed 22 April 2024, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.dcceew.gov.au/sites/default/files/env/pages/aa411d49-cf4d-4c8f-972e-d5bcbbfe03c1/files/105741.pdf.

3. "Transitioning to a Sustainable Future," Future Earth Australia, accessed 22 April 2024, https://futureearth.org/

4. "Environment Protection and Biodiversity Conservation Act (1999), Australian Government, accessed 22 April 2024, https://www.dcceew.gov.au/environment/epbc

'improved recognition, conservation and preservation' of place values and 'enriched appreciation of the values'[5] through expanded community engagement and communication of project activities through a social media strategy and a dedicated section of the Academy website.

Alongside technical and material investigations, the research team sought to explore diverse interpretations of the concept of heritage conservation broadly. To that extent, consideration of the study process and findings can contribute to debates such as that promulgated in the DOCOMOMO International 1997 publication "The Modern Movement and the World Heritage List" (WHL) seeking to add nuance to WHL criteria and the test of authenticity.[6]

1.2 THE APPROACH

The study was delivered in overlapping phases. In Phase 1 Analysis, the team researched best current approaches for the conservation and management of heritage values, reviewed the condition of the fabric, examined intangible heritage including the 'scientific urge to innovate' and assessed the sensitivity or tolerance for change. In Phase 2 Options, the team worked to link heritage values to sustainable development principles and assessed heritage value impacts and potential mitigation strategies. Phase 3 Planning included descriptions of progressive staged systems upgrades and order of implementation cost estimates for identified elements.

Public communication and promotion activities ran across all phases from project initiation. Three public symposia were key events in the strategy.

2. PROCESS OF SUSTAINABILITY PLANNING

Though in reality all activities and phases were intertwined, for ease of telling the story of the study the following is divided into summary descriptions of technical and heritage investigations and promotion activities.

2.1 TECHNICAL

The overall goal of the study from a technical perspective was to review the environmental performance of the Shine Dome and consider how this heritage building could shift towards a more sustainable, net-zero carbon emissions future.

To achieve this aim in Phase I Analysis the team began by investigating existing environmental systems. This included site inspections, and review of electrical, HVAC, lighting, and building envelope elements. The team also developed target improvements to be modelled in subsequent phases.

In Phase 2 Options the project team established a base case model of existing energy performance by reviewing metering data and as built documentation. The team tested 8 different energy improvement initiatives against the base case model to understand the relative saving in kWh/year, $/year and kg/CO2e-. Wider precinct scale sustainable design initiatives such as electricity generation were also considered.

The technical objective for Phase 3 Planning included a staggered implementation plan for identified works. A multi criteria analysis was used to prioritize design and system initiatives established in earlier phases.

5. "Australian Heritage Grant," Australian Government, Department of Climate Change, Energy, the Environment and Water, accessed 15 March 2024, https://www.dcceew.gov.au/parks-heritage/heritage/grants-and-funding/australian-heritage-grants

6. DOCOMOMO International, "The Modern Movement and the World Heritage List. Advisory Report to ICOMOS composted by DOCOMOMO's International Specialist Committee on Registers" (Zeist: ISC/Registers, 1997), see in particular discussions on pages 8-10 and in Appendix III. The authors thank session organisers for reference to this document.

2.2 HERITAGE

The investigation into heritage matters was led by GML Heritage. Detailed studies and findings were documented in a series of internal reports.[7] From a heritage conservation perspective, the study can be characterised as fulfilling dual purposes: to achieve ongoing conservation of the Shine Dome's National Heritage values; to ensure progressive energy efficiencies as a pathway to a net-zero energy future for the place.

As a third, collateral purpose, the team early postulated that the research undertaken could contribute to the production of a reference document for innovations in environmental and cultural heritage sustainability in both listing policies and conservation practices.

As a complement to the technical review, the project team determined that the building had several elements that could be addressed to improve thermal performance as well as protect and promote cultural values including the intangible heritage of the Dome as a site of innovation. To give a sense of the aspects considered, elements identified included: - single glazing in aluminium frames may be upgraded but not replaced; - gaps between the curtain wall and the dome may be infilled but must remain flexible to maintain structural separation between the two; - the vermiculite lining of the auditorium should not be removed or replaced, and should remain exposed as the ceiling of the auditorium; - heritage lights in theatre and other significant rooms must be retained though may be upgraded for LEDs and ease of access. **(Fig 2)**.

2.3 PUBLIC ENGAGEMENT

As part of the public engagement strategy, three public symposia were held bringing together a wide range of disciplines and specialists to broaden the thinking and its dissemination.

The first was held on 4 December 2020. "Envisioning Sustainable Futures for Heritage" served to begin conversations on sustainable heritage futures and project parameters and ambitions. Speakers included Tai Hollingsbee on steps toward zero, Hans Bachor, on the Dome as an iconic home for science. Case studies were presented by Catherine Forbes, Rachel Jackson, and Emma Gwynn and Susan Macdonald led a round table on session ideas.[8]

On 26 March 2021 the symposium "Planning Sustainable Futures for Heritage" was held, with speakers asked to consider approaches to theorising, measuring and approaching environmental, social, and cultural sustainability and conjecture on how we might plan for and promote sustainable heritage values. Deo Prasad spoke on developing credible science-based benchmarks for a net-zero carbon future, Philip Oldfield discussed a research project to measure operational and embodied carbon 1990-2050, and Caroline Pidcock advocated for a feminine approach to systems analysis as a contribution to a regenerative future.[9]

"Possible Futures", the final symposium held on 14 July 2021, focused on challenges in the Australian response to climate change, lessons for a carbon active future, and specific findings for the Shine Dome. Speakers included Peter Doherty who spoke to urgencies in Australia's response to

7. Key internal unpublished study reports include: GHD, "The Sustainable Shine Dome. Phase I: Toward high performance, low energy, and net zero emissions, Phase II: Modelling, Phase III: Implementation Plan". GML Heritage, "Academy of Science: Shine Dome Sustainability Planning, Part 1: Heritage Issues, Opportunities and Recommendations, Part 2: Heritage Assessment of Proposed Sustainability Improvements."

8. The Sustainable Shine Dome: Envisioning Sustainable Futures for Heritage, unpublished program, 4 December 2020.

9. The Sustainable Shine Dome: Planning Sustainable Futures for Heritage, unpublished symposium program, 26 March 2021.

climate change. Ross Harding considered the potential for future carbon active buildings and cities. Catherine Forbes and May Ngui reported on discoveries, recommendations, and next steps arising from the study.[10]

3. FINDINGS, RECOMMENDATIONS, PATHWAYS

3.1 FINDINGS, RECOMMENDATIONS

While the initial outcome for this study was to develop a pathway for a net-zero carbon future for the Shine Dome, through collaboration with external stakeholders and a multi-disciplinary approach in the project team, it became clear that actual project outcomes were broader. This meant that while improving energy performance was important, there were other factors that emerged to have equal or more weighting than the energy efficiency of the building in isolation.

Whole of team workshops were held to debate and agree criteria for use in prioritising recommendations. In ranking and weighing approaches, heritage conservation benefits were a clear main preference of the project team. Six key criteria were agreed for the multi criteria analysis and then their relative value weighted. The agreed criteria and weighting at the time: heritage value (42%), user experience (12%), capital costs (12%), operational costs (12%), and embodied carbon (10%).[11] Consequently, any design initiative which could have an adverse impact on the heritage value of the Shine Dome would not be rated highly by the team.

Twenty initiatives were analysed and then grouped into categories rather than an ordered list to provide more flexibility in implementation. Discussed in detail in internal reports these were coded as follows: Red to be implemented in the long term, Yellow to be implemented in the medium term, Green to be implemented in the short term. An excerpt of the final report illustrating this coding and elements considered is provided at **(Fig. 3)**.

Following a review of the heritage constraints and opportunities, and the clustered ranking resulting from the multi-criteria analysis, recommendations were made in relation to heritage values to guide implementation of a sustainability plan. The recommendations included public promotion of the research undertaken as well as future investigation of potential applications of the approach to other national heritage listed sites. Detailed recommendations were made in related to the curtain wall, the moat, internal walls, roof space, floors, stairs, skylights, and light fittings and room specific recommendations. An especially innovative section of the final internal report included proposals to improve sustainability broadly defined as well as recommendations to improve the user and visitor experience, and to promote the sustainability goals of the Academy.[12]

3.2 WHAT NEXT: PATHWAYS FORWARD

Completion of the study in mid 2021 set the Shine Dome on a trajectory to a more sustainable future. As recognised at the time, much more was still to be done and, in this regard, the research project can be seen to open several pathways. For the purposes of this paper, the following can serve as initial formulations of three such pathways.

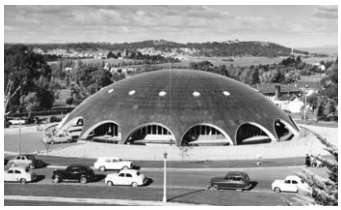
10. The Sustainable Shine Dome: Possible Futures Symposium, unpublished program, 14 July 2021.

11. As internal project team reports note embodied carbon was weighted slightly less than other criteria as the ability to assess each initiative against embodied carbon was deemed to be too subjective.

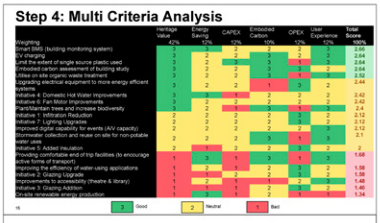
12. GHD, "The Sustainable Shine Dome. Phase III: Implementation," unpublished.

13. Siân Jones, "Negotiating Authentic Objects and Authentic Selves: Beyond the Deconstruction of Authenticity," *Journal of Material Culture* 15 (2) (2010): 181-203.

14. Acknowledgements: Major funding for the research discussed in this paper was provided by the Australian Government through the Australian Heritage Grants Program 2019-2020. Significant in-kind support was provided by Australian Academy of Science and University of Canberra.







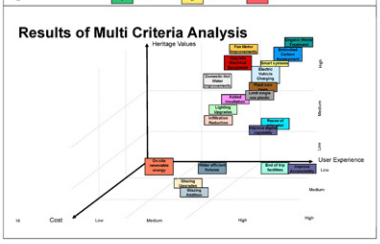


Figure 1. Roy Grounds, Australian Academy of Science building, known as the Shine Dome, Canberra, Australia, completed building circa 1960 showing part of the setting and hills to the East in the background © Australian Academy of Science collection, photographer unknown.

Figure 2. Roy Grounds, Australian Academy of Science building, known as the Shine Dome, Canberra, Australia, view of the auditorium chamber from the upper gallery, circa mid 1970's © Australian Academy of Science collection, Irene Dowdy photographer.

Figure 3. Roy Grounds, Australian Academy of Science building, known as the Shine Dome, Canberra, Australia, excerpt from the multi criteria analysis developed during the Sustainable Shine Dome research project © GHD.

For the Shine Dome itself, the initial study proposal ambitiously suggested that the study process itself and resulting recommendations should seek to mimic the founding motivations and seek to express a national urge to innovate. To that end, the study was to be highly compatible with the objectives of the Australian Academy of Science, that of promoting scientific research to the Australian community. By what means and in what form this would transpire is still to be pursued in subsequent studies.

For national policy and procedures, the study only just began to explore by what means and in what forms a sustainability plan might inflect the conservation policies and priorities of the existing Heritage Management Plan. Nor did it examine what this might mean for other listed places. The team hopes to progress both aspects in future work.

For the field as intimated above, the study might provide another lens to further reflect on the DOCOMOMO International 1997 position paper and perhaps inflect listing and conservation practices to embrace more diverse and critical applications of the WHL test of authenticity. This might include considering how authenticity is constituted through the experience of values, relationships, and intangible heritage rather than solely through materiality as tends to be embedded in modern conservation practice.[13] In an era of the biodiversity/climate crisis this is more important than ever and perhaps for modern movement places in particular. By what means and in what forms might the Shine Dome and other modern movement places positively contribute to more nuanced characterizations of authenticity? This might include a notion of authenticity focused less on the patina of age and more on the promise of a positive future for humanity through science and innovation.[14] ■

BIOGRAPHIES

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Tracy Ireland is Professor of Cultural Heritage, Associate Dean Research of the Faculty of Arts and Design at the University of Canberra, and President of Australia ICOMOS. Tracy is known internationally for her research which has influenced public policy and heritage practice in Australia and abroad in the areas such as ethics, social value, Indigenous historic heritage and archaeological sites conservation. She has prepared innovative conservation plans for World and nationally recognised places.

CURATORIAL NARRATIVES: RETHINKING THE ROLE OF THE EXHIBITION

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ABSTRACT

This article deals with the exhibition of architecture as a category for architectural culture dissemination, understood as a possibility of defining limits and contours of architecture as a disciplinary and reflexive practice. For this purpose, we initially seek to reinforce the construction of the history of the exhibitions, starting from studies of the great Eurocentric and North American international narratives to the inclusion of other non-canonical and unknown contexts and manifestations. To this end, we seek to reflect in a contemporary way on the complex nature of architecture and urbanism exhibitions from the historiographic and epistemological perspective of narrative constructions.

Institutions such as Moma-NY, Centre Georges Pompidou, International Confederation of Architectural Museums, Canadian Center for Architecture, and Cité de l'Architecture et du Patrimoine, in addition to the Architecture Biennials through their exhibitions, actions, and publications, played a central role in disseminating of the agendas of the disciplinary and theoretical field, validating agents and professionals through their collections. The objective is to point out the diachrony and specificities of historiographic construction (understood as the history of history) in non-hegemonic contexts, especially in Latin America and its institutions.

1. INTRODUCTION[1]

Since the late 20th century, the history of art and architecture exhibitions has been a newly developed field of research that has redefined the role and nature of exhibitions and raised problems. Of course, architecture exhibitions play an important role in the history of the discipline, as well as in the formation and dissemination of architectural culture. Architectural exhibitions are a means of thinking, part of the construction and dissemination of new historical narratives and theories, as well as the most famous exhibitions in the twentieth century, such as MoMA-NY, Georges Pompidou Center, the Canadian Center for Architecture and the World Architecture Biennial.

The collection of a society's primary sources of architecture, i.e. buildings, is out in the open. An architectural "object" is the city itself, with its social, historical and cultural practices, whose historicities overlay complex layers of meaning and understanding. Since its beginnings in the 18th century, the architectural exhibition has questioned the place of the presentation and representation of architecture, through its means of representation (drawings and models, and later photographs, videos, installations from panoramas), and more recently digital immersion in various forms of digitality, including augmented reality. Since the second half of the 20th century, the problematisation inherent in architectural exhibitions has transcended the issue of the representation of the architectural work and the realisation of the building, to the extent that the very understanding of the discipline has been transformed, incorporating social, technological, and artistic issues that were previously restricted to other fields of reflection and action.

However, by their very nature as an experiential vehicle, exhibitions can attract a wider and more eclectic audience, especially when they come from large cultural institutions. Consequently, they form and inform public opinion, unlike other media such as books and periodicals, which tend to be restricted to specialised audiences.

This paper deals with architectural exhibitions as a category for disseminating architectural culture, which has been increasingly studied, just as publications have been in the last decades of the last century. The exhibition is understood to define the limits and contours of architecture as a disciplinary and reflective practice. To this end, we initially seek to reinforce the construction of the history of exhibitions, suggesting the inclusion of noncanonical and unknown manifestations of the great international narratives, still unknown outside their contexts. To this end, the aim is to reflect on the complex nature of architecture and urbanism exhibitions in a contemporary way from the historiographical and epistemological perspective of narrative constructions.

2. HISTORY OF ARCHITECTURE EXHIBITIONS

Architecture exhibitions date back to the 18th century in Europe, promoted by architecture institutions, and intensified in the 19th century, the golden age of museums.[2] In 1932, the Museum of Modern Art in New York

1. This paper is sponsored by National Council for Scientific and Technological Development (CNPq) and by Carlos Chagas Filho Foundation for Research Support in the State of Rio de Janeiro (FAPERJ), Brazil; By Comunidad de Madrid (Spain) through the Pluriannual Agreement with the Universidad Politécnica de Madrid in its line of action Programme of Excellence for University Teaching Staff, within the framework of the V PRICIT (V Regional Plan for Scientific Research and Technological Innovation).

2. For the birth of the architecture museum, see Werner Szambien. *Le musée d'Architecture*. (Paris: Picard, 1988), e *Les Cahiers du Musée national d'art modern* no. 129. (Automne 2014). About the history of museums see, Roland Schaer. *L'invention des musées*. (Paris: Gallimard/Réunion des Musées Nationaux, 1993).

established a department dedicated to architecture and design, followed by many other museums of modern art around the world. However, few institutions dedicated to architecture were created between the 1930s and 1970s. From the late 1970s onwards, a series of architecture museums, archives, and libraries emerged, not only in the European context but also in Latin America, which exhibited architecture and urbanism more frequently.[3]

The discussion about collections, museums, and exhibitions of architecture and urbanism went into great depth from the 1980s onwards, in response to the common problems of these institutions that came to light at the end of the 1970s. The International Confederation of Architectural Museums (ICAM) was created in 1979 as an international exchange forum for museum, centre, library, and archive professionals.[4]

Despite the increase in architectural and urban planning institutions, the historicisation of exhibitions is recent and has emerged as a field of post-modern studies. Stéphanie Dadour and Léa-Catherine Szacka pointed to three milestones in the conception of architectural exhibitions: 1979, 1999 and 2007, which, as the title of the article reveals, comprise the transformations of challenges, institutionalisation, and historicisation.[5] For the authors, 1979 marked the creation of the Venice Architecture Biennale and the Canadian Centre for Architecture in Montreal, as well as the Centre de Creation Industrielle (CCI), which included architecture as part of the Centre Georges Pompidou (1977). In the 1980s, important institutions such as the Museum of Architecture in Frankfurt (1984), the Arsenal Pavilion in Paris, and the Netherlands Institute of Architecture in Rotterdam (1988) were created, among a few others of equal or even smaller size. Architecture exhibitions are becoming increasingly numerous as a part of the culture and entertainment industry. The institutions also aimed to raise awareness of architectural issues, promoting guided tours of buildings and urban routes.

Dadour and Szacka identified a more reflective phase from 1999 onwards, in which the exhibition is not limited to a motor tool for building a collection "but is presented as a subject for thinking and as a source of understanding of the discipline and the writing of architectural history".[6] Based on Jean-Louis Cohen, they list the variety of objectives of exhibitions, such as giving visibility to a little-known work, presenting a theme to a wide audience or a new generation, defending a certain position, denouncing, or showing a set from the archives, but always revealing something still unexplored from a new perspective. Many architecture sections have been created at Biennials in the 21st century (among them, Oslo, Rotterdam, Shezhen & Hong Kong, Lisbon, or Moscow), raising awareness among the general public. At the ICC, little by little, towards the end of the century, the object of the exhibition shifted from the building to the conception and the design process. However, at the CCA, the exhibitions moved away from the built object toward the possible debates surrounding the discipline as a contribution to social, political, and environmental issues, etc. In this broader perspective, which is expanding even further in the face of the incorporation of the digital world, what is at stake are collection challenges, such as

3. For exhibition chronologies see: Stéphanie Dadour & Léa-Catherine Szacka. "Portfolio. Exposer l'architecture: quelques moments, 1927-2014," *Les Cahiers du Musée national d'art modern* no. 129. (Automne 2014), 95-111.; Christine Carboni. "L´architecture, matière exposable. Repères chronologiques, 1923-2023", Archiscopie no. 35. (Janvier 2024), 74-81.

4. International Confederation of Architectural Museums. Accessed May 06, 2024. https://icam-web.org/about/.

5. Stéphanie Dadour & Léa-Catherine Szacka, "Exposer l'architecture: enjeux, institutionnalisation et historicization", In: *Les Cahiers du Musée national d'art modern* no. 129. (Automne 2014), p. 3-12.

6. Dadour, and Szacka, "Exposer l'architecture: enjeux, institutionnalisation et historicization", 5.

selecting, classifying, and legitimising objects and authors, integrating them into history, within a general context of increasing collections and exhibitions. The central issue is what possible relationships exist between archives, exhibitions, and history. The didactic value of the exhibition is also called into question, as the general public has different interests from architects and students, who focus on the architectural challenges presented through a narrative that deals with the design and conceptualisation process.

From 2007 onwards, when the Cité de l'Architecture et du Patrimoine opened in Paris, the authors report that a third phase of theorisation and historicisation of architectural exhibitions began, which they call "constitutive and comparative"[7]. Colloquia on architectural exhibitions and some publications appear in special issues of journals. Interest in exhibitions shifts to expography, institutions, and the history of exhibitions, and training programmes are created at the CCA at Columbia University. Unlike the previous milestones, which identified the interest in the building (1979), and in the design process (1999), from 2007 onwards, the interest is in the exhibition itself, "as the writing of the history of the discipline", as it emphasises the change in paradigms, and is itself a vector for new discourses.

3. NON-CANONICAL NARRATIVES

Ten years have passed since the publication of Dadour and Szacka's article (2014), in which we can globally see the milestone established in 2007, which reorientates interest in the exhibition of architecture as a historiographical construction, capable of incorporating new epistemologies and revisions of history. Despite the consistent research condensed in the enlightening article, the universe described and organised by the authors is practically restricted to the Eurocentric world and North America. In this sense, we would like to take up the reflections of Marina Waisman, who emphasises the importance of creating new categories for thinking about Latin American architecture.

For Waisman, the universal validity demanded by the historical units defined for the European world cannot be demanded for the American world, since there is no synchronic correspondence. There was no American scholastic Middle Ages or a Mayan Empire since there was no emperor. The stylistic criteria that characterise each period of European architecture are consistent with a continuous type of development. In Latin America, there was no coherent stylistic development based on the continuity of architectural ideas. Architecture was based on cross-cultural ideas, which were modified and interpreted locally and historically, with anachronisms abounding until the nineteenth century. At the beginning of the twentieth century, the theoretical debate took hold with local nationalist positions, establishing guidelines even though they differed in different cultures, even within the same country.[8]

Of course, the concept of historical time has not been understood as linear or continuous for a long time, but in the very creation of the idea of Latin America, discontinuities prevail. As far as architectural exhibitions

7. Dadour, Szacka, "Exposer l'architecture: enjeux, institutionnalisation et historicization", 9.

8. Marina Waisman. *O interior da história: historiografia arquitetônica para uso de latino-americanos*. (São Paulo: Perspectiva, 2013).

are concerned, there is no institution in the Latin American context with the scope and permanence of those mentioned by Dadour and Szacka.

Even in the context of universalisation and later globalisation in the twentieth century, Latin American institutions are similar in that they follow the international debate guided by Eurocentric and North American centres of reference and differ due to their local and historical circumstances. It is rare to find a large cultural institution working in the field of architecture that combines the functions of collection, exhibition, and library, as we find at the ICC, CCA, MoMA-NY, Cité de l'Architecture et du Patrimoine. As a result, exhibition records are scattered, and few events have had catalogues.

However, we do see a leading role for educational institutions, such as universities such as the University of São Paulo, the Autonomous University of Mexico, the University of Buenos Aires, etc. In addition to private institutions such as CEDODAL in Argentina, the Oscar Niemeyer Foundation, the Lina Bo and Pietro Maria Bardi Institute, and the former Casa de Lucio Costa are among the most significant Brazilian cases.

Also in Brazil, the Research and Documentation Centre (NPD) was created in 1982 at the Faculty of Architecture and Urbanism of the Federal University of Rio de Janeiro (FAU/UFRJ) to conserve, exhibit and publish the output of the disciplines, teachers, and professionals trained by the institution.9 This creation was a pioneering effort in Brazil in terms of collecting, systematising and analysing architectural documents, and today it is one of the largest national collections in the field within a university, with around 500,000 documents with the latest acquisitions.[10]

In the Iberian Peninsula, some institutions for the dissemination of architecture have also emerged in recent years. Without being specifically orientated towards the deposit of personal archives, the Casa de la Arquitectura opened its doors in Madrid just a few months ago with a purely publicising spirit towards the general public and very much orientated towards contemporary production. Created already in full twentieth first century, Casa de la Arquitectura offers a dual exhibition system, with an offline space in the Arquerías de los Nuevos Ministerios in Madrid, which houses the permanent collection, travelling exhibitions and research or meeting activities, and an online space, currently under development, which will house a virtual archive and library dedicated to the masterpieces of 20th and 21st-century Spanish architecture, a georeferenced map with buildings, itineraries, collaborative tools, and a virtual platform for collaboration and content exhibition.

Casa da Arquitectura (Portuguese Architecture Centre) was created in 2007 to collaborate in the dissemination and affirmation of architecture at national and international levels. Among its fundamental activities is the archiving, recovery, and exhibition of private collections of architects deposited or handed over to the institution for its care. Contrary to most international museums that have been returning objects and works to the countries of origin from which they were removed, Casa de Arquitetura has been systematically incorporating collections from important architects, especially from Brazil. This anachronistic colonialism has been interfering

9. Núcleo de Pesquisa e Documentação. Accessed May 06, 2024. https://npd.fau.ufrj.br/npd_historico.php.

10. The collection has funds from important 20th century architects such as Affonso Eduardo Reidy, Sergio Bernardes, Severiano Mario Porto, etc. Among the latest acquisitions are the collections of Archimedes Memoria, Luiz Paulo Conde, Marcos Konder Netto, Musa Arquitetos, Luiz Mário Xavier, Celso Brando and Roberto Segre, among the main ones.

and deconstructing the possibilities for building local cultures in the name of spectacle and historical disfigurement. ■

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PRESENTING ARCHITECTURE, THE ARCHIVE AND MICROHISTORIES: THE OPENING EXHIBITION OF THE NEW HOME OF HUNGARIAN ARCHITECTURE

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ABSTRACT

A new exhibition and event space opened for architecture in May 2022 in Budapest, Hungary: the Rózsi Walter Villa. The modern villa, which was built in 1936 and designed by the architect and structural engineer couple József Fischer and Eszter Pécsi, became the first permanent exhibition venue for the Hungarian Museum of Architecture and Monument Protection Documentation Center. Although the museum was founded in 1968, it has never had a permanent building.

The opening of the Rózsi Walter Villa was a result of a two-year period of reconstruction between 2020 and 2022, which proceeded parallel with the planning of the opening exhibition entitled "Stages and Spaces: Modern Houses in Hungary 1928–1945", curated by Pál Ritoók, Fanni Izabella Magyaróvári and Ágnes Anna Sebestyén, curators of the museum. The rehabilitation of the villa had to take into account the fact that the house is a modernist landmark, an exhibition venue, and a place with a turbulent history – all at the same time.

The major topic of the exhibition was modern housing in interwar Hungary, but the curators had to consider different historical layers and multiple goals while creating the exhibition. This paper focuses on how the show navigated between the demands of introducing the villa, presenting the museum's archives, and involving the family histories of the villa's designers and first owners, the opera singer Rózsi Walter and her family. I highlight how the villa functioned as a 3D-exhibition object and a starting point for the curatorial concept. I underline how the broader topic of modernist housing contextualized the villa and how it was elaborated using the rich archival materials of our museum. I also emphasize the contribution of the families of the designers and the original owners to the exhibition.

1. INTRODUCTION

In May 2022, a new exhibition and event space opened in Budapest for architecture: the Rózsi Walter Villa (**Fig. 1**).[1] The modern villa, which was built in 1936, became the first permanent exhibition venue for the Hungarian Museum of Architecture and Monument Protection Documentation Center (HMA MPDC). The museum was established in 1968 but has operated only as an archive and research centre. Failing to have a permanent exhibition space, the shows curated by the museum's staff members were always presented in different host institutions across Budapest and occasionally in other cities of Hungary and Europe. This constant pursue for an exhibition space reached its conclusion in 2018, when the Hungarian government bestowed the building complex of the former Hospital of the Ministry of the Interior to the Hungarian Academy of Arts, the founder of the HMA MPDC, in order to create the new home of the museum there.[2] The first step of the property development was the rehabilitation of the relatively small Rózsi Walter Villa between 2020 and 2022. The villa opened with a temporary exhibition on modern housing entitled "Stages and Spaces: Modern Houses in Hungary 1928–1945". The show ran for two years (between 18 May 2022 and 17 March 2024) and was curated by Pál Ritoók, Fanni Izabella Magyaróvári and Ágnes Anna Sebestyén, curators of the museum.

This paper considers the challenges of creating the exhibition and focuses on the different historical layers we wanted to uncover. The villa was the prior exhibition object and the starting point for the curatorial concept. The museum's archives provided the basis for elaborating the topic of modernist housing in interwar Hungary. The personal histories of the designers and the former owners of the villa created an added value concerning the issues of political changes in Hungary, migration, and identity.

2. THE VILLA – A SHORT HISTORY

The Rózsi Walter Villa was built in 1936 in a period of half a year. It was designed by József Fischer (1901–1995), who was one of the leading modernist architects in interwar Hungary. He was an activist, an architectural writer, and the deputy head of the Hungarian group of CIAM. Fischer was well-connected in international professional circles, for example, he maintained a friendly correspondence for decades with Marcel Breuer. Breuer was living in London when Fischer mentioned the construction of the Walter Villa to him in a letter dated to 26 April 1936.[3] The structural engineer of the villa was Eszter Pécsi (1898–1975), Fischer's wife, who was a prolific engineer during the interwar period and she was also the first woman who obtained an engineering diploma in Budapest.

The villa was designed for a family of three: the celebrated opera singer Rózsi Walter (1899–1974), her husband, Géza Radó (1899–1965), who was a banker and textile merchant, and their daughter, Marika Radó-Walter (1929–). The Radó-Walter family lived in the villa for thirteen years. They survived World War II and the siege of Budapest in this house, thanks to an air raid shelter built below ground. After the Communists seized power in Hungary

1. For more on the history of the Rózsi Walter Villa, see: András Ferkai, *The Fischer Villa: The Reconstruction of a Modern Building* (Budapest, 2014).

2. Kornél Almássy and Dániel Kovács, "Otthont emel az építészet múzeuma: Az Építészeti Múzeum múltja, jelene és jövője (The architecture museum builds a home: The past, present, and future of the Museum of Architecture)," *Magyar Művészet* 10, no. 5 (2022): 26–35.

3. See the letter in the Marcel Breuer Digital Archive of the Syracuse University Libraries (ID: breuer_m_2616). The archives incorrectly dated the letter to 16 April 1926, its content clearly dates it to the year 1936.

in 1949, the villa was nationalized, and the family had to move out. Marika had been studying abroad, in Switzerland, by that time and didn't return after Hungary had fallen behind the Iron Curtain but emigrated to Argentina. Rózsi Walter and Géza Radó lived in Budapest throughout their lives. After 1949, the villa was heavily altered as it was converted into a nursery and later into a children's clinic adjacent to the Hospital of the Ministry of the Interior. The hospital operated in the building complex around the villa until 2009, and then all its former buildings stood vacant for a decade.

The rehabilitation of the Rózsi Walter Villa was carried out between 2020 and 2022, and it was supported by a team of experts, who performed physical building research, did archival research, and consulted on museum technology. The goal of the rehabilitation was to reconstruct the 1936-state of the villa and to create a contemporary museum and event space. The vintage photographs by the architectural photographer Zoltán Seidner served as the major sources for the reconstruction.[4] Due to the demands of the new museum function, a few compromises had to be made. The original ground floor plan wasn't restored to welcome visitors in a well-functioning space, an elevator was installed to make the building partly accessible by wheelchair, and new insulated windows were built in. Upon its completion, the villa was named after Rózsi Walter in honour of its first owner, acknowledging the fact that the house was referred to as "the villa of an opera singer" in its early days.[5]

3. THE EXHIBITION – CHALLENGES OF UNCOVERING MULTIPLE HISTORICAL LAYERS

The opening exhibition with its focus on modern housing in interwar Hungary seemed to be an evident choice of subject matter considering the venue. The curatorial team articulated three major goals. Firstly, we wanted to introduce the villa as a rehabilitated modernist landmark and to put the spotlight on its architectural features. Secondly, we wished to accentuate that the villa is the first permanent exhibition space of the architecture museum, and the intention is to showcase the museum's collections including especially the rich archival materials – drawings, photographs, pieces of furniture, and documents – that represent the interwar period. Thirdly, we aimed at highlighting that the life stories of the people connected to the villa's turbulent past mirror the fate of many in twentieth-century Hungarian history.

These manifold goals and the complex historical layers of the villa challenged our curatorial team. The architectural features of the villa were inspiring and restricting at the same time. Ca. 200 square meters exhibition space is available with limited wall surface, because the villa opens to the outside with huge windows and discloses in the inside with folding doors according to the principles of modernism. The limited wall surface and the abundance of light characterize a modern living space but contradict to an ideal exhibition space. Even so, we wanted to highlight the characteristic architectural features and to use them to our advantage.

Due to the clients' upper-middle class lifestyle, the spatial arrangement of the villa is a mix of the spatial organization of an old-fashioned villa and

4. The photographs were taken right after the Walters moved in the villa in 1936. The original glass negatives and vintage positives are held in the Photographic Archives of the HMA MPDC, inv. no. 92.961–92.966.

5. See its first appearance in the Hungarian architectural press: "Operaénekesnő villája Budapesten a Bajza-utcában (Opera singer's villa in Bajza Street in Budapest)," *Tér és Forma* 10, no. 1 (1937): 8–11; or e.g. from the international arena: "Town house for an opera singer", F. R. S. Yorke, *The Modern House* (London: The Architectural Press, 1937), 184–86.

a modern living space. On the one hand, the owners lived their life as public figures who entertained guests and required a staff to manage the house. On the other hand, they cherished modern ideas about private spaces. The arrangement of the rooms mirrors these requirements: the majority of the ground floor was the staff's quarter, there were two inner staircases – an elegant one for the family and their guests and a hidden spiral staircase for the staff –, the first floor was a huge open space for living and entertaining (a reminiscent of the *piano nobile* of traditional villas), the second floor comprised of the private spaces with three separate rooms for each family members and two bathrooms, one for the parents and the other for their daughter. The original use of the villa was the inspiration of our exhibition title "Stages and Spaces", which refers to the two-fold use of the house as a stage for public life and a space for privacy.

The exhibition featured the villa and the archival materials in a coordinated way. The spatial arrangement of the house served as the starting point for the curatorial concept: we linked the original functions of each room to selected catchphrases of modernism. The catchphrase for the spacious area of the first floor was 'openness'. Openness referred to the open-plan space, the high exposure to light by the huge windows and its original function as a space for social life. On the second floor, the child's room stood for 'play', Géza Radó's study was linked to 'work', Rózsi Walter's bedroom evoked 'comfort', and the main bathroom represented 'hygiene and health'. The exhibited archival materials and objects gave an architectural historical context to the villa highlighting what openness, play, work, comfort, hygiene, and health meant in architecture and design in the interwar era.

Organizing the first floor of the exhibition around the keyword 'openness', we consciously let the striking architectural features of the villa shine **(Fig. 2)**. We used the limited amount of wall surfaces and digital applications to keep the huge windows uncovered. Because of the abundance of light, sun protection film was applied to the windows and only copies were exhibited instead of original drawings and vintage photographs. We also kept the space clean to host events in accordance with the social relevance of openness. The chosen archival materials represented openness in modern architecture. Flexible spaces, moveable walls, huge glass surfaces were featured in the exhibited works designed mostly by members of the Hungarian CIAM group: József Fischer, Farkas Molnár, József Körner, and Máté Major. Via the exhibited drawings and photographs we underlined that this young generation of architects set the standards of modern living in interwar Hungary, representing an openness to new ideas.

In the former child's room on the second floor, the keyword 'play' evoked the topic of designing for children. As it was an important imperative for modern designers to tailor furniture to the children's size, we wanted to communicate this idea via both the exhibition design and the featured objects. Thus, a part of the exhibition materials was placed lower, to the eye level of children and the central piece of furniture – a modern nursery



Figure 1. József Fischer, Rózsi Walter Villa, Budapest, Hungary, 1936 © photo by Gábor F. Tóth, HMA MPDC, 2023



Figure 2. The first floor of the exhibition in the Rózsi Walter Villa © photo by Gábor F. Tóth, HMA MPDC, 2024



Figure 3. The former study of the Rózsi Walter Villa with Marcel Breuer's tubular steel furniture on exhibit © photo by Gábor F. Tóth, HMA MPDC, 2024

school cabinet from the 1930s – demonstrated the perfect measurements and arrangement of the appropriate children's furniture.

The former bedroom on the second floor was originally the most lavishly decorated room in the villa. The Walters had quite a traditional taste in interior design, so they furnished the house with their old Neo-Baroque furniture. To translate this into the language of the exhibition, we used the catchphrase 'comfort' to illustrate how design features, new technologies, and the entertainment industry turned bare modern interiors into homey spaces in the interwar era. We featured household fabrics, ergonomic furniture, and modern appliances. Using a wallpaper on one of the walls, the exhibition design also reflected on the topic of hominess.

While choosing the archival materials we were also guided by our intention to tell the stories of the people whose life were closely or loosely connected to the villa. It was a conscious choice to involve these people's descendants into the making of the exhibition and to represent their family histories via those objects that were either on loan from them or donated by them to the museum's collection. These microhistories represent the third layer of the exhibition that reflect political changes in Hungary, migration, and identity. Several such stories are known via memoirs and oral histories, which made the selection difficult, so we decided to stick to those materials that represented a network of persons and objects, in which the ties led directly or indirectly to the Rózsi Walter Villa.

An example is another modernist villa designed by József Fischer, the Járitz Villa (1940–1943), which was represented by a photograph and a rendering on the first floor of the exhibition. The house had a similar fate as the Walter Villa: it was built as a luxury villa for a wealthy family but was nationalized under the Communist era and converted into a healthcare institution, which led to its current derelict state. In this way, it also evoked the fates of those people who suffered due to the practices of nationalization in Communist Hungary. At the same time, in the framework of the major topic of the exhibition, Járitz Villa corresponded to the topic of openness with its characteristic architectural features: large terraces, huge windows, and its connectedness to the garden.

Also on the first floor, visitors were introduced to the Walters' weekend house in Lupa Island along the Danube. Archival photographs represented the designer and first owner of the house, the architect Lajos Kozma, who, being Jewish, considered emigrating from Hungary to Australia in the late 1930s, when Anti-Semitism reached its peak. Kozma sold the weekend house to the Walters', so we exhibited additional photographs of the weekend house representing the times when the Walters used it (from 1939). Kozma's fate was also shared by Géza Radó's – also a Jew, as both had to hide during World War II to escape persecution during the Holocaust.

Migration is a topic that joins the life of the designers and the owners of the Walter Villa. Although Rózsi Walter and her husband stayed in Budapest for the rest of their lives, their daughter emigrated to Argentina, where she started a family and became a successful businesswoman. Her three sons

living in Buenos Aires and Santiago de Chile cherish the history of their ancestors and made the family photo albums, the correspondence, and Marika Radó-Walter's memoir available to us while curating the exhibition. They even visited us upon the opening of the villa as a kind of pilgrimage in honour of their grandparents. Exile also became a necessary step in the lives of the designers of the house. After the political changes in Hungary in the postwar era and József Fischer's participation in the Hungarian Revolution of 1956 against the Soviets, Eszter Pécsi and then Fischer also emigrated. They lived in New York, where Pécsi started her career as a structural engineer all over again, with the support of such friends as Marcel Breuer. The former study in the Walter Villa labelled with the catchphrase 'work' was dedicated to the work of Fischer and Pécsi performed during the interwar period in Hungary **(Fig. 3)**. The exhibited objects included drawings and photographs from the 1930s and a tubular steel furniture set used by Fischer and briefly Breuer. The two cantilevered tubular steel chairs (models B33 and B34) exhibited here were designed by Breuer, who ran an architecture office together with Fischer and Farkas Molnár for a few months in 1934–1935 in Budapest, before his emigration to London and then to the USA. This tubular steel furniture set in the exhibition represented Fischer's ties to the international professional arena and Hungarian émigrés. The exposition of these furniture created an opportunity to involve the current user: Fischer's granddaughter, a structural engineer herself, in the making of the exhibition. She also donated Fischer's architectural drawings that were shown in this room of the villa.

The limitations of the space prevented us from elaborating each of these stories in greater detail in the exhibition texts. The texts usually helped visitors to orient themselves in the villa and to see its architectural features in the greater context of the modern architecture of interwar Hungary. However, guided tours, talks, and roundtable discussions addressed this third layer of the microhistories that directly or indirectly penetrated the exhibition.

4. CONCLUSION

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Many visitors believed that the exhibition would be a permanent show in the villa as it succeeded in centring the archival materials around the architectural features. Over the two years of its opening, we managed to spread the word that the house is a modernist landmark in Budapest. It is, however, still a challenge to associate the villa with the Museum of Architecture. This will be facilitated by the development of a new museum complex adjacent to the villa under the name Hungarian Architectural Center and Museum. ■

BIOGRAPHY

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A NEW PERIOD EYE: LEARNING TO SEE VENEZUELA'S MODERNITY WITH DOCOMOMO VENEZUELA EXHIBITIONS

FRANK ALCOCK
DOCOMOMO VENEZUELA

ABSTRACT:
Since 2006, when Docomomo Venezuela (2010) began to fight for the preservation of Modern Heritage, there was little editorial production on Architecture and Urbanism in Venezuela. Due to the political situation and the museum crisis, exhibitions on these topics practically stopped, reducing the contemporary review and spread of Venezuela's Modern Heritage to a minimum.

Docomomo Venezuela chapter members found in Photography the perfect resource to record with new eyes the eclectic, transatlantic and multicultural Urban Memory of the capital, embracing it as the best reflection of modernity in the country. With the group's didactic program, Architecture students and professors also participated in successful academic internships.

In the seven exhibitions done between 2007 and 2022, the emphasis was to bring the public closer to the history of the Modern city with a museography that facilitates a simple and direct reading, and -more importantly-, to incorporate the International History of Modern Architecture, Urban Planning and Art, so present in Venezuelan modernity but usually poorly mentioned in the local historical architectural discourse.

Docomomo Venezuela's '*Colectivo fotografico*' embarked in every new exhibition project traveling through the urban fabric with a perceptive eye, an active memory and a very personal perspective, collecting old and new sites, and producing multiple varieties of views, remapping Modern Caracas.

As a result, these exhibitions have broken all attendance records, published five well-documented catalogs, promoted social media interaction, multiple lectures, won the AICA awards for best catalog and exhibition (in 2013 and 2022), produced an unvaluable research and photographic archive and, most importantly, have made everybody more aware and value the important Modern Heritage in the country.

As backward prophecies long buried in the country's Modern Heritage, all exhibitions are just in fact building one major exhibition, that retells Caracas Modern History with a New Period Eye.

1. INTRODUCTION[1]

"To drown in the abyss, Heaven or Hell, who cares?
Through the unknown, we'll find the new!"
Charles Baudelaire. Le Voyage, 1857.[2]

In 2006, when the group that in 2010 founded the National Working Party of Docomomo Venezuela started their journey for the preservation and conservation of Modern Heritage in Venezuela, they were in a country with little editorial production on Architecture, Design and Urbanism. Due to the long unstable national political situation, museum exhibitions and events on these topics had practically stopped, reducing the contemporary review and spread of Venezuela's Modern Heritage to a minimum.

In order to start their public activities, they decided to present a fresh point of view that would bring a new wave of storytelling into the National History of Modern Architecture. Docomomo Venezuela thus developed a clear politic line: to put a great deal of their efforts in producing a series of medium-scaled exhibitions that would address both the architectural community *and* the general public. A collection of illustrated publications was also a *sine qua non* and major objective, with the crucial goal to achieve a greater -and lasting- impact on the local and global cultural scene about Venezuelan modernity.

Being fully aware of the general current state at the time of poor public knowledge on the saga of Modernism in the country, Docomomo Venezuela's exhibitions spanned from the *grandeur* of urban landscapes to the intricacies of small decorative artifacts, wishing to attract multiple and diverse audiences. With a keen eye on photography, they brought the masterpieces shown to life, by creating newly-made models exhibited along with works of art, original documents, plans and drawings as well as period pieces.

As André Malraux, France's Minister of Cultural Affairs stated in 1962 in his famous Loi Malraux, cultural goods only begin to exist when they are first named. And he was *so* right. History that is not known cannot be valued. Like unidentified orchids in the jungle, what is unknown cannot be wanted. Therefore, this was their premise and mission: to showcase -in many opportunities for the first time-, the most unvaluable examples of Venezuelan and International modernism to the world, inviting people to not just discover, admire and truly understand the works shown, but to foster awareness for their protection and preservation. After all, what remains hidden in the shadows cannot spark admiration.

Since the beginning, Docomomo Venezuela chose to house their exhibition projects at the Sala TAC (Trasnocho Arte Contacto) -a medium-sized private gallery which is the most important stronghold where cultural activity took refuge since 1998-, and which became the space for the best exhibitions on Art, Architecture and Criticism in the country. A place that also provided within the cultural center where it is nestled, the Centro Cultural Trasnocho, many venues and spaces of different scales to

1. This paper was written in collaboration with Hannia Gómez, Docomomo Venezuela.

2. *"Plonger au fond du gouffre, Enfer ou Ciel, qu'importe ? Au fond de l'Inconnu pour trouver du nouveau"*. Charles Baudelaire, "Le Voyage", *Œuvres Complètes*, (Paris: Gallimard, 1961), 33.

accompany the exhibition displays with talks, thought-provoking forums, guided tours, photography contests and even food tastings.

Along the very successful exhibitions there was always a cultural program with something for everyone, making the experience as enriching and enjoyable as possible, beating every time with every opening all of the center's previous records of attendance. But also, having published to date five well-documented catalogs, promoting social media interaction and multiple lectures, winning the AICA (International Association of Art Critics, Venezuelan Chapter) awards for Best Catalog (2013) and Best Exhibition (2022),[3] producing new research and a new photographic archive and, most importantly, having made everybody more aware and value the country's Modern Heritage.

2. THE NON-*DÉJÀ VU*: A CURATORIAL STRATEGY

A story of previous experiences helped to shape the curatorial strategy of Docomomo Venezuela for its own saga of exhibition projects. First, there was the Lecture Series "Las Ciudades Invisibles de Caracas", organized from 2005 by Docomomo Venezuela's founders -and actual chair and vice president-, architects Hannia Gomez and Frank Alcock, with their experience at CENTRO de la Ciudad, a foundation they started in 2001.[4] Then, the Urban Memory of four heritage-rich neighborhoods of Caracas, Las Mercedes (The Cantabric-Mexican City), Bello Monte (The Belmontinian City), Campo Alegre (The Garden City) and Los Chorros (The Chorrigueresque City) was reviewed with new eyes, digging into their untold past to unearth projects, designers, and many long-forgotten urban, landscaping architectural concepts and unforeseen references. From these events emerged the need of a richer and wider history of the city, which with time turned into the necessity of rewriting its story anew, as the official version had many unanswered questions and lagoons, seemed extremely local, too nationally-focused and generally forgetful of the participation of the international cultural world in its construction.

On the second hand, from 2001 on, Gomez also started her role as House Curator of Gio Ponti's landmark work in Caracas, Villa Planchart (1957).[5] Therefore, Ponti's experience as editor and promoter of all sorts of architects, artists and designers -i.e. as Curator of the Design World-, became an influence and an example to be emulated and applied to the fantastic Modern experience that took place in Caracas, one of the most important Modern capital cities of Latin America. In fact, that was what Ponti actually did himself when he first visited Venezuela.

Of the seven exhibitions done to date (six in Sala TAC and one in Villa Planchart) by Docomomo Venezuela members, the first two first, "Gego, arquitecto" (2007),[6] and "El Jardineiro de América: Roberto Burle Marx Centennial 1909-2009 / Parque del Este 50th Anniversary 1959-2009" (2009),[7] announced the forthcoming profile of the future Venezuelan Working Party.

3. "News", AICA Venezuela, May 5, 2024: https://aicainternational.news/aica-venezuela

4. "Las Ciudades Invisibles de Caracas", CENTRO de la Ciudad, May 5, 2024: http://centrodelaciudad.blogspot.com/search/label/Las%20ciudades%20invisibles%20de%20Caracas

5. Hannia Gómez, *El Cerrito: la obra maestra de Gio Ponti en Caracas*, (Caracas, ULTREYA/ Fundación Anala y Armando Planchart, 2009).

6. Hannia Gómez, *Gego arquitecto*, (Caracas,Sala TAC, 2006) May 5, 2024: https://icaa.mfah.org/s/es/item/1148288

7. "El Jardineiro de América: Roberto Burle Marx Centennial 1909-2009 / Parque del Este 50th Anniversary 1959-2009", (CENTRO de la Ciudad), May 5, 2024: http://centrodelaciudad.blogspot.com/search/label/El%20Jardineiro%20de%20Am%C3%A9rica

In *Gego, arquitecto*, the exhibition explored the academic roots and German cultural and architectural influences of Gertrude Goldschmidt, a major German/Venezuelan artist who was trained as an architect in Hamburg but developed her career in Caracas as an artist since 1939. Gego, being a professor at the School of Architecture and at the Instituto de Diseño, influenced many generations of modern Venezuelan architects and designers and left an *oeuvre* full of architectural knowledge. Later on, in 2009, the Centennial of Roberto Burle-Marx's major landscaping achievement, the Parque del Este (Caracas, 1959),[8] brought the occasion to call the attention on this work of modern landscape architecture with a new exhibition. At that time, the park was being threatened by disfiguring works and ever-growing decay. In fact, from this initial exhibition project emerged Docomomo Venezuela's national working party, with the same group of activists who were defending it, who gathered and registered the park photographically to compare it to its status when it opened, by the Mid-Century. The exhibition "El Jardineiro de America" was shown with an installation based on a long wall in real size that recalled the tile-covered walls designed by Burle-Marx for the Patio de los Azulejos in Parque del Este, holding screens that told the story of the park's design, its landscape artist and his work in Venezuela.

After these exhibitions on the influences of important personalities like Gego or Burle-Marx, both a contribution to the global dialogue of modernism, the next step was to start organizing the same kind of contemporary research around what happened in Caracas during the Twentieth-century. Having chosen the capital of Venezuela as the makor leader of modernity that the rest of the country mirrored for its construction, Docomomo Venezuela, officially operating since 2010, continued delving into the heart of the Modern city, to explore the foreign influences that left an indelible mark on its 'artistic' landscape.

From 2010, nevertheless, their academic research aimed to be more accurate and scientific, aiming to dig deeper into the lives of the authors, shedding light on their global impact and how their local legacies would compare with international ones. It was a tribute to their vision and dedication, reminding us of the power of architecture and art to transcend borders and unite cultures. Also, the exhibition projects included artists, but only with their urban or architecturally integrated works.

Step by step, Docomomo Venezuela started guiding visitors through a journey of discovery, unraveling the narratives behind each work. Just like Gio Ponti discovered his authors from all over the world and showed them through his own designing vision to DOMUS global audience, the group unraveled the major architectural and cultural influences that Caracas received in the past century: Italy in "Las Italias de Caracas" (2012);[9] Spain in "Suite Iberia: la arquitectura de influencia española en Caracas" (2015);[10] the United States in "Our Architects en Caracas: arquitectura norteamericana en Caracas 1925-1975" (2017),[11] and France in "La Ville Neuve: los capítulos recobrados de la arquitectura francesa en la capital 1900-1975" (2022).[12] Even Ponti's Caracas was a subject of an exhibition

8. "El Jardineiro de América: Roberto Burle Marx Centennial 1909-2009 / Parque del Este 50th Anniversary 1959-2009", 2024.

9. Docomomo Venezuela, *Las Italias de Caracas*, (Caracas, Sala TAC, 2012.

10. Docomomo Venezuela, *Suite Iberia: la arquitectura de influencia española en Caracas*, (Caracas, Sala TAC, 2015).

11. Docomomo Venezuela. *Our Architects en Caracas, arquitectura norteamericana en Caracas 1925-1975*, (Caracas, Sala TAC, 2017).

12. Docomomo Venezuela, *La Ville Neuve, los capítulos recobrados de la arquitectura francesa en la capital 1900-1975*, (Caracas, Sala TAC, 2022).

held at Villa Planchart: "Arlecchinia: Nostalgia de Venezuela y de la Grecia Antigua" (2018).[13]

3. A NEW *COLECTIVO FOTOGRAFICO*

Docomomo Venezuela's members, being of different backgrounds: architects, artists, professional and amateur photographers, urban and architectural activists, landscape and graphic designers, lawyers, art and antique dealers and many people from the art and cultural world, but all sharing the same love for the Modern city and Modern Architecture, found in Photography the perfect common resource and language shared by all to record with new eyes the eclectic, transatlantic and multicultural Urban Memory of the capital, embracing it as the best reflection of modernity in the country.

Thus, a new type of 'colectivo fotografico' was born. Not a *fotoclubismo*, as in the similar experience that spread in the world among photography lovers, like Sao Paulo's Foto Cine Club Bandeirante.[14] This was the Working Party of Venezuela working on the streets of the capital, with the mission to register its Modern Heritage, watching it as if it was for the first time. But besides that common and clear objective, the group embarked in every new exhibition project with no further restrictions, solely to register what was out there in the townscape, traveling through the urban fabric with a perceptive eye, an active memory and, above all, a very personal perspective, collecting old and new sites, and producing multiple varieties of views to remap the endlessly Modern Caracas townscape. Every personal approach and point of view was unique, every shot was valuable and important: this was the way and the key to the richness of the visual material produced on their urban expeditions. Sometimes it was an architectural detail, or certain atmosphere, usually unseen fragments of stairs, windows, balconies, doors, works of art, ornamentation, urban typography, unexpected spaces or architectural shapes. Caracas spoke differently to each photographer. Many times, a single architectural element had dozens of photos to describe it, thanks to which its true essence was finally revealed for the curatorial work. So, the eye of the *colectivo* lead the way on what each exhibition came to be.

Through the lens of color photography, the group bridged the gap between past and present showing black and white images to depict the original design of a building or site, thus offering a glimpse into the past, and color images to show the evolution and actual status of these timeless works. A very useful way of making a photographical archive to complement the original photographies of bygone eras. A new way of DOcumentation for the COnservation of the MOdern MOvement.

4. A MUSEOGRAPHICAL JOURNEY

The emphasis of these exhibition series was to bring the public closer to the history of Modern Caracas with a museography that facilitated a simple and direct reading, and -more importantly-, to incorporate and emphasize

13. Docomomo Venezuela, *Arlecchinia: Nostalgia de Venezuela y de la Grecia Antigua*, (Caracas, Villa Planchart, 2018).

14. "Fotoclubismo: Brazilian Modernist Photography, 1946–1964", , MoMA, May 6, 2024: https://www.moma.org/calendar/exhibitions/5245

the International History of Modern Architecture, Urban Planning and Art, so present in Venezuelan modernity but usually poorly mentioned in the local historical architectural discourse.

Caracas owns a very eclectical modern panorama, as decades of successive immigration waves from different countries arrived in the city in the Twentieth-century, contributing directly in its construction and leaving behind the artistic and professional traces of their memoires and personal experiences from their lands of origin. There is no such thing as one Modern Caracas, as there are many: the Italian Caracas, the Spaniard Caracas, the American Caracas, the French Caracas… even a German Caracas exists within its urban fabric, on which Docomomo Venezuela nowadays is working for a forthcoming exhibition.

This modern palimpsest demanded a museography that could transform each time Sala TAC's spaces into a different place. With every exhibition, the group strived to create an immersive experience of a different kind, where visitors could not only see but also feel the essence of every cultural layer of the city's multiple modernisms. From video installations to photo murals, the museographers transformed the spaces into living canvases, sparking curiosity and igniting the imagination. The use of environmental and punctual color was not only an aesthetic resource, it was used to reinforce the exhibits' different thematics: ornamentalism and artistic integration in *Las Italias de Caracas*; sound construction skills, flamboyant typographies and bold volumetric expression in *Suite Iberia*; Avatars of American architectural and urban typologies in *Our Architects in Caracas*; the importance of Planning and Urban Design in *La Ville Neuve*…Imagine stepping into a time capsule of modernism, where every corner whispers countless untold stories of innovation and creativity. That's what these exhibitions aimed to encapsulate and preserve –the essence of Caracas eclectically modern richness.

As the public wandered through these spaces, they noticed that every detail was meticulously curated –from the typography chosen to the literary quotes that open each author story, meant to guide the public in their journey as a celebration of creativity, inspired by the words of Gio Ponti, Miguel de Cervantes, Ayn Rand, Victor Hugo, and now Baron Alexander von Humboldt.

In addition to this, Docomomo Venezuela opened each time in the Facultad de Arquitectura y Urbanismo of the Universidad Central de Venezuela a new academic internship (once also with the Master of Historic Preservation at the Graduate School of Architecture, Planning and Preservation in Columbia University), to include architecture students and professors, which led to much richer results. They were the creators of experimental models that made all the difference, capturing the attention of the general public as well as the experts. The didactic program was also in charge of obtaining the graphic documentation, like old plans and drawings. For the objects, private collectors, and the group's team of antique gallerists helped in obtaining the works of art and decorative objects that illustrated



Fig. 1. Docomomo Venezuela's Colectivo Fotografico, 2015.



Fig. 2. Exhibition *Suite Iberia: la arquitectura de influencia española en Caracas*, Caracas: Docomomo Venezuela/Sala TAC, 2015.



Fig. 3. Exhibition *Our Architects en Caracas, arquitectura norteamericana en Caracas 1925-1975*, Caracas: Docomomo Venezuela/Sala TAC, 2017.



Fig. 4. Exhibition *La Ville Neuve, los capítulos recobrados de la arquitectura francesa en la capital 1900-1975*, Caracas: Docomomo Venezuela/Sala TAC, 2022.

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better the spirit of each show. The final result became influential on the local architectural community, who celebrated -and rapidly made theirs- all the new findings and data.

But there were some difficulties, too. Sometimes, architectural history had to be overly simplified in the displays in order to be better explained to the general public; some other times, the difficulties laid in how to include the vast amount of material and documents gathered by the group and the research without making the exhibitions too overwhelmed by information.

Finally, a collection of videos showed every time: the woks of Venezuelan authors trained abroad in the specific countries discussed, the lists of lost works of architecture, engineer and art, and a collection of

the main examples of interior design. Gradually, the exhibitions evolved to become more digital, in order to be more easily able to travel abroad.

5. ONE GREAT EXHIBITION

As a backward prophecy long buried in the city's Modern Heritage, Docomomo Venezuela's exhibitions are in fact the construction site of one major exhibition that retells Caracas Modern History. Thus, Urban Memory performs as a Contemporary *belvedere* from which Venezuela's Modern Panorama is contemplated, cataloged, reviewed, reinvented, retold… and rejuvenated.

Studying the city's major architectural influences during the past century makes possible to grasp the great cultural diversity of Venezuelan modernism. It is also a mirror of the country itself, which welcomed so many immigrants, from whose cultures and work it was nourished at a time of great development. A moment in which Venezuela was avant-garde in all areas, producing works of a high quality in technical and technological development, as well as in aesthetic and artistic values.

Venezuelan modernism is very broad and has elements that some might consider as impure, but which at the same time gives it a quality which perfectly reflects the country, speaks of its originality and authenticity, and constitutes an adaptation to the physical, economic and socio-cultural conditions of the moment.

Venezuela was undoubtedly fortunate during the past century, placed at the vanguard of modernism while enjoying a multicultural modern heritage. This is the heritage that is important to document and spread, in order to guarantee its correct understanding and conservation in time.

With these objectives, Docomomo Venezuela works towards the re-engineering of all the exhibitions into a single one, a major travelling show where the world will learn to see Venezuela Modern Heritage with a New Period Eye. ■

BIOGRAPHY

Frank Alcock. Architect, BA and BArch, Rhode Island School of Design (RISD). MS Architecture and Urban Design, GSAPP Columbia University, New York (1985). Frank Williams & Associates, New York (1985-86), Martha Schwartz Partners, New York (1987). Oficina de Arquitectura Alcock (1988 – present). Director, Fundación CENTRO de la Ciudad, Caracas (2001- present). Visiting Professor UCV, UJMV and USB. Vice President, Docomomo Venezuela, Caracas (2016- present).

BEYOND MODERNISM: CURATORIAL CLASHES AND TRANSFORMATIONS IN 1983 PORTUGUESE ARCHITECTURAL EXHIBITIONS

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ABSTRACT.
The exhibitions "Depois do Modernismo" and "Onze Arquitectos do Porto: Imagens Recentes", held at Lisbon's Sociedade Nacional de Belas-Artes in 1983, marked a significant turning point in Portuguese architectural curatorial practices. These exhibitions clashed in their curatorial narratives, shaped future approaches to exhibiting Portuguese architecture, and influenced ongoing architectural discourses.

"Depois do Modernismo", curated by Luís Serpa, presented a cosmopolitan exploration of Post-Modernism, featuring various art forms. The architecture section, directed by Michel Toussaint, introduced an innovative concept where architects showcased their projects in symbolic 'little houses'. However, dissent arose among Porto architects who expressed their disagreement with the exhibition's values, leading to their abstention from participating. In response, they organised a counter-exhibition titled "Onze Arquitectos do Porto: Imagens Recentes", featuring drawings that emphasised the essential role of drawing in the Porto school's methodology and highlighted differences between Porto and Lisbon architectural approaches.

The presence of processual drawing continued to be a distinctive element in subsequent group presentations by architects from Porto. Its centrality, showcased in exhibitions like "Architectures à Porto" and "Arquitectura Portuguesa Contemporânea. Anos 60, Anos 80" contrasted with the vibrant expression of communication drawings favoured by Lisbon architects in "Tendências da Arquitectura Portuguesa". This divergence persisted in subsequent international representations, amplifying the core ideas that emerged in the 1983 events.

Our paper critically reflects on these transformative moments, shedding light on the details of the division between architects from Porto and Lisbon and the curatorial and display options that have had a lasting impact on subsequent Portuguese architecture exhibitions.

1. SPACE TO FEEL: POST-MODERN EXHIBITIONS

The proliferation of architecture-related events, such as exhibitions and publications, has propelled architecture into the public sphere. These platforms not only served to showcase architectural achievements – buildings – but also to reveal their processual dimension, recovering interest in architectural drawings and ephemeral installations while offering opportunities for plural and individual expressions. When expanded into a post-modern sensibility, characterised by a rediscovery of architecture's "poetic" dimension, the exhibition space became a site for exploring the unreal and the paradoxical.

1.1 DEPARTURES FROM MODERNISM

Post-Modernism emerged around 1960, gaining momentum through various exhibitions[1], notably the Venice Biennale of 1980. Curated by Paolo Portoghesi, "La Presenza del Passato" was the inaugural International Architecture Exhibition, in Venice, and aimed to explore effective ways to engage a wide audience while sparking intellectual discourse.[2]

We will examine three key aspects of the 1980 event, drawing connections to later Portuguese exhibitions, to reflect on the discourses surrounding Post-Modernism, the related innovative display techniques, and the role of drawing in display strategies.

"La Strada Novíssima" section featured twenty façades, constructed within the Arsenale colonnade to delineate an interior street space. Each façade represented the interpretation of twenty invited architects concerning their relationship with the past. Through these façades, none of which depicted existing architecture, visitors could access twenty distinct rooms spanning a 42-square-meter area, where the authors presented their projects, encompassing traditional representational drawings, scale models, and spatial installations.

After Venice, the show travelled to Paris, to the octagonal central room of the Saint-Louis Chapel at the Salpêtrière Hospital. It underwent a content and title revision, becoming "La présence de l'histoire. L'après modernisme", emphasising the focus on history as a solution for moving beyond Modernism. As revealed by Szacka's research, several title options were already considered for the Italian exhibition: 'The Architecture of Postmodern', 'Dopo l'architettura moderna', 'Postmodern Architecture', the very simple 'Postmodern', 'La Mostra sul Postmodernismo', and the more emphatic: 'POSTMODERN'".[3]

Meanwhile, other events promoted alternative approaches to imaginative and historical perspectives, such as "La Modernité, un projet inachevé: 40 architectes" (1982). Paul Chemetov's exhibition, which included Álvaro Siza, delved into the ethics of Modernism, addressing social and urban issues. A year later, at the Institute of Contemporary Arts, in London, another group exhibition titled "Ten New Buildings", featured Siza among nine other architects who questioned the radical positions of Rationalists and Post-Modernists, emphasising the importance of acknowledging and referencing the past without excluding Modernism.[4]

1. "The Architecture of the École des Beaux-Arts" at MoMA (curated by Arthur Drexler) in 1975, "Architettura Razionale" at the XV Milan Triennale in 1973 (curated by Aldo Rossi), and "Roma Interrota" in 1978 (curated by Piero Sartogo), as key events.

2. Cf. Léa-Catherine Szacka *Exhibiting the Postmodern: The 1980 Venice Architecture Biennale*. (Venice: Marsilio Editori, 2016)

3. Szacka, *Exhibiting the Postmodern: The 1980 Venice Architecture Biennale*, 190.

4. Martin Lazenby, "Introduction". 1983. [u.a.] Art and Architecture. London Institute of Contemporary Art. 8.

2. PORTUGUESE POST-MODERNISM

The debate on Post-Modernism in Portugal stemmed from the differences between the Porto and Lisbon schools, which emerged from contrasting responses to the legislation of 1957 known as the *Reforma de 57*[5], separating architecture from Fine Arts schools.

While Lisbon school remained closer to the Beaux-Arts philosophy, largely due to political pressures, the Porto school underwent a transformation under an experimental administration shared by teachers and students. Here, the ethical principles of Modernism were adapted to the practical constraints of the city, leading to a structure more akin to a university system. This antagonism was stressed by two exhibitions occurred in 1983.

2.1 CLASHING CURATORIAL OPTIONS

"Depois do Modernismo" (After Modernism) was organised by Luís Serpa (1948-2015). It was held at the Sociedade Nacional de Belas-Artes (SNBA) in Lisbon from January 7th to January 31st, 1983. "Onze Arquitectos do Porto: Imagens Recentes" (Eleven Architects from Porto: Recent Images), was also hosted at the same venue from April 15th to April 30th of the same year.[6]

The first exhibition, titled similarly to the 1980 Venice event, encompassed fashion design, music, theatre, visual arts, and architecture "to discuss the problematics of the so-called Modern movement (…) to know whether Portugal has room for forms of artistic expression which can include the breadth and ambiguity of a notion like that of Post-Modernity."[7]. It sought to present diverse and simultaneous perspectives on art aligning with "international and global contexts as opposed to the nationalist views, whether of history or the art made in Portugal"[8].

The executive and consulting team for the architecture section was led by Michel [Toussaint] Alves Pereira. They aimed at uniting Portuguese architects who, disillusioned with international functionalist puritanism, were exploring new paths and solutions to overcome prevailing sadness, hoping that it could become "a manifesto against gloom".[9]

According to Toussaint, despite acknowledging the diversity among all the participants, there was a belief in shared directions, which led the curatorial choices. In the catalogue, he asserts: "Against purity, against the moral of cleanliness, against the anonymity they have wanted to impose on us, for the survival of individualities and differences, the various attitudes following the bankruptcy of Modern and Progress appear. Only this can be called Post-Modern."[10]

Diversity and plurality, along with the ambition of internationalisation[11], summed up the main intentions of this exhibition. However, the invited architects from Porto declined to participate in the initiative due to a "healthily discordant to the organisers' approach".[12] Nevertheless, the group of seven architects – Adalberto Dias, Alcino Soutinho, Alexandre A. Costa, Álvaro Siza, Domingos Tavares, Eduardo Souto de Moura and Sergio Fernandez –submitted a manifesto text accompanied by illustrations of significant twentieth-century Portuguese buildings. The text asserted the

5. Cf. Gonçalo C. Moniz, "*O ensino moderno da arquitectura: a reforma de 57 e as Escolas de Belas-Artes em Portugal (1931-69)*" (Ph.D. diss., Faculdade de Ciências e Tecnologia da Universidade de Coimbra, 2011)

6. Promoted by Livraria Leitura it was later presented in Porto, at Cooperativa Árvore (May 6 to 15, 1983) along with a second sector dedicated to "the architectural book in the world."

7. Luís Serpa. "Apresentação". "A propósito…". in *Depois do Modernismo*, ed. Luís Serpa (Coruchéus: Atelier 33, 1983), 9-10.

8. Bruno Marchand, "Depois do Modernismo. A possibilidade de tudo." 04 May 2024. Testimony by Alexandro Melo. Accessed on http://arquivolarte.blogspot.com/2009/02/.

9. Manuel Graça Dias, "O Biombo Neura." *Jornal de Letras, Artes e Ideias*, (January 1983)

10. Michel Pereira, in *Depois do Modernismo*, ed. Luís Serpa (Coruchéus: Atelier 33, 1983), 28-30.

11. Bruno Marchand, "Depois do Modernismo. A possibilidade de tudo." Arquivolarte.blogspot.com, February 6, 2009. Accessed April 30, 2024. http://arquivolarte.blogspot.com/2009/02/. http://sandravieirajurgens.com/luis-serpa-entrevista-depois-do-Modernismo-galeria-comicos.

12. José Manuel Fernandes, "A surpresa do Porto - uma arquitectura ausente". *Jornal de Letras, Artes e Ideias*, (January 1983)

Modern movement had minimal influence on Portuguese architects, who consistently adopted an eclectic approach and integrated local constraints with international influences. Therefore, Post-Modernism was deemed an unsuitable concept: "the evolution of architecture in Portugal presents very specific aspects that we can characterise by the inevitability of eclectic individualism (...) this is why the controversy surrounding what is vaguely referred to as post-modernism cannot cause more anxiety than the desperate conditions of practising the profession in Portugal."[13]

Following that decision, the Porto architects presented the counter-exhibition titled "Onze Arquitectos do Porto: Imagens Recentes", at the same venue.

2.2 PLURALITY AND DISPLAY STRATEGIES

"La Strada Novíssima" affirmed "the ephemeral representation of architecture as architecture itself"[14], blurring "the boundaries of the real and the unreal"[15]. Through its expansive scale and display, it aimed to create an illusionary effect, merging content and container. This immersive strategy, quite unprecedented in architecture exhibitions, prioritised the experience of the exhibition space, and one can affirm its impact to subsequential events, notably the architectural section of "Depois do Modernismo," where similar principles are evident.

In Lisbon, Michel Toussaint proposed individual "little houses" **(Fig. 1)**, that each of the fifty architects could freely manipulate and use to exhibit drawings, texts, photographs, or scale models. Within the symbolic houses, which visibly defined a personal space, the architects explored their surfaces as walls, while interacting with their interiors. Some adhered to conventional approaches, such as organising drawings on the walls, described as "arranged according to the discredited poetics (?) of 'top-down, bottom-up,' 'text blob here, drawing blob there'; sad, demotivating, unloving, uninterested, uncreative, old"[16]. Others, like Vitor Mestre **(Fig. 3)**, introduced new elements, such as a curtain to display drawings from Castro Verde's G.A.T., while Luiz Cunha framed his perspectives of the "Non-Bureaucratic Plan for the Reconstruction of the City of Angra do Heroísmo" with a classical façade reminiscent of Portoghesi's show, featuring two columns supporting a pediment.

The counter-exhibition, by Porto architects was a collection of thirty-three panels exclusively dedicated to drawings – from sketches to sections and plans. These panels presented the works of Adalberto Dias, Alcino Soutinho, Álvaro Siza, Domingos Tavares, Eduardo Souto de Moura, Fernando Távora, Jorge Gigante, José Pulido Valente, Nuno Ribeiro Lopes, Pedro Ramalho and Rolando Torgo.

The eleven architects self-organised this exhibition to present ongoing projects emphasising "the process of forming a project and the role of drawing (…) in each individual process"[17]. Nuno Portas, the author of the opening text for the catalogue – "A half dozen questions about a certain architecture, the best, that of Porto" – clarified that the exhibition that was "not intended to be didactic, polemical, or thematic from the outset", establishing a deliberate departure from the previous show in Lisbon. "It appears that what brought

13. Serpa, Depois do Modernismo, 115-128.

14. Germano Celant, ""Strada Novissima" in "The Presence of the Past"." *Artforum* 19, no.4 (December 1980): 84-85.

15. Szacka, *Exhibiting the Postmodern: The 1980 Venice Architecture Biennale*, 22.

16. Manuel Graça Dias, "O Biombo Neura," 1983.

17. Nuno Portas. "Meia dúzia de questões sobre uma certa arquitectura, a melhor, a do Porto." in *Onze Arquitectos do Porto. Imagens Recentes*, Porto: Leitura, 1983.

these gentlemen to present their works in a gestational phase or, at least, unrealised and uninhabited, was simply the fact that they worked in Porto and considered themselves symptoms - more than representatives - of a cultural activity of professionals who, despite ranging in age from 25 to 60 years old, are part of a group centred on the architecture department of ESBAP".[18]

Nuno Portas also examined shared characteristics among the works that could unveil "a set of attitudes, a distinct northern condition from that of other sectors or trends in architecture in Portugal".[19]

For Portas, the Porto school diverged from existing academic models and resisted the adoption of international codes. Instead, it drew inspiration "from the site, existing morphology, and local tradition (…) related] to tradition not at the level of surface and cosmetics but at a deeper, though less apparent level of morphology". Additionally, he identified a notable emphasis on the importance of drawing, seen as a tool to acknowledge pre-existing reality and to envision the architectural object within the project: "drawing as a place of invention, much more suggestive and globalising than the common dualism of plan + facade study that prevailed for many years".[20]

The consistent organisation of panels **(Fig. 4)** highlighted the coherence among the exhibited works: each trio of panels represented a distinct project. Measuring 1x1m, these panels contained a 50x50cm drawing encased within a large white frame.[21]

While this "celebration of drawing" was intentional and acknowledged, as highlighted by Pedreirinho – "what you can feel here is precisely the drawing as an element of creation, which has to do with the very practice of the profession of architects"[22] –, it was also questioned for its difficult communication with the public and its excessive autonomy. Portas pointed out its "gestural or pictorial sensuality that seeks the book or the exhibition panel instead of remaining as a discipline of space representation and construction capable of enabling communication in the design process"[23], while José Pulido Valente, one of the participants, coincidently born in Lisbon, expressed his disbelief in exclusively focusing on drawings, arguing that "an exhibition (…) should be for communicating to those not in the profession, and it should not be closed off only to specialists. With only drawings, this exhibition is akin to a collection of specialised texts on law, economics, sociology (for example) that the uninitiated cannot access".[24] For that reason, Pulido Valente presented a sample of three of his projects through axonometries.

Processual drawing, fundamental to the recognition, exploration, and contemplation of reality, served as a central tool in the Porto School of Architecture methodology. However, Lisbon architects have approached drawing differently, incorporating colour and three-dimensional representations such as axonometrics and perspectives. Figures such as Luiz Cunha or Tomás Taveira were particularly adept at illustration and comic-style representation, demonstrating architecture's artistic nature and serving as a personal expression of the author.

The dichotomy between Porto and Lisbon architectural approaches persisted in subsequent presentations of Portuguese architecture. Initiatives

18. Portas, "Meia dúzia de questões sobre uma certa arquitectura, a melhor, a do Porto.", 1983.

19. Portas, "Meia dúzia de questões sobre uma certa arquitectura, a melhor, a do Porto.", 1983.

20. Portas, "Meia dúzia de questões sobre uma certa arquitectura, a melhor, a do Porto.", 1983.

21. The frames were designed and produced by Armando Alves, a painter and graphic designer who also served as a professor at ESBAP.

22. José Manuel Pedreirinho. "O Diálogo Norte / Sul da arquitectura Portuguesa". *Jornal de Letras, Artes e Ideias*, (May 1983), 31.

23. Portas, "Meia dúzia de questões sobre uma certa arquitectura, a melhor, a do Porto.", 1983.

24. Valente, Pulido In *Onze Arquitectos do Porto. Imagens Recentes*, Porto: Leitura, 1983.

like "Architectures à Porto" (Clermont-Ferrand, 1986) and "Tendências da Arquitectura Portuguesa" (Barcelona, 1986; Rio de Janeiro, São Paulo, and Buenos Aires, 1987; Lisbon, 1989; Strasbourg, Macau, and Bombay, 1990; New Delhi and Beijing, 1991; Tokyo, 1992), launched in 1986, alongside "Arquitectura Portuguesa Contemporânea. Anos 60, Anos 80" at Casa de Serralves, or "Points de Repère. Architectures du Portugal" at Europália, Brusssels, both held in 1991, expanded on the fundamental ideas developed in the contrasting events of 1983 in a more extensive and discursive manner.

3. EXPANDING DRAWING IN ARCHITECTURE EXHIBITIONS

The emergence of the architectural drawing market coincided with the ascent of Post-Modernism. In Portugal, following its central role in discussions at the II National Conference of Architecture in 1981, where it was emphasized that "the drawing must be recognised as the architect's privileged field of activity and their primary mode of intervention"[25].

The prominent role of drawing in architecture exhibitions, particularly within the art gallery circuit[26] and demonstrated in solo presentations by architects like Álvaro Siza[27] and Manuel Vicente[28], remained also a distinguishing factor in group exhibitions between Porto and Lisbon architects in the 1980s. This difference was evident in exhibitions such as "Arquitectura Portuguesa Contemporânea. Anos 60, Anos 80" at Casa de Serralves (1991) which contrasted with the display strategies employed by Carlos S. Duarte in the itinerant exhibition "Tendências da Arquitectura Portuguesa" (1987-1992).

In the Serralves exhibition, curated by Nuno Portas and Manuel Mendes, square boards[29] had up to two-thirds of their height dedicated to drawings **(Fig. 3)**. Photographs, if available, were displayed on the lower stripe.

In contrast, the A0 panels of Carlos S. Duarte aimed for graphic coherence throughout **(Fig. 4)**, showcasing photographs and technical drawings. The inclusion of artistic drawings[30] was introduced later in the itinerant exhibition as supplementary material, displayed separately.

Portas and Mendes' exhibition primarily reflected the theoretical framework of the "Escola do Porto", focusing on showcasing a quite large selection of projects, through original drawings, that highlighted "the internal process and of the representation techniques of the authors"[31].

On the contrary, Duarte's selection showcased five distinct personalities, with a considerable array of their projects, to "illustrate the main trends that intersect in the field of architectural production and the controversy that accompanies it"[32]. While initially seeming Lisbon-centric, the inclusion of internationally lesser-known architects like Tomás Taveira, Luís Cunha, and even Manuel Vicente, who was based in Macau, alongside figures like Siza, an already acknowledged and appealing name, could have been instrumental, to convey the idea of a Post-Modern ambience in Portugal. However, these curatorial options can also be interpreted as a will to assert *individuality*, a Post-Modern attitude regardless.

Álvaro Siza's international recognition, evidenced by his international solo exhibitions since the mid-1970s, triggered a resurgence of group

25. AA.VV. 1981. Os Arquitectos e o Ordenamento do Território – Documentos do 2º Congresso da AAP. Lisboa: Associação dos Arquitectos Portugueses.

26. In the 1980s, private galleries in Portugal, notably Luís Serpa's Galeria Cómicos, hosted numerous solo exhibitions featuring Lisbon architects. These exhibitions highlighting their drawings and artistic expressions..

27. "Álvaro Siza, Arkitekt i Porto". Copenhagen and Aarhus, 1975-76; "Álvaro Siza". Barcelona, 1975; "Álvaro Siza, Architecto 1954-1979", Milan, 1979.

28. "O Exercício da Cidade. Arquitectura em Macau em 1976/79", Ar.co, Lisbon 1980.

29. The boards were designed by José Gigante and João Álvaro Rocha.

30. Graça Dias, Manuel. Interview by the author. April 7, 2017.

31. Mendes, Manuel. Portas, Nuno. "Nota Introdutória". Mendes, Manuel. Portas, Nuno. 1991. Arquitectura Portuguesa Contemporânea, anos sessenta – anos oitenta. Porto: Fundação de Serralves.

32. Duarte, Carlos S. (ed.). Tendências da Arquitectura Portuguesa. Lisboa: Ministério dos Negócios Estrangeiros, 1987.

exhibitions on Portuguese architecture, centred on discussions on Post-Modernism and Modernist revisionism. In addition to the previous considerations, it is essential to consider Siza's assessment on "drawing as the desire for intelligence"[33], particularly evident in his methodology strongly based on sketches and processual drawings. This perspective also played a defining role in his solo exhibitions, influencing not only the selection of projects but also the emphasis on the display of artistic drawings.

To conclude, one can revisit the question posed by Nuno Portas in 1983: "Can architectural drawing serve to democratize architecture rather than mystify it?"[34]. The 1980s saw a shift towards more curated selections and narratives, alongside the internationalisation of Portuguese architecture, aided by the removal of borders among CEE members in 1986. Despite advancements in exhibition formats and curatorial strategies during this period, the centrality and fetishization of drawing persist in architectural exhibitions today. There remains a pressing need to transcend disciplinary boundaries, engaging the public and affirming architecture's cultural value in society. ■

33. Siza, Álvaro In *Onze Arquitectos do Porto. Imagens Recentes*, Porto: Leitura, 1983.

34. Portas, "Meia dúzia de questões sobre uma certa arquitectura, a melhor, a do Porto.", 1983.



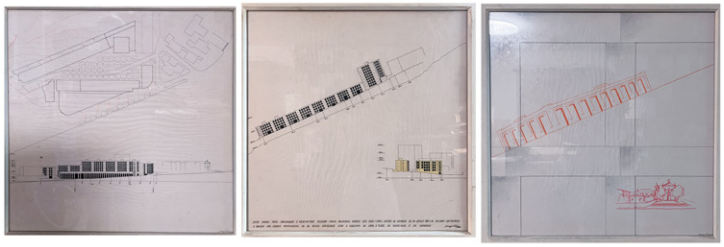






Figure 1. "Depois do Modernismo" views: interior stands and broken column that announces the exhibition, SNBA, 1983 © Victor Mestre, 1983.

Figure 2. "Onze Architects do Porto". Drawings included in Domingos Tavares panels: project for collective housing in Braga © Domingos Tavares.

Figure 3. "Arquitectura Portuguesa Contemporânea. Anos 60, Anos 80", Casa de Serralves, Porto, 1991 © Fundação de Serralves.

Figure 4. "Tendências da Arquitectura Portuguesa", SESC Pompeia, São Paulo, 1987 © Manuel Graça Dias, 1987.

BIOGRAPHY

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WAR'S TOLL OF ITALIAN HERITAGE: UNVEILING ITALY'S POSTWAR RECONSTRUCTION THROUGH TRANSNATIONAL EXHIBITIONS

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ABSTRACT.
In 1945, the National Association for Italian War-Damaged Monuments organised 'The Italian Art Exhibition' at Palazzo Venezia, Rome, marking a pivotal moment wherein artistic heritage was framed as a primary instrument for rebuilding new and democratic relationships between national culture and society. Collaborating with the American Committee for the Restoration of Italian Monuments, another exhibition, the 'War's Toll of Italian Art' took place at the Metropolitan Museum of Art in New York in 1946.

The significance of these exhibitions on war-damaged monuments in the first years after the war was external to the hegemonic context and continues to remain under-explored. Through analysing the political-social background of these exhibitions, this article aims to investigate the Italian post-war responses from a transnational perspective. In the USA, presenting the breadth and significance of national heritage destruction visually was crucial for eliciting the emotional impact relied upon for successful fundraising. The exhibition bestowed universal value and meaning upon the represented historical monuments, and outlined a tribute paid by a traditionally resource-scarce nation to the dramatic global wartime situation.

In addition, the article highlights the increasing diplomatic value of such exhibition projects. In the post-war era, such exhibitions of Italian art and architecture were often promoted by foreign agencies, and this transnational interest in Italian heritage aligned with the 'cultural cooperation' proposed by the Christian Democracy and the Italian Foreign Ministry at the time. These exhibitions, therefore, served the objective of mutual understanding, peace safeguarding, and international solidarity, in clear opposition to the imperialistic nationalism of Mussolini's regime. In this vein, the article argues that these post-war exhibitions exemplify early transnational financial aid for heritage, document the evolution of conservation guidelines, and illuminate the intricate facets of post-war Italian national identity in a transnational dialogue.

1. INTRODUCTION

In the early post-war era of the 1940s, Italy faced significant financial difficulties as it grappled with the immense costs of reconstruction and the burden of war debts. This period was characterised by austerity measures, political instability, economic uncertainty, and the arduous task of rebuilding a nation from the ruins of war. Notwithstanding the devastation, Italy emerged as a leader in cultural heritage and conservation, with efforts to safeguard historical sites, artworks, and traditions, the rich Italian heritage played a significant role in shaping national identity and fostering resilience. Additionally, the influx of transnational flows enriched Italy's heritage landscape.

During this time, several transnational exhibitions in Italy and the US highlighted international efforts to safeguard Italian heritage. The significance of these exhibitions on war-damaged monuments in the immediate post-war years was external to the hegemonic context and remains under-explored. This article analyses the political-social background of these exhibitions to investigate Italy's post-war responses from a transnational perspective. How did exhibitions after the war construct the international image of Italian art and heritage? How was the artistic heritage from the fascist period integrated into the new post-war context through these exhibitions?

2. TWO TRANSNATIONAL EXHIBITIONS

2.1 'MOSTRA D'ARTE ITALIANA' IN ROME, 1945

In 1945, the National Association for Italian War-Damaged Monuments (Associazione Nazionale per il Restauro dei Monumenti Danneggiati dalla Guerra, ANRMDG) organised 'The Italian Art Exhibition (Mostra d'Arte Italiana)' in Rome, marking a pivotal moment wherein artistic heritage was framed as a primary instrument for rebuilding new and democratic relationships between national culture and society.[1] This initiative, the first of its kind to be conceived and set up by Italians, served to recognise the artistic heritage as one of the main tools for rebuilding a new and democratic relationship between culture and society, disrupted by the fascist regime and the war. The ANRMDG, founded in Rome in the summer of 1944, aimed to collect resources for restoring Italian monuments and artworks damaged during the war.

Inaugurated on 16 May and finished on 31 October 1945, 'The Italian Art Exhibition' was held at Palazzo Venezia. Palazzo Venezia, once occupied by Benito Mussolini as the representative seat of the fascist government, now opened its doors to the public, showcasing the heritage saved from the war with multifaceted efforts. As ANRMDG president Zanotti Bianco noted in the Foreword of the exhibition's catalogue **(Fig.1):** 'This Art Exhibition constitutes the first major cultural initiative organised and carried out entirely by Italians since the beginning of the war and aims to direct the thoughts of the entire Nation, through the vision of the works of art, to serious urgent problem […]'[2]

1. Daniela Esposito, "L'Associazione Nazionale per I Monumenti Danneggiati dalla Guerra," In *Guerra, Monumenti, Ricostruzione. Architetture e Centri Storici Italiani nel Secondo Conflitto Mondiale*, ed. Lorenzo de Stefani and Carlotta Coccoli (Venezia: Marsilio, 2011), 245-48.

2. Umberto Zanotti Bianco, *Mostra d'Arte Italiana a Palazzo Venezia* (Rome: Associazione Nazionale per il Restauro dei Monumenti Danneggiati dalla Guerra, 1945).



Figure 1. Cover of the catalogue of 'The Italian Art Exhibition', 1945 ©Associazione Nazionale per il Restauro dei Monumenti Danneggiati dalla Guerra.

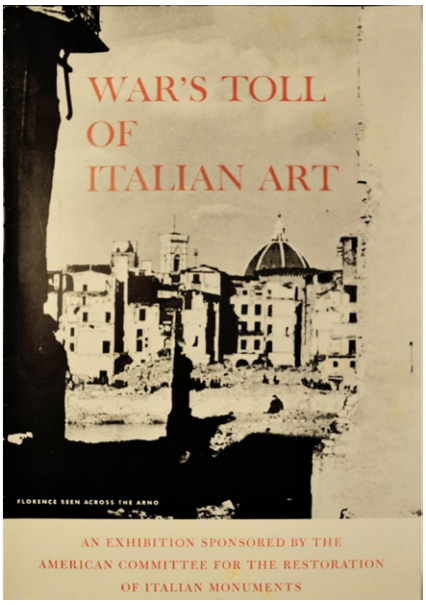


Figure 2. Cover of the catalogue of 'War's Toll of Italian Art', 1946 ©American Committee for the Restoration of Italian Monuments.

Divided into two sections, the exhibition included works from both State Galleries and private collections. The first section, located in the Barbo Apartment and in the three monumental halls, displayed 117 paintings primarily from northern Italy, some of which were initially deposited in the Marche, Umbria, and Lazio before subsequently being transferred to the Vatican. The second section of the exhibition, in the Cybo Apartment,[3] presented privately owned works from various schools and eras, sourced from the most important Roman collections, 'so that even the private individuals could contribute, with their treasures that remained intact, to the salvation of those of the whole homeland, tortured by war.'[4]

The exhibition's purpose was to raise funds for restoring monuments destroyed by Anglo-American bombing. To attract visitors, the entry fee also included potential membership in the Association, with annual fees of one thousand lire for ordinary members or ten thousand for the meritorious members.[5]

2.2 'WAR'S TOLL OF ITALIAN ARTS' IN NEW YORK, 1946

The effort to safeguard Italian heritage extended beyond Italy, attracting transatlantic interest. In collaboration with the Directorate General of Fine Arts and the American Committee for the Restoration of Italian Monuments (ACRIM), a series of events—including exhibitions,

3. See Archives of Associazione Nazionale per gli Interessi del Mezzogiorno d'Italia (ANIMI).

4. Zanotti Bianco, *Mostra d'Arte Italiana*.

5. Luca Ciancabilla, "La Guerra Contro l'Arte. Dall'Associazione Nazionale per il Restauro dei Monumenti Danneggiati dalla Guerra alla Ricostruzione del Patrimonio Artistico in Italia", in *Bologna in Guerra. La Città, I Monumenti, I Rifugi Antiaerei*, ed. Luca Ciancabilla (Bologna: Minerva Edizioni, 2010), 23-40.

publications, conferences, and films—were organised to raise awareness of the state of Italian monuments. Such initiatives sought to foster collaboration and secure financial aid from international supporters who recognised the importance of preserving cultural heritage that belonged not only to Italy but to the whole of civilization.

The ACRIM was established in 1946, with many of its members having been involved in protecting European art and heritage during the war, including the Monuments Men.[6] In preparation for the exhibition, a substantial amount of documentary material had been sent from Italy to New York.[7]

From 18 October to 24 November 1946, 'War's Toll of Italian Art' was hosted at the Metropolitan Museum of Art in New York **(Fig.2)**. The exhibition featured photographs, drawings, graphics of various types, and several works of art previously restored by the Central Institute of Restoration (Istituto Centrale del Restauro, ICR) and the Superintendency of the Galleries of Florence. Approximately eighty panels with large-format views served as 'visual monographs' with detailed captions focusing on the value and state of the individual works.8 The exhibition highlighted that 2,500 buildings, along with some frescoes and sculptural decorations, had suffered from serious or irreparable damage during the war.

Moreover, the extensive network between American art history departments and ACRIM members facilitated the exhibition's dissemination to various venues. Some of the photographic panels were transported by rail across the United States as part of an itinerant exhibition managed by the American Federation of Arts that lasted over a year. Several lectures accompanied the exhibition, delivered by active ACRIM members. Notably, Fredrick Hartt delivered a lecture on 'Toll of Italian Art' at Taylor Hall, Vassar College on 26 November 1946,[9] and Ernest T. De Wald presented at the Cleveland Museum of Art on 28 March 1947.[10]

3. EXTERNAL GAZE AND NATIONAL IDENTITY

3.1 FUND RAISING FOR HERITAGE

During 'The Italian Art Exhibition' in Rome, efforts were made to build cooperation between public and private sectors in the organization of exhibitions and in the reconstruction of the war damage heritage. The 'War's Toll of Italian Arts' exhibition in New York demonstrated transnational concern and cooperation, relying on private 'patronage' for monuments, predating the launch of governmental aid programs to Europe, including the 1948 Marshall Plan. They provide an opportunity to observe the marketing operation implemented in the first years of post-war reconstruction. One journalist remarked, 'We, in America, can only contribute an initial sum out of the total 9 million. Without our aid, however, the inevitable loss of time which would ensure, would result in even greater loss and deterioration. We cannot help but feel a responsibility.'[11]

Several strategies for cultural patronage toward Italian heritage were implemented in the United States. First, a fund-raising campaign launched

6. Michela Morgante, "War's Toll, I Monumenti Italiani in USA (1946-47). Una Strategia per Immagini," *Richerche storiche* 43, no.2 (2013): 233-240.

7. Morgante, "War's Toll",224.

8. Morgante, "War's Toll",224.

9. See "Hartt Lectures on Toll of Italian Art," *Vassar Chronicle* IV, no.12 (November 1946): 1-6.

10. See "Part II. Program of Events," *The Bulletin of the Cleveland Museum of Art* 34, no. 2 (February 1947), 39-42.

11. Lori Wurmbrand, 'Art Notes,' *Vassar Miscellany News* 31, no. 10 (November 1946): 2.

through paid advertisements in American press outlets regularly solicited tax-deductible donations, channelled to a company based in New York. Foreign, extra-budgetary donations reserved for exemplary monuments are financed through a series of minor repairs initiatives. There were also contributions from corporate entities, such as the Samuel H. Kress Foundation, whose contribution to the reconstruction of the Tempio Malatestiano in Rimini, the Santa Trinità Bridge in Florence, and the Campo Santo in Pisa caused great social impact. In the spring of 1948, ACRIM identified among its beneficiaries the Bramanate portico of S.Ambrogio, the Palladian Basilica, Villa Falconieri in Frascati, and some monuments of Pompeii and Faenza. The Committee requested that the Italian government make the donations public, announcing the new contributions alongside the previous ones at the Malatestiano, the Campo Santo, and the Santa Trinità bridge. This practice demonstrates the significance of media coverage for promoting the United States' image as a patron of Italian art.[12]

3.2 EXHIBITION NARRATIVES

These exhibitions addressed a heterogeneous audience, invoking a narrative force to persuade supporters, scholars, lovers of Italian art, collectors, and individual donors to contribute to the preservation of artwork and heritage belonging to all civilizations. As stated, 'the restoration of its monuments is being shouldered by Italy to the utmost extent of that stricken country's resources. But these monuments belong to the common patrimony of Western civilization, and the civilised nations of the West cannot but feel some share in the responsibility of preserving them from further ruin.'[13]

These exhibitions mirror the tentative initiatives of constructing a new Italian national identity in the post-war era from a global perspective and reflect an external gaze on Italian heritage. The exhibition narrative emphasises how Americans and other Allied countries were involved in safeguarding Italian heritage. The memory of facts experienced first-hand by these special witnesses enriched the mere documentary dimension, enhancing its communication aspects. For instance, there are materials on display at the Metropolitan Museum that were produced by Americans in Italy, including Frederick Hartt and Albert Sheldon Pennoyer.

The photographic language then serves a very specific function in constructing this delicate operation: it must confer value and significance of universal scope to the represented art heritage, persuasively depict the gravity of the current state of Italian monuments and capture the attention of American visitors to encourage their participation. The exhibition emphasises the contrast between the 'before' and 'after' status of a series of Italian monuments that suffered damage during the war, as well as pictures of their temporary protection and permanent repair. Notably, panels depicting the 'before' status were placed at the front of the 'after' status, with an intention to demonstrate the beauty and grandeur of those monuments, highlighting the strong determination to restore and reconstruct the beauty through donations.

12. Giovanna Russo Krauss, "Il Ruolo della Fotografia Alleata nella Ricostruzione Postbellica Italiana. Dall'Allied Military Government all'American Committee for the Restoration of Italian Monuments," *Eikonocity. Storia e Iconografia delle Città e dei Siti Europei* 2, no. 2 (2017): 41-55.

13. Charles Rufus Morey, "Forewords," in *Fifty War-Damaged monuments of Italy*, ed. Emilio Lavagnino (Rome: Istituto Poligrafico dello Stato, 1946), VII.

3.3 DIPLOMATIC VALUE OF TRANSNATIONAL EXHIBITIONS IN POST-WAR PERIODS

The exhibition methods of these two exhibitions were distinctive, with the overseas exhibition having been primarily organised by American agencies. In fact, most early post-war transnational exhibitions, including the 1946 'War's Toll of Italian Arts' and the 1949 'Twentieth Century Italian Art', were predominantly promoted by American associations with minimal Italian government involvement.

In the aftermath of its military defeat, Italy lacked the political or economic means for an effective foreign policy,[14] and this was coupled with concerns about nationalistic propaganda that arose immediately after the end of the Fascist governance. The Italian government made significant cuts to the public budget and closed major institutions for cultural activities overseas, with such exhibitions of Italian art and architecture often being promoted by foreign agencies, leading to 'not only the reduction but even the total suppression of any cultural activity abroad.'[15] According to the State Archives of Macerata, the public budget dedicated to 'cultural activities abroad' was reduced to 137 million lire, one-fifth of the pre-war amount,[16] and some major institutions formerly responsible for Fascist cultural diplomacy were abolished, such as Istituto Nazionale per le Relazioni con l'Estero.[17]

The cultural diplomacy of the Italian Republic was characterised by its effort to promote cultural cooperation based on multilateral cultural diplomacy. This represented a new direction, compared to the foreign cultural policy promoted during the Fascist period, characterised mainly by public diplomacy with a propaganda-oriented approach. Therefore, these exhibitions showed the 'multilateral initiatives' or 'cultural cooperation' that were proposed by the Christian Democracy and the Italian Foreign Ministry as a political tool to promote mutual understanding, safeguarding of peace, and international solidarity, in stark contrast to the imperialistic nationalism of Mussolini's regime. This strong commitment to interpreting art as a universal value for all mankind aligned with the general discourse of that time.

14. See Antonio Varsori, *L'Italia nelle Relazioni Internazionali dal 1943 al 1992* (Roma-Bari: Laterza,1998).

15. Lorenzo Medici, "Italy's Cultural Diplomacy: From Propaganda to Cultural Cooperation," *Świat Idei i Polityki* 18, no. 1 (2019): 25-46.

16. See Gabinetto Asmac (1944-1958), b. 83 (1944-1947), posiz. 6 Ris. 2/13, Istituti e scuole all'estero - Finanziamenti, promemoria, De Gasperi to Parri, Rome, July 14 1945.

17. Raffaele Bedarida, "Export/Import: The Promotion of Contemporary Italian Art in the United States, 1935–1969" (doctoral dissertation, City University of New York, 2016),101.

4. ECHOES: POST-WAR EXHIBITIONS AS VEHICLES OF TRANSFORMATION

In the 'War's Toll of Italian Arts', the work carried out in the Central Institute of Restoration (ICR) in Rome was shown to American visitors. Some original fragments of frescoes bombed during the war were sent from Italy to the United States during the exhibition. Additionally, for the launch of the New York exhibition, an illustrated journal, *Life*, published photos of two technicians from the ICR working on the desolate puzzle of 20 thousand pieces, showcasing the remarkable work carried out by Italian experts. In fact, these exhibitions celebrated Italian professionalism in a highly specialised field at an international level, functioning as a catalyst for the development of post-war conservation guidelines.

The 1946 New York exhibition and its catalogue had a lasting impact on the '1950 Rome Reconstruction Exhibition (Mostra Della Ricostruzione Nazionale Roma 1950)'. The latter was organised and held at Palazzo delle Esposizioni from 27 January 1950 to 26 July 1951. It was accompanied by a publication, *The Reconstruction of the Italian Artistic Heritage (La ricostruzione del patrimonio artistico italiano)*, which was released on the occasion of the V General Conference of UNESCO in Florence in 1950. Unlike its predecessor, the Rome exhibition of 1950 represented a point of reflection and fine-tuning of the value, methodology, and operational methods that reconstruction and restoration had in the five years following the end of the conflict.[18] The 1950s exhibition shows the progress and positive image of Italian reconstruction with a stronger sense of national pride.

These post-war exhibitions played multifaceted roles in raising awareness, promoting diplomatic endeavours, and fostering nation-building for Italy on a global scale. They exemplified early translational financial aid for heritage, documented the evolution of conservation guidelines, and illuminated the intricate facets of Italian post-war national identity in transnational dialogues. Acting as conduits for cultural exchange and renewal, these exhibitions symbolise Italy's journey from devastation to renewal in the aftermath of war and dictatorship. They stand as testaments to the resilience and creativity of the Italian people, serving as a bridge between the past and the future.

In conclusion, these post-war exhibitions served as powerful tools for transnational connections, contributing to fundraising, shaping conservation guidelines, and influencing national identity. They mark a significant chapter in Italy's cultural and diplomatic history, reflecting its emergence as a global leader in art restoration and heritage preservation. ■

18. Ministero dei Lavori Pubblici (eds), *La Mostra della Ricostruzione Italiana, Catalogo della Mostra* (Palazzo delle Esposizioni: Roma, 1950).

BIOGRAPHY

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CONTESTED MODERNITIES: ARCHITECTURE AND PROPAGANDA IN THE *EXPOSIÇÃO NACIONAL DO ESTADO NOVO* (RIO DE JANEIRO, 1938)

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ABSTRACT

In 1938, Rio de Janeiro became a stage for the *Exposição Nacional do Estado Novo*, a propaganda exhibition intended to present Getúlio Vargas' project for a "New Brazil" to the masses. The exhibition showcased the work of various government agencies through photographs, graphics, drawings, and scale models. Architecture was particularly mobilized, through built and unbuilt projects, to materialize a national identity aligned with the interests of the state. No other project would attempt to represent the ideological aspirations of the new regime as much as Cidade Universitária do Brasil (CUB), the country's first national university. Prominently displayed inside a pavilion dedicated to the work of the Ministry of Education and Health, the university was, at the time, the flagship project of Minister Gustavo Capanema. Drawing from archival materials, this paper questions the political function of the presentation—and representation—of architecture in the context of Brazil's incipient state-led project of modernity. The exhibition's installation photographs expose a moment of tension within the regime, when conflicting projects coexisted as if part of a harmonious whole. Expanding beyond a traditional architecture exhibition, this paper explores the intricate relationship between architecture and politics through mechanisms of display. Materializing the "culture wars" taking place within the new regime, as historian Daryle Williams put it, the exhibition points to the involvement of architects—including Lucio Costa, Oscar Niemeyer, and Marcello Piacentini—in the construction of the Estado Novo's ideological project. An analysis of the *Exposição Nacional do Estado Novo* reveals the entanglement of architecture exhibitions and state propaganda at a time when fascism, modernization, modernism, and mass media converged. Yet, despite its authoritarian context, the exhibition reveals the disputes, negotiations, and uncertainties that defined the political moment of Brazil and the world on the eve of the Second World War.

1. INTRODUCTION[1]

On December 10, 1938, the capital city of Rio de Janeiro became a stage for the display of Brazil's new authoritarian, nationalist regime with the inauguration of a large-scale exhibition. The *Exposição Nacional do Estado Novo* showcased the work of various government agencies in a series of pavilions located amid the ongoing modernization of the city center.[2] Architecture was particularly mobilized, through built and unbuilt projects, to materialize a national identity aligned with the interests of the state. One of the exhibition pavilions was dedicated to the work of the Ministry of Education and Health.[3] Inside, architectural models, drawings, photographs, and graphics introduced its activities to visitors, encompassing education, culture, health, and social assistance. Prominently displayed within the section dedicated to education was the Ministry's flagship project, Cidade Universitária do Brasil (CUB), which would become the country's first national university.

A photograph of Minister of Education and Health Gustavo Capanema showing the model of the university campus to President Getúlio Vargas during his visit to the exhibition's inauguration is telling **(Fig. 1)**. Published in the widely-circulated magazine *O Cruzeiro*, neither the photograph nor its caption revealed details of the project, pointing to the tension and uncertainty that characterized the design process at that time, but also revealing the mobilization of architecture as propaganda.[4] The model represented the only architectural project on the magazine's pages, and its politically charged function was reinforced by images of Vargas, military men, and nationalist symbols surrounding it. Architectural representation was seen as sufficiently concrete to give form to Vargas' regime, materializing its ideological project. Centered on Vargas as the embodiment of the state, the photograph suggests the intertwining of nationalism, militarism, and education, a mark of the regime and the basis of the *Exposição*. As a result, the university project was shaped by, and intended to give shape to, these same concerns.[5]

Despite the centralizing tone of the propaganda exhibition, a closer look at the display of CUB unveils a moment of tension within the regime, when two competing architectural projects for the future university were displayed side by side. At a time marked by ideals of national unity and authoritarianism, their presence reveals contested visions of modernity coexisting within the recently established Estado Novo.

2. THE EXHIBITION AS A SITE OF NATION BUILDING

The period between 1935 and 1938—which coincides with the conception and design of CUB—was characterized by a search for direction that included the embrace of fascism as a model of nationalist modernization and cultural regeneration.[6] In power since 1930, Vargas cancelled the elections and instituted the Estado Novo as a dictatorial regime on November 10, 1937. To craft a new, modern, and unified identity for the country based on the incipient notion of *brasilidade*, or Brazilianness, the state became both arbiter and promoter of cultural production.[7] The Ministry of Education and Health, created in 1930, inaugurated the

1. Archival research for this paper was supported by the David Rockefeller Center for Latin American Studies' Brazil Research Grant. All translations my own, unless otherwise noted.

2. The exhibition reused structures on the fairgrounds of *Feira de Amostras*. Hugo Segawa, "Cenário de modernidades: a Feira Internacional de Amostras do Rio de Janeiro," Resumos: Arquitetura Moderna Brasileira. 25 anos do Docomomo Brasil, 2019.

3. Other pavilions included labor, war, justice (with an anti-communist exhibition), treasury, roads and public works, agriculture, foreign affairs, and the navy.

4. "O Brasil no Novo Regime," *O Cruzeiro*, December 17, 1938: 30-31. The image caption reads: "Minister Gustavo Capanema explains to Mr. Getúlio Vargas details of Cidade Universitária in the Pavilion of the Ministry of Education."

5. Religion and anti-communism were complementary fields of action within the regime, also shaping CUB's pedagogical project. See Renato Amado Peixoto and Cândido Moreira Rodrigues, "O catolicismo no Brasil do período Vargas: imbricações entre religião, política e espacialidade (1930-1945)" and Rodrigo Patto Sá Motta, "O anticomunismo católico e a ditadura de 1937," in Leandro Pereira Gonçalves and Maria Inácia Rezola, *Igrejas e ditaduras no mundo lusófono* (Lisboa: Imprensa de Ciências Sociais, 2019).

6. With Mussolini's rise to power, the fascist regime sought a more active influence on the Italian population overseas, and between 1923 and 1942 it established international cultural policies targeting the Italian-Brazilian community. Italian influence faded when Brazil joined the Allies during World War II. Although not state-sponsored,

state's interventionist approach to culture, which would intensify under Capanema's leadership between 1934 and 1945.

Historian Daryle Williams introduces the notion of "culture wars" to define the fight for nationhood present within state-sponsored cultural institutions and projects supposed to represent *brasilidade* as the imaginary promoted by the state. As a political strategy, Capanema's emphasis on the collective construction of a national cultural project provided space for some degree of intellectual and aesthetic experimentation within the state apparatus. Bringing together artists, intellectuals, educators, and architects who understood that "managing culture could be a powerful weapon in managing Brazilianness," Capanema embraced culture and education as vehicles for state-controlled ideologies and, at the same time, negotiated with groups from both ends of the political spectrum.[8]

This fight for national representation materialized in space, through the many government buildings emerging in the center of Rio. The inauguration of the Ministry of Education and Health headquarters (1938-1945) consolidated Capanema's image as the progressive patron of modernism and contributed to establish modern architecture as the national style. However, in parallel with its construction, and only a few steps away, buildings such as the art-déco Ministry of Labor (1938) and the Ministry of Finance (1943), with its neoclassical entrance portico, emerged as competing visions of modernity.[9]

Despite Vargas' goal to create a unified national image, the culture wars taking place in the city would be staged once again, through architecture, but now in the space of an exhibition. Aware of the power of exhibitions as sites of nation building, the state's emerging propaganda machine inaugurated its vision for "a New Brazil" with the 1938 *Exposição Nacional do Estado Novo*, organized by the Ministry of Justice—then led by Francisco Campos and his chief of staff, Francisco Negrão de Lima. Campos, one of the most vocal supporters of fascism within the regime, and with strong ties to the Catholic Church, played a fundamental role in the conception of the Estado Novo and its repressive policies, taking charge of the state's propaganda.[10] In an inauguration speech for national daily radio transmission *Hora do Brasil*, Negrão de Lima laid the objectives and strategies of the *Exposição*:

> *(…) Having a doctrinal orientation, the Estado Novo exhibition will be an exposition of ideas, seen through their objectification in concrete works and facts (...) It will be grandiose and will surprise those who see, in the simplicity of its eloquence, the pictures, maps, models and illustrations that represent, in a panoramic cut, the results of the construction operated in national life by the founder of Estado Novo*.[11]

As clearly stated, the exhibition was mobilized as a medium to indoctrinate the masses, ultimately serving as a propaganda tool to strengthen the new regime, embodied in the figure of Vargas. The use of exhibitions as a political tool cannot be dissociated from other contemporaneous exhibitions, including the 1937 Paris International Exposition, but particularly those

cultural exchanges with Italy marked the development of modern architecture in Brazil. Piacentini had a direct impact on the training of architects including Rino Levi, Gregori Warchavchik, and Lina Bo Bardi, all of whom studied in Rome during the 1920s and 1930s. See Renato Anelli, "O mediterrâneo nos trópicos" (1999), in Abilio Guerra (org.), *Textos Fundamentais sobre história da arquitetura moderna brasileira - parte 2* (São Paulo: Romano Guerra, 2010), 219-235.

7. Carlos A. Ferreira Martins, "Identidade nacional e Estado no projeto modernista" (1992), in Abilio Guerra (org.), *Textos Fundamentais sobre história da arquitetura moderna brasileira - parte 1* (São Paulo: Romano Guerra, 2010), 294.

8. Daryle Williams, *Culture Wars in Brazil: The First Vargas Regime, 1930-1945* (Durham: Duke University Press, 2001), 52.

9. Lauro Cavalcanti, *Moderno e Brasileiro: a história de uma nova linguagem na arquitetura (1930-60)* (Rio de Janeiro: Jorge Zahar Editor, 2006).

10. Emerging in 1934 as the Department of Propaganda and Cultural Diffusion, it became the National Department of Propaganda before being replaced by the Department of Press and Propaganda (DIP) in 1939, active until the end of the regime in 1945.

11. "Inaugura-se, hoje, a Exposição Nacional do Estado Novo," *Jornal do Brasil*, December 10, 1938.

of fascist Italy: from the seminal 1932 *Mostra della rivoluzione fascista*, celebrating the tenth anniversary of Mussolini's regime, to the 1937 *Mostra Augustea della romanità*.[12] These "political exhibitions," as cultural historian Jeffrey Schnapp defines them, represented a shift from nineteenth-century museums to twentieth-century temporary exhibitions as sites for nation-building. The historicism of museums, based on a positivist view of scientific knowledge addressing educated elites, gave way to populist calls to mass mobilization through impermanent exhibitions "where myths of origins could be created, disseminated, and venerated, and genealogies linking the present to the remote or recent past be forged."[13] Exhibitions became an important site for the creation and dissemination of what political theorist Roger Griffin identifies as the palingenetic myth of national rebirth, which underpinned not only Mussolini's fascist regime but also Vargas' Estado Novo.[14]

The role of *construction* was fundamental to the narrative of renewal promoted by fascist Italy as well as by the *Exposição*, as revealed in its inauguration speech. Architectural and infrastructural projects—represented by drawings, photographs, maps, and especially scale models—served as "concrete" proof of the regime's actions, physically transforming the territory and giving shape to the new nation, even if restricted to the realm of imagination. As with the architectural projects on display, the exhibition itself—and the mythical narratives it constructed—helped legitimize the ideological project of the new regime. With wide national coverage in the radio, newspapers, and magazines, the *Exposição* served as a public display of nationalist strength.[15]

3. CULTURE WARS AT CIDADE UNIVERSITÁRIA DO BRASIL

Educational reforms were key for the construction of a unified identity based on *brasilidade* and included the creation of a national university.[16] The pedagogical and architectural project for Cidade Universitária do Brasil, a new city within the city, would serve as a model for the country. Its process, however, was marked by conflict from the start. Although unrealized, the project mobilized a network of local and foreign architects, engineers, government officials, educators, and intellectuals who oftentimes negotiated personal, national, and international agendas. For the Brazilian state and its broad array of collaborators, drawing from foreign ideological and aesthetic models required strategies to translate, interpret, and construct a "Brazilian version" able to represent a new imaginary of *brasilidade*. This was the task that, each in their own way, the three unbuilt projects for CUB, designed for a site at Quinta da Boa Vista, attempted to undertake: the first, a 1935 commission to Italian architect Marcello Piacentini with Victorio Morpurgo, approved in 1938; the second, an arguably unsolicited 1936 proposal by French-Swiss architect Le Corbusier that was immediately rejected; and, finally, an alternative project by Lucio Costa and a team of Brazilian architects presented in 1936 and officially rejected in 1937.[17]

Despite its rejection, a year later the Brazilian project was displayed, through three perspective drawings, side by side with Piacentini's models and

12. Jeffrey T. Schnapp, *Modernitalia*, ed. Francesca Santovetti (Oxford, Bern, et al.: Peter Lang, 2012), 148.

13. Schnapp, *Modernitalia*, 145.

14. Roger Griffin, *Modernism and Fascism: The Sense of a Beginning Under Mussolini and Hitler* (Basingstoke: Palgrave Macmillan, 2007), 1; and "Staging the Nation's Rebirth," in Fascism and Theatre (New York, Oxford: Berghahn Books, 2022), 11-29.

15. Events and entertainment—including an amusement park, talent show, music competition, fireworks, and festivities—complemented the populist state's propaganda efforts.

16. Although Universidade do Rio de Janeiro (URJ) was the first university instituted by the federal government in 1920, a substantial educational reform only took place in the 1930s, when URJ was restructured as Universidade do Brasil (UB). Maria de Lourdes de Albuquerque Fávero, "A Universidade no Brasil: das origens à Reforma Universitária de 1968," *Educar, Curitiba*, n. 28, Editora UFPR (2006): 22.

17. The three projects were analyzed in detail in two master's theses: Matheus Gorovitz, *Os riscos do projeto: Universidade do Brasil, 1936* (São Paulo: Faculdade de Arquitetura e Urbanismo - FAUUSP, 1989); Alberto Klaus, *Três Projetos para uma Universidade do Brasil* (Rio de Janeiro: ProUrb UFRJ, 2003).







Figure 1. Exposição Nacional do Estado Novo, Rio de Janeiro, Brazil, 1938. Getúlio Vargas and Gustavo Capanema with model of Cidade Universitária do Brasil. Arquivo Gustavo Capanema, FGV CPDOC, GC foto 146-2.

Figure 2. Exposição Nacional do Estado Novo, Rio de Janeiro, Brazil, 1938. Installation photograph of Cidade Universitária do Brasil. Arquivo Gustavo Capanema, FGV CPDOC, GC foto 147-89.

Figure 3. Exposição Nacional do Estado Novo, Rio de Janeiro, Brazil, 1938. Installation photograph of Cidade Universitária do Brasil. Arquivo Gustavo Capanema, FGV CPDOC, GC foto 147-95.

detailed drawings inside the Ministry of Education and Health pavilion in the *Exposição*, as if part of a cohesive plan **(Fig. 2)**. Emblematic of the period's culture wars, the display of CUB sheds light on the tensions within Capanema's Ministry and the regime at large at a time of political instability on the eve of World War II. While the Ministry's modernist headquarters broke ground a few blocks away from the *Exposição*, Capanema was still fully invested in the construction of the university campus modelled after Piacentini's classicist Città Universitaria in Rome, inaugurated in 1935 for Mussolini's regime.[18]

Occupying a corner of the pavilion, the display of CUB prominently presented Piacentini and Morpurgo's project. Sent from Italy after being displayed in the Brazilian Embassy in Rome, three large wooden models showed a general view of the campus, a detail of the central rectory plaza, and a section of the stadium and its connecting bridge. In addition to a masterplan, rendered drawings on the surrounding walls showed detailed views, including the rectory plaza and the "Beacon of Latin Civilization" **(Fig. 3)**.[19] The Italian project was marked by classicism in its connection to Roman Imperial tradition through a sense of order, symmetry, and solidity. The Brazilian project, on the other hand, was presented through three line drawings prominently displayed on one wall, showing views of the central avenue filled with palm trees; the auditorium facing the rectory and library tower; and the entrance portico accompanied by a larger-than-life sculpture of a standing figure.[20] Led by Lucio Costa, the Brazilian team included Affonso

18. Flavia Marcello and Paul Gwynne, "Speaking from the Walls: Militarism, Education, and Romanità in Rome's Città Universitaria (1932–35)," *Journal of the Society of Architectural Historians* 74, no. 3 (September 1, 2015): 323-343.

19. Marcos Tognon, *Arquitetura italiana no Brasil: a obra de Marcello Piacentini : história, catálogo, documentos* (Campinas, SP: Editora da Unicamp, 1999).

20. Their project had been rejected on March 12, 1937, in accordance with Capanema. Otavio Leonídio, *Carradas de razões: Lucio Costa e a arquitetura moderna brasileira, 1924-1951* (Rio de Janeiro; São Paulo: Editora PUC ; Edições Loyola, 2007), 192-194.

Eduardo Reidy, Oscar Niemeyer, Fernando Firmino Saldanha, Jorge Machado Moreira, Ângelo Bruhns, José de Souza Reis, and engineer Paulo R. Fragoso.[21] Aligned with Le Corbusier's modernist principles, especially the use of *pilotis* to raise the buildings from the ground, the Brazilian project envisioned the establishment of the "new architecture" Costa advocated for since as early as 1934.[22] Although adopting different strategies, the Italian and Brazilian projects shared a monumentality that could explain their presence in the *Exposição*.

4. CONCLUSION

Despite their formal differences and impossible reconciliation, the two projects for CUB displayed side by side suggested alternative directions for the materialization of a national imaginary that was still under construction. Their coexistence in the propaganda exhibition could result from the regime's efforts to conceal its reactionary, authoritarian politics through images of integration, freedom, and collaboration, mobilizing architecture—and its representation—as a mediator. Alternatively, the display could be a consequence of the continuous resistance and persuasion of Brazilian modernist architects, especially Oscar Niemeyer, who might have gained agency to include their project in the exhibition pavilion.[23] While the reasons for the display of the two projects remain unknown, their presence reveals the efforts, by both architecture teams, to negotiate foreign ideological and aesthetic models in the crafting of a national identity that could represent the future nation envisioned by the Vargas regime.

In the context of the *Exposição*, the architectural images on display represented the aspirations of the state, producing a collage that was perhaps unnoticed to most visitors. The fragmented images of select views and buildings allowed the exhibition to entice the audience to imagine Cidade Universitária do Brasil as a representative of the regime's modernizing and ambitious agenda, which included the construction of a "new Brazilian man." Whether drawing from the classical tradition of Imperial Rome and the idea of a Latin civilization or from international avant-garde modernism aligned with a Brazilian colonial tradition, the representations on view emphasized the project's monumentality, dominance over nature, and European roots. While Piacentini's design evoked the strength and discipline sought by the Estado Novo by mostly dismissing local particularities, the Brazilian project negotiated the monumentality of its central axis and entrance portico with more open and intimate spaces, creating a somewhat welcoming and familiar environment. Together, the two visions for the project provided an ambivalent image of both the "eternal" and the "Brazilian character" that Capanema sought from the start to represent the "grand intentions" of the government.[24] ■

21. Lucio Costa, A. E. Reidy, O. Niemeyer, et al., "Universidade do Brasil – Ante-projeto," *PDF: Revista da Directoria de Engenharia da Prefeitura do Distrito Federal* (May 1937): 120-139.

22. Lucio Costa, "Razões da nova arquitetura," *PDF: Revista da Directoria de Engenharia da Prefeitura do Distrito Federal* (January 1936): 3-9. First publication of the essay written in 1934.

23. In a letter from January 30, 1939, Capanema thanked Niemeyer (and his team) for his "technical cooperation" in the organization of the Ministry pavilion. Arquivo Gustavo Capanema, FGV CPDOC. This could also explain the pavilion's modernist ethos, visible in the wrapping of the existing art-déco building, the addition of a marquee, and biomorphic graphics.

24. Capanema expressed these intentions in an early meeting of Escritório do Plano da Universidade, a group responsible for determining the program and structure of CUB. Meeting report, July 22, 1935. Arquivo Gustavo Capanema, FGV CPDOC.

BIOGRAPHY

Catarina Flaksman is a PhD candidate in History of Art and Architecture at Harvard University. Her research explores the intersection of architecture and media in the construction of cultural and political imaginaries of twentieth-century projects of modernity. Her dissertation focuses on the mobilization of architecture exhibitions in Brazil's cultural politics from the 1930s to the 1960s. Flaksman holds a master's degree in History of Art and Design from Pratt Institute, New York, and a bachelor's degree in Architecture and Urbanism from Pontifícia Universidade Católica of Rio de Janeiro.

REMAPPING MODERNISMS: CONTEMPORARY DEBATES

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ABSTRACT

This text discusses the need to redefine modern architecture, considering expanded global knowledge and contemporary perspectives, challenging outdated canonical narratives. It highlights the exclusionary nature of current definitions, which overlook contributions from diverse social frames, such as geographies, gender, and race. Authors advocate for a post-colonial approach, emphasising the cultural subjugation inherent in colonial narratives and the necessity of de-hierarchizing Eurocentric knowledge. Expanding research data on modern architecture prompts a revaluation of teaching and research methodologies, advocating for inclusivity and critical awareness. The text questions the feasibility of creating an all-encompassing compendium of knowledge and suggests adopting new, more collaborative approaches rooted in neural network-like structures rather than hierarchical taxonomies. It emphasises the need for a paradigm change and explicit scrutiny of canonization processes to foster a contemporary understanding of modern architecture. The session aims to contribute to this effort by proposing non-hierarchical, non-patriarchal, and non-racist perspectives rooted in post-colonial and feminist critiques, fostering international collaboration to support the valorisation and conservation of modern architectural legacy.

1. INTRODUCTION

An International Docomomo conference in Latin America presents an opportunity to reflect on the very definition of modernity and modern architecture from diverse points of view. In the last decades of the previous century and the first decades of this one, international knowledge about 20th-century architecture has been significantly expanded, following in-site and archival research held by scholars worldwide. This recognition makes it increasingly clear how canonical history books, written decades ago by prestigious authors and used worldwide as references to the situate Modern Architecture are outdated. Albeit very important and still very useful, these narratives are incomplete, of insufficient temporal and geographical range, and blind to the debate of gender and race issues, which are indispensable from a contemporary point of view. Yet – perhaps for lack of other options –we still rely upon them to define our current conceptual definition of "Modern Architecture". It is an uncomfortable situation that must be questioned. It is necessary to expand our awareness, to remap, reframe, and perhaps re-date what should be defined and comprised as "Modern Architecture". Revising the established propositions, reframing the habitual debates, and rethinking our teaching and research studies' scope and focus is unavoidable.

On many levels, a broadened basis for understanding what we should consider as full-status "Modern Architecture" is of utmost importance. We need to repropose its theoretical and technical study as a fundamental trait to establish a proper basis for the reconnaissance of its heritage status, thus ensuring its importance as a meaningful cultural legacy, on the worldwide stage. Modernity in Architecture must no longer be understood as primarily belonging to a given place, assuming a secondary role to any other different places. As stated by philosopher Agnes Heller, for good and evil, "Modernity is general; it steamrolls over the entire Earth"[1]

2. FROM CANONICAL TO POST-COLONIAL

After the enormous efforts of research being prompted everywhere, during the last decades' knowledge expansion, it is becoming increasingly anachronistic to keep working on a fixed and restricted definition of Modern Architecture. Especially when its canonical version only considers and includes, in its "mainstream", some chosen social frames and their built examples, whose characteristics and descriptions only conform to the deeds that may be found in some given places, countries, regions, or continents. The current canonical definitions of "Modern Architecture '' are exclusionary and restrictive, seldom considering the often-hidden contribution of women architects, engineers, and learned clients. Its structure and boundaries are not tuned with contemporary post-colonial challenges, and it is not wise to keep ignoring the necessity of de-contaminating our field, and any heritage studies, from their (often unconscious, but still present) colonial mentality, which we now realize are imbued in the previous century canonical definitions.

That challenge has been considered, for example, by authors such as UNESCO-Heritage specialist, Maria Pia Guermandi, in her book "Decolonizzare il Patrimonio":

1. Agnes Heller, *A Theory of Modernity* (Oxford: Blackwell Publishers, 1999), 4.

> *Colonial domination was not only exercised as military and political possession, and exploitation of the resources and men of the colonies, but it implied, more profoundly and more lastingly, a cultural subjugation functional to the pursuit of such domination. […] The colonial project can be interpreted as a project of cultural control through which colonizers transformed colonized societies. […] The creation of new categories and oppositions – modern/traditional, civilized/primitive, Europe/Asia – was not a unidirectional process, but produced permanent cultural changes in the colonizing societies.*[2]

Her position suggests that the expansion of Modernity (as in Heller's definition) did not exclusively affect the so-called "periphery" but also, with the same intensity, the supposed "centres." If that is so, a contemporary redefinition of "Modern Architecture" is not only necessary for the "inclusion" of "others": the necessity of repurposing it is for the benefit of all parts involved—which are, literally, the whole world.

Within the colonial system, cultural heritage will take on a dual role, both as a testimony to the superiority of the white man, and as heir of the great civilizations of the past, and as regards the cultural heritage of colonised populations, as a form of knowledge for more effective management of colonial power. And it will continue to be used as an instrument of symbolic power […] In the cultural sphere, Eurocentric knowledge, with the resumption of universalism, imposed the canon that regulates the understanding and controlling of the heritage of the "other"[3].

In that light, the so-called "universal" definitions are shown their true colours: they stem from former colonial powers and their institutions. In a post-colonial world, they must be reconsidered and de-hierarchized, if they are to be able to survive another generation.

The accumulated research data, brought forth by scholars working on all continents, in the last decades of the 20th century and the first decades of the 21st century, on Modern architectural features – buildings, sites, entire cities, parks, neighbourhoods, furniture, objects, etc. – should not be added as marginalia, or to "update" existing canonical books. As it often happens, neither should it be relegated to a secondary chapter, or an appendix, to a consolidated (and thus, supposedly untouchable) history handbook. It must be carefully considered and accepted as a fundamental basis to broaden our understanding of Modern Architecture, what it entails, and what it is about.

The attitude of accepting the change is not only for the benefit of the "others". We should be enlightened by the expanded knowledge about Modern Architecture to reconsider what needs to be encompassed in its content. To be effective, it must affect our conceptual ideas, worldwide, to activate the establishment of new revised enlarged boundaries that are expanding our field. Such endeavour is – or must be considered as – an essential basis to debate and propose more adequate definitions of Modern Architecture, apt and in tune with 21st century best expectations.

2. Maria Pia Guermandi, *Decolonizzare Il Patrimonio. LÉuropa, LÍtalia e un passato che non passa* (Roma: Lit Edizzione, 2021), 33.

3. Guermandi, *Decolonizzare Il Patrimonio*, 33.

Modern Architecture, its definition, is still limited by 20th-century canonical narratives definitions. Changing that situation is a complicated task, as has already been discussed by several authors, since at least the 1990s.

> *The construction of canonical narratives is a dated historical event, but as its prevalence is still ubiquitous today, they are also a present-day issue. This historicity/present-day dual condition makes it a complex subject to deal with comprehensively and systematically. The pervasive nature of the canon renders us unaware of its presence, and due to its virtual invisibility, we tend to lean on its mandates and boundaries, perhaps for the lack of something else to rest on.*[4]

3. RECONSIDERING GENDER ISSUES

The reconsideration of the prestigious pioneering canonical histories is a most important debate. It will also reveal, expose, and review women's contributions, and our role in the establishment, propagation, and consolidation of Modern Architecture, worldwide.

Recent global events have highlighted a special emphasis on a worldwide awareness of women's rights status. Its critical reflection claims a place in all fields of knowledge. It regards fundamental human rights and opens tensions, contradictions, uncertainties, possibilities, and discussions in architecture and related disciplines.

> […] Architecture operates at the intersections of various elements *depending on contingencies, and contexts at a particular place and time. This field deals with a wide set of power and production relations and must face a complex set of cultural, political, and economic factors, representation systems, objects, forms, and meanings. […] The International Conferences on Gender and Architecture (ICGA) have created a pioneering space for meeting and debating about this need to question hegemonic positions and to meet unattended challenges.*[5]

According to the reflections of geographer Linda McDowell, it is crucial to be aware of power relations prevalent in knowledge creation. It is vital to reconsider methodologies that must be more collaborative, in some way open-source, and capable of extending beyond academia. Given that there is no neutrality in pursuing meaning in the narratives we build, it is necessary to question the power dynamics behind those who create the narratives and how they choose to present them. Narrators, narratives, and the narrated embody complex dimensions of power, and therefore, a dynamic and critical dialogue between "committed knowledge" and assumedly "positioned" and partial knowledge, with its critical dimension, is fundamental[6].

The new data that has been recently gathered tends to expand and accumulate exponentially, prompting the necessity of addressing some pressing theoretical questions. On the other hand, the existing, so-called "consolidated" data should not be kept as a fixed standpoint. The debate should be extended

4. Ruth Verde Zein, "The Meaningful Emptiness of the Canon". V!RUS, São Carlos, n. 20, 2020. [online]. Available at: http://www.nomads.usp.br/virus/virus20/?sec=4&item=1&lang=en. [Accessed: 23 April 2024].

5. Nuria Álvarez Lombardero; Patricia Santos Pedrosa; Serafina Amoroso; Dafne Saldaña Blasco; Helena Cardona; Julia Goula; María Novas Ferradás; Amelia Vilaplana. "International Congresses in Architecture and Gender: Innovating and Reconnecting". Hábitat y Sociedad, 11, November 2018: 239.

6. Patrícia Santos Pedrosa; Lia Gil Antunes. "Plural Existences: Feminists' Epistemologies and the History of Architecture". In Anália Torres; Fátima Assunção; Paula Campos Pinto; Diana Maciel (ed.). *Género, Conhecimento, Resistências e Ação*. Lisboa (Lisboa: Instituto Superior de Ciências Sociais e Políticas, 2023), 214.

into the canonical realm, reviewing it from an essentially critical standpoint. The (un) desired effect of the expansion of the field – and its critical awareness – is a general destabilisation. Not even supposed fixed data – like the names of authors, and the dates of the buildings – are not completely safe from that. The data expansion is putting forth an important conceptual pressure, making us acknowledge that nothing may be as it seems. Keeping our eyes "wide shut" to avoid the pain of dealing with this debate is not an option anymore.

4. DEALING WITH CHANGE

All that opens some important issues. The first would be – how is it possible to include "everything"? How would it be possible to create a comprehensive, all-inclusive compendium to amalgamate every knowledge possible? Wouldn't it be doomed to be incomplete, even before it is published? This is a quite common question. It is frequently addressed by professors, who are rightly concerned about Architectural History teaching. To try and answer these questions, one must first question the (implicit) premises.

Agnes Heller proposes that "The universal history (grand narrative)", or "the one single history, written with a capital H – namely, the world history of the human race as such" is a characteristic type of narrative from a stage she denominates as "historical consciousness of reflected universality", where "the universalization of man is the universalization of history (or civilization), or a so-called "consciousness of world-history". It seems correct to identify such stage with what we call the history of "modernity" in architecture on the 19-20th centuries, as it complies with Heller's considerations when she states that at this stage "all human histories are unified under a universalistic concept which contains past, present and future". It is also quite evident that the perfected device to consolidate such "universalistic unification", in architecture, is the general treatise, the supposedly "all-inclusive" History compendium.

Thus, the question of the difficulties in creating a unified "history" encompassing "everything" stems not from an unavoidable challenge but from such a precise (and perhaps outdated) conceptual frame of mind.

> The general treatise on any given scientific or artistic field is neither a natural nor a neutral thing. It is a device created to control and dominate the overwhelming vastness of knowledge opened to Europeans during the "Age of Discovery", from the late Middle Ages onwards. It emerges in the context of Europe's mercantilist and imperialist efforts to extract or mine all kinds of natural and cultural goods from every culture they encountered around the world. These treatises display a conceited attitude. They are the product of a "learned" person, located in a supposed geographical or Cartesian centre (an axis mundi if you will), from a position of power and distance, who believes to be entitled to freely appropriating any information available. Information that he would subsequently process, hierarchize, and organize, purging and pasteurizing all the data randomly received into a "scientific" way of thinking, dealing with all that knowledge in an almost disembodied way. […] We have been educated to believe that "treatises"

and "general compendiums" represent the most learned and "civilized" way of dealing with the incommensurable complexities of all aspects of the natural world, humankind included. Thus, it is easy to deem a book that is large enough a bona fide way of understanding everything there is to know about everything. By using them uncritically, we consent to and accept as normal, their way of reducing the world's cultural knowledge, diversity, and complexity in a fundamentally arrogant way[7].

The contents of what we teach in Architectural History classes and books have always been an editorial clipping. Many of us have been grounding our teaching on general treatises that were fundamentally biassed, genre and race-exclusionary, and geographically limited. Accepting and including the new worldwide data on Modern Architecture will not change our teaching. But it will make us aware that our teaching is not an absolute. From now on, we are rendered aware that we are not, and cannot, try to make sense of and teach all knowledge there is – as we have never done that.

A second question that is raised, when considering how to handle the increased amount of data concerning 20th-century Modern Architecture manifestations is how to hierarchize it. Should any information be treated as having the same importance as anything else? In this newly enlarged field, is it possible to define a new "taxonomy" – a scheme of classification, especially a hierarchical classification, in which things are organised into groups or types according to their importance? Or is the expanded critical awareness of the new research data on Modern Architecture incompatible with 18th-century biological metaphors and tree-like classifications (taxonomy, for instance)?

As a suggestion, perhaps we – professors, researchers, scholars, students, and book authors – should try using new (albeit imperfect) biological analogies. Like for example, neural networks – a novel idea whose translation to Architecture will certainly create other problems and perks. But at least it abandons positivistic vertical patriarchal hierarchic structures of understanding in favour of a more complex system, more apt to describe complex life and environmental crises, that the 21st realities are making us forcibly learn about.

Besides, every historical event is unique and contingent. According to Heller, when she analyses the contemporary postmodern frame of mind, "As far as human creatures and actors are concerned, there is no aim, no goal, no general direction, no necessity in the events which we normally sum up with the term 'history'"[8]. The taxonomic hierarchization of facts tends to be exclusionary following a "hidden teleology". The selection of facts to be used for a given purpose – a course, a text, a research study, a theoretical debate, etc. – is an unavoidable trait. No book, no class, and no article could feasibly include all that is already known on any given subject. All teleology, all the (subjective and objective) choices on what is or is not important to this or that situation – needs, at least, to be clarified.

5. CONCLUSION

There are certainly other difficulties and questions that will be opened by the expansion of our knowledge of Modern Architecture – and its corollary, the

7. Ruth Verde Zein, "It's not the canon, it's how you use it". *Dearq* no. 36 (2023): 39.

8. Agnes Heller, 1999, p. 6.

9. Ruth Verde Zein, 2023: 41.

revision of the supposedly already-known facts about it. The easiest and worst way out is to include new facts as appendixes, as secondary information. That precludes us from construing a contemporary understanding of what should be considered, from a 21st-century point of view, as "Modern Architecture".

> *If we want to open our field up to the possibility of a "paradigm change" we need to raise the awareness level about the canonization processes, make the processes involved explicit, and explain what they are and how they work. […]. If current canons are to change, they must be explicitly declared, questioned, criticized, and undermined*[9].

The use of established, settled, antiquated, patriarchal, and imperialist canonical narratives inherited from the 20th century, defining which examples merit being called "architecture" (especially, but not exclusively, in its modern and contemporary forms) hinders our understanding of the complexities, variety and vast array of methods used in architecture and urban environments around the world. It needs to be questioned, even if it will mean the necessity of taking a painstaking path with lots of work ahead.

Our session aims to contribute to a much more ample effort in pro of change. It is neither an individualistic nor easy task. Its goal is to take into serious consideration the diverse situations and challenges that the valorisation and conservation of Modern Architecture legacy demand on a worldwide basis. For that, we must question many a priori assumptions and skip the use of statical and outdated definitions that are in use in our field.

It may be wise to take our time, consider, and deeply debate the many aspects demanded by such a truly contemporary quest.

To contribute to fostering this debate, this session selected a few of the many interesting studies, all of them proposing some possibilities of devising non-hierarchical, non-patriarchal, non-racist, sustainable ways of remapping modernism+s, rooted in post-colonial critical and feminist perspectives permeating contemporary research efforts. The session hope is that they would convey fundamental devices and propositions, and be able to cooperate in collective, intercontinental, international collaborative ways to support Docomomo's present and future efforts and challenges. ■

BIOGRAPHY

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THE NARRATIVE TRIAD OF NIKOLAUS PEVSNER: RECOGNIZING THE CONTENT PROFILE AND STRUCTURE OF THE BOOK *PIONEERS OF MODERN DESIGN*

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ABSTRACT

The past, as the subject of historical writing, is textually represented in the form of narrative, where events are organized based on common elements of human understanding, even though the content varies in each case. It is simultaneously grounded in real evidence from the past in conjunction with imaginative aspects, as it is a construction of connections not set in the past but proposed in each present, by each author. In this reflection, it is possible to consider that a narrative textual shaping of the past presents a form constructed by the individual who shaped it, and its structuring is therefore a necessary action for understanding the content. It organizes the theme, values, and omits facts, proposes continuity to diverse elements, beyond the simple uncritical memorization of content. In this article, we intend to analyze the narrative structure of the book 'Pioneers of Modern Design' by Nikolaus Pevsner's, as well as the content design proposed by the author, with textual and graphical arguments, in the construction of a textual plot composed of three elements: originality, repetition, and validation, a triad of fundamental components in supporting canonical historiographies, especially panoramic ones. Therefore, this article aims to elucidate the narrative aspects of constructing this historical plot, based on the organization of the parts in which the content is divided, and the relationships proposed by the author through the selection of past events. This aligns with the bias of literary theories developed after the 1960s, which mythical views and revealed truths of authoritative historical discourses are questioned.

1. INTRODUCTION

Nikolaus Pevsner's book titled "Pioneers of Modern Design" was originally published in 1936 by the British publisher Faber and Faber. As the author states in the preface of the first edition, the book was prepared in the early 1930s when he was teaching a course on architectures of the 19th and 20th centuries at the University of Gottingen.

In addition to the original publication, were two other editions in the same language, as well as various translations and their respective editions. The second edition, in original idiom, was done in 1949 by the Museum of Modern Art in New York (MoMA), and the third edition in 1960 by Penguin Books, which included significant content additions. The second edition of 1949, added 53 illustrations (from 84 to 137 images), as well as corrections and suggestions provided by Philip Johnson, Edgar Kaufman Jr, Henry-Russell Hitchcock, and Alfred H. Barr Jr. The third edition, carried out more than 20 years after the original publication, received additions, corrections, and highlights to personalities, previously addressed in footnotes, mainly regarding topics outside the English and German context.

The narrative constructed by Pevsner (1936;1949;1960) comprises an argumentation composed of three elements: originality, repetition, and validation, in that order, a triad of fundamental components in the support of panoramic historiographies. Based on a bibliography well-known in the academic field of Architecture courses and continuing to be published, this article analyzes graphically and textually the structure and profile of the narrative plot, approaching the field of digital humanities, with the aim of understanding more pragmatic issues related to the movement of narrative time and its inclusion as an element of verifiability of the content presented[1].

2. THEORICAL APPROCHES

In the construction of narratives about the past, despite the various cuts and a certain movement in inclusion and omission of events[2], there exists a particular relationship between subject and object. Certain narratives, pseudo-collectives, are formed from a process of validation and acceptance of canonical readings, which include works and "mythical" personalities, legitimized by history itself as a disciplinary field. The field of study itself invariably chooses to reiterate the canons in panoramic narratives, while the inclusion of more specific themes and cuts appears in publications that deal with parts rather than the whole.

The historian, as responsible for this construction, selects and omits facts by establishing, from their point of view, the guiding thread of historical evolution, a *mainstream*. The *mainstream* uses devices such as precursors, pioneers, prophets to consider architectures in their contexts (Tournikiotis, 1999). The positioning of the architectural object in the narrative also adapts to these devices by considering it chronologically inserted from its origin, either by the period of construction or by the date of inauguration, as well as its derivations of influence and evolution.

The past, as the object of historical writing, is represented textually in the form of narrative, in which events are organized based on common

1. This article derives from the studies of the author's doctoral thesis: Ossani, Taís. Structuring Historiographical Elements: the subject that positions and the numerical markers that move seven narratives of architectural history. 2022. Thesis (Doctorate in Architecture and Urbanism) – Mackenzie Presbyterian University, São Paulo, 2022. Conducted under the guidance of Professor Dr. Ruth Verde Zein and co-guidance of Professor Dr. Ana Esteban Maluenda with an academic mobility period at the Polytechnic University of Madrid (CAPES-Print scholarship, process number: 88887.583996/2020-00)

2. Hayden White, La ficción de la narrativa. Sobre historia, literatura y teoría 1957-2007 (Buenos Aires: Eterna Cadencia, 2011)

elements of human understanding, although the content varies in each case. Stone[3] refers to narrative as a mode of organizing material in a sequential chronological order, focusing on the content of a single continuous story and its secondary entries. The events that compose the selected content of the narrative are facts present in the consideration of past realities, but the order in which they are exposed in each text does not necessarily represent any kind of "truthful connection," but rather possible modes of interpretation adopted by the subject organizing the text.

Time is one of the common elements that structure human understanding in historical narratives, as it is through it that the past begins to be understood consciously. This use is not restricted only to an operation that the narrative, seen as a linguistic structure, favors. In a way, it also attributes a credible condition to the discourse by presenting the architectural object as an entity closer to the condition of "fact in itself," and not only from a circumstantial interpretation of it.

Thus, it is possible to understand that, despite the narrative (written) being constructed from a selection of facts, the act of constructing it is not only about memory, knowledge, and inclusion. It is mainly about how to organize them in an operation of a mental instrument for constructing reality, even if this representation or instrument only achieves verisimilitude[4], by saying that the truthfulness of the narrative is not a result solely of its verifiability condition. The acceptance of a narrative does not necessarily depend on its correct reference to reality, but rather on the status of verisimilitude, by the apparent true relationships it establishes and by whom the speech is made.

3. PROFILE: SKETCHING THE CONTENT

The book "'pioneers of modern design" is organized into seven thematic chapters divided into the following titles: "Theories of Art, from Morris to Gropius", "From 1851 to Morris and the Arts and Crafts Movement", "The Painting of 1890", "The Art Nouveau", "Engineering and Architecture of the 19th Century", "England: from 1890 to 1914", and "The Modern Movement before 1941". Pevsner sketches his narrative based on three elements: originality, repetition, and validation. In this configuration, he establishes, with each chapter entry, the personalities or events that will conform as origins or pioneers within the argument presented. Although he repeats this procedure in each chapter, these symbolic figures or events return in the narrative at other times to configure other relationships in this plot, thus, the plot goes back and forth several times in relation to content and time.

The pioneering personality of Pevsner's narrative centers on the figure of William Morris, a localized and English action. He is presented in almost every chapter as a direct influence on thematic events or as a reminder of a pioneering role that enabled developments in the actions of other artists or architects. Detaching again the meaning of narrative, according to Stone[5], the repetitive presence of Morris could give the book a focus in a continuous and unique story, with secondary entries, which in this case is the partial universe

3. Lawrence Stone, "The Revival of Narrative: Reflections on a New Old History" Past & Present, no. 85 (1979), 3.

4. Jerome Bruner, "The narrative construction of reality" Critical Inquiry 18, no. 1 (fall 1991), 1 - 4.

5. Stone, "The Revival of Narrative: Reflections on a New Old History"

of modern design that revolved around Morris, always and exclusively in the context of a section of Europe, with few entries of American content **(Fig1)**.

A mental construction of reality in a narrative has imaginative steps, that combine real events with a good or believable story. White[6] remind us that a "narrative might well be considered a solution to a problem of general human concern, namely, the problem of how to translate knowing into telling". In how to put a human experience into a center importance of collecting knowledge and get consciousness of humanity. White (1980) continue his argument introducing that is difficult to understand some specify traces of other culture but is less difficult to understanding a story coming from another culture. Which suggest that "far from being one code among many that a culture may utilize for endowing experience with meaning, narrative is a metacode, a human universal on the basis of which transcultural messages about the nature of a shared reality can be transmitted"[7]

In Pevsner's narrative, highlighting the pioneering human creator in the figure of Morris, even within an English context and restricted to a few European countries, determines that from him, an entire repertoire of modern design becomes possible. At the time it was written, and perhaps even today, this way of storytelling symbolizes a deterministic human need to believe in another as a mythical figure, a savior, and a break from reality. Believing in doubt, resilience, and in process does not create a good story. It opens a space for uncertainty and chance — difficult words for the vocabulary of human belief, which is secure and often inert. Narratives about the past, in addition to dealing with issues of credibility, also involve moments of editing, acts, and choices that favor certain subjects and contexts. This goes in the opposite direction of what knowledge is — independent, diverse, and never fully satisfied.

White[8] presents that "narrative becomes a problem only when we wish to give to real events the form of story. It is because real events do not offer themselves as stories that their narrativization is so difficult". The past events are loose in a tangle of chronological time, and the human experience is looking for true story instead of a real story.

The profile of Pevsner narrative can be considered like a chronical[9] which events are not simply listed in a chronological sequence but are listed to tell a story. An imaginary one, with no end. "More specifically, the chronicle usually is marked by a failure to achieve narrative closure. It does not so much conclude as simply terminate. It starts out to tell a story but breaks off, it leaves things unresolved or, rather, leaves them unresolved in a story-like way"[10] . To construct a book about "the pioneers", Pevsner elected an origin and continue his narration with a lot of "breaks" in time, the argument only continues to get voice of the origin, reinforcing their importance with a selection of followers.

6. Hayden White, "The Value of Narrativity in the Representation of Reality." Critical Inquiry. Vol. 7, no. 1, (Fall, 1980), 5.

7. White, "The Value of Narrativity in the Representation of Reality.", 6.

8. White, "The Value of Narrativity in the Representation of Reality.".

9. White, "The Value of Narrativity in the Representation of Reality.".

10. White, "The Value of Narrativity in the Representation of Reality.", 9.

4. STRUCTURE: PARTS OF A WHOLE

Understanding the book through its organization, three moments are identified. One of them is introductory, where the characters of the plot are presented, the second is composed of the central chapters of the book where the plot of the argument unfolds, although dispersed, and the third, is

represented by the two last chapters, in which is a path of advancement of the pioneers in the modern movement.

The introductory moment (composed by the first chapter) present theoretical insights on the surface of the content, identifying the key pioneers addressed throughout the narrative, something that, from the interpretation of this article, could be configured as an introduction to the theme that will compose the content corpus of the book.

The second moment is composed of the following four chapters. From the second to the fifth chapter, all address different themes, which approach the three lines of progress highlighted by Pevsner. It is also possible to identify a fourth line of progress, highlighted by painting treated as a separate chapter, distinct, but at the same time primordial, in the transformations of architecture and design.

The third moment begin with the sixth chapter when several of the contents are repeated, scattered throughout the previous chapters to reinforce the country's pioneering role in the actions that composed the beginning of the modern movement, which could be scattered in the second chapter as a possible "continuity"/repetition of post-William Morris, since progress is something desirable within his argumentation. The end of the sixth chapter, which advances on urban aspects, draws a very promising parallel regarding Germany, Austria, the Netherlands, France, and, of course, England. If expanded and more detailed, this part could consolidate another theme. The seventh chapter exemplifying the representations that, fifteen years before World War I, contributed to progress, identified in the United States, France, Germany, and Austria, in the architectures of Peter Behrens, Frank Lloyd Wright, Josef Hoffmann, Adolf Loos, Hans Poelzig, Walter Gropius, and Mies van der Rohe, in the engineering of Robert Maillart, and in the industrial city of Tony Garnier. In the end, there is an indication for a possible direction within the Modern Movement from the works of Le Corbusier.

Objectively, there is a "natural" sequence present in the book, as a complete published object composed of pages, one after the other, which determines the sequential positioning of events. But there are also minor connective sentences, either in sequence or distributed throughout the book, that reinforce this proposition, positioning correlations through vocabulary – for example, the words origin, influence, copy, etc.

Causal relationships, partially constructed throughout the narrative content, are also circumstantial due to issues of editing, memory, knowledge, among others. However, there are also linguistic resources that represent accumulation[11], repetition, and ruptures. Repetition presents elements of the same group of functions, conforming a validation or a cultural construction of what is proposed. The succession of events in chronological time creates a certain perception of sequentiality, generally ascending, which relativizes the chronological value and its progression. In this logic, there is a positioning and an attribution of meaning to events, placed at the beginning (origin), in the middle, and at the end (consequence) of the books, in actions that symbolize a mental construction of the past towards the future.

11. Bruner, "The narrative construction of reality", 18

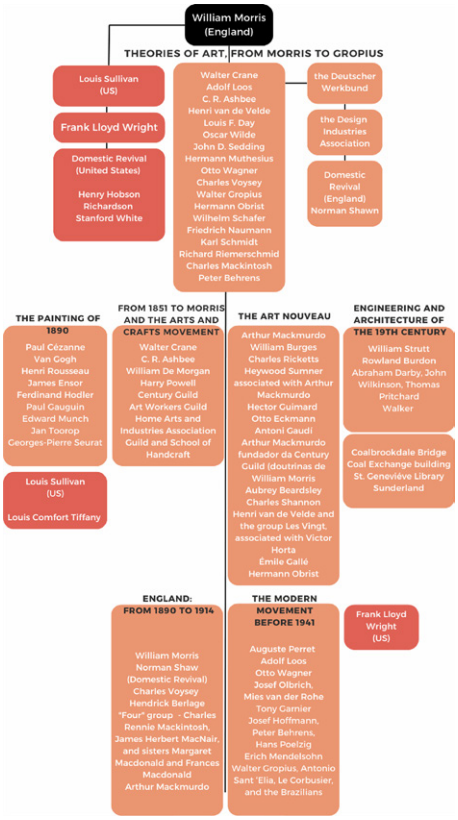


Figure 1. Diagram of a unique story, with secondary entries. Created by the author

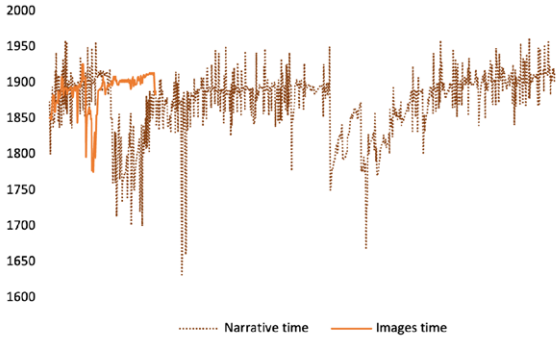


Figure 2. Chronological movement of time in Pevsner narrative. Created by the author.

Chronology, as a linguistic convention of writing and drawing, performs the supposedly linear computation of time, normally increasing, emphasizing this possibility. The idea of the ascendancy of chronological time linked to the progress of the central theme of the narrative becomes more clearly perceived. These partial connective actions only work and fit into the perception of verisimilitude because there is not, in fact, a single constantly ascending line in narrative time: different movements **(Fig. 2)** are necessary for the possible construction of the perception of what, on the surface and in appearance, might be accepted as true. Narrative time is sequential and oscillating, and it is not constantly ascending.

In the narrative triad of originality, repetition, and validation, Pevsner's story benefits from the back-and-forth movements in time, establishing dependent relationships among the selected personalities, forming a single continuous line with temporal movements that do not create a continuous ascendancy. On the contrary, like in a chronicle, it presents various thematic openings that, although included as arguments, can be replaced by others. The idea of constructing causal relationships even if they do not exist a priori brings the book closer to a believable story, easily memorable.

5. FINAL CONSIDERATIONS

Pevsner's persistence as the subject-author of his bibliographic work, even with the content review of the subsequent editions, sustains the line of reasoning

that affirms his own ideology regarding the written theme and how this textual discourse was constructed. The relationships drawn feed the evolution of the narrative, tying and stitching the content into a truthful transmission of the past. He truly represents the subject-author of his own narrative.

Looking back over the years, certainly many other architects and works have been studied, beyond those Pevsner knew and initially included in his narrative. Also, regions and themes that, up to that moment, were not areas of interest aroused curiosity or the "need" to be included because they had been addressed by authorities within the field of history validation. But even with these numerous inclusions, Pevsner mentions that the main point of his narrative has not changed, namely, the argument that Frank Lloyd Wright, Tony Garnier, Adolf Loos, Peter Behrens, and Walter Gropius were the ones who initiated the 20th-century style, and these later inclusions, such as the works of Gaudí and Sant 'Elia, were merely fantastic inventions of that time. Indeed, Pevsner's argument does not change throughout the book, the certainty that he was an authority on the subject due to his pioneering spirit, and possibly the circle of his peers that validated this achievement, allowed him to see his book as a compilation of statements on the subject, rather than an interpretation of the theme.

Thus, as the subject-author and a professor, Nikolaus Pevsner owns the affirmations that belonged to him. In the narrative constructed by him, his bias, the subjectivity of the textual construction of the content, and even the possibility of the veracity of the discourse are not evident. Pevsner holds certainty, originality, and the history told as an existing corpus. And thus, despite not presenting the method by which he selects the works and architects that would enter his discourse, throughout the book, the argumentation proposed by him is quite clear. ■

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BIOGRAPHY

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LINA BO BARDI: THE BAD AND THE UGLY -CONTEMPORARY FORMAL PROBLEMS

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ABSTRACT
Lina Bo Bardi has described the building of the São Paulo Museum of Art (MASP) as "bad and ugly", almost as an excuse for the real concern she had at the time in the search of an "architecture of freedom" rooted in daily life. In her words, "most people find the museum bad. And it really is. I wanted to do a bad design, I mean, formally and architectonically ugly, but a usable space. Something to be usable for people. And the free spaces could be created by the collective." Lina's refusal of the form is totally in tune with her fellow contemporaries, in a context that Argan has described as "the crisis of Art as European science" (1993). Jean Dubuffet, Eduardo Paolozzi, Asger Jorn, Smithsons in Europe and Helio Oiticica, Glauber Rocha and Marta Minujin in South America have all developed spatial experiments exposing the failure of abstract (modern) form to cope with the complexities of contemporary contexts. In her statement, Bo Bardi brings to light a deep concern about the making of architecture in post-modern scenarios, that exposes in bright colors the contingencies of her environment. Responding to the "Remapping modernism+s" session request, this article proposes to investigate Lina's choices and attitudes towards form, such as the ugly, the bad, the popular, and the primitive in some referential projects as powerful tool to broaden the concepts of modern architecture beyond the European canons and categorizations.

1. INTRODUCTION

Lina Bo Bardi has described the building of the São Paulo Museum of Art (MASP, 1957-1968) as "bad and ugly", almost as an excuse for the real concern she had at the time in the search for an "architecture of freedom"[1] rooted in daily life. **(fig.1)** In her words, "most people find the museum bad. And it really is. I wanted to do a bad design, I mean, formally and architectonically ugly, but a usable space. Something to be usable for people. And the free spaces could be created by the collective."[2] Lina's refusal of the form is totally in tune with her fellow contemporaries, in a context that Argan has described as the crisis of Art as European science (1993). Jean Dubuffet, Eduardo Paolozzi, Asger Jorn, the architects Smithsons in Europe, and Helio Oiticica, Glauber Rocha and Marta Minujin in South America have all developed spatial experiments exposing the failure of abstract (modern) form to cope with the complexities of contemporary contexts. In her statement, Bo Bardi brings to light a deep concern about the making of architecture in post-modern scenarios, that exposes in bright colors the contingencies of her environment. Crossing theoretical approaches with the analyses of some referential projects, this article proposes to discuss Lina Bo Bardi's unique approach to form as an outcome of a complex architectonic formation, profoundly connected with her time and place, producing a body of work that opened other paths to develop the modern canon as rich experiences resulting from the confrontation with contemporary contexts and the need to connect with different realities.

2. THE ROOTS OF FORM

Lina Bo Bardi's European architectural formation was a complex process from the start, considering the challenge of studying architecture immersed in Rome's daily drama: the clash between the historical city and the building of contemporary life. This condition would be mirrored in different pedagogical proposals present in her formation years, that were trying to cope with the unstoppable modern wave coming from the northern countries and the need to preserve and develop historical heritage. There were also the setbacks of war and the massive destruction of the cities and historical monuments and buildings.

During the years in the Facoltà di Architettura in Rome (1935 -1939), Lina Bo Bardi trained under the director Marcelo Piacentini, who advocated a rather conventional proposal based on the academicism of classical formal principals to alleviate the radical rationalist ideas coming from the Bauhaus. Bo Bardi frequently quoted the importance of the city of Rome "as a great architecture school"[3] because of the unavoidable presence of the historic buildings and their constant transformations that would build, in her own eyes, an education more oriented to historic preservation than to innovative projects. These facts attest to Bo Bardi's hybrid compositive sensibility[4] which resulted from the strict Italian moral codes under which she was brought up, the affection for country life, rural architecture, and the love for art and a humanist architecture formation, all of which was to be transformed

1. The expression "architecture of freedom" was used by John Cage when visiting MASP for the first time. Lina Bo Bardi was very proud of that and used to repeat it frequently. Silvana Rubino and Marina Grinover (Org.) *Lina por escrito* (São Paulo: Cosac & Naify, 2009), 166.

2. Lina Bo Bardi, apud Francesco Perrota-Bosch, *Lina - uma biografia* (São Paulo: Todavia, 2021), 183.

3. Zeuler R. Lima, *Lina Bo Bardi – O que eu queria era ter história* (São Paulo: Cia. Das Letras, 2021), 51-52.

4. Lima, *Lina Bo Bardi – O que eu queria era ter história*, 51-52.

by the war and the rising of fascism in Italy. It is worth mentioning the impact of the wide use of the new modern abstract forms by the fascist architecture in Italy, that may have added another layer of symbolism to the already complex context of Bo Bardi's architecture formation. There is a political aspect already present since her early years as an architect that would expand with the ordinary confrontations of the professional practice when she was valuing the creative aspects of daily life in the vernacular and popular creations of the common citizen. This hybrid sensibility would develop and flourish during her professional life, in her architectural practice as well as in her activities as a critic, curator, educator and public figure in Brazil. I would argue that the most basic aspect of such a hybridism is the empathetic openness to deviations of all norms, present in her personality since the early years[5] and her eagerness for alternative solutions to rules and patterns externally imposed as a strategic way to cope with her own dilemmas. A practice that, ultimately, would make her – and her designs and architecture – closer to the common citizen's dramas, to anonymous popular life.

3. THE UGLY

The artistic production after the Second World War was radically affected by the human and material losses of the war. Argan says that

> *In the origin, there is a moral revolt: in a society that accepts the genocide, the extermination camps, the atomic bomb, it is not possible that, simultaneously, creative acts are produced. The war is the culminating aspect of the organized and systematic destruction, of the to-do-to-destroy of a society that defines itself as "of consumption".*[6]

So, an alternative to think about art and to produce art after the abyss of the war is beginning again, going back to the basic principles of art and its processes of signification, a way to strengthen a society that needs to be reborn. This idea was proposed by Walter Benjamin as a "positive barbarism"[7], a possibility to pave a new road towards a possible future. Hal Foster, analyzing some expressive artists of the period, Bo Bardi's European contemporaries, argued that a "brutal aesthetic" was a response to that, a quest for the "zero degree of art" found in the works of Jean Dubuffet (1901-1985), Asger Jorn (1914-1973), and Eduardo Paolozzi (1924-2005) among others.[8] The human-animal, the monstrous, the metamorphosis, the child and the insane as aliens to culture, the transgression - were all themes explored by these artists with materials such as sand, dirt, junk, thick layers of ink, formalized as childlike scratches, informal and denatured figures, monsters, all seeking a "ground in brute materiality"[9]. It can be said that none of these works could be considered according to the classical principles of beauty, so remain under the categorization of the ugly. This can be a possible reading of Bo Bardi's definition of MASP as "ugly and bad": the brutality of the building's concrete, the blunt abstraction of the pure form floating in space,

5. Lima, *Lina Bo Bardi – O que eu queria era ter história*, 18-20.

6. Giulio Carlo Argan, Arte Moderna (Cia. Das Letras, 1993), 508.

7. Walter Benjamin, "Experiência e pobreza", in *Obras escolhidas* (São Paulo: Ed. Brasiliense, 1985), 114-19.

8. Hal Foster, *Brutal Aesthetics* (New Jersey: Princeton University Press, 2020), 6.

9. Hal Foster, *Brutal Aesthetics*, 7.

the monumentality of the structure, characteristics that lend the object the monstrosity of an oversized object.

Mark Cousis defends that ugliness has little to do with beauty, and in fact, beauty and ugliness belong to quite different registers:

> *Since antiquity, beauty has been regarded as possessing a privilege relation to truth. From this it follows that an ugly representation, or an ugly object, is a negation not only of beauty, but of truth. The category of beauty plays an epistemological role; it represents the truth of an object. Ugliness belongs to whatever negates that truth. It belongs to a series of categories which similarly distort the truth of objects. It belongs to what is contingent, for contingency cannot admit of the truth of objects.*[10]

Contingencies are always "bad" in the way that they prevent planned idealized perfection from happening, and Brazilian culture was (is) all about contingencies, a permanent struggle to accomplish a designed plan. So, MASP's ugliness and badness are an intentional welcome statement, for there is no absolute truth or perfection to be pursued, but truths to be questioned and tensioned by unpredictable contingencies. MASP expresses this principle quite clearly: "it is ugly (it is modern), *but* it is usable" Bo Bardi says – so there is the justification, that reveals the idiosyncrasies of her formation in the hybridism of her own architectonic language at play. MASP is a modern transparent prism elevated from the ground, only to be questioned in its modernity by the oversized porticoes that suspend it in the air, excused again for its modernity because it frees the ground for what is worth in Bo Bardi's eyes: the valorization of the landscape and the occupation of the urban ground by the people. She recognizes that modern abstract forms do deliver fluidity and functionality, but she needs them to be collectively appropriated, even to be subverted, in order to achieve the "real modern culture".[11] Maybe the need for a monumental form to host a new modern program such as "a museum of modern art" was the key to explain her formal choice. Anyway, it is from this desire that she was to perform rich architectonic experiments later on, deeply tensioning abstract forms to their contingencies' realities, as to be presented here.

4. BRAZILIAN UGLY

As a young architect in Brazil, Lina Bo Bardi was gladly open to add to her pluralist architectural formation all the complexities of the Brazilian cultural scenario: a country rich in popular traditions and practices that she had the chance to know deeply as curator, editor and critic and at the same time a country desiring to reach the promised progress of modern technology, as deceiving as this promise appears now.

Her first project in Brazil was the Casa de Vidro (1951), her home in São Paulo with Pietro Maria Bardi, where the modern form was already tensioned: the glass volume hosting the social program, flying above the

10. Mark Cousins, *The ugly* (Chile: Arq Ediciones, 2020) 8-9.

11. Lima, *Lina Bo Bardi – O que eu queria era ter história*, 229.

landscape as a modern welcome invitation, attached to a rural like house's service program: the big kitchen and the service's rooms opened to a backyard and garden. **(fig.2)**

The Valéria Cirell house (1958), built in the same neighborhood as the Casa de Vidro, and confronting it frontally, is one that Jean Dubuffet and Eduardo Paolozzi would enjoy knowing. The brutality and roughness of the materials such as roundwood columns, fragmented ceramic and thatched surfaces, that invites mosses, small plants and animals to invade the cracks and transform the textures and colors, are characteristics that make the house really mingle as one with the surrounding landscape. In the black and white photographs of the house one is reminded of the existence of a building only because of the straight lines of the regular volumes that bravely resist the landscape, even though crossed by the irregular thatched plane that protects the veranda and the tropical plants on the roof's garden. In this building, where the regularity of the square plan evolves into a cube, the abstract form is confronted to the limit of turning the discovery of abstract forms among all the textures, surfaces and shadows into a complete surprise. "The ugly house" would be an expression easily heard about this house in the middle of being new and old, modern and popular, questioning the very truth of what is, after all, a house.

It becomes clear that Bo Bardi's freedom to challenge the modern language of forms and spatiality, crossing the modern canon with local traditions, comes from a deep sense of social purpose and political conscience,[12] that granted her an aesthetic sensibility to cherish the great potential of innovation present in the artisanal production of humble people.

What strikes the eyes of those familiar with the modern lexicon is the apparent ease Bo Bardi had to "corrupt" regular abstract forms, an operation that abrades the moral codes of the modern language, eventually resulting in "bad and ugly" objects. In the project for the church Espírito Santo do Cerrado (1976-1982) three round forms overlap one another with little concern about their physical integrity: placed on a gentle slope, the circumference occupied by the altar and the space for the religious ceremonies in the higher quota are left intact, with a conic roof of tiles forming a peak where a small Christian cross would be placed. Attached to that, the circumference devoted to services and cloister has a roof that surrounds the circular wall, throwing the rainwater onto the center patio. Its circular form is cut in both sides by the adjacent circles and these cuts are intentionally made visible by a curved wall that connects the forms on one side and a wall that extends itself beyond the cut both in height and in elevation on the other side. The third circumference, the lower one in the plot, has a round roof covering a patio with earth floor for festivities, without walls. The ensemble of three round forms made of cheap and reused materials and the intense participation of the community almost looks like a ruin in the outskirts of the city. **(fig.3)** The construction detail of the gutter in the roof as a plant bed, open to receive all kinds of plants strong enough to resist the tropical weather, accelerates the domain of

12. Lima, *Lina Bo Bardi – O que eu queria era ter história*, 149.







Figure 1. Lina Bo Bardi, MASP, São Paulo, Brazil, 1968 (Instituto Lina e P. M. Bardi).

Figure 2. Lina Bo Bardi, Casa Valéria Cirell, São Paulo, Brazil, 1958 (Instituto Lina e P. M. Bardi).

Figure 3. Lina Bo Bardi, Igreja Espírito Santo do Cerrado, Uberlândia, Brazil, 1982.

time over the architecture, building the character of the form, another "ugly" attempt to refuse the truth of the abstract form. Knowing about the deep commitment Lina had to this particular design process, opens up speculation as to whether this was the real beautiful building in her eyes. "Arquitetura pobre" – poor architecture, a term coined by her, can be applied here about a humbleness from which popular and primitive building methods and materials conjure ethical concerns as potent sources of creativity and imagination.

Another example that would please her contemporary artists working under a "brutal aesthetic" is the new buildings designed for the Sesc Fábrica da Pompeia complex (1977): a clumsy cyclopic monster all confused with too many arms to grab its service partner. The cave-like apertures reminding the war holes on the walls, the brutality of the thick concrete everywhere, all characteristics that blur the scale of the architecture, that in its turn becomes repellent. Bo Bardi would refer to ugliness again regarding this building when talking about the purposeful drained concrete of the water tower. But she believed that it is by *using* the architecture and relating oneself to the spatial and formal propositions that stops it being ugly, bad and scary, to become special, unique and friendly. An absolute public success up to these days, Sesc Fabrica da Pompéia houses countless art exhibitions, music performances, theater and sport activities. Bo Bardi ensured the appropriation of architecture by producing innumerous exhibitions, developing expographic designs that responded to the architecture inwardly. One of these events would attest, with

capital letters, to Bo Bardi's crusade on behalf of the ugly as a true expression of the excluded and less fortunate. The exhibition "The Beauty and the right to Ugly" (1982), curated by her, carried in its poster:

> *The expression Kitsch appeared in Germany at the end of the XIX century when the Industrial Revolution had taken the power once and for all. It is the cultured high bourgeoisie stigma against the sectors of the same class less fortunate that, through industrialization, began to have access to the "Treasures of Art" and "Beauty". This little show is not an Integration of the Kitsch, it is only a small example of the "RIGHT TO UGLY", an essential base of many civilizations from Africa to the far Orient that has never met the "concept" of Beauty, an obliged field of the occidental civilization. Those excluded from this process are the ones less fortunate: the People. And the people are never Kitsch.*[13]

5. CONTEMPORARY FORM

The most powerful aspect of the argument Lina Bo Bardi developed around the ugly and the bad was the unnecessary rupture between tradition and innovation, that she otherwise believed could be united in the pursuit of a national identity. She believed that the modern language of architecture did not have to exclude the local and the traditional, that the architects should search ideas not only in "cultured" modern education but also in the creative aspects of popular solutions for mundane life.[14]

She has collaborated closely with the young Brazilian filmmaker Glauber Rocha, among others, who were fighting for the socialization of culture, in their own way contesting the modern canon in the search for forms in a true dialogue with contemporary contexts. This was the source of her originality, in many ways the culmination of a personal trajectory of cutting across the norms, rules and closed fields to put together extremities that would reveal alternative potent logics of transformation, deeply connected with different realities. Bo Bardi's enthusiasm with popular culture was a testimony of "a new era that is starting, in which the totality of human values and its concrete expression are related to a kind of critical clarity and autonomy that do not give way to closed categories".[15] So "bad" and "ugly" were indeed a critical provocation to the "enlightened" voices structuring the culture field, against the ones historically apart from it, a battle that she would bravely fight with architecture and design, as architect and public figure in the highly polarized political scenario in Brazil. ■

13. Marcelo Ferraz (Ed.), *Lina Bo Bardi* (São Paulo: Instituto Lina e P. M. Bardi, 1993) 241.

14. Lima, *Lina Bo Bardi – O que eu queria era ter história*, 175.

15. Lima, *Lina Bo Bardi – O que eu queria era ter história*, 227

BIOGRAPHY

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BEING MODERN, BUILDING MODERN. *L'UNION FÉMINISTE EGYPTIENNE'S* HEADQUARTERS IN CAIRO IN 1932

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ABSTRACT

The interpretation of what modern ideas and modern architecture mean varies significantly across different regions and historical contexts. At the same time, definitions of modernity and modern architecture evolve over time, reflecting cultural, social, and political contemporary challenges. This paper explores the architectural project of the professional school and headquarters of *L'Union Féministe Egyptienne* (UFE) in Cairo, to reflect on how modern articulations of architectural design programs intersected with ideals of first wave feminism and their local expressions. Founded by Egyptian feminist Huda Sha'arawi and her peers in 1923, the UFE successfully established its headquarters and a vocational school on Kasr-al-Aini street in Cairo by 1932, realized through the designs of Egyptian architect Moustapha Fahmy. Based on archival information from the UFE mouthpiece, *L'Egyptienne* – a monthly on feminism, sociology and art – this paper primarily investigates the rationale behind the design and construction of the union's headquarters. As a journalist and a member of the UFE, Ceza Nabarawi, described the building in 1932 in *L'Egyptienne*: "For it is not only the purely artistic monuments that should hold our attention, but everything - ancient or modern - that has been erected with the noble purpose of alleviating human suffering and contributing to the enrichment and progress of civilization". From this particular case study, the discussion seeks to contribute to remapping modernisms from a feminist and postcolonial perspective that considers, makes visible, and values women's contribution to the history of the built environment, also in North Africa. Lastly, this paper traces the recent history of the building and its transformations over the preceding years, adding to the discourse on the public perception of modernist landmarks in the Middle East and beyond, as well as the challenges of maintaining historical narratives for these structures to ensure their conservation and preservation for future generations.

1. INTRODUCTION

> *"For it is not only the purely artistic monuments that should hold our attention, but everything - ancient or modern - that has been erected with the noble purpose of alleviating human suffering and contributing to the enrichment and progress of civilization"*[1]

The notion of modernity and what it means to be modern, has been interpreted differently across various regions and historical periods. The exploration of the story of the construction of the headquarters of the Egyptian Feminist Union [*L'Union Féministe Egyptienne* (UFE)] in Cairo during the 1930's contributes to documenting the architectural representations of social movements which often claimed to promote "modernization" — especially the women's movement. Founded by Egyptian feminist Huda Sha'arawi and her peers, the UFE building in the center of Cairo stands as a symbol of both architectural innovation and feminist ideals in the early 20th century. From the intimate gatherings where revolutionary ideas took root to the relatively opulent scale of the UFE's building, this research traces the journey of feminist thought and its spatial manifestation within Egypt in the first decades of the 20th century, aiming to make visible the often-overlooked contributions of women to the built environment in the Middle East, while also contemplating the challenges of preserving these landmarks for future generations in the face of changing social values, surging real-estate market prices and inefficient heritage preservation policies. To achieve this, the research firstly presents the spatial transition of emancipatory ideas from private salons to the metropolis, towards the activism of Huda Sha'arawi and the proposal to establish the UFE headquarters, as a social and architectural response to the need of bringing feminist issues on a public scale. The second part focuses on the architectural project designed by architect Moustapha Fahmy, aiming to explore the notions of modern society and architectural ideals within the Cairene society at that time. All in all, the research emphasizes the necessity of broadening the notions of modernity to reveal the histories of visionary women in architecture and society.

2. THE [SPATIAL] TRANSITION OF IDEAS: FROM SALONS TO THE PUBLIC

2.1. HUDA SHA'ARAWI AND L'UNION FÉMINISTE EGYPTIENNE

Egyptian feminism after the 1919 Revolution represented a continuation of actions undertaken in earlier decades, setting the basis for the formation of women's organizations in the 1920s.[2] In this context, Huda Sha'arawi (1879-1947) occupies a central position, being strongly influenced by her mentor, French intellectual Eugenie Le Brun in the 1890s. Sha'arawi was a significant figure practicing salon culture, where Egyptian upper-class women organized lectures and discussed public matters in the private sphere.[3] In the early 1920s, the meetings became more massing. Her influential leadership led her and her peers to establish the UFE in 1923.

1. Ceza Nabaroui, "LÉcole Professionnnelle et Ménangère de l'Union Féminsite Egyptienne." *L'Egyptienne* 8, no. 77 (February 1932):5-10.

2. Beth Baron, *The Women's Awakening in Egypt* (New Haven & London: Yale University Press, 1994), 3.

Despite the accomplishments of the UFE, as Liina Mustonen has written referring to the work of Sania Lanfranchi, Huda Sha'arawi faced difficulties in bridging the gap between her privileged status as an upper-class Egyptian woman and the broader societal issues faced by the working class.[4] However, contemporary feminists perceive their historical legacy as an intrinsic component of the nation's identity since Sha'arawi resisted appropriation by both the hyper-masculine authoritarian state and sought transnational feminist alliances with women from the global North.[5] As a prove, in March 1919, she led the largest women's demonstration against the British colonial state and the success of the march prompted the establishment of the Wafdist Women's Central Committee (WWCC) in 1920.

On the other hand, the UFE was criticized for attempting to impose Western-style modernization on Egyptian women,[6] who were influenced by pacifist feminist western figures such as Margery Corbett Ashby, Germaine Malaterre-Sellier, Christine Bakker von Bosse or Rosa Manus. However, it could be argued that even if Huda Sha'arawi did not initially emphasize the differences between Arab and Western women with the aim of establishing female networks of alliance, she anchored her feminist discourse in a progressive Islamic voice to articulate a new feminism within an Islamic context.[7] This is evident in her subsequent activism beyond the establishment of the UFE. In 1938, Sha'arawi organised the Eastern Women's Conference to bolster connections between Palestinian women and the broader Arab feminist movement. In 1944, Sha'arawi led the Arab Women's Congress in Cairo, and in 1945, she became the founding president of the Arab Feminist Union.[8] She died in 1947, without observing how Egyptian constitutions of 1956 and 1962 guaranteed equal opportunities to all Egyptians –at least in a theoretical sense.[9]

2.2. FROM SALONS TO THE UFE HEADQUARTERS

The UFE was established for both international and national reasons, aligning with women from around the globe in their advocacy for equality, social and political rights, moral upliftment, the protection of children and the abolition of "houses of tolerance".[10] In its first years the UFE participated in international congresses held in in Rome,[11] Graz, Paris, Amsterdam, Geneve and Berlin between 1923-29. The UFE demands included equality in education, setting the minimum age for marriage at 16 years and reforming marriage and divorce laws. In 1925, they established their monthly magazine *L'Egyptienne*, and twelve years later, in 1937 its bimonthly "younger sister" *Al Masria*, published in Arabic.[12] The UFE headquarters building stood in 1932 as the culmination of nine years of effort. Yet, the UFE also lacked consistent broad-based support and sympathy, facing instead, "the hostility of certain circles to the ideas of progress and emancipation."[13]

Members of the he UFE operated through other buildings before establishing its headquarters in Kasr-al-Aini Street.[14] Once the war ended and the nationalist movement became strong, Egyptian women that had fought together with men for peace and equality, finally funded the UFE on the eve of the International Congress in Rome in March 1923, affiliating

3. Fariza Izitounene and Nassima Melaba, "The Notion of Space in Mary Wollstonecraft's *A Vindication of the Rights of Woman* (1792) and Huda Shaarawi's *Harem Years: The Memoirs of an Egyptian Feminist (1879-1924)*" (Doctoral Thesis, Université Mouloud Mammeri Tizi Ouzou, 2020), 37.

4. Liina Mustonen, "The Gender-Dimension of the Authoritarian Backlash in Egypt." *Turkish policy quarterly* 14, no.1 (2015): 181.

5. Basuli Deb, "Cutting across imperial feminisms toward transnational feminist solidarities." *Meridians* 13, no. 2 (2016): 164-188, https://doi.org/10.2979/meridians.13.2.09.

6. Safaa Monqid, "Mouvements féminins et féministes en Égypte: rétrospective et histoire d'une évolution (fin XIXème siècle à nos jours)." *Insaniyat. Revue algérienne d'anthropologie et de sciences sociales* 74 (2016): 49-73, https://journals.openedition.org/insaniyat/16591.

7. Rula B. Quawas, "'A Sea Captain in Her Own Right': Navigating the Feminist Thought of Huda Shaarawi," *Journal of International Women's Studies* 8, no. 1 (2006), https://vc.bridgew.edu/jiws/vol8/iss1/17.

8. Deb, "Cutting across imperial feminisms."

9. James L. Gelvin, *The modern Middle East: A History* (New York: Oxford University Press, 1951), 283.

10. "Discourse de Mme Charaoui Pacha à la cérémonie d'inaguration de l'ecole de l'U.F.E." *L'Egyptienne* 8, no. 79 (April-May 1932): 11-14.

11. Huda Shaarawi and Margot Badran. *Harem Years: The Memoirs of an Egyptian Feminist (1879-1924)* (New York: Feminist Press at CUNY, 2001), 129.

12. Ceza Nabaroui, "A l'Union Féministe Egyptienne"

to the "Alliance Internationale des Femmes pour le Suffrage". To fulfil its aim of assisting the masses of women they located a "modest" space in Al-Sayeda Zeinab in Cairo: a dispensary, to assist sick women and children, and a workshop, where both female and male teachers taught basic notions of Arabic, French, arithmetic, hygiene, dressing, religion, sewing, manual works, tapestry work and "tricotage". Although the UFE claimed to the government for the acceptance of young women in all grades of education,[15] this remained distant from becoming a reality in the academic realm where in 1922 enrolled boys were still four times more than girls.[16] The transformation of the workshop model into a professional school was therefore one of their pivotal goals, leading them to name their headquarters building *L'Ecole Professsionelle et Ménangère de l'UFE*. In the meantime, at the dispensary, the amount of voluntary work was commendable; treating a total of 18,830 women and children during the years 1927 and 1928.[17] Thus, this space was not enough to fulfil the UFE ambitions.

The aim of the UFE with this new building was "to reinforce the feminine solidarity that must exist between the different class societies."[18] However, the classes were still segregated between affluent and non-affluent young women. They secured the collaboration of the Ministry of Public Instruction to ensure that the future school would be tuition-free and provide free books and materials[19] and got granted a plot. Architect Moustapha Fahmy, who had experience in working with civil organisations, was offered the project. After nine years of fund-raising in a context of huge international crisis, in Spring 1931 Huda Sha'arawi placed the first stone.[20] The building was built in 10 months, and "feminists from diverse careers" such as "men of letters, journalists, lawyers, doctors and notables" gathered during the opening ceremony on April 7th, 1932, in what the media named: "La Maison de la Femme."[21] The UFE had intended to engrave this message on the facade of the building, but due to significant public objection, ultimately did not do it.[22], Sha'arawi stated: "This day is one of the happiest of our association as it marks a new page in the annals of the national evolution of the Egyptian women."[23]

3. MOUSTAPHA FAHMY, THE UFE'S HEADQUARTERS AND BEYOND

3.1. MOUSTAPHA FAHMY AND THE UFE'S HEADQUARTERS (1932)

As researched by Mercedes Volait,[24] the Fahmy family, spanning four generations and multiple continents, has left a notable mark in architecture. Mahmoud Fahmy (1856-1924) received one-year training in France and developed a unique position following an itinerary of technical expertise and political function in engineering career. His son, Moustapha Fahmy (1886-1972), followed a similar path, with a career primarily focused on public works but with broader international engagements. Having graduated from the Special School of Public Works of Paris (ESTP) in 1912, Moustapha was one of the founding members of the Society of Egyptian Architects in 1917 and became the first Egyptian professor to teach architecture at the Polytechnic School of Cairo in 1923. In 1948, he contributed to establish the Egyptian section of the International Union of Architects (UIA), which established itself

L'Egyptienne 8, no. 86 (December 1932): 2-6.

13. Nabaroui, "LÉcole Professionnnelle et Ménangère."

14. "Pose de la première pierre de l'École Professionnelle et Ménangère de l'Union Féministe Egyptienne, 2 Avril 1931." *L'Egyptienne* 7, no. 68 (April 1932): 2-9.

15. Nabaroui, "A l'Union Féministe Egyptienne."

16. Florie Bavard, "Politiques du dénudement dans les luttes nationalistes et féministes en Égypte (1882-1956)." *Clio. Femmes, Genre, Histoire* (2022): 101-127.

17. "RAPPORT : La Secrétarie de l'U.F.E." *L'Egyptienne* 9, no. 96 (November 1933): 2-7.

18. Nabaroui, "L'École Professionnnelle et Ménangère."

19. "Echos d'Orient." *L'Egyptienne* 7, no. 70 (Juni 1931): 29-32.

20. "Pose de la première pierre."

21. Ceza Nabaroui, "La maison de la femme." *L'Egyptienne* 8, no. 79 (April-May 1932): 2-10.

22. Huda Shaarawi and Margot Badran. quoting the interview to Saiza Nabarawi published by Myriam Harrey in "La femme orientale et son destin: L'Egyptienne," *Journal de la Femme* (1934), and personal commmunication from Saiza Nabarawi in 1972. *Harem Years,* 129.

23. "Discourse de Mme Charaoui Pach," 11.

24. Mercedes Volait, "Une lignée d'architectes entre plusieurs mondes: les Fahmy d'Egypte," *Cahiers de la Méditerranée*, no. 82 (2011) : 251-266, https://doi.org/10.4000/cdlm.5743.

to represent the profession in the Middle East. His architectural works ranged from public buildings to buildings developed by civil associations, such as the hospital for the Muslim Benevolent Association (1932) and the headquarters of the doctor's syndicate (1940) as part of Egypt's alleged "modernization process".[25] The UFE headquarters was also designed in this context.

Following Fahmy's designs, the UFE headquarters was built on Kasr-al-Aini street in Cairo by 1932 (**Fig. 1**). This move signified a transition from their former model of working-class districts' workshop and clinic to an architectural symbol of the movement. The school, envisioned by wealthy class women for their working-class peers, aimed to train them in feminised manual jobs such as cooking or sewing, while also offering spaces for public encounter, including conferences and annual parties. The two-floor building also included multiple offices and "salons", as well as a grand conference hall with a podium, an exhibition shop and childcare facilities for working women.

The main two floor plans were published in *L'Egyptienne* in February 1932 (**Fig. 2**). The first floor included two magazines in the two corners of the front facade, and the main spaces of the school including offices, rooms for sports, toilets, and the biggest room, the refectory. The second floor hosted the "grand conference hall" and its podium, more offices, classrooms, and toilets, with two salons on both sides of the main entrance, facing the front facade. The entire setup represented the tangible realisation of spaces designed to contribute to women's emancipation in line with the UFE's main concerns.

Figure 1: Main façade of the Professional School of the UFE designed by architect Moustapha Fahmy in Cairo, published in *L'Egyptienne* 8, no. 79 (April 1932): 4.

Figure 2: Floorplans of architect Moustapha Fahmy's design for the UFE in Cairo, Egypt, published in *L'Egyptienne* 8, no. 77 (February 1932): 5-10.

Figure 3: Moustapha Fahmy's UFE building in Cairo, Egypt. © John Hanna, May 2024.

3.2. "MODERN" ACHIEVEMENTS AT THE UFE'S HEADQUARTERS

At the UFE's Headquarters, the private became more explicitly political, and public achievements in relation to "modern" civilization were constantly highlighted. Notably, students' works were showcased and sold at exhibits in Cairo in 1926 and 1931, as well as at the International Exhibition in Liege in 1930. By 1933, the school boasted a total of 150 students over the age of 12, with a preparatory class dedicated to orphans aged 10. Additionally, significant strides were made in the fight for women's admission to universities. That year, the UFE celebrated the first female laureates from the University, recognising them as the "names of modern Egypt" across faculties such as Humanities, Sciences, Medicine, and European Universities, literally marking a "joyful effect in the evolution of the modern Egypt".[26] It is clear that for their members, the UFE represented Egyptian modern ideals, as did their building. Thus, what constituted modernity in Cairo in the 1930s?

As James L. Gelvin has written, the concept of "modernity" has been a fixture in the lexicon of social sciences for centuries. Originating in the eighteenth century, European and North American scholars distinguished between societies deemed "civilized," having achieved modernity, and those perceived as lagging on the path to civilization. Modern societies were characterized by a replication of the European experience, assuming that the trajectory of European society and its form of modernity could serve as a universal model. In this context, throughout the nineteenth century, the Middle East experienced significant socio-economic, and cultural

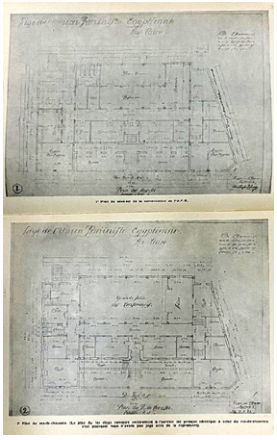
25. Mohamed Elshahed, "Egypt Here and There: The Architectures and Images of National Exhibitions and Pavilions, 1926–1964," *Annales islamologiques*, no. 50 (2016): 107-143. https://doi.org/10.4000/anisl.2138.

26. Nabaroui, "A l'Union Féministe Egyptienne."



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transformations, often through defensive developmentalism, such as rulers adopting European governance methods alongside the influence of (in this case, both British and French) imperialism.[27] Yet, as the history of the UFE Headquarters demonstrates, along with the lives and work of Moustapha Fahmy and Huda Sha'arawi, Egyptian modernity transitioned from an intellectual movement to a socio-political project, with anti-imperialist ideas permeating its very establishment by local elites—the same elites who constructed architecture as the material embodiment of modernism.

Still, the prevailing notion of [European] modern heritage might have influenced the recent history and preservation of the UFE's building, shaping its transformations over the preceding years (**Fig. 3**). Presently, the discourse on the public perception of modernist landmarks in the Middle East and beyond might overlook buildings like the UFE Headquarters. However, its significance is probably greater than commonly thought.

4. BEING MODERN, BUILDING MODERN

Huda Sha'arawi's transition from private salons to the public arena represents a spatial transgression of feminist concerns in Cairo. In this context, examining the history and narratives surrounding the UFE Headquarters not only prompts us to reconsider the notion of modernism through feminist and decolonial lenses but also invites reflection on the diverse manifestations of modernity across geographical contexts, particularly in discussions regarding the preservation of historical spaces.

In the process, the experience of researching the history and stories surrounding the UFE Headquarters reveals the current urgency of documenting buildings that have actively been built to pursue the ideals of social justice, prosperity, and peace. ■

27. Gelvin, *The modern Middle East*, 69 and 90.

BIOGRAPHY

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THE VALUE OF THE MATERIAL. AN ECONOMIC RE-READING OF THE MODERN IDEAL IN CHILE

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ABSTRACT
Modernity in Chile has been historicised mainly from stylistic and technological perspectives, which sought to establish its kinship and ruptures with its European parentage. This work offers an alternative interpretation in terms of how the local modern ideology was conformed, placing emphasis on an economic perspective by distinguishing how criteria such as efficiency and economy of resources were instrumental in constructing its image, exceeding, in many cases, the mere translation and local adaptation of the original modern principles.

The international debate on style and function was challenged in much of Latin America, and especially in Chile, due to the scarcity of financial resources and the critical need for housing and equipment. This disconnect between modern principles and local circumstances quickly shifted the focus to the search for efficiency in construction time and cost. In other words, the economic aspect of the problem took precedence over functional and stylistic issues.

This economic perspective was nurtured by the need for a material expression that better suited the nation's process of modernisation from the 1940s to the 1960s. In this context, Chile's concrete boom can be explained by its unparalleled structural features that could be implemented by an industry dependent on unskilled and very low-cost labour, which allowed for its use to become widespread with the construction of numerous large-scale buildings. This phenomenon enables a re-evaluation of Chilean modernity by assessing the design and construction processes in light of the particular state of technology, economy, and society in three paradigmatic large-scale housing complexes. It might be argued that these buildings helped cement an ideal of modernity firmly subordinated to the local reality —seismically, technologically and economically— with buildings that were massive, serialised, and efficient in the use of resources, thus challenging the received notion of the will of the architect alone as being responsible for defining modernity.

Modernity in Chile has been historicised mainly from stylistic and technological perspectives, which sought to establish its kinship and ruptures with its European parentage. However, for most of Latin America, particularly Chile, the international debate on style and function was challenged by a scarcity of financial resources and a critical need for housing and equipment. Owing to the seemingly unaffordable new technologies in materials such as steel and concrete —as reported in the editorial of the *Técnica y Creación* magazine no. 2[1]— as well as the accelerated processes of urban expansion and densification between the 1940s and 1960s, the focus quickly shifted from the rational use of material to the search for efficiency in construction time and cost. In other words, it became a fundamentally economic problem. Material thus became a commodity, part of a precise financial equation where its expenditure depended on costs, speed of production, and quality of labour, among other technical variables outside functional and stylistic issues.

The economic perspective of developmentalist Chile during that period was nurtured by the search for a material expression that better suited the nation's modernisation process. In this context, the country's great concrete boom can be explained by its unparalleled structural features that could be implemented by an industry dependent on unskilled and very low-cost labour with no ties to guilds or unions,[2] which allowed for its use to become widespread with the construction of numerous large-scale buildingsin a short period, and had great impact on the creation of jobs. Paradigmatic large-scale housing complexes cemented an ideal of modernity firmly subordinated to the local reality —seismically, technologically and economically-— with buildings that were massive, serialised, and efficient in the use of resources. Re-evaluating Chilean modernity by assessing the design and construction processes in light of the particular state of technology, economy, and society at that historical period allows us to challenge the notion of the will of the architect alone as being responsible for defining modernity.

1. DERNITY AND DEVELOPMENTALIST STATE

The period from the mid-1930s to the early 1970s in Chile was characterised by a focus on development, known as "developmentalism." It was driven by the 1939 Chillán earthquake and the subsequent series of social democratic governments that focused on implementing an incipient welfare state. A crucial development was the establishment the same year of the Corporación de Reconstrucción y Auxilio (Corporation for Reconstruction and Assistance) and the Corporación de Fomento de la Producción (Corporation for Production Development - CORFO). These, alongside the Caja de la Habitación Popular (Popular Housing Fund, 1936), provided the state with the initial financial and operational structures required to modernise Chile.

Regarding the state as a promoter of development and material welfare, three key variables helped shape modern Chilean architecture.

1. Editorial. "Nuevos materiales y métodos cambian la ruta del arquitecto contemporáneo". *Técnica y Creación* n°2 (June 1961): 2.

2. Adrian Forty, "Concrete and Labour", in *Concrete and Culture. A Material History*, (London: Reaktion Books, 2012), 225-235.

1.1. STRUCTURAL ISSUES

Chile's unique seismic conditions have restricted construction possibilities throughout the country, significantly affecting the use and expression of materials structurally and constructively. Major seismic events and their subsequent regulations have shaped the quality and aesthetics of modern architecture, establishing specific requirements for vertical support elements and restrictions on building height.

The Chilean standard NCh433 of.1972-Earthquake Resistant Design of Buildings marked a milestone as it introduced structural calculus as a method for determining the elements of a structure. At the same time however, it also established requirements for the layout plan of structural elements, possibly as a safeguard against future massive seismic events. Designed in 1972, only ten years after the devastating Valdivia earthquake, this code emerged when the seismic behaviour of modern materials such as reinforced concrete still needed to be fully understood. Despite this, reinforced concrete demonstrated better seismic performance than other materials, especially in medium and large-scale buildings, rising to prominence during Chile's decades of developmentalism.

1.2. HOUSING DEFICIT

Between 1930 and 1952, Santiago doubled its population due to internal migratory movements, resulting in a critical housing deficit, which was the most visible issue in the national modernisation effort.

In this regard, the creation of the Caja de la Habitación Popular in 1936 would provide the initial momentum for large-scale housing construction, boosted by the 1939 Chillán earthquake, which "was the perfect opportunity to start a housing re-planning process integrated with urban planning."[3]

Although the *Caja* was the first government organisation to address the national housing deficit, it was its successor, the Corporación de la Vivienda (Housing Corporation - CORVI), created in 1952 and operational until 1976, that introduced the rational concepts of serialisation, speed, and standardisation both in construction processes and in the development of typologies suitable for modern families based on hygienist principles and the communalisation of the ground level. CORVI was responsible for consolidating vast territories within Chilean cities through larger scale, height, and urban complexity projects that delivered a solid and recognisable image –that of reinforced concrete– to Chile's new technological and cultural social housing standards.

1.3. HIGH-RISE CITY CENTRE

By 1965, the belief that extensive urban infrastructure projects had the potential to revitalise the city and boost the economy was embodied in the creation of the Corporación de Mejoramiento Urbano (Urban Renewal Corporation - CORMU), whose pursuits included "urban renewal, improvement of areas in the city, densification, inclusion, control of sprawl, and the recovery of deteriorated areas."[4]

3. L. Valenzuela, "Mass housing and urbanization", 278.

4. Patricio Gross, "Testimonios", in *Vamos p'arriba. La Remodelación San Borja y la vivienda vertical en Chile* (Santiago: Ediciones ARQ, 2022), 20.

In economic and cultural terms, the solution that best represented the aspirations of a modern society was the tower. Even when forced to adapt to the local reality and thus detached from the stylised paradigm of steel and glass of cities like New York, the tower was the only typology distanced enough from the colonial city's foundational grid and continuous façade. Finally, in technological terms, the tower made it possible to serialise and professionalise the construction industry, as it demanded updated construction standards, which had to be adopted by architects, engineers, builders, and workers.

These three conditions make up the particular context in which modernity was implemented in Chile, which, although based on modern principles, especially those related to hygienism and the communalisation of space, took forms that were largely determined by the efficient use of resources, particularly material cost.

2. REVALUING MODERNITY

2.1. HEIGHT STANDARDS: TORRES DE TAJAMAR

Chilean seismic regulations have historically favoured the development of structural systems that provide great rigidity to the building, minimising deformations and generating highly resistant structural elements. The material that best meets this requirement is reinforced concrete. However, for it to achieve the desired performance, substantial quantities are required, both because of the preferred use of rigid wall and slab systems and because of the thickness of these elements. These two aspects are backed by the relatively low economic cost of the system in terms of material and labour, as well as by its non-dependence on highly industrialised factories or complex work sites.

The reinforced concrete wall and slab system has been dominant in the construction of high-rise buildings up to the present day, particularly in residential ones, where the wall is pertinent for the division of housing units in response to the requirements of acoustic and fire insulation. As a result, the design of these buildings has been conditioned by this constructive logic, limiting spatial freedom, large spans, and, in particular, the free floor plan of the ground level where the most significant stresses are expected as an effect of earthquakes. This conditioned the implementation of modern ideals of spatial flexibility and large openings, taking into account the context. In addition, the problems resulting from eccentricities between the dynamic loads and the resistant elements have led to the design of perfectly symmetrical floors to ensure a homogeneous distribution between the loads and the supporting elements.

A clear example of these constructions is the main tower of the Torres de Tajamar residential complex (**Fig. 1**), designed by architects Bresciani, Valdés, Castillo, and Huidobro. It was completed in 1967 and measures 84 metres in height. The architect Fernando Castillo described the technical and structural challenges encountered in the design of the building, which led the team of engineers to develop an elastic structural system, never before implemented in Chile.[5] The system was based on

5. Fernando Castillo & Humberto Eliash, *Fernando Castillo: de lo moderno a lo real*. (Bogotá: Escala, 1990), 75-77.

a perfectly symmetrical floor plan with only two sets of perpendicularly opposed main structural walls that separated the residential units. (**Fig. 2**). This configuration frees up the façade to a considerable extent, allowing for a great deal of freedom in its composition, which is only interrupted by the heads of the supporting walls. Consequently, the structural system of reinforced concrete walls and slabs defined the formal and spatial possibilities of modern collective and high-density architecture in Chile.

2.2. PUBLIC POLICIES: REMODELACIÓN SAN BORJA

Reinforced concrete technology made it feasible to build a 'solid' nation that could grow in height while withstanding the country's seismic condition without incurring unreasonable costs. These three characteristics of concrete helped to evolve the ideal of the modern city to one of high-rise, large-scale densification that would require centralised, resource-efficient renovation programmes.

This vision was consolidated with the creation of the CORMU in 1965, whose most ambitious and relevant project was the Remodelación San Borja (RSB) (**Fig. 3**), which started in 1967 and was abruptly ended by the military dictatorship in 1976. The slogan with which it was publicised at the time, *Ahora vamos p'arriba* (Now we are moving up), reflects upon the state's intent to link the idea of modernity with both new high-rise buildings and the country's general development.

The RSB was conceived as a metropolitan-scale intervention that formed part of the "new models of urban growth based on a greater densification of the central areas of the city"[6] oriented particularly towards the middle classes, exceeding the mere provision of housing by acting upon the re-articulation of the urban fabric, installing public space –open to all of society– as a central component of the new urban life of a country that was 'moving upwards.'

Although there was already previous technical experience at hand with Torres de Tajamar, whose maximum height reached 28 floors, the extensive nature of the RSB project required, according to Gonzalo Carrasco, the re-articulation of the traditional practices of architecture, engineering, and the private sector, the latter being significantly boosted by these large housing projects promoted by the social democratic and socialist governments of those years through CORVI and CORMU.[7]

Such a reconfiguration required not only the collaborative –and indeed virtuous– work of the state and the private sector but also the design of a centralised plan sufficiently well structured to safeguard the integrity of the urban vision pushed by CORMU. At the same time, this design had to be flexible enough to support the materialisation of the entire structure from fragments devised by various teams of architectural firms and construction companies.

Despite the formal variations introduced by each team, the overall vision is reflected in the use of the tower typology as the most modern possible approach to densification and reactivation of the centre of Santiago. By freeing up the ground, destined here for public use and enjoyment, this

6. Gonzalo Carrasco, "Una constelación de tecnologías incompletas", in *Vamos p'arriba. La Remodelación San Borja y la vivienda vertical en Chile* (Santiago: Ediciones ARQ, 2022), 114.

7. G. Carrasco, "Una constelación de tecnologías incompletas", 114.



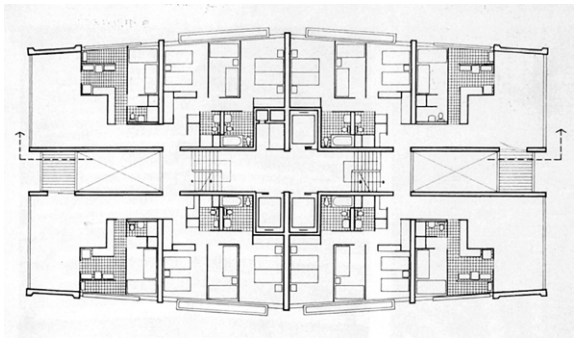


Fig. 1. Bresciani, Valdés, Castillo & Huidobro. Torres de Tajamar, Santiago, Chile. Project view. In: Bresciani, C., Valdés, H., Castillo Velasco, F., García Huidobro, C., Bolton, C., Larrain, S., Prieto, L., & Lorca, J. (2020). "Torres de Tajamar". *Auca: Arquitectura Urbanismo Construcción Arte*, nº16 (1969): 48-53. Retrieved from: https://revistaauca.uchile.cl/index.php/AUCA/article/view/59131

Fig. 2. Bresciani, Valdés, Castillo & Huidobro. Torres de Tajamar, Santiago, Chile. 4th Floor Plan. In: Bresciani, C., Valdés, H., Castillo Velasco, F., García Huidobro, C., Bolton, C., Larrain, S., Prieto, L., & Lorca, J. (2020). Torres de Tajamar. *Auca: Arquitectura Urbanismo Construcción Arte*, nº16 (1969): 48-53. Retrieved from: https://revistaauca.uchile.cl/index.php/AUCA/article/view/59131





Fig. 3. Various authors. Remodelación San Borja, Santiago, Chile, 1972 [Photography without author], collection "Enterreno Chile", 1972. Retrieved from Archivo Enterreno. URL: (https-//www.enterreno.com/moments/remodelacion-san-borja-en-1972-1676). CC BY-NC 4.0 DEED. Accessed: Feb 9, 2024.

Fig. 4. Bresciani, Valdés, Castillo & Huidobro. Unidad habitacional Portales, Santiago de Chile, 2017. © Credits Moritz Bernoully. Retrieved from: https://divisare.com/projects/372010-bresciani-valdes-castillo-huidobro-bvch-moritz-bernoully-unidad-vecinal-portales

offered a completely different image to that of the city's foundational centre, in which the density of the continuous façade concealed the non-existence of a collective life inside the block beyond the old shopping arcades.

In this sense, the RSB can be regarded as a resignification of the large-scale housing project in Chile since it brings real high-rise densification to Santiago for the first time, reorganises the relationship between the inhabitant and public space by almost completely liberating the ground level, and proposes a series of urban artefacts that will enrich collective life in the city.

At the same time, it delivers an image shaped by reinforced concrete as the most capable material for tackling the challenge of building the modern city.

2.3. MATERIAL TECHNOLOGY: UNIDAD VECINAL PORTALES

Chile's seismic conditions and the precarious construction technologies used in most of the 20th century led to a strong preference for "solid construction." This involved using materials such as reinforced concrete and masonry over flexible options like wood or steel, which were culturally associated with poorer quality or emergency buildings. The scarcity of resources and the high demand for construction prompted the use of low-cost, low-complexity materials and techniques that made it possible to employ masses of unemployed workers. Reinforced concrete became the primary construction material for medium and large-scale projects as it possessed three highly valuable characteristics. First, it was perceived as a solid material by the public. Second, it was an economical alternative that could be used in quantities far exceeding the structural needs to compensate for the low quality of its execution. Lastly, it allowed for profitable technical formwork processes based on large-scale standardisation.

The use of concrete was encouraged during the 1940s and 1950s by the new national cement companies with local and readily available materials. This period also saw the creation of the Instituto Experimental de Edificación *of the* Universidad de Chile (1952) and the publication of two technical journals, *Revista de la Construcción* (1962-1972) and *Revista IDIEM* (1962-1983), which favoured active dissemination of structural and construction systems on reinforced concrete.

A paradigmatic case in the use of reinforced concrete was the Unidad Vecinal Portales (**Fig. 4**), built between 1954 and 1966 by the Caja de Previsión de Empleados Particulares (EMPART) in its first phase and by CORVI in its final phase, based on a design by the renowned architectural firm BVCH. The complex consists of housing blocks up to 6 storeys high made of an exposed structure of reinforced concrete walls and slabs that define the spaces while simultaneously serving as the finishing touches. The bare structure is completed by masonry elements such as partition walls and brise-soleils. Here the concrete allowed the construction to be systematised with standardised measurements of the formwork, which was made with 5" planks, leaving an imprint on the concrete. Umberto Bonomo[8] points out that the first phase used more material resources than the second, when CORVI took control of the project, reducing costs and giving more dominance to concrete as the primary material.

By deploying its particular features to their full extent, concrete made itself indispensable, much to the detriment of other materials and elements that, in the face of the cost-efficiency equation, were promptly deemed as luxurious accessories, thus making the formal expression of large-scale modernity take on a rather ethical austerity.

3. CONCLUSIONS

Modernity found fertile ground in the state's developmentalist pursuits between the mid-1930s and early 1970s. Despite the fact that the Chilean economic

8. Umberto Bonomo, "Las dimensiones de la vivienda moderna : la Unidad Vecinal Portales y la producción de viviendas económicas en Chile, 1948-1970", PhD diss., (Pontificia Universidad Católica de Chile, 2009): 239 – 248.

context imposed significant restrictions on the modernisation process[9], the widespread interest in shaping a modern nation, coupled with the housing shortage and the incorporation of concrete construction technologies, led to the establishment of a series of official agencies and plans. These initiatives utilized reinforced concrete to give physical form to the modern city.

This is especially relevant considering that a significant part of modern architecture in Chile consists of large-scale housing complexes and urban infrastructure developed primarily by the state and, in some cases, in partnership with the private sector. Thus, the resulting modernity was closer to one of serialisation and maximisation of resources rather than to the pure expressiveness of stylistic principles, a subject that remained active in the private domain and generally on a smaller scale. Concrete, bare and austere, shaped the image of Chilean modernity thanks to its low economic but, paradoxically, very high use value. ■

9. Among the most pressing restrictions were the post-earthquake reconstruction efforts and the state's limited financial and operational instruments at the time.

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BIOGRAPHY

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TOWARDS A TRANSIENT UNDERSTANDING OF MODERN BUILT HERITAGE DOCUMENTATION AND RESEARCH

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ABSTRACT

Modernism is defined for most Western contexts, much of it applies far less to the Arabian Peninsula. Here so-called modern build architecture and the understanding of heritage are largely impacted by nomadic traditions and transience. In the United Arab Emirates (UAE), knowledge was handed down for generations through intangible practices, such as poetry or 'hakawati' from common gatherings of the Bedouin council in the characteristic 'majlis' space. Here the spatial hierarchy, societal protocols, trade, and conflict negotiations could be observed by the younger generation present in *majlis* sessions. Following the discovery of oil in 1958, the UAE experienced a period of rapid growth and mass construction catering to a growing population. Many structures were built by foreign or regional architects, planners, or engineers who trained in universities overseas. However much of what was built between 1960 to 1990, the period of modernity in the UAE, was significantly influenced by contextual aspects of privacy, spatial division, climate, and culture. Many of the resulting built structures advanced from the local understanding of the environment as well as the social protocols. Hence, as we aim to develop a more global understanding of modernism, it is important to consider approaches to modern built heritage rooted in its context impacting the research and documentation methods. In the UAE the memory of a space or preservation of it is far more about the concept of a space rather than the actual space as an artefact itself.

1. INTRODUCTION

Following the oil discovery in 1958 in Abu Dhabi[1] the built environment of the UAE underwent a period of extensive growth and transformation. This has been perhaps the most significant change and growth in terms of scale, impact and global reach in the UAE's history. Catering to the growing demand for housing, public buildings, and important infrastructures, the UAE garnered a name as a place that intended to implement new ideas and large-scale visions, thus attracting architects, planners, and engineers from abroad. Those newly built structures were constructed using a concrete prefabricated system. As a result from the 1960s onwards, numerous concrete factories had been established in the UAE. Most recently, the architecture in the UAE between the 1960s leading up to the 1990s has officially been titled *Modern Architecture of the UAE*:[2]

> *The architecture during this period shares many of the characteristics of work of the Modern Movement; however, the particular response to context, climate, and culture meant these buildings and/or sites departed from the main considerations of Modernism, resulting in place-specific adaptations*.[3]

The published definition of this period of architectural history in the UAE supports ongoing efforts in systematic documentation and research on the built environment while it also enables the development of a more regionally centred analysis and understanding of the architecture of this time. Despite many similar aspects to various global locations associated with Modernism, it would be limiting to refer to the architecture of this time in the UAE as modernist buildings and disregard the role the local community and context had in the development and growth process.

The architecture of this period particularly in the UAE merely represents a continuation of its traditional predecessors that characterised the years before the 1960s. Unlike Modernism in the West, these structures did not represent a stark departure from its traditional forms, but rather a transformation in their construction methods, scale, and typologies. The new architecture continued to respond to regional-specific aspects of privacy, cultural sensitivities, and the arid climate and geographical specifics. Importantly the development at this time was driven by the country's leaders, who not only commissioned but also were heavily involved in the development and conceptualization of these buildings or grand plans. This paper questions how we can challenge and inspire different ways of understanding and documenting modern heritage, one that considers the evolution of the built environment, rooted within the socio-cultural and historical development of a place.

2. LIVING IN TRANSCIENCE

The Arabian Peninsula has long been a place of mirage for adventurous travellers, characterised by the presence of an ever changing and varying landscape ranging from a mountainous to desert geography and shaped by

1. "UAE Facts and Figures," Organization of the Petroleum Exporting Committee. Accessed June 8, 2024. https://www.opec.org/opec_web/en/about_us/170.htm#:~:text=The%20first%20commercial%20oil%20was,and%20offshore%20at%20Umm%20Shaif.

2. "Modern Architectural Heritage of the UAE Initiative," United Arab Emirates Ministry of Culture. Accessed June 8, 2024, https://mcy.gov.ae/en/modern-architectural-heritage/#.

3. "Modern Architectural Heritage of the UAE Initiative," United Arab Emirates Ministry of Culture. Accessed June 8, 2024, https://mcy.gov.ae/en/modern-architectural-heritage/#.

its hot and arid climate. Deeply entwined with this history is the presence of the numerous tribes across the peninsula, their seasonal migrations, and the unwavering bond to their lands. The seasonal migration, specifically in the UAE, saw tribes move between the coastal and inner country regions, namely desert drylands or mountain terrain. Original living structures were made from locally accessible material such as the goat hair for the Bedouin tent, *Bait al Sha'ar* [4], or palm fronds for the *Areesh* huts [5]. The modular and ingenious dismantled construction system allowed for movement of the house and easy replacements if the weather impacted the construction material. Structures could then be orientated towards or away from the winds depending on the season and would be characterised by specific regional patterns representing the land and its people. The transient life between various locations meant personal belongings were kept at a minimum or reduced to daily living necessities, resulting in a strong intangible heritage, many of which have been inscribed into the UNESCO intangible heritage listing [6].

2.1. A COMMUNAL SPACE BECOMES A 'SCHOOL OF LIFE'

The importance of community and the desire for the representation of the tribal identity has remained strong until today. The gathering and sharing of knowledge in communal spaces whether on a family, neighbourhood, regional, or national level remain a key pillar of this region and take place in the regionally specific *majlis*[7] typology. Those spaces function both as tribal councils and spaces of hospitality, coming together, and sharing knowledge and practices to serve as a 'school of life' for the younger generations. In these 'majalis; (pl. of *majlis*) gatherings stories of past experiences were shared, and experiences or opinions were given to topics discussed or presented. Here the youth and out of tribe guests in attendance were able to learn more about the identity of the tribe and community.

The majlis is mainly known as the male reception room for guests to the house owner, often evoking the most prominent picture of 'Arabia' and orientalist interpretations: a grand room filled with men casually sipping coffee, while sitting relaxed on patterned cushions placed along the edge in u-shape. However, the majlis is more than simply a reception room to a family house, it holds an important social, cultural, and political role in the Arab world. As the public interface in a mostly domestic setting, the majlis encourages the participation of the community in affairs of the neighbourhood, city, or state, simply through an open-door policy. The majlis serves as a space for dialogue between community members and national leaders. The strict separation of the majlis from the rest of the house also allows for maximum privacy in the tribe. The spaces were divided between family and external guests in a tent, areesh, or even later coral stone houses, and until recently concrete build structures. The separation 'wall' served both as protection of the private from the public and allowed members of the family to observe affairs, therefore, being informed of the developments.

4. "House of hair: a Bedouin's tent is his home," Gulf News. Accessed June 8, 2024. https://gulfnews.com/uae/house-of-hair-a-bedouins-tent-is-his-home-1.411756

5. Sandra Piesik, *Arish: Palm-Leaf Architecture* (Thames & Hudson, 2012), 50-51.

6. "United Arab Emirates," UNESCO Intangible Cultural Heritage. Accessed June 8, 2024. https://ich.unesco.org/en/state/united-arab-emirates-AE

7. "Majlis, a cultural and social space," UNESCO Intangible Cultural Heritage. Accessed June 8, 2024. https://ich.unesco.org/en/RL/majlis-a-cultural-and-social-space-01076

2.2. A SPACE FOR STORYTELLING AND COMMUNAL PRESERVATION

The spatial composition and orientation of these spaces were carefully crafted based on the understanding of geography, privacy, and cultural aspects. The *majlis* remains a cornerstone for community gatherings, sharing stories and memories of past times. Stemming from the absence of excessive material possessions in the past, originally spaces and the concept of those were often described through intangible means such as poetry, or storytelling.

The *hakawati*[8] is one such form of storytelling and is derived from the word *'haki'* meaning to talk. A storyteller holds immense importance in Arab nomadic culture, as they become the wisdom keepers of bygone times often describing scenes vividly using movement, music, gestures, and even costumes. The listener and observer become participants as the stories unfold with many famous *hakawati* holding memories of shared spaces, thus offering a description of spatial memory at the time. The *hakawati* is then not only a story that is told to entertain guests but rather a cultural-specific tradition to preserve and hand down knowledge to the next generation. While this cannot be quite understood as oral histories, such oral traditions often can shed light on processes of building communities, their values, motivations, and ultimately the reason for spatial decisions that impact the built environment.

3. ARRIVAL OF MODERNITY

The architecture of the UAE between the 1960s and 1990s is not only characterised as the period of Modern architecture but also the period in which the formation of the UAE took place and as such the structures built during this time play a significant role in the nation-building process. The huge effort undertaken by the rulers to offer housing and a new urban life to their communities was made possible through the invitation of numerous international planners, architects, and engineers.[9] Those building experts came from abroad many of whom had also received an education and training abroad, even those from the region, therefore bringing to the UAE architecture approaches from elsewhere. Though being a source for many imported ideas, it is important to understand the role that rulers and communities had in the planning process.

3.1. A COMMUNITY APPROACH TO MODERNITY

Even though planners would bring foreign ideas to the region, those ideas ultimately were merged or adjusted to the regional sensitivities and local climate, hence displaying a stronger adaptation to the local context. This process of adaptation and consultation with the country leaders took place in previously discussed *majlis* in the presence of community members, therefore allowing for immediate feedback. Being faced with the local climate, cultural sensitivities, and limited resources at the time as well as the desire to preserve and continue communal traditions and spatial practices projects developed between 1960s to 1990s are often characterised by a strong adaptation.

Additionally, it is important to note that the time of major urban development, and architectural experimentation in the UAE took place at the time when 'Western' countries witnessed an end to the period of Modernism

8. "Hakawati: the ancient Arab art of storytelling," Gulf News. Accessed June 8, 2024. https://gulfnews.com/entertainment/arts-culture/hakawati-the-ancient-arab-art-of-storytelling-1.712001

9. Lest We Forget, *Structures of Memory in the UAE* (Lest We Forget FZ-LLC, 2028), 18-26.

shuffled in by the destruction of Pruitt–Igoe in 1972[10]. As such countries such as the UAE not only offer opportunities to planners to realise visions but also directly engage with leaders. This undoubtedly attracted many architects to the shores of the UAE and others were invited after their initial successes in neighbouring states such as Kuwait or Qatar.

3.2. THE BEGINNING OF FORMAL DOCUMENTATION

Parallel to the period of rapid growth was the formation of various governmental institutions that would begin to lead the national development process for the years to come. The establishment of local municipal bodies along with their respective archives played a crucial role in the shaping of urban settled society and the beginning of archive and documentation of one's history in material form. It is important to understand that the intangible process of 'preservation' through storytelling did not disappear but would now be supported by new physical evidence. Understanding the complexity of the spatial evolution of the UAE it is paramount to consider integrating not only the physical documentation of structures but also the immaterial knowledge in spatial wisdom as shared through the *hakawati* or the *majlis*. Even more so as until today, many structures remain undocumented in plan or document form, making the presentation or research far more difficult as often crucial information on the origin, vision, or development process of these structures is often absent or only sparsely existing.

By the end of the 20th century, many planners active during the 1960s to 1990s had returned to their home countries and took the architectural drawings with them. Even though many experts at the time remained in the UAE and have been residing there ever since, many building documents or information remain in private hands making the importance of community building a significant part of the research and documentation process of modern built heritage in the UAE.

4. AN ALTERNATIVE APPROACH TO BUILDING RESEARCH

Most preservation efforts start with the collection of existing knowledge, evidence, artefacts, and documents of the building structure. This process can become significantly more challenging when documents or historical information is absent or located away from the place of interest. With many buildings being far less documented in the UAE especially those from the period of 1960-1990s, documentation and collection of research forms the most important task towards understanding the history and ultimately role of this structure within the greater evolution of the built environment in the region. While there are many governmental and individual efforts being undertaken in the UAE today to thoroughly study and collect such information it becomes particularly important in the research design to consider the early transience of society as a key driver in this documentation effort.

4.1. PRIVATE ARCHIVES AND COMMUNITY BUILDING

As pointed out earlier, until today a lot of information about the 1960s to 1990s remains located in private archives and collections whether in or outside of

10. Charles, Jencks, *The Language of Post-Modern Architecture* (New York: Rizzoli; 4th edition, 1984), 9-15.

the UAE, and in some cases, community members may not be aware of the importance of the information they hold. Further, the early transient history of the region had also resulted in the preservation of the concept of spaces over the physical space itself, at times making the only remaining evidence of this space the oral histories and stories shared in the majlis. The shift towards a settled and more material-centric historical approach shifted in this transformative period of the 1960s to 1990s. Oral histories then play a crucial role in preserving the memory of space and the history of those various structures. These vital stories are more than mere memories or nostalgic forms of traditions but can give insight into the connection to ancestral lands and pass on knowledge of the desert landscape to future generations.

The absence or lack of extensive material possession meant a focus on the experience and memory of a space, as opposed to the attachment to an object. Storytelling was not only a form of spending time but also offered insight into the ways and protocols of life customs and traditions and offered important information about specific tribes and regions. Following the rapid growth of the UAE in the 1960s and the development of large-scale urban areas, many of these more tribal practices found their way into urban daily life, as did the *majlis* and the tradition of storytelling, the *hakawati*.

4.2. NOMADIC TRADITIONS, THE BUILT ENVIRONMENT AND RESEARCH

Research about this period then must include efforts of community inclusion and collection of the various *hakawati*, poetry, or shared stories from the *majlis* gatherings. While this process may take longer, as it requires the development of trust and gaining access to the society, and is focused on qualitative socio-cultural data, it will ultimately allow the reconstruction of the past of this built structure or ensemble. Understanding the connection of nomadic traditions and the connection between the land and its people has a huge impact on deeply understanding and decoding the design and building history choices of these buildings.

This element of humanity in architecture history research is immensely important in understanding the region's architectural growth, the impact individual leaders or rulers and community had, and therefore, the adaptations that took place even though architects may have initially brought foreign ideas to the shores during the moment of rapid growth and expansion in the UAE. Documentation in initial transient cultures where structures themselves were originally made from vanquishable, the concept and ultimate memory of a place is shared through the discussed intangible practices and requires an expanded approach to the documentation of built structures.

5. CONCLUSION

The connection to the local context (geography, society, culture) as opposed to the role of architectural principles such as those of modernism becomes increasingly important in the development of knowledge and understanding of the evolution of the built environment in the UAE and the Arabian Peninsula. Unlike in 'Western' cities where the immediate built



Figure 1. Dubai urban community gathering. Dubai/United Arab Emirates, 2005. © Credits Adina Hempel, 2005.

surroundings and history of place offer space for interpretation of building context, in the Arabian Peninsula the connection of the people to their land, culture, and intangible practices also found their way into the development of architecture in the 1960-1990s.

It is paramount to consider the intangible practices that shaped the building rather than looking at the architectural history of the region through the lens of Western building principles only. The understanding of societal structures in nomadic regions, not only guides the building concept and development but also impacts documentation methods and ultimately preservation processes that would be considered regionally contextual. Moving forward, it is crucial to continue studying and documenting the architectural legacy of the Arabian Peninsula, with a focus on preserving and celebrating its cultural and historical significance. By incorporating indigenous knowledge and practices into architectural research and preservation efforts, one can ensure that the rich heritage of the region is safeguarded for future generations.

In conclusion, the development of built forms in the Arabian Peninsula from the 1960s to the 1990s highlights the importance of local context, including geography, society, and culture, in shaping architectural practices - unlike in Western cities, where the principles of Modernism dominated in the development of built forms. ■

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BIOGRAPHY

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HOW CAN EXHIBITIONS HELP CREATING A SUSTAINABLE AND RESPONSIBLE ATTITUDE TOWARDS THE FUTURE?

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ABSTRACT

The relation between museums, archives and libraries has been changing rapidly. Museums are strengthening their socio-political dimension (ICOM, 2022) and must encourage diversity and sustainability, providing diverse experiences of education, debate and sharing; archives are moving from the usual closed spaces with limited access to exhibition rooms where they are displayed; and libraries are increasingly spaces that welcome creation and debate. These changes go together with the profound socio-cultural transformations underway, helping to question modern ideology and all its forms of authority and power. They foster the decolonisation of museum narratives and encourage the emergence of new readings that replace the Eurocentric, male and Caucasian representation with a new legacy for the future that is truly plural, inclusive and intergenerational. Whilst the exhibition gained an increasing attention with museums remake iconic exhibitions, conferences and meetings on the subject multiply, and a vast theoretical production is published, several of them contribute to the post-colonial studies that have been deepened, debating the museums narratives, collections, discourses and practices. Concerning the curatorial practices and the specific language of exhibitions, this session intends to analyse the current rethinking of the framework of the exhibition, in theory and practice, to debate the challenges created by the assumption of the exhibition as a manifestation of a broader, participatory and collaborative critical process. Is also pertinent to discuss how can the principles of a circular economy can be effectively adopted in exhibition assembly, minimising natural resources, reducing waste, favouring the reuse, recycling or repair of materials. The main goal is to think how exhibitions can offer an engaging and meaningful experience that contribute to the development of a deep citizenship and social involvement that may help create a more sustainable and responsible attitude towards the future.

1. INTRODUCTION

The exhibition is the act of presenting, making appear, showing or displaying, according to a certain look, perspective and organisation. This definition remains valid, even considering that since the end of the 20th century, the exhibition has been valued in a broader understanding as a place of experience and production of thought that help debate the established historical narratives. In other words, more and more, the exhibition is a place for exchange and critical production, with a para-curatorial practice that develops a programme of initiatives that run in parallel, rather than in a subsidiary way. Hence, there has been an increase in piecemeal and subjective readings instead of closed and normative discourses, with direct translation into alternative exhibition displays, as well as the affirmation as places for the dissemination and exchange of proposals resulting from individual and anonymous views[1]. However, it's important to assess the visitor's actual participation, because the line between an enriching and stimulating experience and the entertainment that distracts and alienates can be blurred. In this regard, is important to emphasise the need for a committed visitor participation and draw attention that this approach raises also the need of a real museum teamwork in the exhibition, stressing the need to reconfigure the *modus operandi* of museology and curatorship[2], advocating the work must be developed in a circular, close and collaborative way, avoiding the linear and hierarchical sequence.

The nature of the exhibition has also been rethought, given the multiple transformations in the means of information and communication and the fact that we live in a time when digital image processing and manipulation technologies allow for better conservation, accessibility and study, as well as enabling the development of virtual museums, the careful digitisation of works and their dissemination on a global scale, which poses new challenges for curatorial practice.

While the accessibility of artworks contributes to the democratisation of culture, by making public contact more dynamic and allowing different interpretations, at the same time, it increases the aura of that singular moment when we are living the physical experience of the contact with art. Walter Benjamin had already identified this exhibition value and its great potential with the public, defining it as 'exhibitability' or 'exhibition-value'[3]. Thus, the 'aura of artworks has shifted towards their public'[4], which means that the importance of museums, and their exhibitions, lies in the unique opportunity to allow the subject to have a face-to-face experience with the works and the space, at a specific time and place. To this extent, the exhibition space become crucial, and it is essential for each institution to rethink exhibitions, their themes, contents, curatorial and para-curatorial discourses, scenography, methodologies and aesthetics to trigger intersubjective and self-reflective participation (on an intellectual, psychological, spiritual and emotional level). If so, the exhibition can amplify the intrinsic relational value of culture and the arts, since it becomes a privileged place of education, inspiration, dissemination and public engagement, to re-evaluate our own attitudes, values, emotions and capacities, making us more aware of the full exercise of citizenship **(Fig.1)**.

1. Jesús Lorente, "Estrategias museográficas actuales relacionadas con la museologia crítica", in Complutum. (2015. Vol. 26 (2), 111-120 (16 july 2024.

2. https://www.researchgate.net/publication/283834509_Estrategias_museograficas_actuales_relacionadas_ con_la_museologia_critica).

3. Margaret Choi Kam Lam *Scenography as New Ideology in Contemporary Curating and the Notion of Staging in Exhibitions*. (s.l: GRIN Verlag GmbH, 2013), 24.

4. Lucy Steeds, *Exhibition. Documents of Contemporary Art*. (London/Cambridge, Massachusetts: Whitechapel Gallery, The MIT Press. 2014), 26.

2. THE MULTIPLE DIMENSIONS OF THE EXHIBITION

In 2007, when *Documenta 12-100 days of art* in Kassel proclaimed, through the artistic director of that edition, Roger M. Buergel, and curator Ruth Noack, that the exhibition should be a 'medium in its own right and can thus hope to involve its audience in its compositional moves[5], it gave evidence of a new disciplinary field and a broader understanding of the exhibition as a place of experience, production and thought.

2.1. THE POLITICAL FRAMEWORK OF THE EXHIBITION

This issue is also related with the growing awareness of the ideological, economic and financial framework of museums and how this has always influenced the programming and management of each institution, its history, collections, building, activity and exhibitions. Knowledge of these factors is particularly important as museums are one of the institutions that contribute to the shaping of collective consciousness through the narratives they build with their collections, exhibitions and publications. The attitude of removing objects from the storage or the archive to exhibit them, in association with other pieces and within the framework of a curatorial discourse, means a process of appropriation, valorisation and recontextualisation that culminates in the attribution of new meanings. The way the objects and documents are displayed, their relationships with each other, the exhibition supports they are on, the circuit suggested, the texts and captions, the role given to the visitor: these are all elements of a narrative, which is never neutral or impartial. The very system of classification and categorisation assumes a certain reading and historical conception and is also one of the factors in the legitimisation of the artwork. In other words, it's very important to realise how the museum's context significantly influences the public's perception, interpretation and participation in exhibitions, knowing that any museum is, by its very nature, a reconstruction, necessarily fragmented and incomplete.

While the same piece can give rise to different narratives and exhibition discourses, the dialogue we establish with artworks remains open throughout our lives and, as such, can always be revisited, depending on the forms and conditions in which the pieces are exhibited, our gaze and our questions. In this way, curatorial work is inexhaustible and contributes to a parallel history – one that records the way the artwork has been perceived over time, the readings it has given rise to and the influences it has exerted at each specific moment, in other words, a history that allows us to know how societies define and value art and culture. This is one of the reasons why museums have been re-presenting or reconstituting iconic exhibitions, at the same time as providing digital platforms where it is possible to consult images and information from past exhibitions. Simultaneously, meetings and debates on the topic are multiplying, several titles are published with the purpose of compiling the exhibitions that have made up the history of art and, more recently, that exhibition catalogs increasingly include descriptive memories, technical drawings and photographs of the exhibition project, recording them for posterity, which will contribute to future studies and academic

5. Nicolas Bourriaud, *Relational Aesthetics* (Dijon: Les Presses du Réel. 2002), 58. Isabella Marte (ed.), *Documenta Kassel 16/06-23/09 2007. 12*. (Kassel: Documenta Veranstaltungs GmbH., 2007), 12.

research. The impact of exhibitions on the historical discourse and the way in which they influenced the production of knowledge is also increasingly considered and must be debated. More recently, post-colonial studies have been deepened, debating the difficult issue of the decolonisation of museums, their collections, discourses and practice going beyond the historicist and sequential perspectives, often through collaborative research projects.

At the same time, the emergence of hidden histories about gender, cultural minorities or the environment brings new perspectives that are an important way to relearn universal values, recognising the uniqueness of everyone, showing how the preservation of heritage is a fundamental value in the development of human future, as it is an inexhaustible source of knowledge, learning, questioning and inspiration.

2.2. ARCHIVES ON DISPLAY

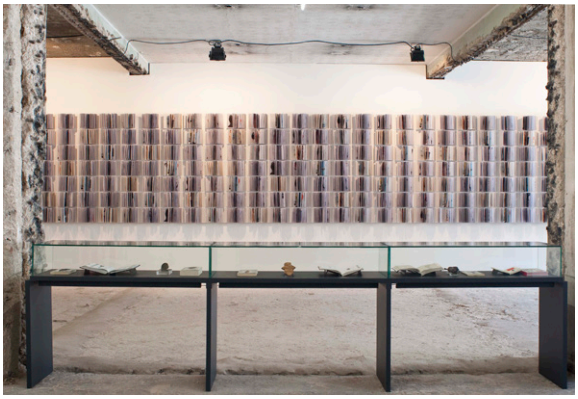
Archives are moving from the usual closed spaces with limited access to exhibition rooms where they are displayed **(Fig. 2 and 3)**. Until now, although they were crucial to the researchers, particularly for the contextualisation of the artistic practice, they were rarely displayed and lived mainly as footnote in thesis, books and catalogues. Now, more and more, they become the very subjects of exhibitions, helping to revisit hidden histories that challenge dominant discourses with the presentation of multiple perspectives, while many museums are starting to incorporate them in their own collections and creating permanent gallery spaces devoted to their display. This put new challenges to the museology and curatorial work due to the materiality and specificity of archive material, compelling a debate about the role of displaying archives and books and how this changes the visitor experience of an exhibition and their perception and comprehension of the archive itself. What kind of documents should be exhibited to give visibility to stories that change the traditional historiographical practices, which are largely focused on the biographies of authors and remarkable works? How should they be exhibited and consulted? How can exhibitions contribute to give visibility to archives and how can archives contribute to the transformation of exhibitions as a medium? The archives on display stress also the need of a museological work that combine different interactions between the physical exhibition and the digital media, raising awareness in a broader audience. This requires a study and debate on strategies that, respecting the specificity of each archival material, allow information to be presented in context to be studied, analysed, questioned, discussed, disseminated.

Another challenge with this approach is how the exhibition of archival material can encourage the recovery and sharing of memories or assert itself as a tool for reflection and speculation, moving away from more retrospective or celebratory visions. On the other hand, the exhibition of original material can trigger work that raises awareness of project development and the interrelationship between thought and the intelligence of the hand; the idea, the drawing and the writing; as they can provide information from the first sketches to the final product, going through the

different phases, errors, experiences, materials, in an integrated approach. Depending on the nature of the archive itself and the curatorial approach taken, the exhibition may also reveal or expand aspects of the archive that are not immediately visible in its organisation and structure.

3. CONCLUSION

Through the presentation of case studies or theoretical works on new exhibition approaches in terms of theme, methodology, curatorial practice and specific grammar, the goal is to analyse the ongoing transformations in the relationship between museums, archives and libraries, while also trying to understand how modern ideology and all its forms of authority and power are being questioned. In other words, this session addresses how exhibitions as a medium and part of a wider and participatory process debate museum narratives, collections, discourses and practices, while encouraging the emergence of new readings that replace Eurocentric, male and Caucasian representation with a new legacy for the future that is truly plural, inclusive and intergenerational. The purpose is to contribute for the growing knowledge about how exhibitions can offer an engaging and meaningful experience that helps develop a deep citizenship and a social engagement that might create a more sustainable and responsible attitude towards the future. ■





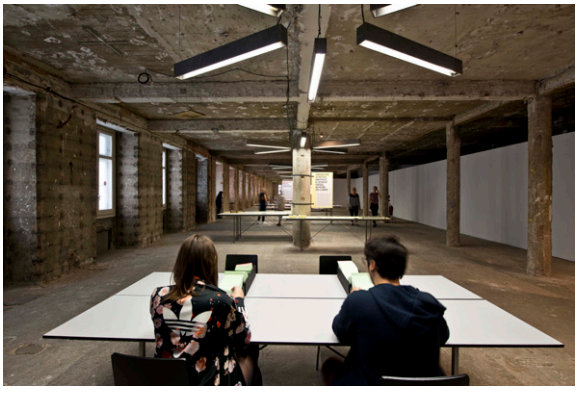


Figure 1. Exhibition *Where ideas are born - Manuel Estrada*. MUDE – Museu do Design, 3° floor, 2012. Installation of books to handle (Luisa Ferreira © MUDE 2012).

Figure 2. Exhibition *Felipe Oliveira Baptista*. MUDE – Museu do Design, 3° floor, 2013. Installation Screen to the brain (FG+SG Fotografias de Arquitetura © MUDE 2013).

Figure 3. Exhibition *Rehearsal for an archive: time and word. Design in Portugal (1960-1974)*. MUDE – Museu do Design, 2° floor, 2017. General perspective (Luisa Ferreira © MUDE 2017).

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BIOGRAPHY

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TOWARDS A REPARATIVE ARCHITECTURAL HISTORY

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ABSTRACT

What kinds of documents, what kinds of archives shall we consider to investigate the complex histories of architecture in order to reverse social/racial exclusion and environmental collapse? How can we expand our notions of architectural documentation and how can we approach these sources? What is the role of exhibitions and how they can contribute to tackling such issues? What methodologies can we engage with so as to achieve a reparative goal in architecture history? How can we see beyond the visual surfaces of the traditional architectural collections in order to consider the bodies and materials involved in the production of architecture?

This paper aims to bring into light a specific discussion in the field of architectural history that is committed to an ethical responsibility of unlearning, as proposed by Ariella Azoulay, in the sense of revising, so as to surpass it, the object-oriented perspective predominant in modern architectural historiography, as put forward by Manfredo Tafuri; the dominance of drawings as research source, as already questioned by Beatriz Colomina; and, last, the traditional scholar attitude concerning critical interpretation and analysis, as also poined out by Ariella Azoulay, when she advocates towards the idea of co-citizenship and research collaboration.

We are strongly inspired by the theories of the Brazilian architect Sergio Ferro, and by the contemporary approach of North-American architectural historian Mabel Wilson as together they combine a critique of the capitalist production of architecture based on the work organization of the construction site, not only locally, but transnationally. We are also inspired by the approaches of Dipesh Chakrabarty, Maria González Pendas, Adrian Forty, and Jane Huton, as they focus on the environment and the material of architecture, its origins, and movements in space, in order to build another history for architecture.

1. INTRODUCTION

Ana Fernandes, an architect and urban planner who is full professor at the UFBA's Faculty of Architecture, coordinated a university project to restore and digitize the collection of the Salvador City Planning Office (EPUCS), which existed from 1943 to 1947. Despite this short period of operation, the EPUCS designed a number of urban plans that inspired politicians and planners for decades. That included the well-known political figure of Antônio Carlos Magalhães who used EPUCS plans in his e rhetorical arguments when he was mayor of Salvador, in the late 1960s, and later bionic governor of Bahia, in the 1970s. In the 2000s, when work began on the EPUCS collection, it was located in the basement of the Mario Leal Ferreira Foundation and was at the limit of material conditions.

José Eduardo dos Santos, teacher and psychologist, is one of the founders of Acervo da Laje, together with another teacher, Vilma Soares. Based in São João do Cabrito, a neighborhood in the railway suburbs of Salvador, the collection was born out of the impulse to remember and collect that nourished the couple in the face of a systematic process of erasure and discrediting of life, in its psychic and material breadth, carried out by public policies with regard to black, impoverished and marginalized territories. It is also in the face of a lack of documentation that the collection makes a vigorous effort to collect, maintain, exhibit and disseminate, bringing to light not only the creative, artistic and cultural activities of the suburbs, but also the historicity of this territory and its challenges in the face of the necropolitics of the state.

We take this encounter[1] between the EPUCS and the Laje collections, between Ana Fernandes and José Eduardo, for what it establishes as the limite-experience of the life of archives: it is true that in both cases we are faced with the fateful absence of adequate public policies, whether for the preservation of documents that belong to a state office from the 1940s, or for the recognition and stimulation of creative activity in territories considered peripheral. But it is also true that both experiences, by refusing the imperative of lack and absence that tends to monopolize debates on archives in territories discredited by the geopolitics of centralities, announce an insubordination to the same narrative frameworks and place the life of archives at the center of our discussion, whether through university engagement or through the autonomy of marginalized subjects: these archives are not inert bodies, but a circuit of lives, human and non-human, intertwined in the limite-experience of continuing to exist. Continuing to exist *in spite of*. We invite our readers to inhabit this text as a place outside established ideas of what an archive is, but within its practices as a pulsating instance: a living body. A living archive. To do so, we call for *unlearning* as a method and *imagination* as a critique. Before going further in this topic, we propose a reflection on the current state of the debate.

1. The conversation between Ana Fernandes and José Eduardo happened in the second seminar online of the research group 'Archives, sources and narratives: between city, architecture and design'.

2. THREE READINGS OF THE ARCHIVE

Thinking about archives has become a political agenda and a social commitment in the beginning of the 21st century. The reasons for this phenomenon range from preservationist interests to reparations processes

and anti-racist agendas. But they also stem from the questions we are asked about the immense amount of data we produce and that is increasingly available to us through digital platforms, hard drives and clouds. Facing a world life that is increasingly connected and archivable, it is inevitable that this agenda will gain momentum and affect us: architects and urban planners.

In Brazil it has gained a certain prominence in recent years, due to the departure of important collections of architects working in the country. As a result, urban planners, architects, historians, critics and archivists have organized seminars, taken the debate to public and national forums and institutions, and produced dozens of texts, articles, books and exhibitions dedicated to the issues that permeate the debate.[2]

If the engagement is led by professionals from different disciplines or institutions with different missions, it is legitimate that the readings, interests and objectives are also diverse and even dissonant. It was with this understanding that Professor Margareth da Silva Pereira gave the opening lecture at the II Seminar on Archives, Historiography and Preservation in 2021. On that occasion, Pereira outlined three perspectives on the subject of archives that are fundamental to understanding the state of the art at the beginning of this century.

The first of these perspectives concerns the way professionals approach the subject from a conservative and preservationist point of view. In this case, a traditional understanding of the subject prevails, in which archives are treated as legal evidence, as a place to store, protect and preserve objects that document certain processes. In the case of architects and urban planners, what is projected onto archives in this understanding is the notion that documents fulfil a role of proof that extends from the characteristics of the built work - in the sense of the material preservation of the asset - to the work dynamics of government institutions and liberal professionals. It's not surprising, therefore, that in this case there is a strong involvement of institutions linked to the profession, as well as institutions led by professionals and teachers interested in the conservation of buildings.

A second perspective is an understanding of archives that derives from debates in history, philosophy and psychiatry.[3] In this case, we add the impact of Freudian theories on the social sciences in the first half of the 20th century and the trauma caused by the Second World War, with the genocide of Jews and Armenians and the mass destruction of documents, monuments and cultural expressions. In this scenario, thinking about archives became an object of study intrinsic to the human sciences, since such structures were understood as manifestations of power, of control, and as a place of subjectivity, of the experience of the body, of social experience. This other perspective is important for the context we are dealing with, because it reframes the archive as an object in itself, as a sign of the historicity of things, of time and of social groups. It's not, then, a question of thinking of the archive as a structure that preserves the evidence of a past in its legal sense, as in the first case, but that it is in itself a manifestation of subjectivity, of desire. The archive becomes a priori an object of social and historical

2. Junia Mortimer, Eduardo Costa, *Desvios da arquitetura: imagem e cultura contemporânea*, 2023; Eduardo Costa, "Lucio Costa na Europa: o papel dos acervos e a arquitetura brasileira" 2022; Ana Castro, Joana Silva, Eduardo Costa, *Arquivos, memórias da cidade, historiografias da arquitetura e do urbanismo*. (São Paulo: FAUUSP, 2021)

3. Jacques Derrida, *Archive Fever: a freudian impression* (Chicago: The University of Chicago Press, 1995); Michael Foucault, *A arqueologia do saber*, (Rio de Janeiro: Forense Universitária, 2009); Jacques Le Goff, *História e memória*. (Campinas: Editora da UNICAMP, 2003).

interest, since it is understood as proof in itself, proof of those who keep and preserve it. The archive allows us to observe the historicity of things.

The last perspective, presented by Margareth Pereira, refers to the concept of *anarchive* developed by the professor of literary theory, Prof. Dr. Márcio Orlando Seligmann-Silva, with reference to the work of Walter Benjamin. In this case, it is understood that the traumatic events of the 20th century overturned totalising discourses and grand narratives, paving the way for the archive - understood as an expression of the totalitarian power of these discourses - to be questioned and problematised. It was necessary to break with totalising discourses, canonical histories and grand manuals. In addition to the radical experiments of the artistic avant-garde at the beginning of the 20th century, this movement found its strength in the discovery of the structure of DNA, made up of four nitrogen bases arranged in a helix and controlled by computer logic. From then on, there was an "awareness that life, like culture, is a history of archives, their rewritings and their metamorphoses".[4]

The notion of rearrangement, rewriting, metamorphosis is fundamental to understanding this third perspective presented by Margareth Pereira. It is not a matter of seeking legal proof, of searching for an archived past, or of considering the structure itself as an object of critical and theoretical reflection. On the contrary, understanding the experience of rearrangement and the possibility of reorganising life opens up space for other discourses and historical meanings to emerge through working in dialogue with and in the archives. We can thus see the emergence of an awareness of the ways in which knowledge, culture and life are produced. An awareness that takes place in the processes of arranging and rearranging, opening up space for other meanings, other sensibilities that are not archived.

The horizon that Seligmann-Silva presents projects her reflection on the work that artists have begun to develop, recalling, rewriting, rearranging and anarchising knowledge. In this case, she highlights the work of artists who collect fragments, shards and scraps of history to create their own archives and build other histories, narratives and subjectivities. It is no coincidence that her text includes the work of Rosangela Rennó, Artur Bispo do Rosário, Marcelo Brodsky and Carrie Mae Weems, artists who mobilise archives, rework the meanings of documents or produce their own archives.

It's worth noting that this dynamic has also positively contaminated the field of architecture and urbanism. If we look at the curatorial proposals of recent biennials - such as the Venice Biennale - we can see that the protagonists in these spaces are no longer urban or architectural projects. They don't present plans, sections, facades, models and photographs, documents that could be considered commonplace in the profession of public companies or professional offices. On the contrary, the curators are much more interested in what lies outside the discipline, because it is here that other sensibilities can be developed. It is in this reordering that the power of transformation lies, albeit under protest from the defenders of a canonical history.

What Prof. Dr. Margareth Pereira presents us with the complexity of the scenario that affects us, making it very clear that there are multiple

4. Seligmann-Silva, Walter Benjamin e a guerra de imagens. (São Paulo: Perspectiva, 2023), p.21.

movements and understandings involved in an archive. But she also reminds us that it is this latter perspective - that of archiving - that can open up other frontiers of thinking in relation to architecture and urbanism, as well as the very manifestation of life in its broadest sense, in contemporary times. It is in this impulse that the vitality of thinking about archives lies. And it is in this sense that we present two fundamental concepts that certain researchers, mainly from literary and media studies, have conceived of recently.

3. UNLEARNING AND CRITICAL FABULATION

In 'Potential History: Unlearning Imperialism', Ariella Azoulay defends the importance of *unlearning* as part of a political ontology that rejects, among other things, the hierarchisation of the subjects that enunciate and produce knowledge.[5] By unfolding unlearning in various theoretical-critical and practical orientations, Azoulay also locates the sense of novelty or discovery, a recurrent feature of academic discourses, in the midst of colonial legacies and rejects the "newness" as the goal of her writing. For her, the basis of political ontology is transgenerational co-citizenship as a premise for any action and critical study to repair and combat the violence we inherit from imperialism, whether as torturers or victims.

Paying particular attention to the relationship between photography and imperialism, Azoulay dedicates her work to experimenting with alternative methods and techniques for researching with photography, given the fact that he origin of this visual technique is, for her, in the imperialist system, which has turned the shutter into a mechanism of expropriation and colonization, also in epistemic terms. For Azoulay, unlearning presupposes a condition of suspension, however temporary, of consolidated structures of production and reproduction of systems of power that perpetuate exclusions and injustices. The suggestion of 'going on strike', which the author mobilizes as an interval of political imagination gives unlearning an active and forward-looking dimension. In this way, we understand unlearning as an ethic for a society, and more specifically for a university, that is committed to fighting the most diverse forms of injustice and exclusion, as it is particularly the case in Brazil.

Arlete Farge, in 'The Flavour of the Archive', first published in 1989, also emphasizes the importance of unlearning in her reflections on what remains behind the scenes, when working with archives.[6] Farge warns of the importance of this attitude towards archives as an intellectual and imaginative disposition to overcome the horizon of expectations created by the structure of the archive, its rules and its laws, its frameworks and its bureaucratic routines, its defenders, in order to breathe air into it that allows us to emancipate our gaze, our knowledge and to foster encounters.

By mobilizing unlearning as a method, or rather as a methodological disposition, the aim is not to refute the previous knowledge that has paved the way for research with and in archives. But it is to open a path for disobedience in the face of theoretical-critical frameworks that tend to determine the roles to be played out by the so-called peripheral regions in archival debates and practices, especially on a broader scale of the geopolitics of knowledge.

5. Ariella Azoulay, Potential History: Unlearning Imperialism. (London: Verso) 2019.

6. Arlette Farge, *O sabor do Arquivo*. (São Paulo: Edusp, 2009)

In this sense, we can speak of archives of ex-centric experiences,[7] without emphasizing the gap, the absence, the lack. This is possible if, on the one hand, we unlearn the horizon of expectation of what constitutes an archive of architecture or urbanism, and if, on the other hand, we deal with absence, when it exists, in a distinct, more fabulatory way.

For Saidiya Hartman, critical fabulation is a method of breathing life, in its potential dimension of rebellion, into racialized subjects who have been captured in the archives of the state, built up on practices of whiteness, in records of poverty, crime and death.[8] Her theoretical proposal does not refer to falsifying data, but to recovering a layer of vital dignity, a pulse of life that does justice to the historicity of these trajectories. The emergence and transnational circulation of the expression critical fabulation, coined by Hartman, has generated a lot of debate, especially among historians. First, for Hartman, critical fabulation does not mean falsifying history. Rather, it means allowing oneself to tell a story, refusing the framework of death, absence and lack, even if there are documentary gaps, in order to fully prove it according to traditional historiographical methods. In this sense, fabulation is also a gesture of unlearning. And, why not, also a gesture of archiving.

Secondly, we endorse Josemeire Alves' critique of the absences or gaps in documentation, especially with regard to the black presence in cities, as eloquent silences.[9] According to the Brazilian historian, the documentary absence is often a presence that we do not recognise because we are unable to see, given the relationship between this framework, the whiteness of the state and the resulting damage to our ability to recognise social subjects and phenomena.

We argue that critical fabulation can also be that change of prism that Josemeire Alves defends; it is an adjustment of our lenses, our frameworks and our modes of institutional organization of the collections themselves, in order to see in the existing documents what racism has imposed on our ways of seeing and on the naturalization of archival procedures that continue the erasure of non-white subjects.

It is within the conceptual key of fabulation that much recent research in the field of architecture and urbanism has been developed, in Brazil, as in the case of 'Inheritance + The fabulous inventory of my grandfather's works', by the sisters Gabriela and Mariana Leandro Pereira, which was presented at the 13th Architecture Biennale in São Paulo in 2022. The proposal pays homage to the authors' grandfathers, João Carlos Pereira and Gumercindo Ruge da Silva (in memoriam), a marble worker and an excavator, and through material and narrative fragments, opens up a debate on the anonymisation of construction workers, who are absent from the hegemonic narratives that have historically constituted the field of architecture and urbanism.[10]

4. CONCLUSIONS

Research that engages with the archival debate allows us to observe the intentions of institutions that aim to qualify the meanings and narratives they produce. On the other hand, we recognise that there are possibilities

7. Ana Fernandes, *Cidades ex-Cêntricas*, 2023

8. Saidiya Hartman, Wayward Lives, Beautiful Experiments. Intimate Histories of Social Upheaval,(W. W. Norton & Company, 2019.)

9. Alves, 2020, p. 454

10. These three readings of the archive open up perspectives on how we could work with archives, and project other ways of researching architecture. We could present some examples that we have been working with - such as the research on the Zumvi archive in Salvador or the research on design and environmental history in the FAUUSP archive - but due to the limited space, we decided to present a much more theoretical approach.

for historiographical revision when we displace and disobey the logic presented to us by archives and their institutions, a logic inscribed in their metadata and forms of organization.

If spatiality is the specificity of our approach as historians of architecture and urbanism, how can we systematize historical knowledge on the history of architecture and urbanism, based on the arguments and experiences we brought to light, but moving away from the attitude of *looking at them* and trying *to see with them*? Not only by changing the 'objects of research' or the 'sources', but by changing our tools, our methods and, above all, our attitudes towards archives, we might be able to carry out a work of urgent reparation, participating in collective processes of historicization around Latin American architecture and urbanism. We argue that anarchiving, based on unlearning and critical fabrication, is a way of reframing frameworks and bringing out other connections to populate the world with more stories. ■

BIOGRAPHY

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DISCOVERING A NEW NARRATIVE: INTERPRETATION METHOD PRACTICES IN THE EXHIBITION *MODERNISM FOR THE FUTURE 360/365*

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ABSTRACT

This paper examines the international exhibition held in Kaunas during its inaugural year as the European Capital of Culture in 2022. The exhibition featured a co-creation process involving 26 artists from modernist cities, including Kaunas (Lithuania), Kortrijk (Belgium), Brno (Czech Republic), Lviv (Ukraine), and Tel Aviv (Israel). Tasked with employing interpretative methods, the artists developed interdisciplinary art projects aimed at fostering a dialogue between art and heritage. By drawing inspiration from the architectural legacy of the 20th century, the sites were viewed as cultural heritage laboratories, where contemporary interpretations and historical narratives were given equal significance alongside authentic remnants of the past. The practice of interpreting modernism highlighted the necessity for a multifaceted narrative for the successful integration of historic urban layers into contemporary cities. This narrative should combine the knowledge, stories, and motivations of scholars, heritage professionals, artists, site owners, the broader heritage community, and an engaged public. As a result, over two years, 18 interdisciplinary art projects were created, providing a significant example of potential approaches to heritage conservation and informing future considerations.

1. INTRODUCTION

Symbolising progress and the future, architecture from Interwar Period now faces a contradictory period of cultural transformation. Innovations in style and technology that signified social advancement have lost their primary roles, gradually becoming historical relics. Buildings and places that were never intended to be monuments have acquired new significance, becoming cultural heritage. Such a transformation poses huge social, cultural, and economic challenges. In light of these contradictions, considerable endeavour has been devoted to comprehending the architectural heritage of 1920s and 30s as a cultural asset possessing significant future potential.[1]

One of the proposed approaches to reassessing the significance of cultural heritage for future generations is through experiment and interpretation, which establishes precedents for innovative methods and practices related to the understanding of cultural heritage. In other words, the goal is to promote awareness, curiosity, and interest by linking the site or objects and their history to the participants' own knowledge, experiences, origins, and values. This can be done using a variety of media, including sound, video, and more, to engage with heritage. Ultimately, interpretation that does not somehow connect what is being displayed or described to something within the personality or experience of the visitor will be sterile.[2]

Moreover, this method of interpretation is closely related to Experimental Preservation. According to Jorge Otero-Pailos, this practice involves a critical re-evaluation and occasional questioning of preservation norms. Experimental preservation begins with a sense of skepticism. Practitioners of experimental preservation carefully select particular objects to assess their suitability as heritage items. This process seeks to confirm, contest, or affirm hypotheses regarding their potential to attain heritage status —those revered objects and accompanying characteristics deemed indispensable by future generations.[3]

Recent international experiences have shown that turning phenomena into experience and provoking resonance and participation, involving co-creation methods have become a successful and influencing curatorial practice, especially when it comes to discussing the backdrops of social realities and disorders, including the role of multi-layered identities and legacy of heritage.[4] In the midst of these contradictions, 20th-century architecture continues to reveal numerous layers of meaning that are both intellectually significant and relevant to contemporary society. This served as the starting point of the curatorial narrative of the international exhibition *Modernism for the Future 360/365*, which took place in Kaunas, during the opening year of European Capital of Culture in 2022.

The article reflects on the examples of interdisciplinary art interpretations in the modernist cities of Lviv, Brno (Czech Republic), Kortijk (Belgium), Tel Aviv (Israel) and Kaunas (Lithuania), which led to deeper research into the stories, memories, and examples of architectural heritage from the period that reveal the complexity of recent European history. The interdisciplinary projects have raised questions such as: How can we inspire a stronger

1. Vaidas Petrulis, "Introduction: Modernism for the Future," in Modernism for the Future: An International Conference (Conference Proceedings), ed. Vaidas Petrulis (Kaunas: Kaunas – European Capital of Culture 2022, 2019).

2. Freeman Tilden, Interpreting Our Heritage (University of North Caroline Press, 1977), 32.

3. Jorge Otero-Pailos, "Experimental Preservation: The Potential of Not–Me Creations," in Experimental Preservation, ed. Jorge Otero-Pailos, Erik Langdalen and Thordis Arrhenius (Lars Muller Publishers, 2016), 20.

4. "Introduction by Adriano Pedrosa, Curator of the 60th International Art Exhibition," La Biennale di Venezia, accessed May 31, 2024, https://www.labiennale.org/en/art/2024/introduction-adriano-pedrosa.

emotional bond with the built heritage of the 20th century, in particular in terms of the Interwar Period, and the pride taken in the local modernist tradition within local heritage communities? What is the greatest motivation for sharing personal stories about everyday heritage and preserving it for the owners? As far as contemporary society is concerned, what is the value of employing an artistic approach within historic urban landscapes, and what are the new scenarios for doing so?

2. MEETING POINT – MODERNISM

In recent years, Modernism has gained prominence in the cultural landscape of Kaunas, especially since 2015, when the city's interwar architecture received the European Heritage Label. In 2023, the early 20th century urban layer of Kaunas was included in the UNESCO World Heritage List. Enthusiasts of local architecture have meticulously explored every part of the city and examined extensive archival records documenting its development. However, despite this surge of interest and activity, there remains a sense of uncertainty about how to accurately define the history of Kaunas's early 20th-century architecture. During the interwar period, Vytautas Landsbergis-Žemkalnis, one of the city's most esteemed architects, noted that the people of Kaunas appreciated "the rhythms of classical architecture within a modern configuration,"[5] highlighting the influence of Italian Rationalism. In 2016, The Guardian named Kaunas one of the ten best European cities for Art Deco design. Meanwhile, academics continue to seek evidence of a distinct regional school of Modernism.

This naturally raises the question: What exactly is the character of Lithuanian Modernism that Kaunas residents referred to in the press during the interwar period when they claimed to be building a modern city? Did terms like "modernisation" and "modernity" simply signify novelty, or were they linked to the emerging global Modern Movement? These questions have led us to place the phenomenon of Modernism within its proper intellectual and geographical contexts.

The prevailing modernist narrative often highlights a heroic era in which a group of "grand masters" revolutionised contemporary architecture, influencing not only Europe but the entire world. However, a closer examination of Modernism's individual expressions reveals that these celebrated figures represent just a fraction of the broader movement. The full scope of Modernism is evident in the numerous visionary works that, inspired by modernity, transformed living environments across neighbourhoods and streets globally. Local decisions—aimed at finding optimal solutions for housing, integrating nature, developing social infrastructure, improving building materials and techniques, and respecting architectural traditions and aesthetic preferences—gave Modernism its many diverse forms.

The concept of the exhibition was based on this collection of architectural approaches and decisions that expressed the ideas generated by Modernity, Modernisation, and Modernism. Traditional textbooks on modernist architecture rarely include the cities represented in the exhibition

5. A. Braziulis, "Valstybinės konservatorijos rūmai. Pasikalbėjimas su direktoriumi J. Gruodžiu ir architektu V. Landsbergiu," 7 Meno dienos, no. 80 (March 1932):12-14.

within the dominant heroic modernist narrative. The UNESCO-protected White City of Tel Aviv is a rare instance of international recognition, while cities like Lviv, Kaunas, Brno, and Kortrijk are often overlooked among Europe's primary modernist hubs. Nevertheless, the exhibition aimed to promote a retrospective exploration of the fringes and peripheries of modernist history. The aim was to connect these cities into a single network, emphasising that Modernism's global impact is rooted not in the international careers of famous modernist figures but in the efforts of local architects. Figures such as Arnas Funkas in Kaunas, Ferdynand Kasler in Lviv, Bohuslav Fuchs in the Czech Republic, and Huib Hoste in Flanders, who formulated local interpretations of global Modernism, exemplify this idea. Their contributions, along with those of numerous others, illustrate that modernist history is not confined to isolated and unique centres or schools. Consequently, the exhibition aimed to convey modernist heritage not as isolated elements within each city but as a collective of artistic, social, and technological processes that spread throughout Europe, from major capitals to the most remote peripheral towns.

3. MODERNISM AS AN INSPIRATION FOR CONTEMPORARY ART

The Modernist period produced some of the most remarkable examples of both public and private architecture in Kaunas, Lviv, Brno, Kortrijk, and Tel Aviv. Despite this, the value of our heritage from this period is not always recognised by authorities or the wider public. In many cases, this value requires special conservation efforts to protect the private buildings that represent this heritage. Therefore, we have to deal with the same issues of importance, despite our different social, cultural and historical backgrounds. This motivated us to orientate the *Modernism for the Future 360/365* project's main goal towards upholding the heritage of Modernism —by creating new meanings / contemporary discourse and strengthening its European narrative through the creation of new artistic interpretations of modernist architecture and the modernist phenomenon, finding the keys to help us reconsider its value for the future. The number 360 symbolises all possible perspectives of Modernism: cultural, political, economic, and so on. Meanwhile, the number 365 refers to our attention to everyday heritage. It is about more than just visits to churches and museums on special occasions, but concerns everyday architecture: residential buildings, industrial and entertainment facilities.

Given the complexity of the phenomenon, the partner institutions Kaunas 2022 (Lithuania), Cultural Strategy Institute (Ukraine), Interdisciplinary Arts Centre Vaizard, z.ú. / INDUSTRA (Czech Republic), Intercommunale Leiedal (Belgium) and Liebling House – White City Centre (Israel) became organisers' of international artistic residency programmes. After an open call, 26 artists were selected to find a universal language to express it. They drew inspiration from the varied physical and intangible heritage of the modernist period. In total, 18 artistic projects were implemented at various sites, each reflecting a narrative about the distinct layer of modernist architecture and

its characteristics, incorporating both local and international features. Over the course of two years, the process was shaped by in-depth research into history and context, with the assistance of architectural historians. Gaining new insights from audience development experts, the artists' residencies were accompanied by discussions and meetings between the artists and the building owners.

3.1 COMMUNITY ENGAGEMENT

Over 600 local community members in partner cities were engaged through various activities and public programmes. This especially involved artists communities, such as the Nuepiko group, who invited local contemporary dancers for a co-creative process to perform at the Trade Unions Building in Lviv or Erich Weiss, who enabled the local public to rediscover closed cinema space (White House) in Brno and become aware of the value of this forgotten modernist building. In this way, Weiss has managed to generate new awareness among the local population and neighbours regarding a potential future scenario for the building. Erich's idea was inspired by the exhibition *White Space in a White Space* by Stano Filko, Milos Laky and Jan Zavarsky, which took place in the House of Arts, Brno in 1974. It motivated him to reconsider the original concept. As a result, he decided that the most practical intervention in the local context could be the organisation of an Open Day as the first step in making the local public aware of the potential of this building. Finally, after the residency the permanent art space was established here. **(Fig. 1)**

Additionally, children and youth were a crucial part of the community who took part in the residency activities (e.g. Ingel Vaikla, Michal Trávníček and Ivana Kupková, etc.). This also included elderly people (Anrii Linik, Josef Řehák and Karolina Strnadová, etc.), a community on the edge of society (Tadas Stalyga and Rita Kundrotaitė), and national minority groups, such as Jewish communities, and their history in the cities. e.g. Olha Kuzyura created an installation of embossed paper prints made using the technique of blind printing.

Over several weeks of her residency, Olha worked with archival materials, collaborating with researchers into Modernism, Judaism, art critics and collectors in Lviv. Nineteen residents of Lviv were also involved in the project, most of them living in various modernist houses in the city and ranging from the very young to those of retirement age (4 to 90 years old). At the meetings, the author asked residents to share household items and interior details from the 1930s and 40s from their houses, which, in their opinion, could theoretically fit the historical period and style of the apartment in Gallet's Building. The author made prints of these objects and placed these paper copies in Gallet's apartment, where the main artistic process took place. Olha aimed to supplement the space of the flat, to "revive" its history with a so-called "dialogue of details."

This dialogue with city residents brought about an open discussion that provided broad insight into how Lviv residents view their history. The

reflections and artefacts collected have become the basis for an artistic interpretation of Interwar Modernism in Lviv. As a result, the author placed a large installation in one of the rooms of Gallet's apartment, the Crystal Hall. The exact placement of the artwork was significant – it was positioned on a wall that used to be the entrance to another part of the apartment, which was separated and replanned during the post-war period and is no longer accessible today. The artist chose a composition of *mizrah*, which in Jewish culture symbolises a lost home, paying tribute to the tragic history of the former owners of the house —the Gallet family, who were killed during World War II. Among the items whose phantom silhouettes are placed on the wall are decorative grilles, candlesticks, lighting elements, switches, locks, keys and even a button from an SS uniform. Dust and soot, rust marks and even fingerprints on objects serve as natural dyes for the paper. **(Fig. 2).**

3.2 FROM INTERPRETATION TO EXPERIMENTAL PRESERVATION

The international artistic programme facilitated public access to modernist heritage buildings that were previously inaccessible or only partially accessible, including private or non-public heritage sites. This initiative also highlighted local heritage owners and their expertise, encouraging others to participate in heritage preservation. Consequently, choosing the former Kaunas Central Post Office as the venue for the exhibition uniting all these projects was a deliberate and purposeful decision. The recent history of the building exemplifies the contentious standing of Modernism within contemporary society. Engaging directly with this site prompts reflection on and examination of other narratives, some of which have experienced more favourable outcomes.

The construction of the Post Office Palace between 1930 and 1932 significantly altered the urban landscape. The architectural blueprint of the building during its construction era was influenced by a prevailing ethos among interwar architectural practitioners and theorists, seeking to symbolically accentuate the interplay between modern edifices and local heritage, thereby intertwining Vernacularism and Modernism in architectural design. Architect Feliksas Vizbaras, through deliberate allusions to national stylistic elements and decorative motifs, underscored recurrent themes of political discourse in interwar Lithuania, concurrently highlighting the pivotal role of the Post Office in shaping the national identity and projecting the image of statehood. Despite retaining its original function throughout the latter half of the 20th century, the Central Post Office faced attempts to diminish its symbolic importance during the early years of Soviet occupation. Following Lithuania's reclamation of independence in the late 20th century, efforts were initiated to restore the symbolic significance of the Post Office. However, as demand for postal services waned in the early 21st century, a significant portion of the premises fell into disrepair, culminating in abandonment. At the same time, mounting public interest in the interwar architectural heritage of Kaunas propelled the former Central Post Office to the forefront of public discourse, sparking vigorous debate surrounding its preservation and revitalisation.







Figure 1. Miroslav Spurný, František Jakubec, Jiří Kučera, 1974-1976, The White House, Brno, Czech Republic, Erich Weiss artistic residency in Brno © INDUSTRA ART Archive, 2021.

Figure 2. Tadeusz Wróbel, The Gallet Family House, Lviv, Ukraine, 1930, Olha Kuzyura artistic residency in Lviv. © Nazarii Parkhomyk, 2021.

Figure 3. Feliksas Vizbaras, Post Office Building, Kaunas, Lithuania, 1930-1932, Opening of the International Exhibition "Modernism for the Future 360/365". © AHOY, 2022.

This prompted the exhibition organisers to undertake the formidable challenge of employing creative strategies to highlight a dilapidated building and enhance interest in its preservation. Ensuring that all parts of the exhibition were fully accessible to people with disabilities was as important as sensitively integrating the artistic projects without overshadowing the building's interior. Tailored technical and infrastructural solutions have captured the imagination of a wide audience and garnered the attention of national authorities. The Ministry of Culture has committed to this vision by acquiring a building designated to house the National Institute of Architecture beginning in 2024. **(Fig. 3)** ■

BIOGRAPHY

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ARCHIVE NARRATIVES. CURATORIAL PROPOSALS BASED ON ARCHIVE COLLECTION DOCUMENTS.

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ABSTRACT

In the Peruvian context, where an established architectural narrative is still lacking, it is urgent not only to communicate but also to imagine its architectural identity and promote a broader vision of its architecture. The objective of this essay is to present an alternative to bridge these gaps through virtual architecture exhibitions using archival material. These exhibitions provide greater visibility and dissemination of architecture to reach a broader audience, promoting a deeper appreciation of architectural heritage. Additionally, they contribute to the preservation and accumulation of curatorial discourses over time. This essay focuses on a key characteristic of archival architecture exhibitions: their ability to reproduce and preserve architecture beyond its constructed buildings.

This essay presents the project Archive Narratives, which aims to construct discourses of modern Peruvian architecture based on curatorial explorations from the documentary material of the Architecture Archive of the Pontifical Catholic University of Peru that are exhibited in a virtual gallery. This project explores documentary material from four thematic areas: work, representation systems, creative process and interventions. This premise is presented as a methodology to construct discourses from different points of view based on the dialogue between the archive, the curator and the architect.

Architecture exhibitions play a crucial role in the dissemination and understanding of the discipline. The archival material has the potential to broaden the research field on the project and the architect, creating opportunities to construct new and more discourses. Architectural archive-based exhibitions offer the opportunity to rethink and reformulate established narratives, exploring ideas, creative processes and representations that underpin finished works.

1. INTRODUCTION

The history of modern architecture is closely linked to the history of its exhibitions because they have not only documented the progress of the discipline but have also influenced its development and dissemination. The International Exhibition of Modern Architecture, known as *Weissenhof-Siedlung*, held in Stuttgart, Germany in 1927, is recognised as having been the first architectural exhibition and serves as a fundamental milestone in the development of modern architecture. This exhibition brought together leading architects such as Le Corbusier, Mies van der Rohe and Walter Gropius, and presented experimental homes designed to demonstrate the fundamental principles of modern architecture, such as the innovative use of materials and construction techniques, as well as new conceptions of construction. spatial organisation and urban design. Other exhibitions, such as *Built in USA* at the Museum of Modern Art (MoMA) in 1932 and the New York World's Fair in 1964, have made significant contributions to the recognition and promotion of modern architecture both locally and internationally.

It was only in 1979 with the creation of the Canadian Centre for Architecture (CCA) in Montreal, that there was an important shift in the conception of architectural exhibitions. This centre integrates archives, research, publication and the dissemination of architecture in a single place, thus enabling the first exhibitions to be carried out using its own documentary material.

The main difference between an art exhibition and an architectural exhibition lies in how the works are presented and defined. While an art exhibition presents the work itself and the viewer can experience it directly in the gallery, the architectural exhibitions display works that are never in the room, a building that is not physically present. Architectural plans, photographs, models and documentation are presented in such a way that they explain the concept and process behind the architectural work.

In that sense, when the CCA mounted architectural exhibitions using archival material, from its collection of originals, the viewer was exposed to the work of art itself. Architectural documents created by an architect are considered unique pieces that reflect ideas, representation techniques and creative processes.

This essay discusses the importance of dialogue between architectural archives and curatorial projects for their ability to reproduce and preserve architecture beyond its constructed buildings.

2. URGENT DISCOURSES

Although architectural books and magazines are taking up more space in bookstores, these printed publications mainly cater to a specialised audience. In Peru, architecture exhibitions[1] go unnoticed because most are held in academic settings that are not open to the public and only last as long as the exhibition remains in place. If we also understand that an exhibition, although temporary in nature, can construct discourses that may have a long-term impact, it is essential to reconsider how to document or publish these discourses to ensure their longevity and usefulness for society, elevating the role of architecture within the local community.

1. List of some physical architecture exhibitions held in Peru:
Eduardo Alvarez and Luis Perez, *Llona Núñez. UNT Campus 60 years. Colegio de Arquitectos de La Libertad*, Trujillo 2024
Llona, Michelle. *José García Bryce. Recolecciones para una historia de la arquitectura peruana*. Centro Cultural de la Pontificia Universidad Católica del Perú. Lima 2021
Víctor, Mejía, *Paul Linder, arquitecto. Modernidad universal / Sincretismo local*. Centro Cultural de la Pontificia Universidad Católica del Perú. Lima 2019
Universidad de Lima. "Mario Bianco y el espacio moderno en el Perú". Instituto Italiano de Cultura. Lima 2016.
Mejía, Victor. "Retóricas de la línea. Gráfica arquitectónica en el perú durante el siglo XX". Galería Germán Krüger Espantoso, ICPNA de Miraflores. Lima 2015.
Michelle Llona and Fernando Mosquera. *Historia de un emprendimiento: Arana, Orrego y Torres (AOT)*. Universidad de Lima, Lima 2014.
Universidad de Lima, *Walter Weberhofer y el proyecto moderno en el Perú*, en Santa María del Mar, Universidad de Lima, Lima 2014.
From 2011 to the present. Peru Pavilion at the Venice Architecture Biennale.

When we recognise that exhibitions have the potential to attract a potentially broader and more varied audience than academic publications, we realise the importance of establishing a meaningful link between the intellectual community and the general public. These exhibitions can play a crucial role in educating and raising awareness of the population about the role of the architect, architecture and therefore its cultural and social value.

Peru has not yet managed to construct an architectural discourse despite its important cultural heritage, which gives way to an interesting space for curatorial explorations that seek not only to preserve but also to re-imagine its architectural identity.

3. THE PROJECT

Towards the end of the 20th century, the CCA and other important institutions that house architectural archives[2] valued original documents and drawings in exhibitions because they enrich the public's understanding of architecture and its history. Exhibitions from original documentary material have the potential to reveal theories, representations and processes behind a finished work, whether a building, an essay or a master class. The view from the archives expands the research behind the project and the architect, opening up a diversity of curatorial projects.

In 2016, the Pontificia Universidad Católica del Perú (PUCP) created the Archivo de Arquitectura through the donation of the documentary collection of the architect Paul Linder, and to date has brought together the production of 21 architects who worked mainly in the modern period in Peru.

About five years later, with a more consistent collection, the Archivo de Arquitectura PUCP began calling for curatorial projects on an annual basis, based on original documentary material, with the aim of constructing narratives of modern Peruvian architectural history yet to be told. This initiative, titled Archive Narratives, is a laboratory for curatorial experiments that encourages collaborative storytelling between the architect, the archive and the curator.

The call promotes curatorial projects that aim to delve into deeper discussions, taking into account not only specific technical and disciplinary dimensions but also as a means for social and cultural reflection. The most interesting exhibitions of recent times are those that go beyond showing documents—sketches, plans, photographs, writings, models—following a monographic or chronological order and are structured around a hypothesis, trying to connect the architect and the archive through a broader argument.

For this reason, the bases of Archive Narratives propose four thematic areas that give direction to the curatorial projects: work, systems of representation, creative processes, and interventions from the original. Such themes will be presented later along with a brief reference to four cases of narratives of Peruvian architecture.

Due to the restrictions experienced during the COVID-19 pandemic and recognition of the crucial role of exhibitions in educating and raising awareness of the population about the importance of their architectural heritage, the digital or virtual gallery format appeared as an interesting platform for Archive Narratives.



Fig. 1. Virtual exhibition on "Work", *Centro Civico de Lima*, perspective of the competition, text on the original documents, photography of the finished building, interview with architect Guillermo Málaga. Lima, Peru, August 2021. © Archivo de Arquitectura PUCP.

2. Other architectural institutions or archives that carry out research and exhibitions: COAM Architecture Foundation, Netherlands Architecture Institute (NAI), Architekturzentrum Wien (Az W), The Chicago Architecture Centre (CAC).



Fig. 2. Virtual exhibition on "Representation Systems", *El aeropuerto como proyecto político*, photograph of the president inaugurating the building, text that goes into depth about the contents of newspaper clippings, clipping. Lima, Peru, July 2023. © Archivo de Arquitectura PUCP.

A virtual gallery has the potential to expand the possibilities of formats, designs, access, dissemination and, above all, to prolong the useful life of exhibitions. Today, online presence has become as significant as physical presence in reaching audiences and establishing a lasting legacy. The digital format also contributes to the conservation of archival documents and preservation, not only of an exhibition but, above all, of a curatorial narrative.

On the other hand, the virtual gallery's location in an architecture faculty that manages an archive guaranteed an environment that allowed for rigorous curation, integration with education, the promotion of research and debate within the academic community and architectural professionals.

The Archivo de Arquitectura PUCP designed a virtual gallery that can include all formats -writings, quotes, images, videos, audio, and downloadable content- with a flexible layout that allows for different assembly options. Therefore, the assembly stage is a design process and, if you will, curatorial exploration as well. This platform was designed not only for the dissemination of the narratives of modern Peruvian architecture but also to allow the versatility of the archives' own documentary formats.

The resulting virtual gallery showcases a collage of individual or collective curations, featuring an array of new narratives that offer a partial or complete analysis. It aims to shed light on specific aspects of the history of Peruvian architecture. Without the intent to present exhibitions with detailed research, we seek curatorial proposals that introduce new approaches and new questions.

We hope that the exhibition space of the "Virtual Gallery"[3] of Archivo de Arquitectura PUCP will progressively become a space for propagating historiographic discoveries of curatorial projects.

4. NARRATIVES OF PERUVIAN ARCHITECTURE

The first exhibition inaugurating the archive in the "Virtual Gallery" was in 2021. Today there are 6 exhibitions in total, with four more planned for this year. It is interesting here to present the results of four exhibitions as examples of curatorial projects under the thematic areas of the initiative: *work, representation systems, creative processes, and interventions*.

The curatorial proposals of "Work" establish a parallel between the work and the archive documents—plans, photographs, articles, and essays—to delve deeper into the principles of modern architecture and how these took shape in our specific context. An example is the exhibition *José García Bryce. Recollections for a history of Peruvian architecture*.[4] This is a curatorial project that goes beyond presenting the architect's building design. Instead, it allows us a more comprehensive view of his work, in which his multiple facets are presented, highlighting his roles as a designer, researcher, historian and teacher. This exhibition features ten works: a graphic essay, a survey, four buildings, a photographic investigation, two articles, and a workspace.

To establish a parallel between the work and the archive of José García Bryce, the curatorial proposal seeks to bring hypotheses and new interpretations through the review of documentary material with other architects and artists. These conversations are presented in an audiovisual

3. Virtual Gallery: https://galeria-arquitectura.pucp.edu.pe

4. Michelle Llona, *José García Bryce. Recolecciones para una historia de la arquitectura peruana*, Galería Virtual de Arquitectura PUCP. Lima, August 2021. https://galeria-arquitectura.pucp.edu.pe/exposicion/garcia-bryce/

format and accompany architectural documents, generally technical, to facilitate their understanding by the public. The exhibition demonstrates how primary research sources can lead to different discourses about the information presented in the original documents of each work.

On the other hand, the curatorial proposals of "Representation Systems" seek to interpret orthographic drawings, axonometric, sketches, collages, photographs, and models, among other formats, in order to understand the forms of expression of each architect, in light of the graphic conventions, contexts and discourses of an era. For this thematic area, the exhibition *Architecture in the Peruvian press. A journalistic review of the modern*[5] is a curatorial proposal that uses journalistic clippings as a primary source of analysis and in that sense, addresses representation beyond the architectural project.

The "Jorge Chávez" international airport was among the emblematic buildings that attracted attention in the Peruvian press, remaining a constant headline since the publication of the results of the contest, in 1960, until its inauguration in 1965. Through its representation in the press, the exhibition addresses the airport project as a response to modernist concerns, architectural competitions, the political scene —this being the first time in Peru in which the architect is recognized as a public figure at the centre of the discussion.

In the exhibitions associated with "Creative Processes", research on design methodologies is expected through different versions of the same work that show the creative and technical process behind an architectural production over time. The original drawings and documents reveal the direct connection with the thought process and the architect's hand. This material reflects the initial ideas, modifications to the project and final decisions that are not visible in the photographs of the final buildings.

The exhibition *Málaga, architectural research*[6] is a methodological proposal by the curator on research in creative processes. This exhibition seeks to approach, from a free perspective, an interpretation of the environment that has allowed the architect Guillermo Málaga to project as he does, as well as the possibilities of continuing to learn from his work.

The contents of the exhibition are the result of a year's worth of review of the drawings and weekly conversations with the architect and also includes work from an elective course where students develop architectural readings guided from planimetry, seeking to uncover the unconscious essence of the building through new representations; It does not look for its origins to value it but rather shifts its gaze to place it once again in front of the uncertainty of itself.

The final topic focuses on "Interventions" based on archival material. This allows for the construction of new original documents and serves as a catalyst for new research and projects. These curators engage in research through creative practice, resulting in pieces that offer new readings or reflections on the architect and modern architecture in Peru.

The exhibition *Inventing a museum. A project based on materials in the García Bryce documentary collection*[7] was curated by two plastic artists. The curators used the documents from the archive linked to the conceptualisation of a Lima Art Museum to superimpose them, transcribe them and overdraw them. This



Fig. 3. Virtual exhibition on "Creative Processes", *Museo de Ancón*, photography of the building, quote from the architect, conceptual interpretation, axonometry by student Jhon Carrasco. Lima, Peru, November 2023. © Archivo de Arquitectura PUCP.

5. Edgar Salas, *Arquitectura en la prensa peruana. Una revisión periodistica de moderno Aeropuerto Jorge Chávez*. Galería Virtual de Arquitectura PUCP. Lima, July 2023. https://galeria-arquitectura.pucp.edu.pe/exposicion/arquitectura-en-la-prensa-peruana/

6. Rodolfo Cortegana, *Málaga, investigación arquitectónica*, Galería Virtual de Arquitectura PUCP, Lima, Novermber 2023. https://galeria-arquitectura.pucp.edu.pe/exposicion/guillermo-malaga/

allowed them to develop a critical discourse between the museology proposal of the Swedish archaeologist Alfred Westholm, heir of nineteenth-century European thought, and García Bryce's modernist museography proposal, which was both simple and flexible, and respected the spatial values of the museum.

5. CONCLUSION

The history of architectural exhibitions has shown us how they have documented the progress of the discipline, influenced its development and promoted its dissemination locally and internationally. However, they also prove to be fundamental because history is essential for developing project maturity in order to create architecture of this era.

This essay highlights the significance of architectural exhibitions in preserving and reinterpreting architecture beyond just the buildings themselves. The curatorial initiative from the Archivo de Arquitectura PUCP offers an opportunity to investigate and communicate Peruvian architecture from the documents prior to the building, bridging an evident gap in all discourses. In this sense, the location of an archive and a virtual gallery in a faculty of architecture is important because it offers a specialised environment that guarantees the quality of research, curatorship, dissemination and therefore education.

The proposed methodology seeks to present new narratives and approaches to modern architecture in Peru. There are still many more curatorial proposals to be added to the Archive Narratives project in order to consolidate knowledge on a single platform, the "Virtual Gallery." This platform will enable us, through various exhibitions, to delve into the written history and theory of architecture collaboratively, involving architects, archives and curators.

The exhibitions transport us to another realm of architecture, where the construction of modern history is essential in developing project maturity to create the architecture of this era, not just building structures, but also shaping memories.■

7. Gala Berger and Iosu Aramburú, *Inventarse un museo*, Galería Virtual de Arquitectura PUCP", Lima, December 2022. https://galeria-arquitectura.pucp.edu.pe/exposicion/inventarse-un-museo/

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BIOGRAPHY

Michelle Llona Ridoutt Architect from the Universidad Ricardo Palma in Lima, Peru with a master's degree in architecture from Universidad Católica de Chile in Santiago, Chile. In 2009, she began her independent practice alongside the architect Rafael Zamora with whom she obtained first prize in 2014 in the competition of ideas for interventions in the Parque Arqueológico Nacional Machupicchu. In 2016, alongside Alejandra Acevedo, she published Catálogo de Arquitectura del Movimiento Moderno en el Perú, which was awarded at the XXI Bienal Panamericana de Arquitectura BAQ-2018. Currently, she works as associate professor at the Pontificia Universidad Católica del Perú, and she also directs the Archivo de Arquitectura PUCP.

ELIZABETH MOCK'S CURATORSHIP AT MOMA: A NEW APPROACH TO ARCHITECTURE AND ARCHITECTURE EXHIBITIONS AND ITS ECHOES IN EUROPE

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ABSTRACT

The promotion of modern architecture in the United States owes much to the still relatively unknown work of the US American original Taliesin fellowship apprentice, architect, writer, curator and scholar Elizabeth Mock (1911-1998). Mock was an assistant and acting curator of the Department of Architecture at the Museum of Modern Art (MoMA) in New York from 1937 to 1946. Her tenure at the museum was marked by her collaboration on and organization of several successful exhibitions that demystified modern architecture for the common public. Mock's most important exhibition at MoMA was Built in U.S.A.: 1932-1944 held in 1944, for which she also wrote the book *Built in USA: 1932-1944*. The exhibition was aimed at reflecting on the progress of US American architecture since the pioneering Modern Architecture: International Exhibition, also held at MoMA in 1932, co-curated by Henry-Russell Hitchcock (1903-1987) and Philip Johnson (1906-2005). In *Built in USA: 1932-1944* – both the exhibition and the book –, Mock presented new experiments in US American architecture characterized by a regionalist accent that took a sensitive approach to the site and used local materials and traditions. The exhibition proved to be one of her most successful works at MoMA, and the book became an influential publication. Through the 1944 MoMA traveling exhibition America Builds, Elizabeth Mock's non-European and attentive regional-based approach to architecture that nurtured the exhibition Built in U.S.A: 1932-1944 was to have repercussions in European architecture in the immediate post-war period, echoing as far away as Portugal, then a distant and closed country.

This paper aimed at achieving reflection on Elizabeth Mock's approach to architecture and architecture exhibitions during her curatorship at MoMA, through the 1944 exhibition Built in U.S.A.: 1932-1944 and the accompanying book *Built in USA: 1932-1944* and exploring the repercussions of Mock's unique and cultured approach to architecture.

1. PROLOGUE

On 24 May 1944, the exhibition *Built in U.S.A.: 1932-1944* opened at the Museum of Modern Art (MoMA) in New York. It was organised by the acting curator of the Department of Architecture at MoMA, Elizabeth Mock (1911-1998), who was also author of the book *Built in USA: 1932-1944*[1] published at the same time. The exhibition and book were a high point of Mock's tenure at MoMA. Mock, an original Taliesin fellowship apprentice, began working for the museum in 1937 at the invitation of Alfred Barr (1902-1981), who had been the director of MoMA since it was set up in 1929. She worked as a part-time assistant to the Department of Architecture and Industrial Art, which was under the direction of John McAndrew (1904-1978), from 1937. The mobilisation of men for WWII helped many women make it to more important positions at MoMA. Mock had returned from Switzerland, where she had lived since 1933 with her husband, the Swiss-born architect Rudolf Mock (1904-1977)[2], and where she had picked up her study of architecture at Basel Gewerbeschule again. In 1941 she stopped working for the museum due to the birth of her son, Frederick Mock[3], and returned in 1943, again at Barr's invitation, now as acting curator of the Department of Architecture. Her classes with the art historian Georg Schmidt (1896-1965) in Basel awakened Mock's interest in curatorship, anticipating one of the main paths towards her manifesting her view of modern architecture. The other path was writing.

The *Built in U.S.A.: 1932-1944* exhibition was a success, with both the public and the critics, and the book became an influential publication. Thanks to the travelling exhibition *America Builds*, also organised by MoMA in 1944, and circulation of the book *Built in USA.: 1932-1944*, Mock's non-Eurocentric regionally attentive approach to architecture was to have repercussions in the European architectural scene in the immediate post-war period, echoing as far away as in distant Portugal.

2. THE EXHIBITION *BUILT IN U.S.A.: 1932-1944*

Mock's most important exhibition at MoMA and one of her most successful works at the museum was arguably *Built in U.S.A.: 1932-1944*. The exhibition opened on 24 May 1944 and ran until October 22 of the same year; it constituted the architectural section of the more general *Art in Progress: 15th Anniversary Exhibitions* programme, organised by MoMA to mark its 15th anniversary. As the title suggests, the exhibition was aimed at reflecting on the evolution of US American architecture since the *Modern Architecture: International Exhibition* show of 1932, which had been co-curated by Henry-Russell Hitchcock (1903-1987) and Philip Johnson (1906-2005). That exhibition was the first exhibition dedicated to architecture that had been organised by MoMA and had been decisive for its affirmation as a benchmark institution for the promotion of modern architecture. Mock, who was then still known by her birth name of Bauer, visited the exhibition several times. *Built in U.S.A.: 1932-1944*. featured approximately 50 works constructed in the USA, most of which had been designed by US American architects. There

1. Elizabeth Mock, *Built in USA: 1932-1944* (New York, Museum of Modern Art, 1944).

2. Rudolph and Elizabeth Mock separated in 1948. In 1951 Elizabeth married architect Kenneth Kassler (1905-1964).

3. Elizabeth and Kenneth Kassler had a daughter, Katrina Kassler (b. 1957).

was a predominance of houses, demonstrating Mock's social concerns and an attentive approach to everyday life. In addition to residences, housing projects, public buildings, industrial units and works of engineering were also featured. As in other MoMA exhibitions that had Mock's involvement, several models were presented to the public, as well as a huge number of carefully selected photographs, technical drawings and small explanatory texts on the works arranged in an unusually unpretentious but inviting and contemporary way **(Fig. 1)**. The sophistication of *Built in U.S.A.: 1932-1944* contrasted with the elementariness of how the 1932 exhibition had been presented.

From the beginning of his tenure as curator of the MoMA's Department of Architecture and Industrial Art, John McAndrew worked towards achieving an inflection in terms of the previous approaches the department had taken, which were strongly influenced by Philip Johnson.[4] A more idealistic, aesthetic-influenced understanding of architecture, of which the *Modern Architecture: International Exhibition* show was the clearest example, gave way to a more humanistic approach that placed the emphasis on "the primacy of climate and culture, the impossibility of universal solutions and the emergence of regionally situated modern architectures."[5] Without this meaning that the international reality could be ignored, US-American modern architecture became more favoured in line with a deliberate and wider MoMA movement that reflected the policies of affirmation of a national spirit by the Franklin D. Roosevelt (1882-1945) administration.

John McAndrew's curatorial vision, which imposed a regionalist message on the MoMA architecture exhibitions[6] and which was to be continued on by Janet Henrich (1913-1988) and, later, by Alice Carson (1908-2001) after he left office in 1941, took on new amplitude and depth with Mock, when she became acting curator at the department in 1943. This adjustment reflected the uniqueness of Mock's relationship with architecture.

> *Thus, with the departure of John McAndrew, Elizabeth Mock championed his legacy at the same time as she drew on her own training with Wright, her transatlantic experience, and her association with Mumford (through her sister Catherine Bauer [Wurster]) to bring vernacular and regional expression to a national platform.*[7]

Built in U.S.A.: 1932-1944 – the exhibition and the book – presented a wide and diversified group of new experiments in US American architecture, most of which were characterised by a regionalist accent, with a sensitive approach to the site, local weather and materials, and vernacular tradition. The book is fundamental for understanding Mock's approach to architecture. Her discourse is inclusive, albeit critical. While distancing herself from the more abstract and doctrinaire pioneering of Modern European architecture of the 1920s, even if she acknowledged its importance, Mock did not reject European contemporary architecture. In addition to Le Corbusier (1887-1965), she also appreciated the new Scandinavian architecture, particularly the work of Alvar Aalto (1898-

4. After Philip Johnson left MoMA in 1934, curatorship of the department was first entrusted to Philip Goodwin (1885-1958), and then Ernestine Fantl (1906-1983).

5. Keith L. Eggener, "John McAndrew, the Museum of Modern Art, and the 'Naturalization' of Modern Architecture in America, ca. 1940," In *Architecture and Identity*, ed. Peter Herrle and Erik Wegerhoff (Berlin: LIT Verlag, 2008), 236.

6. Liane Lefaivre and Alexander Tzonis, "International Style versus Regionalism," in *Architecture of Regionalism in the Age of Globalization: Peaks and Valleys in the Flat World*, eds. Liane Lefaivre and Alexander Tzonis (Abington, UK and New York, NY: Routledge, 2012), 116.

7. Mardges Bacon, *John McAndrew's Modernist Vision: From the Vassar College Art Library to the Museum of Modern Art in New York* (New York, Princeton Architectural Press, 2018), 153. Catherine Bauer (1905-1964) was a defender of public housing. In 1940, Catherine married the architect William Wurster (1895-1973).

1976) and Aino Aalto (1894-1949).[8] At the same time she underlines the referential value of the work of Frank Lloyd Wright (1867-1959) and US American vernacular architecture. Mock writes:

> *Stimulated, perhaps, by Wright and by Le Corbusier's experiments with natural materials in the de Mandrot house (1930-31) and the Swiss Dormitory at the Cite Universitaire in Paris (1932-33), Americans looked again at the stone and wood barns of Pennsylvania, the white clapboard walls of New England, the low, rambling ranch houses of the West, and found them good*.[9]

Built in U.S.A.: 1932-1944 is the manifestation of a non-Eurocentric vision of architecture that reveals itself to be open, updated and cultivated. At the same time, it furthers the emancipation of US American architecture in relation to European architecture, re-rooting it in a new reading of its deepest values. In its condition of summarising and synthesising recent architecture, *Built in U.S.A.: 1932-1944* suggests a pathway ahead for new US American architecture.

3. THE TRAVELING EXHIBITION *AMERICA BUILDS*

In April 1944, the Office of War Information (OWI)[10] commissioned MoMA with a travelling exhibition that was to be shown in Stockholm, Sweden. The show was to affirm the US American way of life and, accordingly, contribute to the war effort at a time in which it (the war) was entering a crucial phase. The reasoning behind an exhibition of architecture was that it "reveal[s] more of our American way-of-life than perhaps any other type of show, except the straight propaganda presentation through photographs of people, films, etc."[11] Given the short time available for preparing the exhibition and the fact that said preparation took place at the same time as organisation of the *Built in U.S.A: 1932-1944* exhibition and a housing exhibition in the United Kingdom, Mock and Elodie Courter (1911-1994), director of the MoMA Department of Circulating Exhibitions, decided that the Stockholm exhibition would be mounted using the available material.[12] *America Builds* was to include 4 sections: 1. Pioneers of Modern Architecture; 2. Outstanding Buildings of the Past Ten Years; 3. U.S. Housing in War and Peace; and 4. Planning in the U.S.A. Section 2 was based on the *Built in U.S.A: 1932-1944* exhibition.

Amerika Bygger opened at the National Museum in Stockholm on 14 June 1944 and ran until August 15 of the same year. The fact that the opening took place a few days after D-Day gave the American way of life promoted by the exhibition added importance. **(Fig. 2)**

The show included some 400 photographs and drawings, in addition to books, magazines, films and building material samples. Alvar Aalto was invited to give a lecture.[13] The exhibition was accompanied by the publication of a book, *Amerika Bygger*,[14] which was structured in accordance with the exhibition sections and was generously illustrated. The Swedish and US American press noted the great visitor flows to, and huge success of, the exhibition. Jørn Utzon (1918-2008) was a visitor to the show. It introduced

8. Mock, *Built in USA*, 20.

9. Mock, *Built in USA*, 14.

10. The OWI was a US-government propaganda agency that operated during World War II. It documented and disseminated the US American way of life in films, photographs, radio programs and texts, thus contributing to the war effort.

11. "The Museum Goes Abroad," *The Bulletin of the Museum of Modern Art* 12, no. 2 (1944): 3. https://doi.org/10.2307/4058166.

12. Elizabeth Mock, "Where Credit Is Due in the America Builds Exhibition," *Pencil Points* XXV, no. 10 (October 1944), 8.

13. "The Museum Goes Abroad:" 5.

14. Nationalmuseum, *Amerika Bygger. Utställning 14 Juni–15 Augusti av Amerikansk Arkitektur* (Stockholm: Nationalmuseum, 1944).

him to the work of Frank Lloyd Wright and how he took the location and surroundings for each of his designs into consideration.[15]

After Stockholm, *Amerika Bygger* was presented in Gothenburg in September 1944, also accompanied by the book. In June of the following year, it travelled to Finland, where it was presented in Helsinki. Alvar Aalto wrote one of the introductory texts to the book. Still in 1945, it travelled to Copenhagen, Denmark. And then, in January 1946, it was shown in Oslo, Norway.

In 1945, the *America Builds* exhibition was presented in Switzerland, where it was likewise accompanied by a book. *USA Baut* was shown in Zurich and Berne. The following year, *L'Amérique Bâtit* visited Geneva and Basel. In relation to *USA Baut*, Emil Brunner (1889-1966) noted both the way in which America had learned from the old continent and, above all, how it had increasingly gone its own way in recent decades.[16] The exhibition garnered praise in the Swiss architecture-related press. Later, the Swiss architect Alfred Roth (1903-1998) acknowledged the pioneering character of *USA Baut* in re-establishing cultural links between countries through traveling exhibitions in the aftermath World War II.[17] In this sense, *USA Baut* was a precursor to the *Contemporary Swiss Architecture* traveling exhibition which Roth himself put together in 1952 to be shown in the USA and Canada.

The book *In USA Erbaut*[18], the German-language translation of *Built in U.S.A: 1932-1944*, was published in West Germany in 1948.

4. ECHOES IN EUROPE

In the course of 1945, the architect Fernando Távora (1923-2005), then still a student at the Porto University School, delved into several modern architecture books he had purchased at the time to widen his knowledge. Among those books was *Built in U.S.A: 1932-1944*. The book's presence in Portugal as early as 1945 is revelatory of the unexpected reach of the *Built in U.S.A: 1932-1944* exhibition and added new reach to the repercussions of Mock's approach to architecture. Portugal at the time was a distant country and one far removed from the discussion on architecture. The comments Távora made in the books reveal the importance he gave to Mock's observations, particularly when she refers to the renewed attention of American architects to the vernacular architecture in their country.[19] **(Fig. 3)**

His reading *Built in U.S.A: 1932-1944* contributed directly to the writing of the text *O Problema da Casa Portuguesa* [The Problem of the Portuguese House],[20] which Távora published in November 1945 in the *Aléo* magazine. In this text, Távora argued in favour of the study of Portuguese vernacular architecture, convinced that its value was important for the realisation of contemporary architecture, which had a duty to be Modern. Together with the thoughts of other Portuguese architects, the version of the text published in 1947 was decisive for the realisation of the *Inquérito à Arquitectura Popular em Portugal* [Survey of Portuguese Vernacular Architecture] carried out from 1955 to 1958. Távora was a referential figure in the renewal of Portuguese architecture in the latter half of the 20th century, defending the reconciliation of Modern Architecture and the values of vernacular architecture and tradition.

15. Adrian Carter and Marja Sarvimäki, *Jørn Utzon and Transcultural Essentialism* (Abington, UK and New York, NY: Routledge: Routledge, 2021), 53-54.

16. Emil Brunner, foreword to *USA Baut* (Zürich: Kunstgewerbemuseums, 1945), 4.

17. Alfred Roth. *Alfred Roth, Architect of Continuity* (Zurich: Waser, 1985), 176.

18. Elizabeth Mock, *In USA Erbaut* (Wiesbaden: Metopen-Verlag, 1948).

19. Mock, *Built in USA*, 14.

20. Fernando Távora, "O Problema da Casa Portuguesa," (November 1945).





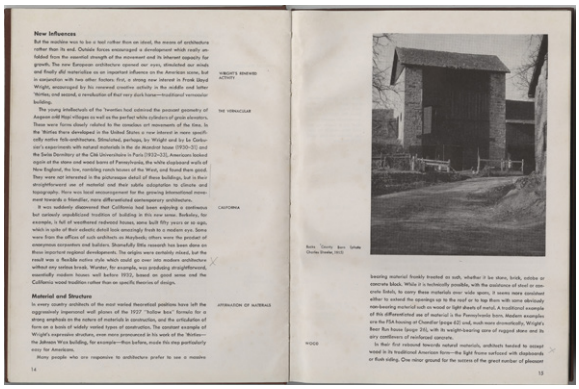


Figure 1. Installation view of the exhibition 'Built in USA: 1932-1944'. MoMA, NY, May 24 to October 22, 1944, IN267.1. © 2024 Digital image, The Museum of Modern Art, New York/Scala, Florence.

Figure 2. Window display describing the architectural exhibit, America Builds, which opened in Stockholm from June 14, 1944 and held until August 15, 1944, at the National Museum. Marcel Breuer Papers, Syracuse University Library, breuer_m_3294.

Figure 3. Pages 14 and 15 of Elizabeth Mock's *Built in U.S.A: 1932-1944* owned by the architect Fernando Távora. © Fundação Instituto Marques da Silva, Porto, Portugal, FIMS/MONOGRAFIAS/FT/1648.

5. EPILOGUE

Elizabeth Mock's tenure at the Department of Architecture at MoMA was marked by the constant thinking of the public. She was as concerned with the ordinary public as she was with architecture-related professionals without compromising on the modernity and the quality of the architecture on display. The modern house and the routine of the dwellers were common themes of her exhibitions, demonstrating her social concerns and an attentive approach to everyday life. Mock was a woman with ample knowledge of the modern architecture of Europe, the USA, and Brazil, which she interpreted based on her own critical thought and sought to share through her various professional links. Mock's most enduring legacy of her tenure at MoMA, however, was her non-Eurocentric and regionally attentive approach to architecture, of which the 1944 exhibition *Built in U.S.A.: 1932-1944* and the book of the same name are arguably the most far-reaching manifestations. The *Modern Architecture: International Exhibition* show of 1932, introduced to the USA the European architecture of the 1920s. Just 12 years later, with the aid of the traveling exhibition *America Builds* and circulation of the book *Built in USA: 1932-1944*, the *Built in U.S.A.: 1932-1944* exhibition showed Europe a modern architecture impregnated with regional values that contributed to a revision of the Modern Movement, which at the time was just beginning to emerge.

Elizabeth Mock left MoMA in 1946, dismissed by Philip Johnson. Her curatorship of the *Built in U.S.A.: 1932-1944* exhibition was ignored by

21. Henry-Russell Hitchcock and Arthur Drexler, *Built in U.S.A.: Postwar Architecture* (New York, NY: Museum of Modern Art, 1953), 8.

22. Acknowledgements: The authors wish to thank Dr Paula Abrunhosa and the José Marques da Silva Foundation Institute (FIMS) for permission to use the images of the book *Built in USA: 1932-1944* owned by the architect Fernando Távora. This work was supported by FCT - Fundação para a Ciência e Tecnologia, I.P. by project reference <UIDB/04026/2020> and DOI identifier <10.54499/UIDB/04026/2020 (https://doi.org/10.54499/UIDB/04026/2020)>.

Henry-Russell Hitchcock and Arthur Drexler (1925-1987) in the catalogue for the 1953 exhibition *Built in USA: Post-war Architecture*, which they co-curated, even though they stated that the exhibition catalogue was the second in a series of MoMA's declarations of excellence that began with the 1944 exhibition catalogue.[21] [22] ■

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FOOD PARTY: REFLECTIONS ON COMMUNITY ENGAGEMENT THROUGH FOOD PROJECTS IN ARCHITECTURAL EXHIBITIONS

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ABSTRACT

In recent decades, the acceleration of urbanization and soil degradation has raised severe concerns regarding decreased farmland. As access to nutrition becomes increasingly dependent on a complex and fragile food system, which often impairs public food security, the attention towards fresh, organic produce has encouraged the emergence of growing food in urban areas, such as community gardens and shared rooftops. The introduction of agriculture into urban spaces is necessitated not only as a means of ensuring nutrition, but also as a way to promote public care and community engagement. In response to these emerging conditions, projects at architectural exhibitions and biennales seek to explore the immediacy and agency of care at divergent scales through the medium of food. While these exhibition projects are entangled with different political and social concerns, they draw upon the cultural and ecological value of food production, carving new avenues for community engagement where the politics and powers of food are materially and ecologically investigated. These projects *seek* to ask: what narratives about food and food-related activities do exhibitions intend to foster? How could architectural exhibitions become a productive platform to devise, spatialize, and communicate resistance and resilience to social and environmental unrest?

To answer these questions, the paper will analyze several curatorial and exhibition projects related to the theme of food, examining divergent measures that promote social interaction and ecological awareness through the medium of food. It will also discuss the role of architectural exhibitions as crucial devices for convening and communicating with the public, rendering visible the material forces that contribute to new forms of community engagement in the 21st century.

1. INTRODUCTION

Architectural exhibitions have always been a significant platform for showcasing emerging design technologies, spatial innovations, and theoretical inquiries into a material world saturated with ever-changing social, political, and environmental issues. Traditionally, these exhibitions have been inclined towards the collection and display of objects that serve as repositories of 'high' cultures for the educated and elite, with limited attention to quotidian objects and everyday experiences associated with the public. However, in recent years, there has been a remarkable shift in architectural exhibitions and biennales, moving away from the hierarchical curatorial paradigm towards a perspective of care that engages everyday objects and activities of divergent communities. What exemplifies this notable shift is the burgeoning discussion in architectural exhibitions around projects that interrogate urban farming, food culture, and its architectural response, speculating on the tools and spaces of food production as social and cultural catalysts in forging new forms of collectivity. As argued by the curators for the Spanish Pavilion in the most recent Venice Biennale, titled *The Laboratory of the Future*, "By eating, we digest territories."[1] In the context of global uncertainties and social and environmental unrest, food, along with its relation to bodies, communities, and territories, continues to echo as a critical factor in shaping our world.

Over the past decade, the Bi-City Biennale of Urbanism and Architecture (UABB) has witnessed various forms of community engagement tackling food production and food-related activities. For instance, in 2009, a series of planting modules was devised as a landform installation at the West Kowloon Cultural District, where children in the neighborhood used the modules to grow and harvest the lettuce; in 2017, the public audience gathered for food activities under the large chimneys, titled *Fired Foodies Club*, designed by Atelier Bow-Wow (**Fig. 1**). From interactive installations to pop-up dining experiences, food projects have emerged as powerful tools for engaging diverse audiences and fostering transdisciplinary dialogue, acting as productive apparatuses to expand the architectural discourse by unfolding its entanglements with different political and social concerns. These exhibition projects draw upon the entrenched cultural and ecological value of food production, carving new forms of community engagement where the politics and powers of food are materially, socially, and ecologically investigated.

2. THEORETICAL FRAMEWORK

To comprehend the agency of food in architectural exhibitions, it is imperative to elucidate several questions related to contemporary curatorial practices and the pressing social and environmental issues. For instance, what is the role of architectural exhibitions in engaging the public beyond providing visual and sensory experiences? How do food-based projects and activities at architectural exhibitions facilitate conversations that engage divergent communities? How can architectural exhibitions challenge dominant power structures and support community-driven resistance and resilience to social and environmental unrest we face today?

1. Andrews Blanco and Oscar A. Sanchez, "Foodscapes, 'By eating, we digest territories". Spanish Pavilion at the Venice Architecture Biennale 2023," Metalocus, accessed May 5, 2024, https://www.metalocus.es/en/news/foodscapes-eating-we-digest-territories-spanish-pavilion-venice-architecture-biennale-2023.

As the immediacy of the food crisis becomes more apparent, so does the urgency to unravel food systems and the environment that supports them. Over the past decades, the acceleration of urbanization and soil degradation has raised serious concerns about the decrease in farmland. A recent study reveals that the world has lost one-third of its arable land due to erosion and pollution. With intensive agricultural practices, including the continual plowing of fields and the heavy use of fertilizers, the quality of land and the food it yields continues to decrease, which limits access to nutrition and thus impairs public food security. This escalating concern around food production has spurred two areas of inquiry in architectural exhibitions: on the one hand, it explores the architecture's role in the politics and logistics involved in food transportation, distribution, labor, and maintenance. It delves into the ecology of food materialized in farmhouses, food factories, and supermarkets, which is epitomized at the Tallinn Architecture Biennale 2022, titled *EDIBLE; Or, The Architecture of Metabolism*. On the other hand, it examines the emergence of farming practices, such as urban farms, community gardens, and domestic gardens, which are encapsulated in the projects *Landgrab City* and *Value Farm* at the Bi-City Biennale of Urbanism and Architecture 2013. These exhibitions aim to explore food not only as a source of nutrition but also as a means to enrich community engagement. By involving communities in the process of knowing, growing, and sharing food, these exhibitions aim to reveal a world of nutrition that necessitates collective efforts to sustain its fragile ecosystem, redefining the agency of mutual care through the medium of food.

In addition to its ecological and environmental dimensions, the social and performative value of food is underscored in many food projects to enhance community engagement through architectural exhibitions and biennales. As the architectural historian Elizabeth Cromley asserts, the activities around food, including cooking, storing, serving, eating, and disposing, function as a food axis in the social production of space.[2] Food is theatrical and performative. In the space where the cleansing, cutting, cooking, and sharing of food converge, a routine of activities transforms into a theatrical site for potential performances and social interactions.[3] In other words, the production and consumption of food is the production and consumption of social spaces that enable activities of care and conviviality. This connection between food and collectivity is exemplified in the project titled *Secret Ingredient*, designed by Herkes Icin Mimarlik (HiM Collective) as part of the 2019 Chicago Architecture Biennial. Centered around a series of picnic tables, the project brought together visitors and residents in the neighborhood in the garden of the Anthony Overton Primary School. Through a series of interviews and activities engaged in the sharing of "Soul Food," the exhibition intended to unearth the "secret" stories of the marginalized African American communities and their struggles for food sources and civil rights. These small-scale interventions and installations in architectural exhibitions draw upon the medium of food as the catalyst for collective behaviors, operating as the infrastructure of care to promote a new set of social codes and spatial politics that crafts new modes of collectivity and solidarity in the living community. In response to these

2. Elizabeth C. Cromley, "Transforming the Food Axis: Houses, Tools, Modes of Analysis," *Material Culture Review* 44, (Fall 1996): 8-20. https://journals.lib.unb.ca/index.php/MCR/article/view/17695.

3. Barbara Kirshenblatt-Gimblett, "Playing to the Senses: Food as a Performance Medium," *Performance Research* 4, no. 1 (1999): 1–30. http://doi:10.1080/13528165.1999.10871639.

perspectives, two curatorial and exhibition projects will be further examined in the next chapter.

3. CASE STUDY

3.1 FOOD: BIGGER THAN THE PLATE

In 2019, the exhibition, titled *FOOD: Bigger than the Plate*, was held at the Victoria and Albert (V&A) Museum of London. Curated by Catherine Flood and May Rosenthal Slone, the exhibition offers a compelling insight into food and its broad narratives, suggesting innovative ideas that interrogate the convoluted relationships between the environment and the diverse organisms inhabiting and digesting it. This series of inquiries is facilitated by projects on community involvement, emphasizing the significance of social interactions, such as collective dining and farming, as powerful tools for challenging established perceptions of food that separate consumption from production.[4]

The exhibition suggests the role of food as not only a sustenance of nutrition but also a medium that carries narratives of its origins and its transformative processes. As food journeys from transportation to our plates, it is crucial to consider its impact on the environment, elevating the act of eating from mere necessity to a critical understanding of our surroundings. This includes educating the community on the ecological footprint at each stage, from farming practices to transportation methods, as well as the complex network of labor and capital forces involved in food processes. As the exhibition unfolds, it introduces four main sections: *Compost, Farming, Trading*, and *Eating*. Though all of them touch upon different aspects of community engagement, *Farming* and *Eating* are more entangled with our everyday activities.

Farming explores the intricate connections between landscapes, organisms, and those who cultivate our food. By showcasing innovative farming techniques, it highlights the recalibration of our relationship with the land through sustainable agricultural practices. This is rendered visible by community-driven projects, such as *Bicitractor*, developed by Farming Soul, to support small-scale farming. *Bicitractor* is a pedal-powered machine equipped with electric assistance designed for small- and medium-sized vegetable farms. In contrast to traditional machine-powered tractors, *Bicitractor* offers farmers the benefit of eliminating the inconvenience caused by the internal combustion of engines and the unpleasant odor of exhaust fumes. Aside from its contribution to reducing carbon dioxide emissions, *Bicitractor* operates on an open-source principle, with the manufacturing plans for the vehicle free and available to all in the community.[5] Moreover, the project enables community collaboration by offering a hands-on approach to work collectively from the initial stages of cultivation to the final collection of fresh produce. By involving members of the community in these activities, Bicitractor not only enhances practical skills but also cultivates a deeper appreciation for the collective efforts involved in food production.

In the *Eating* section, the exhibition presents a bold departure from conventional food practices, underscoring the cultural, social, and political dimensions of cooking, dining, and other forms of food consumption. In this section, meals are explored as more than mere sustenance; they serve as vehicles

4. Sarah Dawood, "V&A Food Exhibition Challenges Our Ideas of Consumption," Design Week, accessed May 5, 2024, https://www.designweek.co.uk/issues/10-16-june-2019/va-food-exhibition-challenges-our-ideas-of-consumption/.

5. Dawood, "V&A Food Exhibition Challenges Our Ideas of Consumption,"

for storytelling, cultural exchange, and community engagement. By dismantling traditional nutrition paradigms, new forms of eating practice encourage visitors to think critically about food choices and their broader implications on societal norms. This concept is highlighted in the *Loci Food Lab*, which crafts sustainable canapés using ingredients that are frequently disregarded, such as vegetables deemed "too ugly" for supermarket shelves.[6] This innovative approach seeks to educate visitors about inventive ways to mitigate food waste and reconsider production and consumption practices. Another avenue through which the exhibition promotes community engagement is by introducing novel approaches to dining, highlighting the importance of the table not as a surface for eating, but as a connector for diverse culinary traditions, practices, and storytelling. Central to the exhibition is an 11-meter-long table showcasing diverse projects, ranging from inventive cutlery designs to unconventional utensil shapes **(Fig. 2)**. It also includes the adoption of unconventional methods such as group eating, framing it as a collective activity that not only nourishes the body but also fosters human relationships, sparks debates, and encourages meaningful conversations. The exhibition communicates a clear message: food is much more than what we eat; it is a sophisticated system encompassing social, cultural, and environmental implications that offer a compelling vision for a more sustainable and socially conscious food future.

3.2 FOODSCAPE

As part of the Venice Architecture Biennale 2023, the Spanish pavilion, titled *FOODSCAPES*, is dedicated to highlighting the architectural presence in the complex processes of production, distribution, and consumption. Curated by Manuel Ocaña and Eduardo Castillo-Vinuesa, the exhibition invites contemporary creators to investigate the often-overlooked architectural aspects of manufacturing and their impacts on the surrounding environment, exploring the role of physical architectural frameworks in facilitating food-related processes **(Fig. 3)**.[7]

The exhibition comprises three main frameworks: *Feast, Total Recipes*, and *Public Program*. *Feast* is an audiovisual feast composed of five movies, each of which delves into five constitutive layers of agro-alimentary systems, including *Foundation, Production, Distribution, Consumption*, and *Digestion*. *Total Recipes* is a research project that goes beyond the finding of traditional recipes filled with mixing protocols of the ingredients available in our kitchens. Through a collection of ten case studies, *Total Recipes* explores the infrastructural chains necessitating the production of each ingredient, showcasing how different dishes cut across the five layers provided in the first framework. *Public Program* is a collection of short films that delve into the present conditions of food environments via lectures, workshops, film showings, and guided tours. It invites viewers to actively engage with their communities by exploring complex global food systems, revealing untold stories, and fostering a shared dedication to creating a more sustainable, fair, and resilient future.

While the exhibition as a whole prioritizes community involvement, *Total Recipes* underscores how the ingredients of a dish traverse multiple

6. Dawood, "V&A Food Exhibition Challenges Our Ideas of Consumption,"

7. "Copenhagen Architecture Festival (Cafx) - A Place to Explore, Discuss & Communicate Urban Challenges," Copenhagen Architecture Festival, accessed May 5, 2024, https://www.cafx.dk/.

scales of community engagement in the digital age. For instance, in *Recipe 1*: "Ghost Tortilla" by Lucia Tahan, an architect and augmented reality software designer, she investigates the process of making a tortilla, tracing the links between the traditional practices of an egg farm and the digital landscapes of a data farm. As the quintessential Spanish dish, tortillas have long carried a cultural symbol of the Spanish community. However, the way they are made is shifted from an ordinary kitchen to a "ghost" kitchen, which produces food that is transported directly to the homes of clients who order via digital technologies. Tahan argues that this digital innovation has marginalized the role of architects in regulating the spaces of production, with its negative social impacts on the local community due to the noise, smell, and garbage produced by these ghost kitchens.[8] As she immerses herself in this investigation, Tahan's curiosity is piqued by the symbiotic relationship between age-old culinary craftsmanship and the digital innovations reshaping the gastronomic landscape of contemporary society. "Ghost Tortilla" exemplifies the ambition of Total Recipes to unravel the intricate tapestry of tradition, technology, and taste that intertwines to redefine our community in the digital age.

Figure 1. Atelier Bow-Wow, **Fire Foodies Club**, Shenzhen, China, 2017.
© Zhang Chao

Figure 2. Installation, *FOOD: Bigger than the Plate*, London, UK, 2019.
© Victoria and Albert Museum, London

Figure 3. Photograph presented at the Spanish Pavilion, titled *FOODSCAPES*, Venice, Italy, 2023.
© Pedro Pegenaute

Figure 4. Photograph of Balchen, 9th Bi-City Biennale of Urbanism and Architecture, Shenzhen, China, 2023. © Wenhan Dong

4. REFLECTION

The term "curation" finds its roots in the Latin word "curare", which translates to "to care". This etymology underscores the fundamental nature of curation as a practice of care, a concept that has shaped the way museums interact with people. In the context of early and modern European museums, curatorial practices were primarily focused on the care of collections and objects, which were considered valuable for their educational and scholarly significance. The role of the curator and the curating institution was considered pivotal in imparting knowledge to the public, perpetuating the singular authorship that informed how society was perceived and dissected.[9]

However, over the past few decades, there has been a noticeable shift towards the notion of architectural exhibitions as crucial devices for convening and communicating with the public. The idea of care has been expanded to include the care of communities where diverse constituents reside. Following this curatorial shift, food projects serve as a powerful medium to facilitate the exchange of conversations in communities. However, as the production of food is ephemeral and interactive, food exhibitions and projects are often subject to a performative process that requires meticulous attention to the growth of plants and the preparation of fine cuisine, both sensitive to unpredicted reaction and participation from the audience, and thus inclined to be unduly curated based on a finished product rather than an open, flexible process. This polished outcome of the exhibition is criticized by Chris Fite-Wassilak in his review article of *FOOD: Bigger than the Plate*, in which he claims that the exhibition is the product of a consumerist middle-class society that produces and consumes its own narratives. The exhibition, as he argues, "presents well-designed, consumer-friendly products that tweak on the outputs of the current system instead of offering provocations or reflections to what and how we eat together."[10] This critique arouses critical questions: is there a "radical attitude

8. Graham Keeley, "Ghost kitchens, tortillas and giant greenhouses - Spanish gastronomy on show at the Venice Biennale," Euronews, accessed May 5, 2024, https://www.euronews.com/culture/2023/05/24/ghost-kitchens-tortillas-and-giant-greenhouses-spanish-gastronomy-on-show-at-the-venice-bi

9. Alethia Wittman, "Expanding Care: Curation in the Age of Engagement," The Incluseum, accessed May 5, 2024, https://incluseum.com/2019/11/25/expanding-care-curation-in-the-age-of-engagement/.

10. Chris Fite-Wassilak. "Food: Bigger Than the Plate Review," E-Flux Criticism, accessed May 5, 2024, https://www.e-flux.com/criticism/278274/food-bigger-than-the-plate.









of cooperative inquiry" into the representation and participation of food in architectural exhibitions? How do these exhibitions react to the messy, dirty, and unpredictable reality? How could these exhibitions reject a prescribed timeframe and the constraints it entails, and what do exhibition spaces and events leave behind them once their performance ends?[11] As highlighted in the author's project, titled *Balchen* **(Fig. 4)**, when the biennale venue was shut down unexpectedly due to the pandemic control, the residents in the neighborhood volunteered to look after the plants and take ownership of the installation as if they were part of the curated repertoire. This unplanned publicity became even more prominent when a local farming organization adopted the installation and continued to foster food in its rooftop venue—the exhibit was animated as a catalyst for facilitating and empowering community engagement rather than merely staging such events in a didactic way. Such unpredictability is hard to project, but perhaps it could be examined as the immediate "future" of the architectural exhibition, whether as risk or as potential.[12] As Castellani concludes, "We must make room for art and food as our everyday source of relating and healing."[13] In other words, the ways in which the production of food in architectural exhibitions fosters and inspires an everyday practice of care remain further critical inquiry. ■

11. Maddalena Castellani, "Relational Narratives of Food in Design and Architecture Exhibitions," Humanities 12 (2023): 135. https://doi.org/10.3390/h12060135.

12. Leyuan Li, "Domestic infrastructure of food: thoughts on community engagement through food, furniture, and architectural exhibition" (paper presented at the IASDR 2023: Life-Changing Design, Milan, Italy, October 9-13, 2023), 6. https://doi.org/10.21606/iasdr.2023.854.

13. Maddalena Castellani, "Relational Narratives of Food in Design and Architecture Exhibitions," Humanities 12 (2023): 135. https://doi.org/10.3390/h12060135.

BIOGRAPHY

Leyuan Li is a Chinese architect, educator, and researcher whose professional and academic work focuses on interior and urban realms in the articulation of spaces and societies. He has practiced architecture internationally at OMA and SOM before founding his design practice, Office for Roundtable. Li is assistant professor of architecture at the University of Colorado Denver. His writing has been published in esteemed journals, and his curatorial projects have been exhibited at the Denver Art Museum, the 9th Bi-City Biennale of Architecture and Urbanism in Shenzhen, and the UCCA Center for Contemporary Art in Beijing. Most recently, he was awarded the 2024 AIA/ACSA Housing Design Education Award.

Max Bravo is currently enrolled in the architecture program at the School of The Art Institute of Chicago. With a foundation in interdisciplinary studies, he seeks to explore the role of existing materials in architectural design, aiming to cultivate a deeper appreciation for the dynamic relationship between form and substance.

EDUCATION TO CONSERVE MODERN HERITAGE: METHODS AND TOOLS

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ABSTRACT

Modern heritage is increasingly understood and appreciated but there are still significant hurtles that must be overcome to ensure that modern places are conserved and well cared for. This paper discusses the educational challenges in the conservation of twentieth-century built heritage in terms of both what needs to be taught, how it is best taught, and who should be receiving this training. The need for increased educational opportunities for those involved in conserving modern heritage was confirmed in a joint research report written by Getty Conservation Institute and DOCOMOMO International, which was published in 2020. The survey also pointed out that this sort of training is happening, although its reach is currently limited. Examining some education and training efforts, aimed at both university students and professionals, we find there are several notable efforts underway that offer useful lessons. At both the student and the professional levels, a need for broadening what we consider heritage, and who it matters to, are becoming part of the educational content. This also means that conservation should be taught as a multi-faceted subject, including social, economic, as well as historic and cultural values. Investigating successful trainings we see that they should deliver theory, methodology, and technical subject matter. In many cases, using case studies of successful conservation projects engages professionals by demonstrating actual example of the application of conservation science or technique.

Education and training are key to advancing the practice and ensuring better conservation outcomes, Overall, the paper stresses the importance of a well-rounded educational framework that not only imparts technical knowledge but also cultivates an appreciation of the historical, cultural, and social significance of modern architectural heritage. This comprehensive educational approach is deemed crucial for effective and sustainable conservation efforts.

1. INTRODUCTION

Modern heritage is increasingly understood and appreciated but there are still ways to go to ensure that places are conserved and well cared for.

Modern sites are aging, their uses often becoming obsolete, and their physical conservation poses difficult technical challenges which make them vulnerable to insensitive alterations, neglect, and demolition. In addition, the climate change emergency and rapid societal changes require balancing different needs that at times compete with conservation priorities. In an increasingly complex world, professionals working on modern heritage conservation are faced with difficult decisions that require a large set of skills and competencies including engaging stakeholders to ensure good conservation outcomes.

Could this be why, despite diligent attention to this matter, and the evidence that there have been decades of successful conservation practice the field of education and training for conserving modern heritage has lagged behind?

Over recent years a wealth of knowledge has been developed which needs to be disseminated widely both to the students, emerging professionals, and to those already working in decision-making positions. Education and training are key to advancing the practice and ensuring better conservation outcomes, as declared in the *DOCOMOMO Manifesto on Education*.

The need for increased educational opportunities for those involved in conserving modern heritage was confirmed in the joint research report "A Global Survey on Education and Training for the Conservation of Twentieth-Century Built Heritage" by Getty Conservation Institute and DOCOMOMO International, which was published in 2020.

Almost two thirds of the respondents acknowledge an interest in the subject of conservation of this topic. Nevertheless, the survey reveals still many open challenges and points out lessons and recommendations for the future.

These findings were one of the starting point for the DOCOMOMO International Specialist Committee Education+Training to set a discussion and a working group aimed at examining how education and training could be key to advancing the practice and ensuring better conservation outcomes. The results are collected in the 2022 *DOCOMOMO Manifesto on Education*. As the manifesto makes clear, modern heritage education must be seen as a multi-faceted and strategic effort that must be implemented on a full spectrum of platforms and to diverse audiences.

But, how is modern heritage education unfolding today? How the complex aims of the Manifesto can be realised?

2. GLOBAL PERSPECTIVES ON TWENTIETH-CENTURY HERITAGE EDUCATION

Based on the experience developed over these years, we can affirm that different approaches to pedagogy (and practice) of twentieth-century built heritage conservation coexist, also including different opinions on whether

or not it should be taught separately from traditional conservation curricula, and how it can be integrated therewith.

In the academic sector, education and training on twentieth-century heritage conservation are generally integrated into broader heritage conservation education programs. This integration can be seen as advantageous because it provides extensive knowledge in the field of cultural heritage and confirms that the conservation of modern architecture does not require a separate conservation theory and methodology. However, it also presents a potential drawback: most architecture and engineering schools do not offer architectural conservation at the undergraduate level, and the curriculum has limited scope for teaching about traditional materials, surveying, and diagnostics. Specialized education in architectural conservation primarily occurs only at the postgraduate level and there is often insufficient time to address the unique challenges of modern architecture, risking an oversimplification of contemporary conservation approaches. As Cristina G. Longo points out, «Theoretical and design concerns seem to lag behind scientific/technical developments in architectural conservation, and there is a lack of awareness even on existing contemporary theories of conservation and only limited informed open and public debates on conservation»[1]. This issue is particularly noticeable in the tendency to prioritize the restoration of original appearance or conditions, which may not always be feasible or appropriate.

Other educational institutions beyond universities are actively engaged in the field beyond just teaching it. Through their work, they play an essential role not only in fostering the study and documentation of twentieth-century built heritage but also in raising awareness and developing a community of professionals sensitive to the topic. These institutions, which may include education and training committees from various NGOs like GCI, DOCOMOMO, ICOMOS contribute significantly to the broader educational and conservation efforts by providing practical training, workshops, seminars, and public engagement activities. Their involvement helps to bridge the gap between academic knowledge and practical application, essential for effective conservation practices.

An excellent example of this approach to heritage conservation is the training course «Inheriting the Present: The Care of Contemporary Architecture», organized by the Fondazione Scuola per i Beni e le Attività Culturali in Rome[2]. The first edition, held in 2023-24, effectively combined the development of theoretical and methodological skills needed to think, plan, and design the conservation of contemporary architecture, with the creation of a community of practice.

This community includes officials from the Ministry of Culture responsible for the protection and cataloging of modern heritage, ensuring that theoretical learning was closely integrated with practical, real-world application of preservation.

This dual focus helps foster an awareness critical for effective conservation work and for engaging with various stakeholders, including citizens living in the buildings under preservation. And, offering training like this to cultural

1. Cristina Gonzalez-Longo, «Can Architectural Conservation Become Mainstream?», in *Heritage and Landscape as Human Values*, ed. Maurizio Di Stefano, ICOMOS 18th General Assembly and Scientific Symposium, Florence 2014 (Napoli, Edizioni Scientifiche Italiane 2015), 626.

2. The course "Ereditare il Presente. La cura dell'architettura contemporanea," curated by Andrea Canziani, is organized by the Fondazione Scuola per i Beni e le Attività Culturali in Rome in collaboration with the Direzione Generale Creatività Contemporanea of the Italian Ministry of Culture. It is designed to delve into contemporary architecture conservation and is structured into thematic modules: A - Education for the conservation of modern heritage: sources and study tools; B - Contemporary architecture in Italy: protection of cultural assets and copyright; C - The restoration project between contemporary methods and materials: challenges and perspectives; D - Preserved contemporary architecture: designing for use; E - Conservation and restoration of systems and envelopes: the conservation of the contemporary and its cultural and energetic sustainability. https://www.fondazionescuolapatrimonio.it/ereditare-il-presente-cura-architettura-contemporanea-corso/ [accessed on 10.06.2024]

heritage authorities rather than only to practicing architects means it will reach a vital group of decision-makers with possibly far-reaching effects.

Alongside examples like this, it must be noted that there is a significant shortage of skilled practitioners and contractors in the conservation of contemporary built heritage. As more heritage buildings and sites require substantial interventions, both interest and awareness of the field's challenges are growing. There is a clear demand for more professional training; however, vocational education and training (VET) on this topic is often overlooked, leaving contractors without the necessary skills. From the perspective of creating a skilled workforce, capable of supporting design choices rather than opposing them, due to a lack of knowledge on how to intervene in contemporary architecture, a notable example is CONCRETO, a 36-month project started in 2024, bringing together 13 partners from 5 EU countries to promote the rehabilitation of concrete architecture. CONCRETO is an Alliance for Education and Enterprises within the Erasmus+ Programme funded by the European Union[3]. The starting point is the lack of specialist skills available and the need to develop guidelines and standards for the quality regeneration and maintenance of our modern concrete buildings. Therefore this project brings together academics, professionals, and construction workers with the aim of developing skills for the recovery and conservation of historic reinforced concrete through both theoretical training and significant, substantial practical restoration activities.

In short, training is a perceived necessity, but what type of education follows from it? Can we tackle the problems of how without having answered the whys? Edgar Morin[4] would have reminded us that the goal is a well-made head, not a well-filled head.

3. CRAFTING CONSENSUS FOR MODERN HERITAGE

The importance of integrating theoretical frameworks with practical knowledge is well documented in the DOCOMOMO Manifesto on Education, which contains eight key messages outlining the aims of education for modern movement heritage. The Manifesto emphasizes the need to educate about the significance of modern heritage, before and regardless of any official recognition or listing. It advocates for preserving authenticity in both ideas and materials, and for safeguarding all traces of time. It also highlights the practice of preventive conservation to address the fragility of modern architecture through regular, scheduled maintenance that aligns with all themes of sustainability. Additionally, it promotes cultural sustainability alongside environmental and economic sustainability. Finally, it encourages citizen participation, recognizing that the rights, values, memories, and interests of heritage communities are crucial elements of effective conservation.

It is interesting to note how the ability to manage public participation emerges as a professional skill to be recognised and cultivated. Conservation experts should better communicate with communities using clear, simple language and diverse media to explain conservation principles and share project results. Similarly, educating the public about architecture

3. Project Coordinator: Pier Luigi Nervi Project (PLN) with DOCOMOMO International as Heritage Organization partner. https://concreto-academy.org/ [accessed on 10.06.2024]

4. Edgar Morin, *La Tête bien faite. Repenser la réforme, réformer la pensée* (Paris: Seuil 1999)

and conservation is vital, much like teaching sustainability. Integrating conservation into educational curriculums is essential for developing informed citizens[5]. We protect something when we feel represented in that thing, and the decision to conserve appears as the clearest manifestation of a recognition of value. These statements bring us back to a specific disciplinary area[6], but they also ask us to intervene on the social dimension of the relationship between heritage and the subjects from whose recognition this derives. In summary, it involves giving value to themes and disciplines that belong to the processes of patrimonialization that include anthropology and sociology and cover topics of significant interest for contemporary society such as post-colonial and queer studies. It is increasingly evident that the nature of conservation and heritage education is not just technical. The Faro Convention by the Council of Europe in 2005 marked a shift, recognising that the conservation and education of heritage isn't merely a technical endeavour but deeply intertwined with political and social dimensions. This approach emphasises the active involvement of communities in the heritage they live with, suggesting that heritage should be seen as a resource for sustainable development and promoting a diverse and inclusive interpretation of heritage narratives. This comprehensive view supports the idea that heritage conservation extends beyond preserving physical structures to fostering cultural continuity and social cohesion. The issue is particularly evident for the modern which embodies divisive themes, linked to political or colonial regimes, or to certain ideas of welfare that appear discriminatory but are carriers of cultural, ethical, and social values still relevant for the 21st century.[7]

4. EXPANDING HERITAGE EDUCATION

To approach these objectives, two groups appear as key stakeholders who are outside the usual educational programs and need to be involved and considered: the citizens —as the inhabitants/users— and the decision-makers.

4.1 ENGAGING CITIZENS

If we try to assess the relationships that are created between education for citizenship and heritage education—understood as an interdisciplinary education founded on active participatory methodologies—it becomes clear that this does not only address formal school system educators but also those involved in informal education, especially those who work with heritage as bearers of knowledge[8]. Heritage education, therefore, is seen not just as the transmission of content, but as making heritage relevant in the contemporary world as a bearer of meanings and values that can improve, both culturally and socially, the quality of life for each individual. This process mirrors the fostering of awareness and appreciation in contemporary art, which often encounters skepticism due to well-understood factors.

Schools and universities bear the great responsibilities of the formal system, but there must also be continuing education that, for instance, engages professionals who play a crucial role in mediating between inhabitants and architectures.

5. see: Cristina Gonzalez-Longo, «Can Architectural Conservation Become Mainstream?», in *Heritage and Landscape as Human Values*, ed. Maurizio Di Stefano, ICOMOS 18th General Assembly and Scientific Symposium, Florence 2014 (Napoli, Edizioni Scientifiche Italiane 2015), 626-630.

6. Alois Riegl, *Der moderne Denkmalkult. Sein Wesen und seine Entstehung* (Wien: 1903). Cesare Brandi, *Teoria del restauro* (Roma: Edizioni di Storia e Letteratura 1963)

7. Tolia-Kelly Divya Praful, Emma Waterton, Steve Watson, *Heritage Affect and Emotion: Politics Practices and Infrastructures* (London: Routledge 2017)

8. Andrea Canziani, «Modern Architectural Heritage as a Catalyst for Education in Conservation», in *Conservation/ Transformation*, ed. Loughlin Kealy, Stefano Musso, (Genova, EAAE – ENHSA Network on Conservation 2011), 141-150. Junko Taguchi, «Professionals or the General Public? Emerging Lay experts of Heritage Managment in Japan», in *Inheritable Resilience: Sharing Values of Global Modernities*, ed. Ana Tostões, Yoshiyuki Yamana, XVIth International Docomomo Conference (Tokyo: Docomomo International, Docomomo Japan 2021) pp.662-667. Andrea Canziani, «Conservation vs Musealization. Notes for an anthropology of Inhabiting the Modern Heritage», in *Modern Heritage Between Care And Risk*, ed. Maria Bonaiti Sara Di Resta, (Venezia: Bembo Officina Editoriale 2022) 284-305.

4.2 ENGAGING DECISION-MAKERS

A fundamental aspect in the relationship between modern heritage and its care is to educate decision-makers, as they have the responsibility for collective choices that have immediate consequences. Intervening in this area can seem challenging because it affects codified work systems and established habits. In the public administration sector, if we exclude continuous training systems linked to mandatory professional updating that do not reach everyone or that have to address multiple topics, we are dealing with individuals who are not involved in formal education processes but rather in informal ones. At the same time, however, action is needed on only a limited number of individuals, who, moreover, have a specific interest in developing necessary skills. This goal is closely linked to specific national situations and cannot be standardized because decision-making systems differ for each country, as do laws. Nevertheless, we believe it is crucial not to forget these figures and to include them as much as possible in our considerations about the key stakeholders.

5. EDUCATIONAL EXPERIENCES

In terms of developing a pedagogical approach to the subject, the papers in this session offer some possible examples.

First, the Eramsus course called Joint Masters RMB which is being planned by five European universities on conserving modern heritage developed at the Master's Level has decided to focus on adaptive reuse as the framework for its studio projects. This will give students more than a theoretical understanding of modern heritage conservation, it will require them to develop design solutions for real buildings, forcing them to grapple with practical and technical challenges. Furthermore, because of the regional diversity of the five participating universities, the students will be exposed to a wide variety of regulations, climates, and building typologies, which will give them broad understanding of the role context plays in conservation. The desired result of this program will put theory into practice within an academic context.

The example of the GCI conservation professional-level course addresses the need for heritage professionals to learn about the wide the broad spectrum of historic, social, technical, and advocacy issues that confront those in practice, and relies heavily on case-studies as a teaching tool. In this way the participants learn new skills and, importantly, how to apply them.

The creation of a conservation management plan for a Benedictine Monastery church in Santiago, Chile, demonstrates how learning various tools and methodologies that are required for writing a CMP for a modern-era structure has provided certain skills to those architects and conservation professionals related to the values-based approach to conservation, including engaging with stakeholders.

Finally, reflecting on how can students effectively incorporate political, economic, and sociological considerations into their designs, Artina Qehaja highlights the challenge of grasping a wide array of topics within a limited

timeframe. This underscores that conservation is a multidisciplinary field encompassing economics, politics, sociology, and information technology. It advocates for an educational approach that integrates historical appreciation with contemporary needs, preparing students to effectively preserve architectural heritage for future generations. The ultimate goal is to deepen our understanding of architectural history in a way that informs and enhances current and future conservation efforts. ■

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BIOGRAPHY

Andrea Canziani is an official at the Italian Ministry of Culture and collaborates with the Fondazione Scuola dei Beni e delle Attività Culturali in Rome, curating educational courses on contemporary architecture. He was DOCOMOMO Italy's General Secretary and now co-chairs DOCOMOMO ISC Education + Training. He earned his Master's and PhD from the Polytechnic of Milan, focusing on cultural heritage protection and the economy of culture, and completed a postgraduate degree in Monument Restoration at the University of Genoa. He also teaches Architectural Preservation at the Polytechnic of Milan and is a member of the Italian Society for the Restoration of Architecture.

Chandler McCoy, AIA, directs the Conserving Modern Architecture Initiative at the Getty Conservation Institute in Los Angeles, which aims to enhance modern heritage conservation through educational programs, field projects, and publications. Before joining GCI in 2015, he was Associate Director for Planning and Design at the Presidio Trust in San Francisco. McCoy holds a BS in Architecture from the University of Virginia, a Master of Architecture from Columbia University's GSAPP in New York City, and a certificate in Architectural Conservation from ICCROM in Rome. He also serves on the board of the Barnsdall Art Park Foundation in Los Angeles.

THE CMAI'S INTERNATIONAL TRAINING ON THE CONSERVATION OF MODERN HERITAGE

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ABSTRACT

Conserving Modern Architecture Initiative (CMAI) is a long-term initiative of the Getty dedicated to advancing the practice of modern heritage conservation. One key strategy for achieving this goal is through a diverse array of educational activities, ranging from introductory and advanced courses to specialized workshops. In 2023, CMAI launched the first iteration of the International Course on the Conservation of Modern Heritage (MAC), an comprehensive training program designed for mid-career professionals.

The course featured a blended format, comprising nine weeks of online instruction followed by a two-week in-person session in Los Angeles. The curriculum integrated cultural, social, environmental, and economic dimensions of modern heritage conservation. addressing a wide range of contemporary issues in modern heritage conservation. From theoretical and methodological foundations to practical and technical aspects of conservation practice, the values-based approach underpinned the entire course which explored topics such as the identification of modern heritage, upgrades and adaptation, environmental sustainability, climate change, the conservation of relevant modern materials, and the role of advocacy in protecting 20th century heritage.

The blended format provided numerous advantages, combining the flexibility of online learning with the immersive experience of in-person interaction. Online sessions allowed for an international roster of instructors and an extended course duration, enabling in-depth coverage of diverse topics and ample time for participants to assimilate the content. The in-person component built on the online foundation, offering participants the chance to apply their knowledge in a local field project, engage in discussions, exercises, and practical demonstrations, and visit 20th-century heritage sites undergoing conservation.

Overall, the course created a platform for sharing experiences, challenges, and insights among participants and instructors, fostering a rich international exchange and the community of practice.

1. INTRODUCTION

From May through August of 2023, the International Course on the Conservation of Modern Heritage (MAC) convened twenty-six participants to advance their knowledge around the challenges and opportunities for conserving modern heritage globally. This inaugural MAC course began with nine weeks of online learning followed by an intensive two week in-person program in Los Angeles. The course was designed and delivered by the Getty Conservation Institute (GCI)'s Conserving Modern Architecture Initiative[1] (CMAI) at the J. Paul Getty Trust (Getty) with experts in the field of modern architecture and heritage internationally.

Training and Education is a major tenant of the CMAI's approach to advancing the conservation of modern heritage internationally. CMAI has been delivering short courses for mid-career professionals since its very early days in 2014. The courses have always been in high demand demonstrating that there is a great need and demand for educational opportunities for professionals working with modern heritage. Between 2018 and 2019, in partnership with DOCOMOMO ISC E+T, CMAI conducted a global survey of academic and training institutions to assess current offerings and gaps in educational and training programs related to the conservation of twentieth century built heritage[2]. The results of the survey highlighted a scarcity of dedicated educational opportunities in some regions, especially at the professional level. These findings, together with CMAI's direct observations of the field, led to the decision to create a new long, course on the conservation of modern built heritage.

The course closely aligns with the principles outlined in the DOCOMOMO Manifesto on Education[3] - both in its objectives and its content - offering participants a broad view on what constitutes the heritage of the 20th century and proposing a holistic concept of sustainability, encompassing cultural, social, environmental, and economic considerations. It equips participants with a nuanced understanding of a values-based approach, encouraging interdisciplinarity and underscoring the importance of community and public-engagement in conservation endeavors.

2. COURSE AUDIENCE

The target audience for this course is mid-career professionals with previous experience in the conservation of modern heritage and various professional backgrounds – practicing architects, planners, engineers, heritage conservators/historic preservationists, site managers, heritage government officials, policy makers, non-profit professionals, and academic professors.

Twenty-six participants from twenty-three countries were selected for the first iteration of the course based on a set of criteria to ensure geographical and professional diversity **(Fig. 1)**, and the selection of participants in a professional position to immediately influence decisions, enact change and disseminate their learnings. To foster a rich exchange, participants were required to bring case studies to share with the class which provided a global perspective, and enabled participants to identify common challenges and

1. The CMAI was established to address the challenges of conserving modern heritage and gaps in the education, promotion, and conservation of modern heritage around the world. Since its founding in 2013, through field projects, research on modern building materials and techniques, and creation and dissemination of technical and methodological resources, the CMAI has become a recognized international player in the field of conserving modern heritage.

2. Pedroni, Margherita, Cesar Bargues Ballester, Andrea Canziani, Wessel de Jonge, and Chandler McCoy, *A Global Survey on Education and Training for the Conservation of Twentieth-Century Built Heritage: Research Report*. (Los Angeles: Getty Conservation Institute; Lisbon: DOCOMOMO International, 2020).

3. DOCOMOMO International. *Manifesto on Education*; (DOCOMOMO: Valencia, Spain, 2022).

emerging trends. Such discussions not only enriched individual learning journeys, but also enhanced the collective experience for all involved.

3. COURSE OBJECTIVES AND CONTENT

In shaping the curriculum, CMAI undertook a thorough reflection on the knowledge base of professionals in the field alongside their ongoing learning needs. The challenge was to uphold the program's relevance for a global audience, catering to the diverse educational and professional backgrounds of the participants while imparting practical skills and tools applicable in various contexts.

As a result, the course addresses heritage in its cultural, social, environmental, and economic dimensions, providing participants with an interrelated set of competences. This approach pushes participants to think beyond the physical aspects of heritage, to a more holistic view of heritage management and conservation as a means to support broader societal goals[4].

By the conclusion of the course, the goal was to have participants able to:

- Articulate and identify the broad range of challenges to protecting and conserving modern heritage within the framework of historic conservation practice and philosophy.
- Apply a values-based conservation methodology to modern heritage places.
- Identify and address technical challenges related to the conservation of modern materials.
- Understand the implications of climate change mitigation and adaptation in the conservation and management of modern heritage places.
- Understand the role of advocacy, its strategic objectives, and its application to conserving modern heritage in their own region.
- Expand their professional network by engaging with colleagues from around the world.

The course commenced with an exploration of the field's evolution since its beginning and the pivotal role of key international organizations in its advancement. Delving into the challenges inherent in conserving modern architecture, we emphasized the need to broaden the understanding of 20th-century legacies worldwide. This necessitated embracing a narrative that transcends linear Western-centric perspectives, acknowledging the diverse contributions of non-Western cultures to architectural historiography. Introducing the Twentieth-century Historic Thematic Framework[5], we provided participants with a tool to recognize and safeguard a vast array of building typologies and places by connecting them to the key themes that shaped the 20th century and its built environment. Emphasis was also placed on raising awareness of modern landscapes and settings, and support their conservation bridging the gap between buildings and the broader environment and context.

The course presented modern heritage conservation anchored in the principles contained in the Madrid–New Delhi Document and the conservation methodology outlined in the Burra Charter which offers a step-by-step process **(Fig.2)** based on cultural significance, prompting critical reflection on what,

4. Erica Avrami, and Randall Mason. "Mapping the Issue of Values." in *Values in Heritage Management: Emerging Approaches and Research Directions*, eds. Erica Avrami, Susan Macdonald, Randall Mason, and David Myers (Los Angeles: The Getty Conservation Institute, 2019).

5. Marsden, Susan, and Peter Spearritt. *The Twentieth-Century Historic Thematic Framework: A Tool for Assessing Heritage Places*. With contributions from Leo Schmidt, Sheridan Burke, Gail Ostergren, Jeff Cody, and Chandler McCoy. (Los Angeles: Getty Conservation Institute, 2021).

why, and for whom we conserve before defining how to do so effectively. To this aim, the course emphasized the importance of identifying and engaging stakeholders and communities, demonstrated through various case studies. By highlighting the dynamic nature of heritage values and the often-overlooked intangible attributes and social significance, instructors fostered a nuanced understanding of significance as the cornerstone of managing change.

Building on this basis, the course moved on to discussing the delicate balance between conservation and changes to accommodate current needs and requirements to either retain their use(s) or to find new. Instructors presented case studies demonstrating how to navigate the need of upgrading and adapting buildings without compromising significance.

Recognizing the urgent imperative of climate action, the course underscored the pivotal role of modern buildings in mitigating climate change by exploring strategies to enhance energy efficiency and reduce their carbon footprint by careful reuse. It also emphasized the importance of proactive adaptation measures in the face of emerging impacts of climate change on modern places.

The course provided comprehensive insights into the evolution of modern materials and building techniques and addressed the conservation of modern materials such as concrete, plastics, mosaics, wood, and key building elements such as steel and aluminum windows. Maintenance was repeatedly mentioned as an essential aspect of effective and sustainable conservation, but also one that is often overlooked and should be elevated in the conservation practice.

The critical role of advocacy in modern heritage conservation was also a central point. Moving beyond reactive responses to imminent threats, we proposed proactive advocacy strategies grounded in economic viability, environmental sustainability, and social cohesion, to foster a broader societal appreciation for our collective architectural heritage, including dissonant heritage.

4. ORGANIZERS AND INSTRUCTORS

The course was conceived and organized by the author of this paper, Susan Macdonald, and Chandler McCoy, with help from Elsa Haarstad, the 2022-23 CMAI's graduate intern. With an international cohort of participants, MAC placed emphasis on ensuring a geographical and professional diversity of instructors where possible. To this aim, the team consulted four international peer advisors[6] to provide inputs on instructor selection, curriculum development, and case study identification. The teaching team for the online component consisted of Getty staff and external experts brought on as instructors representing a mix of conservation specialists, practicing architects, and professors. The online component ultimately had 32 instructors from 14 different countries who presented case studies from their countries and regions. The examples presented by instructors, as well as the case studies brought forth by participants throughout the course, ensured representation of geographies, typologies, and scales and reflecting the challenges that participants were facing in their work.

The in-person component relied entirely on local instructors with the exception of Sheridan Burke, from Australia, who was a core instructor both online and in person.

6. David Fixler (USA), Fernando Diniz Moreira (Brazil), Sheridan Burke (Australia), Ho Weng Hin (Singapore)

5. COURSE STRUCTURE

This course was designed to leverage the benefits of both online and in-person formats, and it aimed to cater to a diverse range of learning styles by incorporating a mix of activities, including pre-recorded video lectures, readings, assignments, group work, individual exercises, asynchronous and synchronous tasks, online forums, live Q&A sessions, demonstrations, site visits, and field project work. Throughout the course, there was a consistent emphasis on experiential learning. Participants were given ample opportunities to put their knowledge into practice with exercises.

ONLINE COMPONENT

The online component was organized into nine modules, paced at one module per week with a relatively high intensity (8-10 hours of estimated workload per week). This section of the course followed a flipped classroom approach, which means that the participants first gained exposure to new material through prerecorded video lectures and readings, before meeting on weekly live sessions where time was spent on live interaction.

Each module contained the following elements:

- Six to nine pre-recorded video lectures of about 30 minutes each.
- An extensive bibliography of recommended readings and readings for further study.
- Assignment prompts related to the content of the module to allow participants to actively reflect on the lectures, bring in their own experiences and case studies foster peer-to-peer exchanges. Participants were encouraged to not just bring good/best-practice case studies, but also controversial, puzzling, or challenging examples. To submit their assignments, participants prepared a single PowerPoint Slide and submitted it ahead of the session. Once assignments were collected, they were shared with the class so participants could see each other's submissions.
- A 90-minute live session where participants and module instructors met for Q&A, present a selection of assignments, and discuss them with the class.
- Written Forum to engage in off-hour discussions with participants and instructors.

In total, the online component included 62 lectures plus five short-form interviews with leaders of key modern heritage professional groups. All video lectures were professionally filmed and edited, then embedded into the Getty's learning management platform where participants could watch the videos with closed captions. Participants have continued to use the platform long after the course conclusion to rewatch lectures and consult the educational material as they need.

As most topics discussed are part of current debates, the course was intended to provide a platform for participants to share experiences and advance the discourse alongside instructors. The weekly live sessions were an extraordinary opportunity to do so. Through Q&A, debates, and participants presentation of assignments, the course allowed for an enriching exchange among participants and instructors.

Teaching online afforded us the opportunity to expand the course curriculum, encompassing a diverse array of topics delivered by a globally representative cohort of instructors. This format provided flexibility for participants across various time zones to engage with prerecorded video lectures at their convenience, allowing the review of material as needed to ensure a thorough understanding. This approach established a solid foundation and rapport for the subsequent in-person component of the course.

IN-PERSON COMPONENT

Following a small break, participants convened in-person in Los Angeles from August 5 through 20 for a practical, face-to-face learning experience grounded in the conservation methodology proposed. Using Los Angeles as a classroom, the in-person component allowed participants the opportunity to apply what they learned online.

Over two weeks, participants attended and engaged with additional lectures, class discussions, a field project, site visits to historic modern sites, demonstrations, and social events **(Fig. 3 and 4)**. Lectures and talks were provided by Getty staff as well as Los Angeles based architects, conservators, planners, historians, advocates, and government officials.

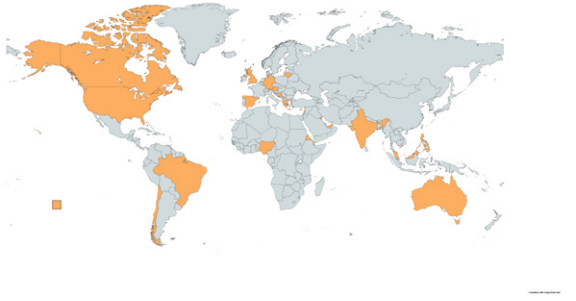
Participants visited many renowned modern heritage sites to see and discuss with site managers and architects recent or undergoing conservation efforts, including the Lovell Health House (Richard Neutra), Salk Institute (Louis Kahn), Eames House (Charles and Ray Eames), Hollyhock House (Frank Lloyd Wright), and Sheats-Goldstein (John Lautner).

The program of the in-person component was organized to follow the steps of the conservation planning process **(Fig.2)** with lectures, activities and the field project exercises matching the steps of the process. During the two weeks, participants worked on a field project that required them to apply the conservation planning methodology process they had learned online to an actual site, the Richard and Dion Neutra Reunion House (1951) in Silverlake, Los Angeles.

The participants were divided into five groups and tasked with creating a high-level, executive summary style Conservation Management Plan for the site. They drafted a statement of significance, identified key elements to the site, assessed risks, vulnerabilities, constraints, and opportunities at the site, drafted conservation policies, and established priorities for Reunion House. All groups presented their findings and recommendations on the final day of the course to the institution who owns and manages the house.

6. LESSONS LEARNED AND CONCLUSIONS

The MAC course, several years in the making, was a learning journey for participants, instructors, and organizers alike. In the course, emphasis was placed on broadening the participants understanding of modern heritage and its conservation practice by theoretical reflections, imparting tools that professionals can apply in their work, and disseminating existing resources and references that are already available but often scattered.







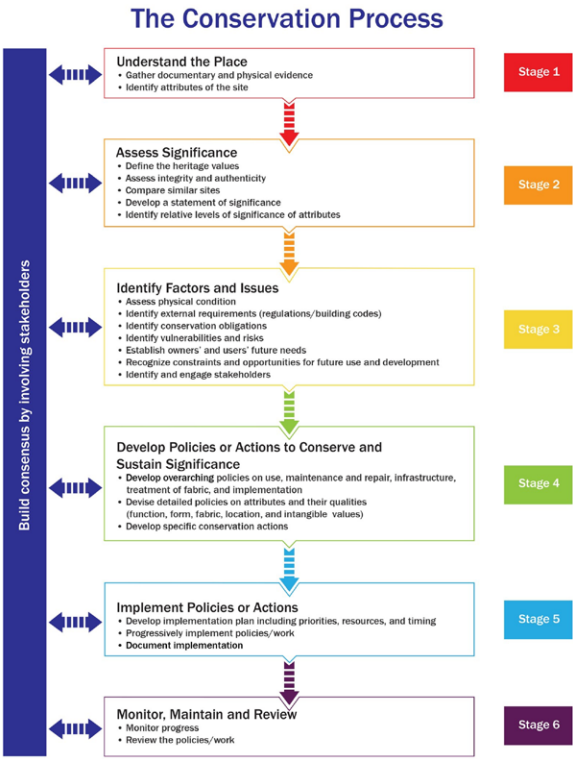


Figure 1 Country Distribution Map of 2023 Course Participants. ©J. Paul Getty Trust

Figure 2: The conservation Process adapted from the Burra Charter (Australia ICOMOS 2013a, 10) © J Paul Getty Trust.

Figure 3 Participants on a tour of the Salk Institute. Photo: Cassia Davis ©J. Paul Getty Trust

Figure 4 Participants during the concrete conservation workshop at the Getty Villa. Photo: Cassia Davis ©J. Paul Getty Trust

Crafting a program that is relevant to international mid-career professionals with different backgrounds and professions, represents a quickly evolving field, provides an overview on international practice, while presenting a coherent methodology and imparting technical skills was a challenging task that required balancing many needs. The course was largely based on the values-based methodology outlined in the Burra Charter and made extensive use of international case studies to demonstrate its practical application. Even though these examples are the specific product of a particular context and culture, they ground the methodology and can serve as an inspiration and foster the generation of new ideas. The active engagement of participants proved instrumental in enriching the course content, infusing it with more examples, challenges, and insights coming from their professional experience. This participatory approach truly fostered knowledge exchange among participants and significantly enriched the learning environment.

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Robust evaluation mechanisms were employed to gauge participant feedback systematically, thereby informing enhancements for subsequent iterations. Overall, participants lauded the course's hybrid nature, striking a good balance between theoretical underpinnings and practical applications underscored by field projects and site visits and highlighted the networking opportunities. They also offered constructive suggestions for refinement, such as slowing the pace of the online component, including more non-Western examples, increasing the focus on hands-on exercises, and diversifying the types and scale of places presented. These considerations along with our own will guide the refinements of the course for the next iterations.

The course's hybrid format afforded unprecedented flexibility while mitigating the logistical challenges associated with international travel. The online component allowed for a comprehensive exploration of diverse topics and accommodated a global cohort of participants and instructors. By blending pre-recorded video lectures with live zoom sessions, we provided the opportunity for interactions with the instructors and exchanges with the other participants. Although the in-person component necessitated travel to Los Angeles, it provided a rich immersive experiences and hands-on activities, complemented by the presence of local and international instructors.

The production of high-quality pre-recorded lectures was a significant upfront effort, but it allows the course's replicability and potential for wider dissemination by other institutions we may share our materials with. ■

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BIOGRAPHY

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JOINT MASTER RMB, REUSE OF MODERNIST BUILDINGS

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ABSTRACT

Most of the built-up urban fabric worldwide dates from the 20th century, especially the four decades after 1945. In all parts of the world, heritage is in danger of being destroyed with the risk of losing specific cultural elements, environments, and energy stored in the structure and material. It is a modernist heritage that needs reuse and preservation specialists to prevent demolition, contribute to meeting our climate goals and secure sustainable development.

Many tools, services, and design strategies for conserving and adaptively reusing modern movement heritage have been developed in different parts of Europe to meet specific needs and concerns, building codes and legislation, and supporting geographic and demographic conditions. The Joint Master RMB Reuse of Modernist Buildings, designed and accredited by the TH-OWL, ULisbon, UCoimbra, UAntwerpen, and UBelgrado, in collaboration with Docomomo International, frameworks its educational program by bringing together successful approaches and experiences from the RMB partner countries and based on existing research, educational practices, and reference projects. This European reuse approach integrates different European contexts regarding spatial patterns and cultural heritage, climate and construction principles, and the knowledge about social and technical evaluation and monitoring of spaces as key factors for professional education in reusing modern movement architecture and urban planning.

The paper describes RMB teaching methodologies, the curriculum, the intended learning outcomes, the division of tasks. Moreover, an additional focus in the paper lies on the value RMB places on working with case studies, problem-based learning, and workshops, as well as the specific significance of working with existing buildings and heritage in education on-site, compared to working on new buildings and environments.

1. INTRODUCTION

Most of the built-up fabric in urban areas worldwide dates from the 20th century, especially the four decades after 1945. It is a modernist heritage in danger of being destroyed with the risk of losing specific cultural elements, environments, and energy stored in the structure and material. These buildings are not always the prima donnas of modernism but have great qualities that deserve loving protection and careful reuse. Careful handling has a giant impact here since this is such an enormous stock.

Modernist heritage requires professional reuse and preservation specialists to prevent demolition and the loss of specific cultural elements and environments. With an appropriate way of reuse, we can better meet our climate goals and secure the sustainable development of buildings and neighbourhoods, creating a cleaner, safer world.Tools, services, product solutions, and design strategies for the adaptive reuse of modernist buildings have been developed in Europe to meet specific needs and concerns, building codes and legislation, and support geographic and demographic conditions. The experiences and approaches are different in each country.

In this relevant professional area and research field, a European approach to the reuse of modernist buildings can integrate different European contexts regarding spatial patterns and cultural heritage, climate and construction principles, and the knowledge about social and technical evaluation and monitoring of spaces as a key factor for professional education. Thus RMB is an educational framework of common definitions, approaches, and methodologies on a European level based on existing research, educational practices and reference projects in the RMB partner countries. RMB collected knowledge from various European regions to develop them as new transnational teaching material for a two-year Joint Master programme. The current RMB team includes the universities of Belgrade, Coimbra, Lisbon, Detmold, and DOCOMOMO international, who now have compiled a fully accredited two years Joint Master programme and are ready to start. It is an interdisciplinary framework combining perspectives from Architecture, Interior Architecture, Landscape Architecture, Urban Design, Architectural Engineering and Humanities (Conservation Science, Cultural Heritage, Architecture History, Heritage Studies). RMB students were and will be selected from these fields and will be working in multidisciplinary teams.

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RMB´s overall framework of the study programme aligns with agendas/ charters in the field of architectural and urban design, adaptive reuse, research and education, and current global and national priorities for the development of research and education. RMB will use international and national priorities agendas to evaluate the compliance of the study programme's objectives with the overall objectives in education.

2. OBJECTIVES AND FOCUS

RMB follows the framework for Qualifications in the European Higher Education Area (FQ-EHEA) and describes the intended outcomes with the specialist RMB focus in mind.

RMB students obtain deep and qualified academic expertise and knowledge of concepts, designs, legislation, technical constructive aspects, and analytical skills in the areas of modernism itself and building conversion and reuse of modernist buildings. The programme holistically combines aspects from interior architecture, monument preservation, landscape and urban development, as well as building technology and construction related to building conversion and reuse of modernist buildings. Students will be empowered to independently and responsibly solve complex tasks in heritage and reuse, design practice, science, and research.

- The European and international character of the RMB prepares students for a global and interdisciplinary career and teamwork based on a broad spectrum of expertise.
-The Master's degree program is designed to empower graduates to work independently in academic research and development and to complete a PhD if desired. Furthermore, successfully completing RMB will enable students to enter senior civil service positions.
-RMB Students will learn to deal with built heritage issues and reuse them confidently in a methodologically clear, participative and respectful way. They will approach conservation, transformation, and reuse from a broad perspective. This perspective includes spatial patterns, cultural heritage, participation, climate and construction principles, social and technical assessment, and building space monitoring. They will have a holistic, multidisciplinary view and knowledge of reuse, but will ultimately be specialists because of the RMB-specific focus on the heritage of modernist architecture.
-RMB graduates will be well-prepared for an international labour market through an overview of reuse on a European scale and international cooperation between students and teachers during the Master's. Students will be well-equipped for the contemporary working practice of 'mobile' offices with staff in different locations. They will combine a high sensitivity to local conditions with a broad experience and knowledge of international best practices and collaborative, effective working methods. Master students who successfully applied for a place in RMB may come from different backgrounds; they hold a bachelor's in architecture, interior architecture, landscape architecture, heritage or structural engineering and also will find jobs in within a broad field such as architectural offices, heritage offices, construction companies and public services.

RMB objectives reflect the DOCOMOMO Manifesto on Education[1]

Intrinsic to the overall concept of modernism, is that innovations in different fields were established. They form the three focal points to address in RMB that prepare students with the specific knowledge required for a successful and respectful design of reuse of modernist buildings.

1. "DOCOMOMO Manifesto on Education Tokyo – Valencia", docomomo, accessed June 9, 2024, https://docomomo.com/wp-content/uploads/2022/09/20220909_docomomo_manifesto_education_final.pdf

- Focus 1: On a conceptual level, modernist architecture is characterised by a re-definition of the habitat, especially the relations between inside and outside and the open-space system of organisation, supported by innovative urban design goals. This modernist age's architecture and construction boundaries became fluent or even non-existent. The interaction between inside and outside played an ever more important role defining new spatial qualities intending to improve the well-being and health of the urban population compared to the industrialised cities of the 19th century. This new architecture was looking for a new city and a new society spread worldwide, but it was adapted to each local environment from north to south and from east to west.
- Focus 2: On a societal level, the rapid and non-adapted replication of modernist buildings worldwide has led to a critical perception and recognition of this enormous building stock. This perception complicates and prevents sustainable reuse and refurbishment, often demolition and new constructions are favoured, thus retaining the thermal and structural mass of the stock to retrofit them into energy-efficient and user-friendly buildings. Far from this identity issue, the modernist buildings answered particular functional briefs: housing and other community facilities such as schools. Reusing these buildings creates new challenges for architects, stakeholders, and future users to compromise the modern legacy and current needs.
- Focus 3: On a technological level, new materials and experimental constructions were used in load-bearing structures, building envelopes, and interior finishing, utterly different from the traditionally used systems of the preceding centuries. Many refurbishments show that these structures are difficult to adapt to current standards and requirements without risking the loss of their characteristic strengths. Modernist architects were innovative and developed fragile constructive systems that create specific challenges in adapting buildings.

3. DEVELOPMENT OF A STUDY PLAN

To compile a study plan with the objectives and focus in mind, RMB partners tried out joint design and analysis workshops, contributed to and organised conferences, wrote articles, compiled study materials, and invited lecturers to participate in RMB. Conference proceedings and three magazines with RMB as guest editor were published. RMB lectures, were recorded and desiminated. All RMB partner countries have important modernist architectural and urban heritage and relevant reuse experiences that will be the basis for the educational process. We selected cases from the partner countries, analysed them in workshops, and published them in the RMB case study handbook, an essential source of information for the design studios in the RMB master. Thus, RMB material for educational purposes was developed. In this period, the universities also got to know each other thoroughly and gave the different academic cultures a place in the education and partner cooperation agreements. We initiated numerous collaborations with specialists, NGOs, companies, and agencies that

contributed to the development phase and will contribute their specialist knowledge to the RMB master in operation.

An evaluation of the curriculum's content and methodology through surveys and questionnaires investigated the students' and teachers' perceptions of it. The comments of students and teachers were analysed and classified, identifying adjustment needs in the teaching and learning methodologies and their adequacy to the defined learning objectives. Finally, the RMB advisory board and non-academic partner docomomo international advised and commented on the curriculum, thus initiating another round of improvement.

4. CURRICULUM

The universities developed a four-semester curriculum with:

- Theory courses that provide backgrounds and training in scholarly skills.
- Specialised practical courses allow students to apply the theoretical knowledge they have gained and to develop skills for use in design studios.
- Design studios and workshops integrate analytical, practical, teamwork, and creative skills.
- The thesis, for which students develop a topic in several workshops and choose one of the universities as the location for their final RMB semester. The learning objectives, competencies, teaching methods, and assessments form a coherent, intertwined structure. Each partner brought in its competencies and specialisations.
- TH-OWL: Interior architectural design, typological studies, urban/landscape design, research by design and design by research, history of Modernism in Northwest Europe, heritage studies and computational research techniques.
- University of Coimbra: history of Modernism in Southwest Europe, urban design, participation and social aspects in designing for reuse, environmental design, reuse theory.
- Instituto Superior Técnico /University of Lisbon: Modernism and housing, architecture and sustainable development, environmental design and users' behaviour in buildings, building technology and general assessment of buildings in use, theory of reuse of buildings and heritage.
- University of Belgrade: History of Modernism in Southeast Europe, Urban Morphology, Building performance simulation and verification, structural systems, and construction techniques of modernist buildings.

Students and, to a lesser degree, teaching staff in RMB travel between the partner locations. The first semester is taught at the TH OWL Detmold School of Design in Detmold, Germany. The second semester in Portugal at the Architecture Faculty of the University of Coimbra and the Instituto Superior Técnico/University of Lisboa, the third semester at the architecture faculty of the University of Belgrade Serbia and the final semester is the Thesis Semester, the Students choose one of the four partner universities for their thesis.

The RMB master is fully accredited.

			1th semester				2nd semester				3rd semester				4S
			Weekly hours				Weekly hours				Weekly hours				
Quarters			1th		2nd		1th		2nd		1th		2 nd		thesis
L: Lecture S: Seminar			L	S	L	S	L	S	L	S	L	S	L	S	S
Theory/Fundamentals	**location**	**ects**													
RMB 1.1 Hist. Modernism	Detmold/OWL	3	2	2											
RMB 1.2 Hist. Modernism	Coimbra/ UC	3							2	2					
RMB 1.3 Hist. Modernism	Belgrade/UB	3									2	2			
RMB 2.1 Reuse Theory	Online/ UL	3	3	1											
RMB 2.2 Reuse Theory	Lisbon/UL	3							2	2					
RMB 2-3 Reuse Theory	Online/UC	3									3	1			
RMB 3.1 Environ.Design	Online/UL	3			2	2									
RMB 3.2 Environ.Design	Coimbra/UC	3					1	3							
RMB 3.3 Environ.Design	Belgrade/UB	3											2	2	
RMB 4.1 Urban 1	Detmold/OWL	3			1	3									
RMB 4.2 Urban 2	Coimbra/UC	3					1	3							
RMB 4.3 Urban 3	Belgrade/UB	3											2	2	
		36													
Design/Research															
RMB 7.1 Design 1A	Detmold/OWL	6	2	6											
RMB 7.2 Design 1B	Detmold/OWL	6			2	6									
RMB 10.1 Design 2A	Coimbra/UC	6					2	6							
RMB 10.2 Design 2B	Lisbon/UL	6							2	6					
RMB 13.1 Design 3A	Belgr/OWL	6									1	7			
RMB 13.2 Design 3B	Belgrade /UB	6											2	6	
		36													
Specialist Skills															
RMB 5 Typological	Detmold/OWL	3			1	3									
RMB 6 Research	Detmold/OWL	3	1	3											
RMB 8 Assessment	Lisbon/UL	3							2	2					
RMB 9 Social Aspects	Coimbra/UC	3					1	3							
RMB 11 Housing	Online/UL	3									2	2			
RMB 12 Build. Constr	Belgrade /UB	3											2	2	
		18													
RMB 14 Thesis	Choice/All	30													2
TOTAL credits		120													

Fig.1: RMB Curriculum



Fig.2: RMB action research; Student Michel Kelder in action

5. AN ESSENTIAL SIDESTEP: THE EXISTING

Working with the existing, the real, and the love for it infuses RMB. Planning within heritage is different from designing new buildings: The context, the buildings, landscape or neighbourhoods are already there; one can touch, smell, go inside, test it and possibly talk with the inhabitants. RMB places great value on being 'on-site', not remote, and promoting on-site tactics in design and research. In design, scientific and artistic research has become increasingly important in practice and education. It became an informed design and moved from search to research.[2]

An effect of this is 'scientification' and restriction through obligatory methodologies. Using intuition and direct sensory, subjective experiences and experiments as drivers to co-feed a design is easily forgotten. RMB's strength lies in in-space fieldwork. It is not only scholarly, lab-type or library research; RMB needs `action research and design'. It is a design and research on a 1:1 scale, intentionally personal and possibly subjective, using direct experiences next to sources sublimated through text or drawing. It is a compelling way of exploring and being, by necessity, in direct communication with existing spaces. The principles are not so different from other kinds of research: there is a presumption; one collects evidence to understand the presumption or find proof for it; the results of the investigation and the methodology used are made accessible and transparent to a larger audience; and this gives input for subsequent steps. The great thing about action research is that these three steps – question, collecting, and result – combine in one act!

Bernard Tschumi's theoretical framework, which links architectural concepts, use, and actual space, inspires RMB. Tschumi wrote about the tension between use and form that becomes visible in a building's changing appearance and spatial conditions over time. In the preface of his book Architecture and Disjunction, Tschumi reflects on some of his earlier essays, concluding that what retroactively connects them is that: "While

2. Frank Weiner "The Emergence of Research and the Decline of Search in Architectural Education and Practice" *Proceedings of the Architectural Research Consortium/European Association for Architectural Education*, 2007.

their common starting point is today's disjunction between use, form, and social values, they argue that this condition, instead of being a pejorative one, is highly 'architectural'… architecture being defined as the pleasurable and sometimes violent confrontation between spaces and activities".[3]

Tschumi states that the point where a building has collected traces over time, where it shows life and death, and with borrowing George Bataille´s concept of transgression for architectural purposes, is where concept and real space might join; in Architecture and Disjunction, he explains:

"Whether through literal or phenomenal transgression, architecture is seen here as the momentary and sacrilegious convergence of real space and ideal space. Limits remain, for transgression does not mean the methodical destruction of any code or rule that concerns space or architecture. On the contrary, it introduces new articulations between inside and outside, between concept and experience. Very simply it means overcoming unacceptable prevalences".[4]

Time reveals the ultimate form-use disconnection – the wearing out of the original idea – making clear innovation is needed in concept, in building, or both. In RMB, we don't wait for transgression to happen because we can provoke or experimentally search for it through action research! It is concept development in action in existing buildings and spaces. It is about finding new uses, testing new concepts, challenging form vs. use, occupation with guerrilla actions while constantly developing new tools and methods for transgressing the existing state of buildings.

6. PESKY PROCESS MOMENTS

Composing a Joint Master with participants from different countries is challenging. Content-wise, the partners were soon on the same wavelength, and the universities' specialisms and personalities produced an exciting and appropriate curriculum. Dealing with bureaucracy and administrative issues was and is a big challenge; each university has its mores, i.e. the distribution and uses of funds differ, and achieving a fair distribution is a challenge. In long-term processes, partners and people will drop out. Keeping up the energy and finding the right new people is a continuous task, which incidentally also has a positive side: it prevents a static, inward-looking attitude.

RMB sees the differences in the preservation and reuse of the built modernist heritage in Europe as a particular strength; they form the foundations of the master. In other areas, however, we have found that despite many theoretical agreements between countries in the EU, practice is much more recalcitrant, and differences between regions are a tenacious problem. The accreditation of RMB is an example. Although the EU has agreed on the so-called European approach, which means that a European approach to accreditation is valid for accreditation in the member states, many countries, including RMB countries, still require national accreditation, leading to costly delays.

A start-up problem is that university boards often welcome a new course of study but are reluctant to invest in it beforehand. I.e. investing in programme accreditation without being sure to get funding for it where, unfortunately, funding authorities a valid accreditation is conditional for

3. Bernard Tschumi, *Architecture and disjunction* (1st MIT Press paperback ed.. Cambridge, Mass.: MIT Press, 1996) P. 4

4. Bernard Tschumi, "Architecture and Transgression", In *Architecture and Disjunction*. (Cambridge, Mass: MIT Press, 1996) P. 78

grant funding. Another hurdle is the delay or lack of financial updates of subsidies in line with inflation. As inflation shows significant differences between the partner countries, it is too great a financial risk for some partners to take on this RMB adventure.

7. CONCLUSIONS

After the latest consortium changes, a fresh accreditation is within reach. An application for the so-called Erasmus Mundus Joint Master grant for students and partners will follow in February, and the enrolment procedure is open from late 2025. ■

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BIOGRAPHY

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THE CONSERVATION PLANNING AS A CONTRIBUTION TO EDUCATION AND TRAINING FOR TWENTIETH-CENTURY HERITAGE CONSERVATION

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ABSTRACT

Chile's built heritage primarily stem from its colonial legacy and the advent of modernity in the later nineteenth and twentieth centuries, responding to geographical conditions.

Similarly to many other regions, the need for recognition of Twentieth-century (20-C) heritage is one of the main challenges concerning conservation practices.[1]

Even though there has been a growing interest and awareness in built heritage in recent decades, it is necessary to develop and disseminate methodological tools that allow caretakers and professionals in modern heritage to identify and assess cultural significance, develop conservation guidelines, and coordinate stakeholders for feasible and sustainable implementation over time.[2] Additionally, there is a need for more training programmes to educate qualified professionals and technicians in safeguarding twentieth-century heritage.

The paper depicts existing challenges regarding training and specialisation in the field. It identifies various instances—both nationally and internationally—from which knowledge can be transferred, both for professionals in modern heritage conservation and users and caretakers of cultural sites.

Thus, the experience of developing the Conservation Management Plan for the Church of the Benedictine Monastery of the Holy Trinity represents a significant effort to establish valid methodologies and procedural instruments for enhancing and preserving modern heritage. [3]

Developing the Conservation Management Plan has been a profound learning experience through workshops and courses addressing the various stages of the conservation planning practice.

1. INTRODUCTION: THE CURRENT SITUATION OF MODERN HERITAGE TRAINING.

1.1 SITUATION ON THE INTERNATIONAL STAGE

The heritage of 20-C architecture continues to be underrepresented. In fact, it was not until 2016 that seventeen of Le Corbusier's projects were added to the UNESCO World Heritage List, and three years later, eight prominent works by American architect Frank Lloyd Wright received similar recognition. However, the need for recognition and protection of this kind of heritage is still paramount.

Despite a remarkable inventory of sites (buildings and landscapes), the situation is no better in Latin America and the Caribbean.

The need for more education and training programmes is one reason for the lack of focus on 20th-century heritage conservation. Topics related to 20-C heritage conservation are delivered as a component within broader programmes. As such, only limited focus is placed on this type of heritage and its conservation.

In 2018, the Getty Conservation Institute and the Education and Training Committee of Docomomo International conducted a survey, reaching out to over 750 academic and non-academic institutions in 115 countries.[4] The study showed that while the topic interested most of the institutions surveyed, there is a need for greater quantity and depth of programmes at both academic and postgraduate levels (undergraduate and postgraduate), as well as technical training.

Latin America and the Caribbean rank second after Europe in terms of education and training programmes. The most common courses feature subjects related to heritage conservation, workshops, certificates, and diplomas. Regarding the most consulted topics, there is a notable interest in the conservation practice and intervention of heritage buildings, followed by themes related to design, preservation, and construction techniques.

Emerging topics such as adaptive reuse, Heritage BIM, facility management, sustainability, and artificial intelligence for identifying structural damage are open for discussion. These areas offer potential for expanding the range of possibilities for educating professionals in the field.

1.2 SITUATION AT THE LOCAL LEVEL

Of the more than 1,800 listings from the National Monuments Council of Chile (CMN), less than 5% belong to buildings or environments from the 20-C period.[5] This situation is not unique to our local reality and has been widely discussed.[6] This issue is exacerbated by a misunderstanding of modernity, the belief that 20-C buildings are not old enough to need protection. In addition to the geographical situation of our country, it is exposed to saline environments resulting from its extensive bond with the Pacific Ocean and its vast colonial heritage, periodically threatened by strong earthquakes. While the aforementioned represented one of the main drivers behind the thriving modernism in Chile, incorporating more suitable construction techniques for the country's seismic reality, the appreciation of twentieth-century built heritage remains precarious.[7]

1. The term "Twentieth-century Heritage" is used instead of modern architecture, modernism, or the modern movement, understanding that the emergence of architecture corresponding to these movements occurred at different times in various cultures.

2. *"Burra Charter; the Australia ICOMOS Charter for Places of Cultural Significance," 2013.*

3. The Benedictine Monastery, Santiago - Chile. Its church (1962-1964) was designed by the architects and monks Gabriel Guarda (1928-2020) and Martín Correa (b. 1928).

4. Review the document "A Global Survey on Education and Training for the Conservation of Twentieth-Century Built Heritage," published by The Getty Conservation Institute & Docomomo.

5. Based on the National Monuments Council (CMN) report on current listings as of March 2024.

6. Susan Macdonald, "Modern Heritage in the Twenty-First Century". *Conservation Perspectives; The GCI Newsletter.* No 38. (May 2023): p.4.

7. Fernando Pérez O., *Arquitectura en el Chile del Siglo XX; Iniciando el Nuevo Siglo 1890-1930* (Santiago, ARQ Ediciones, 2017).

The National Monuments Council, responsible for safeguarding cultural heritage, was established in 1925. The Church of the Benedictine Monastery of the Holy Trinity of Las Condes became the first modern work to be declared a Historical Monument in 1981, just 17 years after its construction was completed.[8] In 40 years, we have yet to grasp the cultural value of Twentieth-Century architecture, which is considerably under-protected. The current state of the country's modern heritage is concerning due to insufficient legal instruments, limited public funding, and the non-existent offer of training programmes that provide theoretical and technical knowledge regarding the evaluation, restoration, and management of 20-C heritage. It is worth noting that although there are academic programmes in cultural management and heritage intervention, there are no specific programmes at university and technical-professional levels.

Thus, this work highlights the importance of local and international initiatives that contribute to the training process of academics, professionals, and technicians involved in the various stages of the 20-C heritage conservation process.

1.2.1 SITUATION OF CHILE REGARDING 20-C HERITAGE TRAINING PROGRAMMES

In line with the regional situation, the educational offerings focused on heritage conservation and management addressed the general subject, and no programmes specifically targeted 20-C heritage conservation.

This lack of focus is one of the main reasons associated with the lack of appreciation, craftsman skills, and knowledge generation which are essential for a more promising future for modern heritage in the architectural and urban realm.

Having reviewed the current academic programme at its different levels, there is a robust offer of Master's degrees, Diplomas, and Courses in cultural heritage conservation and management.[9]

Although none of the programmes include twentieth-century heritage conservation, most address topics related to the subject of study, such as digitisation and documentation, values and attributes, local codes and regulations, funding instruments, technical assessment of materials, and procedural aspects of cultural heritage site management.[10]

However, courses that valorise 20-C heritage and provide a theoretical framework and practical tools for its conservation are scarce.

Some cases are worth mentioning, as they greatly contributed to the field through education and training. The work carried out by academic institutions such as the Cultural Heritage Centre of the Pontifical Catholic University of Chile gains relevance through initiatives such as documenting cultural heritage and jointly organising the "18th International Docomomo Conference and Workshop for Students". Similarly, public institutions such as the National Centre for Restoration and Conservation (CNCR) contribute to offering courses and training programmes linked to managing cultural heritage.[11] One noteworthy example is the case of the SUBDERE Academy, which offers a Diploma in Heritage Conservation and Management for more than

8. Definitions from the National Monuments Council (CMN): Historic Monument: places, ruins, constructions, and objects owned by the state, municipality, or private individuals that, due to their quality, historical or artistic interest, or their antiquity, have been declared as such by supreme decree, issued upon request and prior agreement of the Council. Typical Zone: urban or rural real estate properties that constitute a representative settlement unit of the evolution of the human community and stand out for their stylistic unity, materiality, or construction techniques.

9. Programmes address specific topics, such as the "Advanced Documentation in Historic Buildings" course at the Faculty of Architecture of the Pontificia Universidad Católica de Chile or the "Diploma in Management of Artistic and Cultural Heritage" at the University of Chile.

10. Centro del Patrimonio de la Pontificia Universidad Católica de Chile. Last modified: May 3rd, 2024, accessed May 6th, 2024. https://centropatrimonio.uc.cl/

400 public officers from a diverse range of institutions related in conserving cultural heritage. Finally, organisations such as ICOMOS and Docomomo are important advocates for Twentieth-Century heritage and play an important role in raising awareness of initiatives that contribute to educating students, technicians, and professionals involved in managing built heritage.

2. CONSERVATION PLAN FOR THE CHURCH OF THE BENEDICTINE MONASTERY OF THE MOST HOLY TRINITY.

As part of the Getty Conservation Institute's "*Keeping It Modern*" initiative, during its seventh and final edition in 2020, the Faculty of Architecture and Art of the University of Desarrollo nominated the Church of the Benedictine Monastery of the Most Holy Trinity in Las Condes.

The programme's objective was to develop a Conservation Management Plan (CMP) that establishes the elements making a place worthy of preservation and protection.[12] Additionally, it sets out a series of criteria for managing the processes of change that every site experiences throughout its history, avoiding the compromise on its cultural significance.

This exercise is relevant to the local context because it is the first methodological tool for assessing, evaluating, and making technical recommendations for conserving and maintaining a heritage site corresponding to the modern period.

3. EDUCATIONAL OPPORTUNITIES ARISING FROM THE EXPERIENCE OF THE CMP.

From an academic point of view, the development of the CMP itself was a space for profound learning through a robust programme of workshops, conferences, seminars, and support material provided by the Getty Conservation Institute. This allowed the project team to become acquainted with the 20-C Heritage Conservation Plans' theoretical and methodological framework, as defined in instruments such as the Burra Charter (ICOMOS Australia).

This programme enabled us to participate in activities that make significant contributions to the field, such as the "*2020 International Conference on the Conservation of Modern Heritage*," which convened key players from the public sector and academia, the CMAI International Course for the Conservation of Modern Heritage, and the KIM Regional Conferences and Workshops.[13]

The aforementioned has inspired the incorporation of a specialisation track focused on heritage conservation into the architecture undergraduate programme at UDD School of Architecture. This aligns with many of the theoretical approaches and methodologies applied to the Benedictine Monastery Church CMP.

3.1 INTERNATIONAL COURSE FOR THE CONSERVATION OF MODERN HERITAGE (CMAI)

This programme, in addition to being one of the few, if not the only one globally, focuses on the conservation of 20-C heritage. It offers the

11. Centro Nacional de Conservación y Restauración (CNCR). Last modified May 2024 accessed May 2024. https://www.cncr.gob.cl/

12. James Semple Kerr, "The Conservation Plan; A guide to preparing conservation plans for places of European cultural significance" (New South Wales, ICOMOS Australia, 7th edition, 2013).

13. J.Paul Getty Trust. Conserving Modern Architecture Initiative. Last modified May 2024, accessed May 2024. https://www.getty.edu/projects/conserving-modern-architecture-initiative/international-course-conservation-modern-heritage/

opportunity to engage with professionals from diverse backgrounds and expertise, enriching discussions by offering diverse perspectives on the topics addressed by the programme.

In order to incorporate topics related to the development of Conservation Management Plans (CMP), the programme provided innovative insights into the future of modern buildings currently at risk of deterioration or demolition. Concepts such as Adaptive Reuse envision new scenarios for these sites to further promote their attributes and values that define their cultural significance, thus raising awareness for their protection.

Being part of this group of professionals also fosters space for discussions and the development of seminars and meetings, which are extremely beneficial for promoting awareness of conserving twentieth-century heritage.

3.2 KEEPING IT MODERN REGIONAL WORKSHOPS FOR PROFESSIONALS IN THE FIELD OF 20-C HERITAGE CONSERVATION

To showcase the results of projects funded by the J. Paul Getty Trust through its "*Keeping It Modern*" initiative, International Conferences and Workshops have been held in different parts of the world to facilitate the transfer of knowledge and skills to local institutions responsible for the care of modern heritage.

In February, the "*2024 Taiwan Convening*" brought together experiences from projects related to heritage conservation in the Asia-Pacific region, represented by professionals from Taiwan, Turkey, Japan, the United States, India, Italy, Australia, and Chile. The meeting focused on conservation projects on buildings as significant as Frank Lloyd Wright's Robie House, Kenzo Tange's Yoyogi National Gymnasium, and Le Corbusier's Gandhi Bhawan. Additionally, attendees had the opportunity to visit the ongoing works based on the CMP of the Luce Memorial Chapel, designed by architects I.M. Pei and Chen Chi-Kuan.

Another KIM workshop will soon take place in Kosovo (June 2024), followed by the *International Conference and Workshop for the Conservation of Twentieth-Century Heritage in the Southern Hemisphere*, held in Santiago, Chile, in April 2025. This event, organised by the UDD School of Architecture, aims to explore the conservation planning methodology from the experience of "*Keeping It Modern*" grantees from Portugal, Brazil, Argentina, Uruguay, the United States, and Chile.

In addition to the Conference, a six-week Student Workshop will consider multiple scenarios for adapting 5 Fire Stations in Santiago by assessing the cultural significance, current condition of the sites, and user requirements, and finally, developing conservation policies to address change management through a design proposal.

These activities leverage young students' interest in conserving twentieth-century heritage and represent opportunities to reflect on the current situation and challenges faced by the field in our local context. By focusing on upstream efforts, these Conferences and Workshops would raise interest in new academic and training programmes addressing twentieth-century heritage conservation.







Fig.1 Brother Martin Correa and Gabriel Guarda's Benedictine Monastery Church, CMP. Steel reinforced structure nonintrusive survey.

Fig.2 Concrete probes analysis at the Getty Labs. Credits: Santiago Beckdorf, 2023.

Fig.3 Benedictine Monastery Church CMP presentation at the 2024 Taiwan Convening. Credits: Taichung University Photographic Archive. Prof. Chijeng Kuo.

Given the lack of training programmes, these experiences are crucial to triggering changes in the existing education offering, broadening the scope, and including existing theoretical and methodological approaches to allow for effective and sustainable protection of our 20-C heritage.

#30

4. CONCLUSION.

In recent decades, there has been increased appreciation for 20-C heritage. This is evidenced by the growing number of sites registered on UNESCO's World Heritage List and the various organisations (academic, public, and civil society) advocating for the preservation of these properties, neighbourhoods, or landscapes.

However, there is a significant lack of educational programmes at all levels, from academic to technical and professional. This reality not only affects the capacities for implementing management plans or interventions on heritage properties but, worse still, fails to raise awareness of 20-C heritage and reveal its importance and urgency for protection, especially

among younger generations who will be responsible for defending this cultural heritage in the future.

Due to the low demand for undergraduate and postgraduate programmes in modern heritage conservation subjects, short courses, workshops, seminars, and applied research projects offer a viable and effective alternative to address the skills gap. Additionally, international programmes such as the Getty Foundation's "*Keeping It Modern*" initiative or the courses promoted by the Conserving Modern Architecture Initiative (CMAI) serve as spaces where, in addition to accessing cutting-edge knowledge, methodologies, and innovative procedures, shared experiences are valued. International and cross-disciplinary networks are generated, enabling collaborative projects' development.

Our region faces several challenges related to climate change and housing scarcity. Twentieth-century heritage conservation represents a promising opportunity for the future, and professional training, and it is crucial to raise awareness and advocate for future heritage sites.[14] ■

14. Acknowledgements: This paper was written in collaboration with Oscar Mackenney, Architect from Pontificia Universidad Católica de Chile, Vice Dean in Faculty of Architecture in Universidad del Desarrollo and Manager of the Bendectine Monastery Church conservation management plan.

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REMAPPING MODERNISM: MAPA PERU AREQUIPA 2023

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ABSTRACT.

MAPA PERU, an academic initiative launched in 2023, explores the impact of Modernism and sustainability initiatives in Arequipa, Peru's second most populous city. Despite Arequipa's reputation as a historic city, the influence of Modernism is often overlooked and remains largely unrecognised and undervalued, to the extent that it was not considered in the statement of Outstanding Universal Value when the city was designated a World Heritage site in 2000. MAPA PERU therefore aimed to raise awareness of the potential and challenges of Arequipa's Modern architecture. This involves re-mapping of these places, by evaluating current uses and users, identifying heritage and character-defining values, and assessing the potential for adaptive reuse of two representative Modernist buildings: the Gamesa Galleries, a mixed-use complex with residential and retail uses located in the historic city, and the Nicolás de Piérola residential building, a social housing complex located right outside the city centre. The one-week workshop, held in August 2023 with students of Architecture, Urbanism, and History from four Peruvian universities in Lima, Cusco, and Arequipa, involved field visits and documentation, diagnosis of building status and uses, and analysis of the adjacent urban fabric, considering form, matter, original function, current uses and users, resilience, sustainability, and capacity for adaptation to future needs and possibilities. The analyses revealed that while both buildings are in good condition and continue to serve their original purpose, they have been affected by densification, changes in land use, and urban growth. As such, proposals were made to address these transformations and potential new layouts and uses, so that these buildings can be adequately valued and maintained, and can continue being assets to Arequipa and its people.

1. INTRODUCTION

Located at an altitude of 2335 metres above sea level, on the banks of the Chili River, at the foot of the Misti, Chachani, and Picchu Picchu volcanoes and surrounded by lush countryside and agricultural terraces, lies the historic city of Arequipa, the second largest in Peru. It was founded in 1540 by Spanish conquistadors near a prehispanic village located in the present-day district of San Lazaro. Over the next three centuries, the city expanded and acquired several magnificent civil and religious buildings, though most of the city's traditional buildings are one storey tall and built of sillar. This lightweight, yet compact, tufa-like volcanic rock comes in shades of pink and white and was obtained from nearby quarries, the remains of ancient volcanic eruptions. While Arequipa is blessed with a magnificent natural setting and a year-round mild and sunny climate, it is also vulnerable to frequent earthquakes which though destructive, have also spurred ingenious architectural innovations, such as robust walls, vaults, the use of courtyards, patios, and the preference for sillar as a construction material due to its availability, and malleability, making it a good canvas for ornamentation, strength, and lightness.

2. AREQUIPA BECOMES A WORLD HERITAGE SITE

The historic city centre was designated a World Heritage Site (WHS) in 2000. In order to be included in this list. a statement of "Outstanding Universal Value" is required, and in the case of Arequipa, the statement privileges the ornamented architecture and the urban fabric of the Colonial (1540-1821) and early Republican period as the most significant values to be preserved, describing it as "a masterpiece of creative integration of European and native characteristics (...) challenged by the natural conditions, the Indigenous influences, the process of conquest and evangelisation, as well as the spectacular nature of its setting,"[1] thus implying that mid-century and Modern buildings do not add significant value. This means that there are currently no guidelines on how to intervene, and renovate these structures in such a way that respects their character-defining attributes, while also addressing the need to update obsolete materials and services; adapt to new uses and users; and consider improvements in areas such as energy use, comfort, sustainability, and technology.

Unfortunately, Modern buildings are facing many of the same challenges as the city centre, such as the deliberate demolition of historic buildings, uncontrolled urban sprawl into the countryside, the absence of a risk-preparedness plan, the creation of newer retail, commercial, and entertainment centres outside the World Heritage Site (WHS) limits, a decline in permanent residential population in the historic city, vehicular congestion and pollution, and often insensitive, piecemeal interventions that have negatively affected many buildings.

3. MODERNISM IN AREQUIPA

Obedience to the site
Obedience to construction systems

1. "Historical City Centre of the City of Arequipa" World Heritage City Convention UNESCO, accessed June 24, 2024, https://whc.unesco.org/en/list/1016/

Obedience to the function of housing
... is the manifestation of modern life, and its relationship with public space.[2]

By 1940, Arequipa was preparing to celebrate its 400th anniversary with a new urban masterplan designed to guide growth, modernisation, and address challenges related to industrialisation, migration from rural areas, and population growth, including the need for more housing and infrastructure. This urban plan, in addition to the two earthquakes in 1958 and 1960 that destroyed many historic buildings, facilitated the introduction of Modern architecture and urbanism, much of which was developed by local architects.

While most of the best-known examples of architecture and urbanism from this period are located in Lima, which is also where most Peruvian architects received their education and training, Arequipa developed its unique flavour of Modernism, drawing from vernacular architecture, ornamentation styles, and the local climate.

4. CASE STUDIES

4.1 THE GAMESA GALLERIES: MODERNITY IN THE HISTORIC CITY

The Gamesa Galleries are an emblematic mixed-use residential, professional, and retail complex designed by local architect Gonzalo Olivares Rey de Castro (1930-2019) and completed in 1961-1962. Situated in the heart of the historic city centre, they are located between Mercaderes, the city's main commercial street which was converted to pedestrian-only in 2008, and the quieter Santo Domingo street. The architecture of Gamesa is representative of the Modern style and stands out for its functional design and ability to integrate multiple commercial spaces in the same place, making it a landmark in the historic centre of Arequipa.

Gamesa is composed of three main parts. The base level contains a passageway lined by retail space connecting the streets, Mercaderes and Santo Domingo, as well as an open courtyard that serves as a meeting and social space. This feature is inspired by the central patios of traditional houses and can be enjoyed year-round thanks to the sunny, mild climate and absence of rains. The upper level of the base contains an above-ground parking lot. The passageway anchors the two main tower blocks, located on each street: the Mercaderes Tower, containing offices, and the Santo Domingo Tower, dedicated to housing. A third tower was planned, but never built. Access to the upper levels is provided through a combination of ramps and elevators.

Gamesa embodies simplicity in its lines and forms, and its structure prioritises functionality and spatial efficiency. Architect Olivares succeeded in creating a modern building that respects and complements Arequipa's historical, cultural, and urban landscape. At the pedestrian level, the complex presents a futuristic, yet familiar character to the urban form by incorporating the architect's interpretation of traditional architectural elements such as those found in traditional tambos.

2. "C.H. Nicolas de Pierola I Etapa. Habitar" Radar, accessed June 24, 2024. https://www.facebook.com/RadarRevistaArquitectura

4.2 THE NICOLAS DE PIEROLA RESIDENTIAL COMPLEX: MODERN LIFE AND ITS RELATION TO PUBLIC SPACE

Nicolas de Pierola is a remarkable social housing project designed by architects Adolfo Cordova (1930-2022) and Carlos Williams (1924-2004). This complex was inaugurated in 1966 and was commissioned by architect and President Fernando Belaunde Terry (1912-2002) during his first term in office. All three of these architects were key figures in the Peruvian Modern Movement.

The complex is located just outside the historic city centre and was built during a period of significant urban growth due to migration and the expansion of economic activity in the region. This led to the growing demand for housing and basic services, and resulted in the creation of new residential, commerce and retail areas.

The design of the complex includes multi-storey buildings surrounding a ten-storey multi-family building, as well as courtyards and passageways that give the place a familiar human scale. The façades feature large textured and inlaid surfaces, with exposed concrete structural details and railings. In addition, wood joinery and interspersed brick panels add a touch of warmth and visual variety to the architectural composition. The complex also included several open and common areas that, in subsequent years, began to be occupied by vendors authorised by the municipal government. While this change brought new life and movement to previously underused areas, it also eliminated these common areas and led to piecemeal, and sometimes damaging interventions that degrade the site as an architectural object.

5. MAPA PERU AND ITS OBJECTIVES

Academia has a responsibility to contribute to the identification, recognition, conservation, and protection of Peru's 20th-century and Modern heritage, along with their associated values, and the works of Peruvian architects. MAPA thus aims to raise awareness and generate greater interest in the significance and impact of this Modern heritage, as well as to contribute to its adequate maintenance, conservation, renovation and adaptation, ensuring appreciation for future generations.

The first edition of MAPA PERU was organised by the Peruvian Network of Universities (RPU as it is known by its acronym in Spanish) as part of a collaborative inter-university research project, and it involved the participation of four universities from three different cities with different realities. These included the Pontificia Universidad Católica del Perú (PUCP) and Universidad Católica de Santa María (UCSM) in Arequipa, both private, located in Lima and Arequipa respectively, as well as the public Universidad Nacional San Agustín (UNSA) in Arequipa, and Universidad Andina del Cusco (UAC) in Cusco. Over one hundred architecture, urbanism, and history students and ten teachers and scholars met in Arequipa in August 2023, for a workshop that lasted seven days.

The objective was to identify character-defining traits and values, explore the state of conservation, current uses and users, and transformations and interventions in the two case studies, to evaluate how they have adapted

to current urban conditions and the impact of the WHS designation, and thus to propose ideas to help these buildings to adapt to the future, especially regarding advancements in sustainability, tourism. The workshop also included a third case study, the Andres Avelino Caceres Commercial Platform, a sprawling marketplace that is expanding and taking over the adjacent countryside. This study considered the effects of changing land use, urban planning and design, and informal and unplanned growth, which falls outside the scope of this work as it is not a Modern building or site.

6. REMAPPING MODERNISM IN AREQUIPA: THE WORKSHOP

For us, it was essential to understand the historical context of Peru's Modern architectural and urban legacy in order to shed light on its relevance and intention at the time they were conceived and first built. We also considered it important to understand the influence of pre-Hispanic and historic Spanish and European influences from an interdisciplinary perspective, to distinguish the elements that make Arequipa-based Modernism unique, as well as to bring more attention to the works of Arequipa-born and based architects. Remapping, therefore, corresponds to the need to recontextualise, in time and space, buildings that we do not want to be lost to oblivion due to demolition or significant transformations that will obscure their original traits, uses, and intentions.

6.1 WORKSHOP METHODOLOGY

The academic exercise involves understanding the problems in the transformation of the collective living and working spaces of the Modern movement and their integration into the existing urban fabric through a multidimensional approach that contemplates history, contemporary needs, and potential future developments. Careful and critical observation and documentation were crucial during the field visits.

The workshop consisted of four stages. The first was the preliminary research and information gathering, which took place before the students arrived in Arequipa. This included virtual meetings with team members from different universities in the other cities, as well as reviewing existing documentation such as archives, films, books, and journals, to gain insight into the buildings, and their historical and urban context, and how they were used in the past.

Upon arrival in Arequipa, the students and faculty teams commenced the second stage of the workshop, involving field visits, during which time the students observed and documented the buildings using written descriptions, photography, and hand-drawn illustrations. Drawing is an essential tool for understanding the sites, as it gives one the confidence to work on what is seen, what is found, and what is experienced, without physical or temporal distances. Drawing also serves as a tool for interpretation, as it facilitates our understanding of the original form and function, its changes and uses over the years, and how to respond and react to the site. Emphasis was placed on this moment as half of the participants were unfamiliar with the buildings, and the dynamics of the environment. For this reason, it seemed





Fig. 1. Galerías Gamesa visit during workshop. (2023) © Carlos Torres Flores

Fig. 2. Nicolás de Piérola Residential Complex visit during workshop. (2023) © Carlos Torres Flores



Fig. 3. In classroom workshop session (2023) © Carlos Torres Flores

relevant to us to sensitise the participants with the buildings, the place and its relationship with the urban fabric, its dynamics and its temporality.

The third stage took place over two days in the classroom and involved assessing the buildings themselves as a group through discussions, graphic exercises, and examining the material that the students had produced on site. The goal was to reach a consensus on the character-defining values of each building, their uses and users, challenges and potential, as well as the values to protect, conserve, and communicate. Many crucial decisions had to be made at this stage regarding what was worth protecting and preserving,

what needed to be renovated and transformed, and their potential for future uses and users. We made 4 smaller groups in which we mixed the students from different universities and cities so as to enrich the conversation with their different experiences and approaches.

The fourth and final stage involved planning and designing interventions considering the buildings and their adjacent urban context —the remapping exercise itself. The production was carried out using different types of mapping that communicated the dynamics, sketches that transmitted perception, physical maquettes and digital models, urban and exploited axonometrics that showed the physical situation of the buildings and their potential uses. Sectional analysis was also used to communicate the new ideas of proposed spatiality.

At the end of the workshop, we held a final review in which the students presented their proposals and received feedback and comments from the faculty members, the organising committee, guest professors and authorities; in addition to their peers.

7. FINAL THOUGHTS: UNDERSTANDING THE MAIN CHALLENGES OF LOCAL MODERN HERITAGE AND THE REMAPPING

Our observations and the students' proposals revealed that while the case studies remain in relatively good condition, they have nonetheless been affected by the passage of time, and costly renovations and maintenance are needed to replace some of the worn-out and obsolete systems. Furthermore, the needs and expectations of the users, especially regarding housing, have changed, and the perceptions and uses have also been affected by larger social and economic transformations in the city. For instance, Gamesa was a major hub for retail and a popular gathering place for many years, but the growth of the city and the opening of new malls and department stores in the new neighbourhoods have made it less appealing and consequently, now many stores remain empty, the base level remains underutilised, and the main courtyard and passageway serve more as a convenient shortcut between Mercaderes and Santo Domingo street than an actual shopping destination and meeting place for locals and tourists to gather. Similarly, Nicolas de Pierola has introduced small-scale retail that occupies the complex's common areas, thus providing neighbours with a convenient place to shop and meet, but with less common spaces. The proposals put forward during the workshop mostly focused on revitalising and adapting these underused spaces, to consider current urban conditions in the historic city and the larger metropolitan area.

Proper maintenance, renovation, and transformation of these buildings will significantly and positively affect local communities. For us, it is essential to consider how changes would impact social cohesion and the quality of life of the inhabitants. The conservation of Modern heritage requires striking a balance between renovating and adapting these sites to changing conditions and preserving historical, architectural, social, and character-defining values while considering new needs and regulations such as accessibility, energy efficiency, and technology.

Sustainability is a core value when considering Modern buildings. When we consider the words of Carl Elefante, former president of the American Institute of Architects when he claimed that "The greenest building is the one that already exists."[3] This means that existing buildings hold valuable embodied energy and are already significant investments in time, energy, resources and materials. Therefore, the most sustainable action to prevent waste is to maintain and adapt these buildings, which requires careful planning and understanding of these sites, their current conditions, challenges and potential.

Finally, the workshop results make it clear that it is essential to understand the problems of each architectural object in both its original and current context, to give them a new life that takes advantage of its potential. Academia, and interdisciplinary initiatives like MAPA, are necessary to conduct the required research and communicate the results with practitioners, leaders and decision-makers, and the public, to generate awareness and interest, and be able to make informed decisions about the future of Modernism in places like Arequipa. ■

3. "The greenest building is the one that already exists" by Robert Adam, September 24, 2019. *AJ Architects' Journal*, accessed on June 24, 2024. https://www.architectsjournal.co.uk/news/opinion/the-greenest-building-is-the-one-that-already-exists

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WHAT DO WE WANT FROM ARCHITECTURAL EDUCATION?

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ABSTRACT.

This paper delves into the evolution of architectural education in response to the unique challenges posed by the conservation of modern heritage. Drawing upon personal past experience as a student, it underscores the need for an interdisciplinary approach, integrating elements of economics, politics, sociology, and technology into conservation efforts.

At the heart of this exploration lies the concept of ageing in architecture, which the study approaches through a holistic lens encompassing more than mere physical deterioration. By examining the ageing process of buildings, the paper identifies four key dimensions—materiality, use, context, and concept—that influence our perception of a building's age and inform tailored conservation strategies. It highlights the vulnerability of Modern buildings due to experimental design choices and material selection, stressing the importance of early intervention and informed decision-making within the context of evolving urban landscapes.

While there is a consensus on the necessity of skilled hands, whether dealing with Modernist structures or those from earlier periods, an examination of the history of Modern architectural conservation reveals that technical challenges are just one aspect of the broader conservation landscape.

This complexity poses a significant educational challenge, requiring students to grasp a wide array of topics within a limited timeframe. By adopting a balanced approach that combines historical value with contemporary needs, students can play a vital role in preserving our architectural heritage for future generations. The paper seeks to cultivate a critical engagement with how the past intersects with the present, encouraging a perspective that relates to the legacy of earlier generations not with intimidation, but with a profound understanding of our place within this continuum.

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1. THE EVOLUTION OF ARCHITECTURAL EDUCATION

If you have ever had to learn about, or teach on the topic of the conservation of Modern Heritage, you are likely familiar with the frustration a student can experience, especially if they struggle to engage with the abstract ideas of the twentieth century. This challenge is not necessarily built into the subject itself, but rather originates from the intellectual achievements of this period. Buildings from this era were designed to be of their era, "new," reflecting the spirit of the age. The association of this heritage with recentness, manifested tangibly through cleanliness and shininess, can lead to the misconception that they are timeless and immune to aging.[1] This misconception sometimes gets in the way of students understanding why conservation of this heritage is necessary and how to approach it effectively. Without understanding its nature and significance, it is easy to feel lost, especially when the timing is tight, a common challenge for students balancing multiple tasks beyond design and construction.

To understand how to approach this task, it is insightful to examine the approach of the Bauhaus, the first school fully connected with Modernism. This departure from traditional teaching methods, notably different from the Beaux-Arts model, emphasised hands-on experience and direct interaction with materials, similar to the Montessori "learn by doing" approach.

Although Gropius, the founder of the Bauhaus, did not teach architecture there, the introduction of architecture into the curriculum under Hannes Meyer's leadership in 1927 as "Building Science" marked a pivotal moment. This shift coincided with the concept of separating design from manufacturing, a development crucial for the cost-effective modernisation of industrial cities.

Today our appreciation of Modern heritage extends beyond mere nostalgia; its focus on efficiency and functionality suggests an inevitable evolution in architectural practice. The sheer volume of buildings from this period attests to both architectural innovation and intellectual achievement, enduring despite any perceived shortcomings. Ernst May alone managed to build close to around 12,000-15,000 apartment units in this period, regardless of the school's teachings.[2]

Modern buildings, often products of experimental design, display a particular vulnerability. Even if we were to perfect the teaching of material conservation techniques, which has been a focus for many years now, a lingering question persists: How can we ensure that the conservation of Modern heritage effectively balances historical values with our contemporary needs?

2. TRACKING A BUILDING'S JOURNEY THROUGH TIME

Understanding how historical and contemporary elements can be held together requires discussing the passage of time. By exploring how buildings change over time, we gain insight into which aspects may require conservation efforts and the reasons behind them. Understanding how a building changes post-construction—essentially tracing its journey through time—can clarify what it means for a building to age.

Time shapes a great deal of our perceptions and interactions with the world. Just like everything else, including us, buildings are not immune to the effects

1. Andrea Canziani, Andrea Luciani, and Margherita Pedroni, "Learning from Modern Heritage: Methodological Tools for Re-Thinking Education in Conservation," A*daptive Reuse: The Modern Movement Towards the Future, 14th International Docomomo Conference* 2016, 848.

2. Thomas Edelmann, "A Lot of Life in One Person," Stylepark, August 16, 2011, https://www.stylepark.com/en/news/aa-lot-of-life-in-one-person.

of the passage of time. As a building ages, we begin perceiving it as though it belongs to another era, transitioning from a contemporary object to being seen as something of the past. But how can we tell if a building is genuinely ageing?

When examining how a building ages, four key dimensions come to mind. These are not guidelines specifically but rather structured approaches, offering a framework analysis and helping to guide decisions when uncertainty arises.

2.1. MATERIALITY

Materiality is arguably the most obvious and quantifiable indicator of a building's age. By simply observing a building's physical condition and how it has held up over time, we can tell whether it reflects the contemporary era or a past one. While all buildings look new upon construction, the tangible effects of ageing gradually become apparent. Over time, paint peels, and new materials corrode, leading to decay and possible structural deformation.

Modern buildings, often the results of experimental design, are particularly susceptible to deterioration due to design choices and material selections. This vulnerability necessitates repairs earlier than structures built using traditional methods—typically within 25-30 years after construction with major renovations generally required every 50-60 years.[3]

Research and case studies underscore the technical complexities inherent in this process[4], emphasising the role of expert handling to ensure the longevity and structural integrity of buildings. While fully comprehending this intricate field is not possible in a short timeframe, it is beneficial to become familiar with the reasons behind material decay and particularly its pace. Understanding construction materials, their properties, and ageing processes is vital for effective preservation and maintenance. This knowledge can help us make more informed design decisions, effectively manage existing materials, and make better choices regarding replacements.

2.2. USE

Another practical indicator of a building's ageing lies in its use, which often entails the layout and organisation of the structure. Buildings frequently adapt to changing circumstances and functionalities over time, sometimes straying significantly from their original intent. Even if a building continues to serve its initial purpose, shifts in how people use the space demand updates and revisions. Evaluating a building's adaptation in terms of use involves examining its historical purpose and function, comparing it with its current state to measure its level of adaptation and identify areas requiring further adjustments.

This includes understanding the building's historical context by considering the following questions, bearing in mind that historical records often have limitations in their completeness and may reflect the biases of those who documented them.

1. Where is the building located?
2. Who was it built for?
3. What purpose did it originally serve?
4. How did it once function?

3. Macdonald, Susan. "Materiality, monumentality and modernism: continuing challenges in conserving twentieth-century places." From an address given at the Unloved Moderns conference in Sydney, Australia. 2009.

4. Margherita Pedroni et al., "A Global Survey on Education and Training for the Conservation of Twentieth-Century Built Heritage" (J. Paul Getty Trust and Docomomo International, 2020), 38.



Figure 1 Aerial View of Villa Savoye. Google



Figure 2 Lucien Hervé. Distant view of the northwest and southwest façades of Villa Savoye, Poissy, France. 1931 or later, comp.: 16.0 x 23.8 cm, Collection Centre Canadien d'Architecture/ Canadian Centre for Architecture, Montréal.

Understanding a building's values, strengths, and weaknesses allows us to make informed decisions about which elements to preserve and which to modify, aligning with its evolving functions.

When possible, it's helpful to remember that buildings should be responsive to their local environmental conditions, which not only ensures sustainability but also enhances comfort for its occupants. Ultimately, buildings are more than mere structures; they are spaces where people live and work, fundamentally designed for those who use them.

2.3. CONTEXT

Context is a particularly intriguing way to measure a building's age, in such a way that it does not concern the building itself, or at least not directly, but rather everything else happening around it. Initially, buildings are designed to adapt and blend seamlessly with their environment, aligning with infrastructure, optimising views, and integrating smoothly among neighbouring structures.

This is the context in which Villa Savoye finds itself today. **(Fig 1)** The photograph taken in the 1930s **(Fig 2)** captured a context that no longer exists.

As urban landscapes evolve and expand, the land around a building can undergo significant changes. Such alterations can shift the building's relationship with its surroundings, ultimately influencing our perception of it. Buildings that were once well-integrated may now appear mismatched as new structures emerge, roads expand, or land use shifts. Urban densification can lead to once-harmonious buildings becoming out of sync with new infrastructural developments, with formerly isolated structures becoming engulfed by urban expansion, or vice versa. Moreover, the transition of the villa Savoye from a private residence to a public museum has brought about other shifts, in funding, management, and other aspects. Thus, context encompasses both the tangible physical elements surrounding a building and intangible factors such as social, economic, or political considerations. This marks a clear transition of conservation from a technical endeavour to an interdisciplinary practice, presenting a significant challenge for students, who are now expected to delve into more than just design and construction.

2.4. CONCEPT

Modern heritage buildings are more than physical structures; they encapsulate the ideas, values, and aspirations of their era. This conceptual dimension also influences their ageing process, as ideas and trends evolve. Thus, buildings can become "conceptually" old, regardless of their physical state. Measuring this is challenging, as some concepts age faster than others, especially those tied to trends. Consequently, even well-maintained buildings can seem old when the ideas they represent become outdated, leading us to perceive them as "dated" rather than simply "aged."

Historic photographs frequently feature the latest technological advancements—such as new car models, accessories, and hairstyles—set against newly constructed buildings that were once symbols of modernity. However, upon revisiting these images today, the elements intended to

highlight the building's modernity today appear outdated, while the image of the structures themselves remains largely unchanged. This observation prompts an interesting consideration: despite the rapid evolution of many aspects of life, the physical appearance of a number of buildings may have remained relatively constant over time.

Coming up with a plan for conserving a building that is ageing in a single dimension, such as materiality, is typically an easier task to manage. However, when a building begins to age across multiple dimensions — material, functional, and contextual— it often creates a sense of unease. This complexity arises because conservation at this point involves more than just addressing technical issues; it entails navigating the interplay between architecture and ever-changing elements of economics, politics, sociology, and technology, among others, factors that are not always predictable and often beyond our control. This uncertainty can lead to a tendency to restore the building to a state in which the ageing "problem" had not yet manifested itself, often reflecting its original or a well-documented, so-called "authentic" former image. While widely discussed, the topic of authenticity remains a thought-provoking and essential aspect for those new to the field, challenging established beliefs and encouraging their re-evaluation.

3. BRIDGING THE PAST AND FUTURE: MODERN HERITAGE PRESERVATION THROUGH INTERDISCIPLINARY EDUCATION

The concept of Modern heritage conservation that embraces change can be a compelling topic for students, testing boundaries and sparking debates on the extent of acceptable change. Problems arise precisely at this juncture —when delving into the specifics of proposed changes, it becomes crucial to assess whether the proposals genuinely contribute to the building's conservation or might cause more long-term harm. Modern buildings are highly sensitive to minor changes, just like those from earlier periods.

Therefore, how can students effectively incorporate political, economic, and sociological considerations into their designs?

3.1 THE INTERSECTION OF POLITICAL CONSIDERATIONS, SOCIOLOGICAL PERSPECTIVES, AND ECONOMIC FACTORS IN MODERN HERITAGE CONSERVATION

To effectively address economic, political, and sociological factors, conservation education must adopt a multidisciplinary approach. This integration prepares students to develop well-rounded strategies that consider all aspects of Modern heritage preservation.

Politics plays a crucial role in shaping conservation efforts. Laws and regulations determine how buildings are protected, zoned, and maintained. These political frameworks influence not only the physical conservation of structures but also public opinion and societal values, which can prioritise or overlook their conservation.

From a cultural and societal standpoint, sociological studies highlight the importance of Modern heritage. Understanding the cultural value attached

to these structures helps in crafting preservation strategies that resonate with contemporary society, including dynamics of urbanisation such as gentrification and displacement. Involving communities in the conservation process is crucial for ensuring cultural sensitivity and support. Educational initiatives play a key role in helping communities recognise and value their Modern heritage, and in turn, the cultural value placed on these structures often determines which ones are prioritised for conservation.

Economics is another essential factor in determining how resources are allocated for conservation, renovation, or demolition. Effective conservation strategies should align with long-term financial and environmental goals, as emphasised by scholars like Della Torre in discussions on planned conservation.[5] Integrating economic strategies into conservation practices ensures that efforts are sustainable and beneficial in the long run.

CURRICULUM DEVELOPMENT / Designing a comprehensive curriculum for conservation students begins with intensive documentation analysis. This first step ensures that students gain a thorough understanding of the project in all its complexities and nuances and what it is that they are trying to conserve before shaping their conservation strategies.

Detailed case studies, both successful and unsuccessful, should be integrated early into the curriculum to provide practical insights into real-world conservation challenges and decision-making processes. By examining case studies from different regions of the world, students can understand how certain decisions may be successful in one context and less so in another, promoting a more nuanced approach to conservation strategies.

Sustainability should be a core component of the curriculum, highlighting the advantages of building conservation, such as minimising waste and preserving the embodied energy in existing structures.

COLLABORATIVE LEARNING / Collaborative learning is another critical element, where students benefit from the insights of professionals from diverse fields like architecture, politics, economics, and history. This can be achieved through lectures, panel discussions, workshops, and field trips to Modern heritage sites. These hands-on experiences allow students to observe ongoing conservation efforts, understand their impact, and engage directly with local communities and stakeholders to appreciate the social implications and communal benefits of conservation efforts.

USE OF TECHNOLOGY / Digital tools and software can manage the complexities of conserving Modern buildings. Architectural simulation software and virtual reality can create conservation scenarios, allowing students to experiment with various preservation strategies and observe outcomes. This dynamic learning experience emphasises the process over the final image, fostering discussions on the implications of different conservation techniques on cost, energy efficiency, and structural integrity.

5. Della Torre, Stefano. "Economics of Planned Conservation." INTEGRATING AIMS — BUILT HERITAGE IN SOCIAL AND ECONOMIC DEVELOPMENT, 2010, 141–56.

ASSESSMENTS / Project-based assessments should be introduced where students are tasked with developing and defending conservation solutions, which include as many factors as possible (like economic, viability, political feasibility, and cultural sensitivity). This approach challenges students to apply their learning in a complete manner and prepares them for the complexities they will face in their professional careers. Importantly, it also teaches them to prioritise effectively, make the most of available resources and recognise that perfect solutions are often unattainable. These assessments provide a good opportunity to measure how the alterations can be balanced against the significance of what has been altered.

FURTHER PROFESSIONAL DEVELOPMENT

Finally, ongoing professional development is essential. Offering specialised courses in conservation and encouraging participation in relevant conferences and seminars can provide students with the latest research and practices in the field. This continuous learning ensures that students remain at the forefront of conservation techniques and strategies.

By combining different fields of study, real-world examples, teamwork, modern technology, thorough evaluations, and continuous learning, we can provide students with the skills and knowledge they require to balance old and new elements in their conservation work. With this well-rounded and comprehensive education, they can create conservation strategies that preserve the past while also meeting current and future needs. ■

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RE-EDUCATION FOR REUSE OF MODERN SPACES. SOCIAL AND ENVIRONMENTAL DIMENSION AS A PLATFORM FOR INCLUSIVE DIDACTIC AND RESEARCH

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ABSTRACT

Modern futures, sustainable and culturally diverse, claim to think critically about certain emerging challenges in education and research for the valuation, documentation, conservation and reuse of the legacy of the Modern Movement, in the context of the complex and changing scenarios of today's world. On the one hand, the social dimension, about the engagement of communities/people that inhabits modern legacy, to identify its needs and challenges – resources, security, health – as well as the priority on the international agenda of inclusion and social participation for a fair development. On the other hand, the environmental dimension, about built heritage as a non-renewable symbolic, physical, and economic resource whose demands – climate change, energy, nature - require creative designs for a sustainable development.

This paradigmatic time that society and its environment are going through today is prompting us to review the forms of production and transmission of knowledge, as well as the objects of study. Interdisciplinary and transversal knowledge, situated learning-teaching, alternative didactic strategies, inclusive perspectives, and everyday modern heritage as study cases, are some of these contemporary educational challenges. In this context, this paper provides a conceptual framework for the session that aims to discuss socially, and environmentally innovative and inclusive experiences developed for the training of students and researchers in the disciplines of spatial practices to adapt or rehabilitate buildings, sites or neighbourhoods of the Modern Movement.

1. INTRODUCTION

The Societal and Environmental Challenges are at the top of the international agendas due to the accelerated transformations that are facing today the urban and rural territories, where modern movement played a key role during the 20th century. On one hand, globalisation is having an impact on the perception of modern heritage generating social inequalities and lack of human rights. On the other end, Climate Change is imposing a new ecological awareness that affects the preservation and reuse of modern spaces.

Architecture and Urbanism Education institutions are late in the integration of these emerging issues into the training process. In fact, educational policies are insufficient or fragmented to deal in depth with the contemporary complexity that claims a permanent adaptation and updating of contents and didactic strategies, as well as the exploration of experimental and alternative ways of teaching and learning knowledge.

DOCOMOMO has an educational aim since its foundation well represented in the activities of the International Specialist Committee on Education + Training (i.e, declarations[1], workshops, surveys), the DOCOMOMO Journal publications[2] and in the international conference papers. Nevertheless, social and environmental dimensions are marginal in these spaces of debate and sharing of knowledge.

In the field of research, this topic receives today broader attention with the European programme framework New European Bauhaus, an open call to rethink Bauhaus values in the frame of the social and environmental challenges, namely highlighting the importance of co-creation to establish the connection between people and nature.

In this context, this paper provides a conceptual framework for the session that aims to discuss socially, and environmentally innovative and inclusive experiences developed for the training of students and researchers in the disciplines of spatial practices to adapt or rehabilitate buildings, sites or neighbourhoods of the Modern Movement.

2. SOCIAL AND ENVIRONMENTAL DIMENSION

Modern futures, sustainable and culturally diverse, claim to think critically about certain emerging challenges in education and research for the valuation, documentation, conservation and reuse of the legacy of the Modern Movement, in the context of the complex and changing scenarios of today's world. On the one hand, the social dimension, about the engagement of communities/ people that inhabits modern legacy, to identify its needs and changes – resources, security, health – as well as the priority on the international agenda of inclusion and social participation[3] for a fair development. On the other hand, the environmental dimension, about built heritage as a non-renewable symbolic, physical, and economic resource whose demands – climate change, energy, nature- require creative designs for a sustainable development[4].

This raises questions and challenges:

To what extent do we venture to cross the frontiers towards re-education or the exploration of alternative methods and tools for the adaptive reuse

1. DOCOMOMO, *Manifesto on Education Tokyo – Valencia*, 2022.

2. AAVV, "For an Architect's training," *DOCOMOMO Journal no. 49*, 2013.

3. Tim Ingold, *The Perception of the Environment: Essays in livelihood, dwelling and skill* (London: Routledge, 2000); Peter Jones, Doina Petrescu, and Jeremy Till, *Architecture and Participation* (London: Taylor & Francis, 2005).

4. AAVV, "Modern and Sustainable," *DOCOMOMO Journal no.* 44, 2011.

of modern architecture in today's complex scenarios? What pedagogical strategies promote situated and engaged knowledge in students with the social and environmental reality?

2.1. INTERDISCIPLINARY AND TRANSVERSAL KNOWLEDGE

Schools in spatial practices - interior architecture, architecture, urbanism, landscape - are generally oriented towards training professionals with artistic or technical profiles producing new spaces. While modern built heritage/legacy/spaces are generally part of mandatory courses on theory and history, and part of elective courses where students do not always design adaptive re-uses. Or it is addressed by traditional design studios, often lacking appropriate theoretical and methodological underpinning, as demonstrated in the *Global Survey on Education and Training for the Conservation of Twentieth-Century Built Heritage*[5], organised by DOCOMOMO and the Getty Institute.

This implies a double educational challenge. Also, the integration of these issues when intervening modern landscapes and architectures that have their own conceptual and material characteristics requires research and documentation as a starting point for the re-design process.

At the same time, social and environmental issues are rarely integrated as transversal content in the curricula to provide theories, instruments and activities to deeply understand the needs and desires of users and the benefits of nature-based solutions, as well as to carry out joint design processes.

These topics are out of the architect's education, because they need interdisciplinary knowledge that can understand the social and environmental conditions that these buildings were produced in, and that can support its reuse in the context of these two dimensions. Although spatial practices are important, it is necessary to stimulate the dialogue with social and environmental sciences – sociology, anthropology, geography, biology.

This interdisciplinary dialogue was already integrated in the modern architectural education[6], from the initial Bauhaus to the late Harvard, São Paulo, IUAV, Delft, Porto, among others, with different approaches, but with common interests. Rethinking Bauhaus is also reopening the schools of architecture to other disciplines that can promote collaborative practices among professionals, academics, stakeholder and students, i.e, teamwork, as claimed by Walter Gropius[7].

2.2. SITUATED LEARNING-TEACHING

Education to preserve and reuse modernity is not exempt from the hegemonic narratives that dominate knowledge and literature. Especially from Europe, a body of concepts, historical periodisations and conservation criteria have crystallised that do not reach all territorial realities. The post-war period as a historical milestone or the material fragility of modern architecture does not represent the processes and characteristics of the modern legacy of contexts such as Africa, Asia or Latin America.

Situating the teaching-learning process implies thinking globally and acting locally. On the one hand, understanding the social and environmental

5. Margherita Pedroni, Cesar Bargues Ballester, Andrea Canziani, Wessel de Jonge, and Chandler McCoy, *A Global Survey on Education and Training for the Conservation of Twentieth-Century Built Heritage: Research Report* (Los Angeles: Getty Conservation Institute; Lisbon: DOCOMOMO International, 2020). https://hdl.handle.net/10020/gci_pubs_global_survey_education.

6. Gonçalo Canto Moniz, "Training the Architect: Modern Architectural Education experiences," *DOCOMOMO Journal* 49 (2013): 10-15.

7. Gonçalo Canto Moniz, "Training the Architect: Modern Architectural Education experiences," *DOCOMOMO Journal* 49 (2013): 10-15.

problems that affect us today as a planetary community. On the other hand, by taking into account the cultural and historical particularities, the economic and technological resources of the modernity of each place. Likewise, acting locally means working with real contexts in articulation with local authorities and communities to understand the real challenges of co-production.

2.3. ALTERNATIVE DIDACTIC STRATEGIES

Beaux-arts didactic was spread all over the world and is on the top of the alternatives in every educational reform, as an artistic statement and a guarantee of the architecture autonomy. Bauhaus didactics may have the same impact in several countries worldwide. Based on these pedagogies, the design studio still guides education in architecture and spatial practices. Its values are undoubtedly reflection in action and the integration of knowledge from different backgrounds through the project. But also, the design studio has a dynamic where students generally interact with a tutor (or several) and advisors who are the authorised voices on the topics. This legitimisation of expert knowledge produced by and from academia has, for example, overlooked or undervalued the experience of users.

A valuable antecedent of the Modern Movement were the experiences on "*radical pedagogies*" in São Paulo, Porto, Yale, Paris or Chile schools, in late 1960s[8] where students claimed for the social and political role of architecture[9].

Co-creation processes between students and the community to activate modern neighbourhoods, buildings or public spaces makes it possible to integrate the voices of those who are the meaning of heritage conservation. Similarly, programmes articulated with stakeholders: governmental agencies, productive sector, NGOs, activist groups. To this end, it is necessary to think of new ways of organising working groups, exploring, representing and communicating the processes of valuing, conserving and reusing heritage.

2.4. INCLUSIVE PERSPECTIVES

Education is not neutral and has historically reproduced social processes of exclusion in terms of gender, ethnicity and class. It is worth mentioning that modern pedagogies such as Bauhaus were brutal examples of discrimination. Because of the large number of women in his first enrolment (84 women, 79 men), Walter Gropius imposed that the school would only have 1/3 women and vetoed their entry to the architecture workshop, a discipline considered masculine. Women studied in the photography, ceramics and textile workshops until Lotte Stam Beese was admitted to architecture, 8 years after Bauhaus was founded[10].

During the 1970s, the pioneering summer courses of the Women's School of Planning and Architecture (USA)[11] questioned the hierarchical and heteronormative structures of architectural teaching and practice by addressing women's issues in the design of cities and spaces. However, they did not have much reverberation.

Inclusive educational policies[12] are an ongoing challenge in the organisation of institutions and programmes dedicated to documenting and

8. Beatriz Colomina, Ignacio Galán, Evangelos Kotsioris and Anna-Maria Meister (eds.), *Radical Pedagogies* (Cambridge: MIT Press, 2022).

9. Gonçalo Canto Moniz, "Training the Architect: Modern Architectural Education Experiences," DOCOMOMO Journal no. 49 (2013): 10-15.

10. Inés Moisset, "Los silencios de la historia: mujeres en la Bauhaus," *Cuadernos del Centro de Estudios en Diseño y Comunicación*, nº 113 (2020): 165-180.

11. Leslie Kanes Weismans, "The Women's School of Planning and Architecture," in *Learning our way: Essays in feminist education*, ed. Charlotte Bunch, Sandra Pollack Pollack (Trumansburg, New York: The Crossing Press, 1983), 224-245.

12. Gonçalo Canto Moniz, and Carolina Quiroga. "New challenges on modern re-use education: social participation and gender," in *16th International Docomomo Conference Tokyo Japan 2020+1* (Tokyo: DOCOMOMO International, 2021), 216-221.

conserving the Modern Movement. It is relevant that training and research are based on approaches that question hegemonies, recognise inequalities as a problem and propose solutions aimed at equity and inclusion: the feminist, intersectional, multicultural, queer perspective, among others. Its potential addresses both the historiographical revision of modernity to recover the contribution of women and all those authors eclipsed by the canonical figures, and the actions of urban or architectural rehabilitation to consider the active participation of the diversity of social groups in the community **(Fig. 1)**.

2.5. EVERYDAY MODERN HERITAGE

The transition from modern architecture to modern heritage meant broadening educational criteria based on the theoretical and technical revisions that arose to carry out its conservation: the displacement of material authenticity to the authenticity of design, the difficulty of articulating contemporary operations with architectures that are still references, the restoration of new materials (concrete, plastic), among others. Although advances have been made, teaching to conserve the recent past often refers to the canonical origin of the heritage field: the preservation of iconic buildings carried out by specialised knowledge.

Modern everyday heritage[13] is one of the central educational themes towards a sustainable approach to the recent past. It is necessary to expand the concept of modernity as a monument to cultural heritage: material and immaterial aspects that represent the history and memory of the different groups that make up a society. Anonymous architectures, industrial architecture, urban infrastructure works -education, health, recreation-, neighbourhoods and mass housing complexes are part of the daily life of the community. (**Fig. 2**) And they are also those that lack protection, maintenance and appropriate interventions. Thus, it becomes relevant in the first place to take this non-iconic and representative architecture of local realities as a case study. Second, that students can think of creative proposals for reuse with active community participation.

3. CONCLUSIONS

Modern architecture aimed to provide better conditions for society and its environment by producing new ways of thinking about urban planning, landscape, architecture and design.

Since the awareness of the value of modern architecture as heritage, education for its conservation and reuse also had to integrate theoretical and instrumental knowledge in order to train future professionals on the most appropriate forms of carrying out these actions. Today, the accelerated changes and profound contrasts that the world is witnessing mean that education often fails to address these complex scenarios, both in terms of content and didactics.

The session will explore some successful educational cases that can work as best practices. In Brazil, Sorocaba school of architecture is integrating modern heritage into the education course, research projects, and extension practices, exploring a social and environmental dimension.

13. Wessel De Jonge, "Sustainable renewal of the everyday Modern," *Journal of Architectural Conservation* (London, Routledge, 2017): 62-105.



Figure 1. Workshop activity, Healthy Home Summer School, URBiNAT H2020 Project, Coimbra, 2023 © Gonçalo Canto Moniz



Figure 2. Everyday modern heritage in didactic strategies, urban itinerary and documentation, Heritage and Rehabilitation course, Faculty of Architecture, University of Belgrano, Argentina, 2023 © Carolina Quiroga

In Lithuania, the program Vilius Tech Project discusses how soviet schools can be renovated with democratic principles through the students and communities' participation in multiple activities (workshops, tours, lectures). In Czech Republic an educational programme for non-architects (pupils) aims to transform modern schools built in the during the soviet period with architects, artists and educators promoting interdisciplinary. Finally, in Denmark, drawing is used as a pedagogical tool to investigate and to design based on socially sustainable strategies

Far from representing a limitation, this complexity is the possibility of adapting knowledge in a constantly evolving thematic field. It is also an opportunity to dare to explore didactic experiences in the disciplines of spatial practices to adapt or rehabilitate the legacy of the Modern Movement oriented to innovate and experiment, with situated and inclusive approaches, on the same pillars that sustained modernity: the social dimension and the environmental dimension. ■

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EDUCATION, RESEARCH, AND EXTENSION PRACTICES ON SOROCABA CITY (BRAZIL) MODERN ARCHITECTURAL HERITAGE

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ABSTRACT

Buildings of Brazilian modern architecture are presented throughout the undergraduate courses of Architecture and Urban Planning, especially considering subjects on Theory and History. Nevertheless, notwithstanding the iconic stature of certain buildings, numerous examples of modern architecture in Brazilian cities remain overlooked. Most of them are abandoned due to the challenges of its conservation; transformed, missing its modern characteristics, or even demolished. The aim of this article is to present different strategies developed on teaching, researching and extension practices with a specific emphasis on modern architectural heritage presented in Sorocaba city, São Paulo state, Brazil. First, in the field of teaching, local modern heritage is presented in site visits and investigation practices which employs documentary research methodologies. Furthermore, within an architecture design studio, the objective is to propose the reuse of a building. Then, considering research practices, two different areas are being investigated. One of them has the aim to identify modern buildings and its authors, in order to produce an inventory. The second study involves analyzing the conservation status of public and institutional brutalist buildings. Finally, in extension practices, as a demand from the Public Security Secretary of São Paulo State, the reuse of one of the cities modern buildings where the Agriculture Secretary was once located. Its reuse was proposed as an internship with the undergraduate students. Considering the publication "A Global survey on education and training for the conservation of twentieth century-built heritage", those initiatives are an important step for the recognition of those buildings by local society and the necessity to maintain and reuse them, through the establishment of public policies, as part of the local history. Finally, a future generation of local architects and urban planners are being prepared to disclose modern heritage and work together with local society as watchdogs for their conservation and reuse.

1. INTRODUCTION

The university was born with three different objectives – teaching, researching, and extension practices. In the undergraduate of Architecture and Urban Planning isn't different. The Brazilian resolution that organizes the curriculum establishes that all three practices must be developed by the students. As such, they must be presented in a document called "Political and Pedagogical Project."[1]

First, research activities can be developed in short term experience as undergraduate research. Furthermore, these practices can also be interconnected with the knowledge involved in Theory and History disciplines, methodologies for urban planning and urban design, as well as documentary research. The development of research skills is incentivised, with a particular emphasis on their application in the Final Graduation Project that includes conceptual ground.

Then, since 2023, due to a law established in 2018, the activities which comprehend extension practices must be developed considering 10% of the curriculum. They also can be developed during complementary activities.

The undergraduate program in Architecture and Urban Planning at Facens[2] has incorporated in its curriculum all the requirements stipulated by the Brazilian legislation. Modern heritage preservation is integrated into these three core practices throughout the entirety of the five-year program. The aim of this article is to present different strategies developed on teaching, researching and extension practices with a specific emphasis on Sorocaba's modern architectural heritage.

The modern architectural heritage can be seen in most of Brazilian cities comprehending a period when the urban development, public and private sectors defended the use of its language. In Sorocaba there are many examples from different authors and periods which are being investigated and are object of study in disciplines, research, and extension projects.

As the document "A Global survey on education and training for the conservation of twentieth century-built heritage" affirms, despite all the efforts to develop a preservation conscience in our students, concerning modern heritage, is necessary to reinforce more practices. From the identification to documentation, improving conservation and reuse practices.

With that in mind, the following article offers a response to the questionnaire outlined by Pedroni et al.[3] concerning the curriculum content of undergraduate courses in Architecture and Urban Planning. Teaching, researching and extension practices encompassing building conservation, and dissemination of research findings, increasing the level of interest among students and future institutional plans including XXth century heritage.

2. ARCHITECTURAL EDUCATION CONSIDERING MODERN HERITAGE

The Architecture and Urban Planning undergraduate course presents modern heritage since the beginning. For 5 years the theme has been integrated into education in design studios, language, and expression practices as well as

1. Brazil, "Resolução nº 2. Institui as Diretrizes Curriculares Nacionais do curso de graduação em Arquitetura e Urbanismo," 2010, http://portal.mec.gov.br/index.php?option=com_docman&view=download&alias=5651-rces002-10&Itemid=30192.

2. Facens is located in Sorocaba, a city in São Paulo State.

3. Margherita Pedroni et al., *Global Survey on Education and Training for the Conservation of Twentieth Century Built Heritage* (Los Angeles, United States of America: Paul Getty Trust and Docomomo International, 2020).

built environment technology. This integration is depicted in **Figure 01**, which illustrates the curriculum.

There are specific disciplines in which the main object of study is the modern movement and the XXth century heritage (highlighted in black) and disciplines where those subjects are explored as its background. For instance, in the first years the modern movement is presented during site visits when students identify buildings such the ones by Milton Ghiraldini called "Conjunto Santa Clara" (1963), "Edifício São Bento" (1964) and "Nossa Senhora da Ponte" (1965).[4] They are object of study to present transitional spaces and the connection between architecture and urban planning.

Then, the modern heritage is theme of investigation in theory and history disciplines, which employ documentary research methodologies to generate scholarly papers and reviews. As a result, the documentary research involves the production of 3D models in virtual and physical version, which are exhibited for the community, as seen in the **Figure 02**.

Those disciplines have two different frames to investigate the modern movement heritage. First, in the 2nd year, the modern movement is addressed in a wide global overview and then, in the 3rd year, the objective becomes to recognize and investigate Sorocaba's colonial and modern heritage in its wider national context.

At the end of the 4th year, students have as demand in architectural studio to propose the reuse of a building in the city centrum. The design comprehends concepts of minimal intervention to preserve modern characteristics. This studio prepares the students for the Final Graduation Project in which some of them are deciding the reuse as theme. In those projects, the students are considering not only modern movement buildings, but also examples from the beginning of the XXth century. That expresses their interest in the conservation and preservation of this heritage.

3. RESEARCH CONSIDERING MODERN HERITAGE

Brazilian modern architecture and its XXth century heritage widely recognized, especially its celebrated authors, but in the interior state of São Paulo this style was applied by local authors that are still to be discovered. Due to that, one of the main objects of study during undergraduate research, comprehend the identification and documentation of the local modern heritage. Therefore, the results are disclosed in order that local society recognizes this heritage value, proposing conservation plans.

The first research developed between 2021-2022 focused on mapping buildings featured in the renowned architectural magazine "Acrópole".[5] Then, new undergraduate research was developed, identifying buildings which had as main material fair-faced concrete elements. At that time, a comprehensive bibliographical review was initiated considering publications on brutalist architecture and other buildings from 1950 to 1980. As a result, 35 buildings were identified from schools, institutions, private buildings such residences, and public ones like the city hall and the Municipal Theatre.[6]

4. Taiana Car Vidotto and Giovani Leonardo Gomes, "Arquitetura moderna na Sorocaba planejada: O caso do Conjunto Santa Clara e dos Edifícios São Bento e Nossa Senhora da Ponte," in *14o Seminário Docomomo Brasil*, 2021.

5. Taiana Car Vidotto, Giovani Leonardo Gomes and Gustavo César Dias, "First, identify and document, then, protect and recover: the modern architectural heritage in Sorocaba," *5th Biennial of Architectural and Urban Restoration BRAU5* (2021): 145- 153.

6. Nádia Maria Boscariol Machado, Marcia da Silva Inácio, Rodrigo Henrique Geraldo, and Taiana Car Vidotto, "Recognition and identification of fair-faced concrete buildings in the landscape of Sorocaba/SP," *Revista Mix Sustentável* vol. 9, no. 2 (2023): 107-119. https://doi.org/10.29183/2447-3073.MIX2023.v9.n2.107-119

Then, the research selected four different buildings to identify their architecture, documents, and current state of conservation, evaluating any pathologies present in their façade. The buildings were the "Serviço Nacional de Aprendizagem Industrial" (1965, Architects Lúcio Grinover, Hélio de Queiroz Duarte, Marlene Picarelli e Roberto Tibau); the "Departamento de Agricultura do Estado" (DIRA – 1972, Architects Abrahão Sanovicz); the "Serviço Nacional de Aprendizagem Comercial" (Senac – 1980, Architects Flávio Marcondes, Tito Lívio Frascino e Vasco de Mello), and the "Municipal Theater Teotônio Vilela" (1983, Architect Luiz Athur Guimarães Navarrette)[7] **(Fig. 03).**

Also, the selection of these buildings was based on their respective design and construction periods, facilitating a comparative analysis of their current state of preservation. Both Senai and Dira were built in the 60's and Senac and the Municipal Theater were built in the 80's. In addition, they are buildings of public and institutional use. Their authors had a similarity in their role during the modern period: Senai and Dira were designed by architects which were responsible for the spread of modern language, part of a group called "Escola Paulista"; while the authors from Senac and the Municipal Theater were members of a group known as "Arquitetos não alinhados."[8]

On one hand, documentary records were compiled of each one of the 35 buildings with information like: author, location, year of construction, architect, and which publication mentions them. On the other hand, an extensive investigation was made concerning drawings and other documents from selected buildings. Then, its state of conservation and pathology presence were identified.[9]

The analyses of these buildings indicated structural modifications. Some of them due to the lack of conservation or maintenance decisions made by their administrators. This was evident in DIRA and SENAI, where the flat concrete slab was covered with a roof. At DIRA, the consequence was the skylight's closure, making the internal corridors darker than previewed in the original design. That intervention didn't impact the exterior of the building. However, at SENAI, the rooftop made a significant change in the way the concrete slabs and paraboloid where covered and can be seen only inside the main pavilion.[10]

The other two buildings – the Municipal Theatre and SENAC – hadn't passed through significant changes. Both maintain their structure, but a significant difference was identified between them. SENAC, a private school, had few pathological manifestations in the façade. In the opposite side, the Municipal Theatre, a public building, displayed a higher incidence of pathological manifestations. It is notable the difference due to private and public resources in the conservation and maintenance of both buildings.[11]

In addition, the transformation process of SENAI, considering documentary research in the school library and access to photography's that registries the interventions in the building, were published.[12] While the conservation status of the Municipal Theatre was investigated,

7. Machado et al., "Recognition and identification of fair-faced concrete buildings in the landscape of Sorocaba/SP," 112-117.

8. Machado et al., "Recognition and identification of fair-faced concrete buildings in the landscape of Sorocaba/SP," 112-117.

9. Machado et al., "Recognition and identification of fair-faced concrete buildings in the landscape of Sorocaba/SP," 112-117.

10. Machado et al., "Recognition and identification of fair-faced concrete buildings in the landscape of Sorocaba/SP," 112-115.

11. Machado et al., "Recognition and identification of fair-faced concrete buildings in the landscape of Sorocaba/SP," 116-117.

12. Taiana Car Vidotto and Rodrigo Henrique Geraldo, "O edifício do Senai de Sorocaba: do projeto ao estado de conservação atual," in *8o Seminário Docomomo SP* (Araraquara, 2022), 211-224.

leading to the publication of a comprehensive map detailing damages to its façade.[13]

Another research developed by other students focused on the production of a local architect named Geraldo Caiuby (1946). He was graduated in the year of 1970 at the Faculty of Architecture and Urban Planning of Mackenzie University, in São Paulo. Mr. Caiuby designed many residences and other buildings that made part of Sorocaba's landscape. The documentation of his production was important due to the transformation that is happening in the local context. Of the fifteen buildings attributed to him, nine remain in a good state of conservation; three were modified, losing their characteristics and other three were demolished.

In addition, in the Final Graduation project, developed in the 5th year, our students are selecting as a theme the adaptative reuse. During the year research is developed considering the documentation of the existing building, its author and condition until the development of the reuse **(Fig. 04)**.

Although the academic reuse projects were not implemented, they were presented in evaluation sessions which occur in a public place. During those sessions possibilities of reuse were highlighted and the buildings characteristics and present condition were disclosed.

4. EXTENSION PRACTICES CONSIDERING MODERN HERITAGE

In Brazil, the concept of the extensionincludes interdisciplinary initiatives aimed at fostering interaction between academic institutions and society, producing or implementing knowledge developed together with education and teaching.[14]

This extension practice law was approved in 2018, the same year that the course started. Since then, some of the activities developed concerned the identification, documentation, and promotion of the modern heritage. Not only the buildings that are famous or that show off in the city landscape, designed by well-known architects, but also the ones which were built and designed by local architects.

In 2020, during the COVID pandemic times, São Paulo State Docomomo proposed local workshops in different cities, including Sorocaba. The main objective was to identify, through Google Maps walks in Santa Terezinha neighbourhood, buildings that had elements recognized as modern style. At the occasion, two teachers and nine students were involved. Throughout the virtual visit, was possible to identify 29 buildings that had the characteristics indicated.

In that sense, our most notorious example of extension practice came as a society demand. The Secretary of Public Security from the State of São Paulo started an investigation on how they could organize 13 police districts in a bigger building. The objective was to concentrate strategical sectors of civil police to work together, reusing an available public building. The building selected was useless and had fair faced concrete façade, independent structure, with brutalist characteristics.

13. Nádia Maria Boscariol Machado, Márcia da Silva Inácio, Rodrigo Henrique Geraldo, and Taiana Car Vidotto, "Anomalies in the modern building Teatro Municipal Teotônio Vilela: identification and diagnostic methods," *50º Congresso Brasileiro do Concreto,* Brasília, 2022.

14. Brazil, "Conselho Nacional de Educação/ Câmara de Educação Superior. Resolução no. 608 – Institui as Diretrizes para as Políticas de Extensão da Educação Superior Brasileira," 2018. http://portal.mec.gov.br/index.php?option=com_docman&view=download&alias=102551-pces608-18&category_slug=novembro-2018-pdf&Itemid=30192.

First, the director from the civil police invited the teachers from the under-graduation courses of Architecture and Civil Engineering to identify if there was any signal of significant damage in the building and if a preliminary study was worth it. After this visit and the confirmation that the building had minimal conditions to be occupied with some intervention, a group of two teachers of Architecture and Urban Planning invited students for a short-term internship to develop its reuse with new activities.

When the design process started, there weren't information about the building such as its drawings, who was its author or when it was built. Due to that, the first step was to make an "as built" model. At the same time, visits were made in different police stations considering specificities of the working space.

When the "as built" model was concluded, preliminary studies started to verify the distribution of spaces, maintaining the functionality between each sector. The inherent characteristics of the building, including the rhythm of the concrete structure and the glass façade were maintained, contributing to the formulation of the architectural concept. While the building design was defined, investigations were made in public archives to discover if any documentation of the building could be found. In Sorocaba, any information was found, but in the Archive of the Faculty of Architecture and Urban Planning from University of São Paulo, searching for the architectural projects that were built in Sorocaba, was found the plans of the building that once was called Secretary of Agriculture – Regional Directory, from 1969, whose author was Abrahão Velvu Sanovicz (1934-1999). Then, it was possible to identify the intentions of the original design, as well as redefine the use of some the skylights that were once covered by a new roof as a solution for infiltration problems.

All the design process was a collaborative effort involving both teachers and students. When the first study was made and presented for the directors, the story of the building was clear, and the decisions made to conserve its original characteristics and speciality were respected. Due to the vertical circulation to the first floor, was conceived a simple intervention on the back façade of the building with a new lift for the access of people with special necessities. That experience highlights a partnership developed with the public sector and how the documentary research is significant in the design methodology of reuse.[15] Unfortunately, until now the building is empty.

5. CONCLUSION

The presence of XXth century heritage and modern architecture in the curriculum of Architecture and Urban Planning undergraduate course is remarkable. Considering the three different principles of university roles – teaching, research, and extension practices – they can be seen in all of them. As a result, the students of the institution are prepared to recognize, respect, and propose new uses for them, an obligatory course of action in light of our current urban development and the educational needs of preserve and

15. Ana Carolina Formigoni Basso Marques and Taiana Car Vidotto, "Pesquisa e Extensão em meio à pandemia: o projeto de reuso adaptativo do DIRA - Sorocaba-SP," *XXXVIII Encontro Nacional sobre Ensino de Arquitetura e Urbanismo, XXI Congresso da Associação Brasileira de Ensino de Arquitetura e Urbanismo* (2022): 81-95.

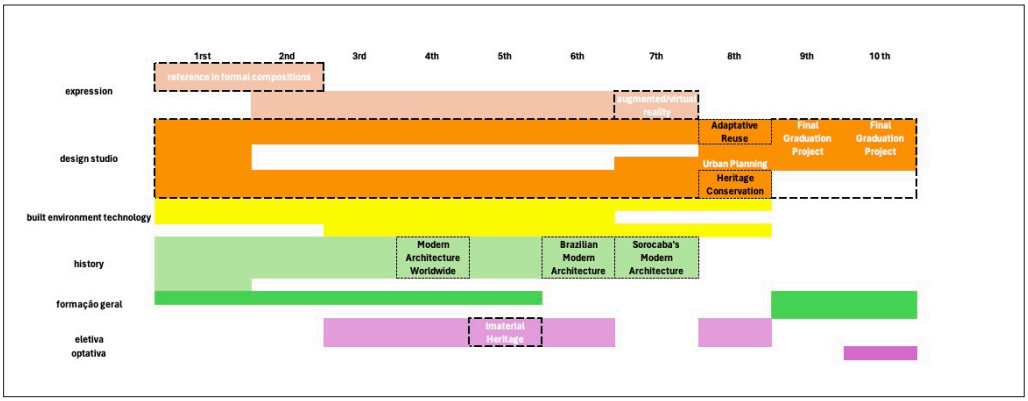


Figure 01. Architecture and Urban Planning Curriculum and the XXth Century heritage. © Credits: the authors, 2024.



Figure 02. Dira building (Abrahão Sanovicz, 1972, Sorocaba, Brazil) –physical and virtual model produced by the students. © Credits: the authors, 2023.



Figure 03. Three of the four investigated buildings – Senac (Architects Flávio Marcondes, Tito Lívio Frascino e Vasco de Mello, 1980), Senai (Architects Lúcio Grinover, Hélio de Queiroz Duarte, Marlene Picarelli e Roberto Tibau, 1965) and the Municipal Theater (Architect Luiz Athur Guimarães Navarrette, 1983), all of them in Sorocaba, Brazil. © Credits: the authors, 2022.

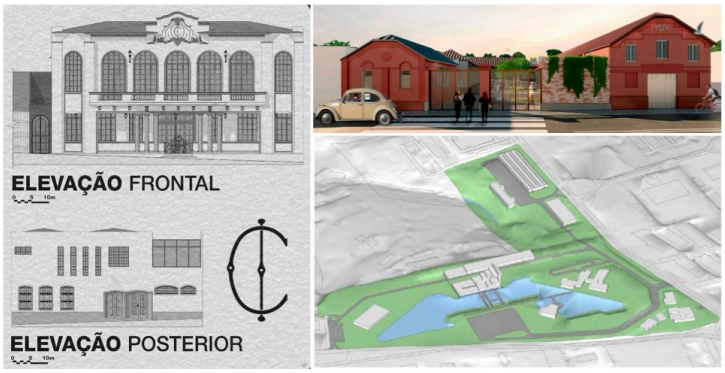


Figure 04. Reuses proposed by our students in XXth century heritage considering a public building in Itu city (unknown author, Ituano Clube, 1947); a private (unknown author, Trico, 1948) and an industrial building (unknown author, Dafferner S/A, 1976) in Sorocaba city, Brazil. © Credits: Lucca Chieregatti, 2023; Vitória Amorin; 2023 and Giovani Gomes, 2023.

inhabit our material heritage. Those practices fulfil the 11th United Nations Development Goal – Make cities and human settlements inclusive, safe and sustainable, promoting sustainable construction industry activities.

It is general agreement that buildings designed by well-known architects are easily reused and conserved. But the ordinary ones still need to be identified and their importance disclosed for local society. As they become reused, other demand is the establishment of a conservation plans.

Nevertheless, some efforts can still be made with the use of innovative tools to amplify the scale and precision of the research. In the next years the creation of 3D models considering Heritage Building Information Modelling (HBIM) is an institutional policy. As the documentation of those existing buildings can be developed during design studio disciplines, they can be articulated with public sector to establish conservation plans.

In addition, another aspect to be improved, is the connection between academic sector with public and private agents. As both have a determinant role in the civil construction investments a close dialogue could guarantee the recognition of those buildings and project purposes that consider the reuse of existing structures.

Moreover, as a future contribution, a digital platform where all research results, documents and reuse design projects can be available. Besides, as a limitation, knowledge itself will not guarantee the preservation or reuse of modern buildings. New practices concerning the public and private sector must be developed to intensify social and environmental aspects of modern buildings conservation. ■

BIOGRAPHY

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IMPLEMENTING DEMOCRACY IN SOCIALIST ARCHITECTURE. ADAPTATION OF FORMER SOVIET SCHOOLS FOR CONTEMPORARY EDUCATION NEEDS IN LITHUANIA

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ABSTRACT

Most of the educational buildings implemented in Lithuania during Soviet rule (1944–1990) are still in use. When they were built, the school was an important institution that reinforced the Communist utopia. The totalitarian model of society, based on hegemony, propagandistic rites, and segregation, was precisely reflected in the architecture of schools. Therefore, contemporary communities in this country face challenges as a result of the non-compliance of buildings and require up-to-date equitable and inclusive education. Spaces which before served in the education of the Soviet man today should be rearranged for a democratic society.

#31

Post-war modernist school buildings are an aesthetic, cultural, and technological representative of the time. They are standard-type structures, designed from a functionalist approach, and assembled from prefabricated reinforced concrete elements, implemented a dozen times in various urban contexts. At the same time, the buildings are original works of architects from that time. Research shown through design studies demonstrates how different standard school buildings can be adapted to a more democratic education system. This university educational project was communicated with the local society. By transforming these buildings from the past, we preserve cultural diversity, engage society in planning processes, and promote sustainable use of resources.

1. SLOW CHANGE TOWARDS MORE DEMOCRACY

Slow change towards more democracy. In Lithuania, there continues to be an urgent need to address spatial challenges in education, which includes adaptation of school buildings so that they meet current needs. However, this is a slow process, particularly for many buildings used for primary and secondary education.

When Lithuania gained independence in 1990 and was no longer under the regime of the Soviet Republic, it inherited an infrastructure designed to support a socialist society. Back in 1942, Joseph A. Schumpeter[1] stated the fact that the concepts of socialism in the Soviet Union had nothing to do with democracy in detail. The spatial infrastructure in this country, like the infrastructure in other parts of the former Soviet Union, was largely the result of standardized design. This was true at least for the buildings for education and childcare. The importance of these buildings cannot be underestimated because these are the basis of cultural education and the political views of the citizens. Educating children was a crucial tool for strengthening support for the Soviet state: Schools not only impart knowledge and skills, but also have a great influence on the moral education of students. It is well known that the Soviet Union, for example, through a detailed system of actions aimed at youth, tried to instill ideas that reflected the dominant communist ideology.[2] Besides education, the system of pioneers and communist youth movements was perhaps the best-known instrument for the coercive sociocultural shaping of young children.[3]

The legacy of standardized school buildings in the former Soviet Union reflected political goals in the sense of uniformity and top-down control. For example, in Lithuania, the absolute majority of schools built between 1944 and 1990 were so-called type schools (**Fig.1**). The buildings had been implemented using prefabricated elements according to the projects, created for multiple uses. The floor plans were typical for the different climate regions and there are just a few exceptions when custom in-site design was used. In contrast to an international context, education in the twentieth century blossomed with a great diversity of approaches[4]. However, in the Soviet Union at that time, only one educational paradigm was permissible. This was inconsistent with the idea of a more democratic conception of education in which students are guided as free individuals. The first statement on the new approach in national education was published in 1989,[5] which required education to use new educational methods that focused on the individual. In order to implement more democratic principles in education, the government of Lithuania, soon after restoring statehood in 1990, began to gradually change the legislation on Education and Care. The Law of Education of the Republic of Lithuania was approved in 1991. In the following years, many changes were made in technical, hygiene, and educational legislation to promote equitability, inclusiveness, diverse education, and person-centred care. Since 2024, the law on inclusivity has been in force, and pioneering work has now been exchanged for cultural courses or sports activities as part of out-of-school care. The law on childcare that comes into force in 2024

1. Schumpeter Joseph Alois, *Capitalism, Socialism and Democracy* (London and New York: Routledge, 1976).

2. Jonathan Tudge, "Education of Young children in the Soviet Union: Current Practice in Historical Perspective," *The Elementary School Journal vol. 92*, no. 1 (September 1991): 121-133.

3. Susan Reid, "Khrushchev in Wonderland. The Pioneer Palace in Moscow's Lenin Hills, 1962," in *Walls that teach On the Architecture of Youth Centres*, ed. S. Pietsch et al. (Prinsenbeek: Yap Sam Books, 2015), 127-155.

4. Lukšienė Meilė et.al., *Tautinė mokykla. Lietuvos vidurinės bendrojo lavinimo mokyklos koncepcija* (Vilnius: Žinija, 1989).

5. OECD, *Education in Lithuania: Reviews of National Policies for Education* (Paris: OECD Publishing, 2017).

requires mandates after-school activities. With these successive adjustments, Lithuania followed the European trend and legislation and strengthened its democratic principles step by step, and will continue to do so.

However, while the legislation was changed on paper, implementation regularly lagged behind. The application of new teaching methods proved difficult, in part because it required a change in teachers' attitudes. Existing teachers are not naturally prepared to exchange their past (positive) experiences with education for new ideas and working methods.[6] Another important cause was the lack of financial means to modify buildings and make them more suitable for the new education, which, for example, required more independent workspaces. Especially in the first decade after 1990, financial resources were limited, and little new construction or adaptation of existing buildings took place. Furthermore, although schools were technically improved with the financial support of European funds, this was not used to fully adapt buildings. In recent years, however, there have been increasing examples of the completion of new schools where innovation has been implemented. Since school building adaptation is also a spatial task, a team of teachers and scholars from Vilnius Gediminas Technical University (Vilnius Tech) initiated a long-term project to enhance knowledge and research in this area. Since 2015, within the framework of university teaching and research in an international context, the team has been developing numerous activities to strengthen and stimulate this process of building renewal as a bottom-up strategy. Not only have they themselves participated in this change for a long time, in fact for several years in a row, but they are also convinced that participation of other parties can strengthen the process of democratization in schools.

International Perspective Project. The theoretical background of the team of scholars' approach is based on an international reflection on the task, which has shown that the renewal of school buildings is relevant. An essential aspect of said approach is the focus on the participation process, in which, for example, extensive research has been carried out by the Germany-based Montag Stiftung. The influential German foundation has demonstrated through numerous case studies, pilots, and extensive information to schools that renewal is a slow but necessary and realistic process. An example of this is the 'Bildungslandschaft Altstadt Nord' pilot in Cologne, Germany, which has been ongoing for several years.[7]

The Vilnius Tech method aligns with research that prefers to approach technical intervention on buildings as part of an integral task. That stance has been observed by researchers in democratically governed countries in Western Europe.[8] For example, in the Netherlands, a team of experts and architecture students of Delft University of Technology, under the initiative of the Chief Government Architect (Rijksbouwmeester), investigated the practice of adapting primary school buildings and promoting integral design.[9]

In practical terms, the multiyear project, which began in 2015, consisted of annual summer schools, field trips to schools, research on school building design, the creation of open-air educational spaces, two international public

6. Ernst Hubeli et.al. *Schulen Plannen und Bauen. Grundlagen und Prozesse* (Montag Stiftung Jugend und Gesellschaft, 2012).

7. See for research regardng standardized schools: R. Hillmann et al., *Moderne Architektur der DDR. Gestaltung Konstruktion Denkmalpflege* (Wustenrot Stiftung/Spector Books, 2020). Doris **Österreicher**, *Sanierung im Schulbau. Untersuchung von energieoptimierten Sanierungskonzepten in Verbindung mit neuen Raumanforderungen in bestehenden Schulbauten* (Technical University Vienna, 2015) (dissertation). A. Lederer, et.al., "Schulen in Deutschland", in *Schulen in Deutschland: Neubau und Revitalisierung*, ed. I. Beckel et al. (Ludwigsburg: Wustenrot Stiftung, 2004), 36-67.

8. D Broekhuizen et al., *Scholenbouwatlas. Verbouwen als nieuwe opgave voor basisscholen en kindcentra* (Rotterdam NAi010 publishers, 2015). D. Broekhuizen, Arkesteijn, M. et al., "Conversion Strategies for Dutch Primary Schools. Practice and Refinement", in *Journal of Architecture and Urbanism* volume 44, no. 1 (2020): 69-77.

lecture series, and two symposia. This paper presents the main findings of the Vilnius Tech project and aims to provide an analysis of the project. The main components of that bottom-up project can be summarized as historical research, research by design, and presentation, which will be further explained below.

2. THEORETICAL AND HISTORICAL ANALYSIS

To gain a deeper understanding of the existing school stock and the task in Lithuania, historical research was conducted initially. The research, carried out by several researchers at Vilnius Tech, was motivated by various perspectives.

Historical research on school buildings in Lithuania uncovered specific local buildings that are characteristic of Lithuania. The article also presented the first national overview of the status of historic monuments and school buildings in Lithuania.[10] In a second article, they focused on the standardization of school design as part of Soviet practice. That research shed a completely new light on standard schools. The authors argued that while standard schools in Lithuania reflected the application of building regulation known as 'SNiP', there were just as many instances in which they actually deviated from standard designs. Specific variations of standard schools were constructed, which are now part of the legacy of school buildings.[11]

In addition to these literature reviews, the scholars also conducted analyses in situ of buildings. During excursions of the summer schools, the focus was on buildings from all building periods, not only historical buildings but also sporadic) new buildings. From those visits to the capital city, Vilnius, and other towns in the country, it became evident that in recent years more investments were made with regard to new construction and alteration. The conversion of the Kačerginė School Multifunctional Center (2022, 2L Architects) shows that existing buildings can also be well adapted to new functions and societal values. Although at the beginning of the project in 2015 it was difficult to find new schools, in recent years several new school buildings have been completed, in which innovative ideas regarding education have been realised. It has helped to better understand the landmarks for the renovation of existing building stock for education and has triggered changes there. More and more schools are adopting people with mobility, hearing, visual, and mental disabilities. In many schools, spaces for working individually and as part of a team have been installed, and improved. At the same time, recreation and personal hygiene spaces instead of mass WC blocks have been diversified. The school community's identity is being more strongly expressed in the space A significant transformation involves rejecting the idea of using space for just one purpose. By making minor changes, such as using fixed-to-floor furniture, and non-transparent doors, existing spaces have become more flexible, multipurpose and now continually evolve. Outdoor space use was developed. School premises in many municipalities have become open to their neighbourhoods.

9. Nekrošius Liutauras and Riaubienė Edita, "Lietuvos mokyklų architektūros paveldas. I-II dalis," *Archiforma* (Vilnius: Archiforma, 2016), no. 1-2, 88-96, no. 3-4, 72-85.

10. Riaubienė Edita and Nekrošius Liutauras "Standardisation and architectural ideas for school buildings in Soviet Lithuania," *Oxford Review of Education* 47, no. 5 (Abingdon: Taylor & Francis, 2021): 638-658.

11. Nekrošius Liutauras, Ruseckaitė Indrė, and Riaubienė Edita, "Learning environment by the future society: development of school grounds in Lithuania," *Landscape Architecture and Art vol.13,* no. 13 (Jelgava, 2018): 105-114.

To enrich the content, the researchers also invited external researchers. They presented the latest insights in their fields, such as the history of educational attitudes, the construction of community schools, and the further integration of children with disabilities into regular education. These studies provided a better understanding of the cultural values of buildings and the history of ideas of the building stock. Such information is considered valuable for decision-makers in critical building handling.

3. RESEARCH BY DESIGN AS A TEST AND PROOF

A second research approach is that of design research, which focuses on devising novel solutions for existing school buildings. During several summer schools, students analysed existing school buildings and proposed experimental designs to functionally improve historic buildings. In doing so, they worked with themes, several of which are mentioned below. At the beginning of the research (in 2015), students analysed five different types of kindergarten, primary and secondary schools (built between 1950 and 1970) in Lazdynai and how these buildings could be adapted to new educational methods.

In 2021, with the support of the mental health hospital, students discussed issues of inclusivity in educational spaces. They chose a standard school for 1284 students designed in 1969 at the State Institute for urban design in Vilnius 'Miestprojektas' by the architect Aloyzas Geibūnas, designated project No 222-1-94. In 2023, students discussed wellbeing issues at a full-day school. They analysed and proposed spatial transformations for the school that was built based on a project prepared in 1960 at the state design institute in Riga, 'Latgiprogorstroj'. In 2016, students demonstrated the potential to incorporate new educational methods into a school attended by 1392 pupils. The school, which was established in 1969, underwent a custom design by architect Elena Nijolė Bučiūtė in 1966 under Miestprojektas. The 2018 workshop focused on vocational education in historic buildings, using the former Jewish ORT school from 1925, which is currently utilized by the railway school, as a case study.

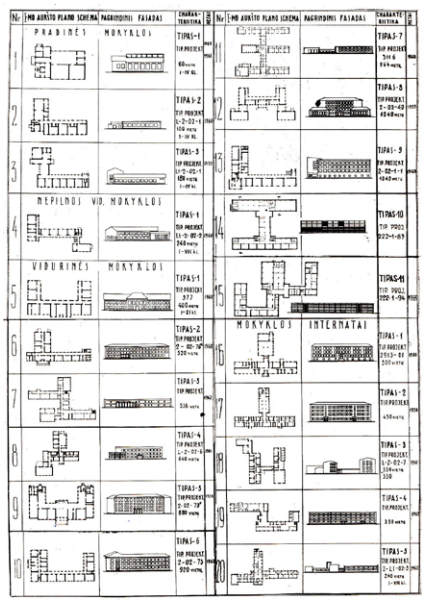
The analyses as a whole showed that standardized schools from the Soviet period (1944-1990) could indeed be made more suitable for new education, inclusivity, and care. For example, by changes could be made by adjusting the layout of the building, or developing a different vision for the outdoor space. The advantage of design research is that it allows for the development of fundamental typological variants with less emphasis placed on economic or technical feasibility. That variation in types of play opens up new conversations about desires and possibilities and can enable existing school types to think more freely about their existing building.

In addition to design research, students alongside the school community, also conducted small interventions in schools learning environments. These small interventions signified steps taken towards innovation. The addition of some play objects for the yard of an existing school (placed in a standard type kindergarten building) – the Gymnasium of Blessed Theophilius

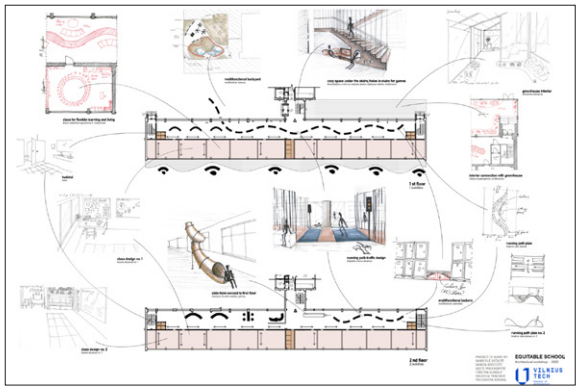
Figure 1. Juozas Baršauskas, Algimantas Stapulionis. Scheme of main standard type projects for secondary education schools in Lithuania, 1974.[4]

Figure 2. Barbara Pampe, Vittoria Capresi, Indrė Ruseckaitė, Liutauras Nekrošius, curators. Courtyard of Blessed Theophilius Matulionis Gymnasium, Vilnius, Lithuania, 2016. Architecture students and 5th grade pupil improving outside space for education and recreation, International Summer School Go-East. Photo: Vilnius Tech.

Figure 3. Dolf Broekhuizen, Liutauras Nekrošius, Edita Riaubienė, curators. Gabrielė Gečaitė, Gabija Griciūtė, Aistė Pakamorytė, Tristan Scheelf, Valeriia Yanchur, Yelizaveta Dziuba, student authors. Gerosios Vilties Progymnasium, implemented according to standard type project for 1712 pupil, in 1968, Vilnius, Lithuania. Fragment of student proposal to improve educational space for more equitable education, International Summer School 'Equitable School', 2022.







Matulionis in Vilnius in 2017 shows that not only the building is relevant for educational renewal, but also that the outdoor space is an inseparable part of the building (**Fig.2**). In their publication on this intervention, the authors state: 'Understanding of spaces and processes of school together with its community reveal the hidden potential and identity of the school, therefore context-aware transformations rather than predesigned solutions are more acceptable to the community.' The restoration of the disappeared and the development of new connections between the outer and inner recreational spaces is a priority.[12]

Although interventions are only minor locally, the project's presentation has a broader scope. The project also sewed a seed among architecture students who participated in the summer school (**Fig.3**), introducing them to the subject matter, immersing them in it, and encouraging them to sooner or later implement the experiences and views in design practice.

4. KNOWLEDGE EXCHANGE AND PRESENTATION

The central idea of summer schools is to analyse actual buildings and their daily connection with the users of the building. This process involves spending several days in a real school, analysing it, and developing design proposals. This approach is motivated by the need to come up with solutions for existing stock. This process started in the Vilnius district Lazdynai, a neighbourhood

12. The title is inspired by a French publication: Anne-Marie Chatelet et al., *Paris a l' ecole* (Paris: Arsenal, 1993).

built in the sixties and seventies as a model socialist district that was widely presented in vocational magazines in the USSR, GDR, and France at that time.

Equally important were the series of presentations in the participating schools themselves. When school boards and teams invited students to the presentations of their design studies, the knowledge of new possibilities was brought to the attention of the target audience. In addition to these local presentations, an exhibition was also organized at which the results of the scientific studies were made accessible to a wide audience. The exhibition, titled "Lithuania goes to school", travelled through different schools in Lithuania (and the title was inspired by Chatelet, 1993).[13] The aim was to broaden the knowledge of community members on school construction and the ideas behind it. In addition, the spatial transformation model of schools was prepared by scholars and is used by the Vilnius municipality for architectural competitions.

The scientific component of knowledge exchange was further fleshed out through two congresses in which the international context was, once again, specifically sought after. Various experts, with backgrounds in the fields of history of education, architectural history, and psychology, were given a platform for knowledge exchange and discussion. The Vilnius City Municipality, founder of most city schools, was not only the host, but also actively involved itself. It shows how closely practice and research, experts (both architectural, and educational), and communities are intertwined in this project.

5. CONCLUSIONS

In this project, a team from Vilnius Tech, alongside a group of international experts, made an effort to conduct socially relevant research, contributing to the transformation of school buildings in the country and aligning them with more democratic ideas. The team of scholars has provided a unique interpretation of dealing with socialist heritage. The project's three elements — researching the history, present, and future of school buildings, are inseparable — showing that the integrated approach to the task makes sense. The use of a participatory process is perhaps itself a democratic aspect. This involves not only the participation of the school community, but also empowers students to participate as future building designers. ■

13. Baršauskas Juozas and Stapulionis Algimantas, "Mokyklų pastatų funkcinio–erdvinio sprendimo raida Lietuvoje," *Lietuvos TSR Architektūros klausimai* (Vilnius: Mintis, 1974), 307.

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BIOGRAPHY

Liutauras Nekrošius (Lithuania) is an architect. He earned a PhD degree in History and Theory of Architecture from Vilnius Gediminas Technical University in 2009. He is an Associate Professor and Dean of the Faculty of Architecture at VILNIUS TECH, a member of the Lithuanian National Commission for UNESCO. His current research interests are the history and preservation of modern architecture and the architecture of educational buildings. He publishes and presents regularly on educational buildings and modern heritage.

Dolf Broekhuizen (The Netherlands) is an independent architectural historian. He received his PhD from the University of Groningen in 2000 for a dissertation on Dutch post-war architecture. He advises governments, companies, and cultural institutions on Dutch architecture, urban planning, and heritage from the twentieth century. He also teaches at the Faculty of Architecture at Delft University of Technology. His research focuses on renewal movements in Dutch architecture of the twentieth century. He publishes regularly on educational buildings. Since 2015, Broekhuizen has been a regular guest lecturer at VILNIUS TECH in Lithuania.

PIMP DANISH MODERNISM: DRAWING AS A PEDAGOGICAL TOOL FOR A SUSTAINABLE FUTURE

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DET DANSKE INSTITUT I ROM

ABSTRACT

The paper discusses the outcomes of an elective course for North-American universities' undergraduate students studying abroad in Scandinavia, since Spring 2016. Each semester, students are tasked with examining and assessing the works of Danish architects of the XXth in Copenhagen, Denmark. The primary objectives of this course are twofold. First, it aims to foster an understanding of the Danish modern buildings as physical and social artifacts. Second, it aims to explore how these same buildings can be adapted to meet contemporary social sustainable standards. Students work in groups and represent the complexity of the considered buildings, encompassing materiality, technical processes, cultural, urban and social values, solely through traditional representation methods: drawings. Backed by two editorial projects introduced in class as premises, students utilize digital techniques, incorporating 2D projections and 3D isometric and perspective representations, enriched by diagrams and concise textual descriptions. The final scope is to introduce by drawings two possible interpretations for each case study: one related to its state of the art at the moment of the investigation; and a second one propelling a "pimped" intervention of the case study based on socially sustainable strategies. The pedagogical objective is to bridge the gap between the students' incomer cultural contexts and the Scandinavian hosting one by employing a shared code of representation that, as it is argued, forms the foundation of the architectural profession and a tool to propel alternative historiographies challenging an established heroic depiction of Danish modernism. The drawings produced demonstrate how students grounded their work in both empathy and abstraction to make the specific strategies for implementing sustainability in Danish modern buildings accessible to a wide readership. As a result, rather than mere reporting of some architects' design intentions, students introduce novel design proposals that adapt Danish modernism to contemporary values and principles of social sustainability.

1. PREMISE

The specificity of teaching an architectural elective for exchange students enrolled in North American universities traveling to Copenhagen, Denmark, combined with the task of instructing a design elective course about "Detailing and Sustainability in Scandinavian Architecture", underscores the need to introduce students, many of whom are traveling to Europe for the first time, to accessible literature projects as a mediation. On one hand, there is a need to establish a common starting point for the course among individuals who have never met and come from diverse cultural and university backgrounds[1] on the two course core foci: Danish modernism and social sustainability in the Nordic Context. On the other hand, there is a need to provide facilitation for their own travel, exploration, and living in a completely unfamiliar city for a semester.

Pertaining the first core focus, the required mediation may not only serve as an introduction to Danish architecture and specifically Danish modernism, but also as a systematic overview of Copenhagen, comprising organized spaces, selected buildings, and established routes: an architectural guidebook. From Fall 2021 to Fall 2023, the chosen guidebook was centered on the architect Kay Otto Fisker (1893 - 1965) with the scope of contributing to an international re-assessing[2] of a Danish actor whose name, for too long, was overshadowed by most known names, as his students Arne Jacobsen (1902 - 1971) and Jørn Utzon (1918 - 2008). The architectural guidebook "Kay Fisker - Københavnske Boliger" was itself a former pedagogical exercise held at the Royal Danish Academy by faculties Peder Duelund Mortensen and Mogens Fich[3] whose primary focus was mapping twenty Fisker's housing buildings in the Copenhagen area. What the report contains are few, short, but essential information: a city map, a list of works, and for each of the twenty housing blocks, a city key plan, the full or partial plan of the block with an apartment type, a photo, an address, a short description and, when possible, a reference to one or more published article in Danish specialized architectural magazine. Following the co-organization of a Kay Fisker Symposium[4], since Spring 2024 another guidebook has been selected to both keep up the re-assessing of the canonical historiography of a Danish Modernism mainly centered on welfarism and few renowned architects.[5]And also, to avoid perpetuating a historiography that centres solely on male authors. The second chosen architectural guidebook has been thus the much more recent "By Women. A Guidebook to Everyday Architecture in Greater Copenhagen" as the first outcome of a pivotal scholarship in Danish female architecture (1925-75) titled "Women in Danish Architecture" (Copenhagen University, 2020-23) by the architectural historians Svava Riesto and Henriette Steiner.[6] As the previous one, what the guidebook contains are concise information: a city map, a list of addresses, and for each of the fifty case studies, one or more contemporary photos of the built/landscape project and a short description. In this case, since the drawings are not added to the guidebook, we, as faculties, must operate with archival review[7] while preparing the syllabus, adding, or excluding the case studies based on the accessibility of their set of drawings.

1. DIS is a non-profit study abroad foundation established in Denmark in 1959, with locations in Copenhagen and Stockholm. Students at DIS span from architectural foundation enrolled in liberal art colleges, to professional architectural ones enrolled in polytechnic universities.

2. Samuel Quagliotto, *Kay Otto Fisker: Architetto danese della monumentalità del quotidiano* (Roma: Campisano Editore, 2021); Martin Søberg, *Kay Fisker: Works and Ideas in Danish Modern Architecture* (London: Bloomsbury Visual Arts, 2021); Andrew Clancy and Colm Moore, *Kay Fisker: Danish Functionalism and Block-Based Housing* (London: Lund Humphries, 2022).

3. Peder Duelund Mortensen and Mogens Fich, *Kay Fisker - Københavnske Boliger* (Copenhagen: Kunstakademiets Arkitektskole, 1993).

4. *Kay Fisker Symposium: Appraisals and Reappraisals*. Organised by Angela Gigliotti and Martin Søberg, 29th – 30th November 2023. The symposium was funded by the Carlsberg Foundation and hosted by the Culture at the Royal Danish Academy – Architecture, Design, Conservation in partnership with Det Danske Institut i Rom – Accademia di Danimarca in Rome.

5. Katrine Lotz et al., eds., *Forming Welfare* (Copenhagen: Danish Architectural Press, 2017).

6. Jannie Rosenberg Bendsen, Svava Riesto, and Henriette Steiner, *Untold Stories: Women, Gender, and Architecture in Denmark 1930-1980* (Copenhagen: Strandberg Publishing, 2023).

7. "Arkiv Arkitekten," arkitekten, accessed May 6, 2024, https://arkiv.arkitekten.dk/. "Digitale Samlinger," Det Kgl. Bibliotek, accessed May 6, 2024, http://www5.kb.dk/editions/any/2009/jul/editions/da/.

Pertaining the second core focus, the mediation occurs between the introduction of the global complexity of the multidisciplinary environmental dimension, and the local specificity of Danish social sustainable practices and strategies. What might look like a task of Sisyphean proportion has been achieved by a polyvocal perspective. Students have been exposed to a combination of external stimuli focused on practices of sustainable critical thinking, rather than by introducing a single positionality about sustainability. Such combination aims to investigate the impact of systems, processes, organizations, and activities on people and social life filtered through the lens of architecture and building environment. Therefore, the stimuli span from lecture-based presentations by Environmental Policy makers, Cradle to Cradle consultants and Research-based Danish architectural practices; flipped students' presentation about certified sustainable precedents in Scandinavia and their shortcomings; field study visits to community-supported agricultural rooftop[8] and to local community centre re-activated thanks to bottom-up initiatives.[9] Such interdisciplinary behaviour have led to a diversity of concepts, methods, and tools being included by students both in the research phase and in the design process during in-class workshops.

2. THE COURSE

The course in object is a semestral elective for a maximum of 22 students, organized into two modules where the city itself acts as the classroom. Both modules deploy drawing and representation as a tool of knowledge. While the first concerns crucial Danish modern detailing, the second one targets Danish social sustainability. The students' learning is assessed towards the participation to a practical workshop along the semester titled "PIMP MY BUILDING!" divided into as many assignments as the modules of the course and devoted to learning about an assigned building in Copenhagen among the ones of the chosen guidebooks. The first assignment aims to represent, approach, and problematize the state of the art of the assigned building; the second one is meant to propose a "pimped" version of the same building using sustainable strategies. Students are asked to develop the outcome of the workshop as a team, though grading is individual. Generally, teams are of 2-4 students and a single A3 sheet is outlined for each assignment along the editorial guidelines and layout offered by the instructors. Overall, in both assignments, students are tasked with applying the interdisciplinary stimuli they've learned about sustainable complexity to actualize the Danish modernist buildings under investigation. This application occurs at various levels: in the first assignment, it involves conducting semi-structured interviews with inhabitants to gain insights from the diverse social actors who experience modern spaces daily. This approach helps students to better understand the needs and desires of users and evaluate the effectiveness of existing sustainable solutions, if any. As a result, students often opt not to focus solely on technological strategies in the second assignment, despite studying it closely (**Fig.1**). Instead, they propose spatial strategies that promote social dimensions, engage with the tenants of Danish modern legacy, and foster inclusion, social participation,

8. "Østergro Tag Farm," Østergro, accessed May 6, 2024, https://www.oestergro.dk.

9. "EnergiCenter Voldparken," energicenter.dk, accessed May 6, 2024, https://energicenter.dk/.

and equitable development. This might span from re-conceptualizing the "gaard" as the common courtyard at the center of many assigned building blocks, de-privatizing it and activating strategies to resist its gentrification; to the re-assessing of the norms and codes that regulate the Danish private property and associationism in dwellings, namely the "ejerforening" and "andelsboligforening" as the different schemes to organize the association of owners based on what is actually owned being the walls or a virtual share.

3. DRAWING AS A TOOL OF KNOWLEDGE

Students are thus empowered in learning and listening to the local voices to analyse and rethink in their own design proposal the social and environmental dimension of the Danish modern buildings with the tools of the architect: the drawing. Starting from the assumption that everything could be represented, the question is understanding how. Technically speaking, a good representation is obtained through what is called *ensuring perception*. In other terms, the task is to ensure that what is shown is a good approximation of what we intend to convey. Nonetheless, an additional responsibility emerges in relation to the readership.

The representation of architecture (more than other subjects) is probably one of the most emblematic cases related to the history of representation. Architecture and the built environment have always been both an art (linked to aesthetics) and a science (building practice) and have recently increased their technological complexity and broadened the range of their effects on society.

Historically, the tradition of detailing has been linked to the architect's ability to enrich and give value and meaning to the architecture itself, whereas today detailing is in danger of simply becoming a technological response and solution to presentation needs.

This means that a more abstract approach must be used to describe the internal complexity of architecture, asking representations to resolve the increased complexity of the concrete phenomenon in front of us.

In parallel, learning processes, particularly in the field of architecture, are influenced by the evolution of digital media and reflect an indirect transmission of knowledge. Our mind is formed by organizing its ability to learn by following the way the new media work.

During the course, the pedagogical approach considers how to deal with this transformation (from analogue to digital) to exploit it and make it effective without suffering a loss of learning structure.

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The students' works —the representation of the building state of art (**Fig.2**) and the pimped version (**Fig.3**) — refer to two editorial references. The first is "Instructions and Manuals" column, which was published in *Abitare Magazine* from September 2007 to April 2011 as the contribution of Salottobuono[10] to one of the most influential architectural magazines in Italy, directed from 2007 by the Italian architect Stefano Boeri.

The second practice-based editorial works is the outcome of a research project developed by OFFICE U67[11] and The Empire[12] titled "Foresturbia: a Manual for a Landscaped City" for the Oslo Triennale 2019 named "Enough: the Architecture of Degrowth".[13] The research was rooted on fieldworks and

10. Founders and partners from 2006 to 2012: Fabio Gigone, Giovanni Piovene, Ludovico Centis, Matteo Ghidoni, Marco Ferrari, Michele Marchetti.

11. Founders and partners from 2013: Angela Gigliotti and Fabio Gigone.

12. Founder and partner from 2013: Ludovico Centis.

13. Curatorial Team: Maria Smith, Matthew Dalziel, Cecilie Sachs Olsen, Phineas Harper.

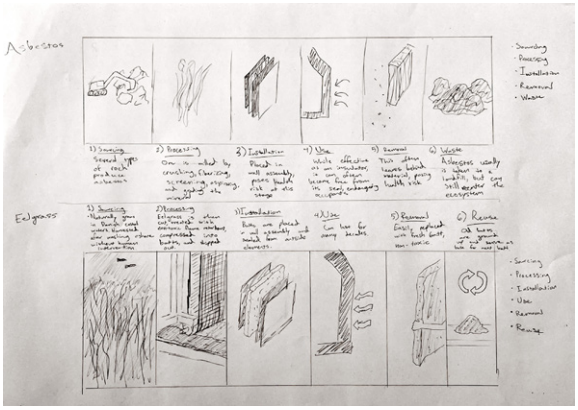
site analysis localized in some areas of Oslo investigated under Gigone's Associate Professorship at the Norwegian University of Life Science.

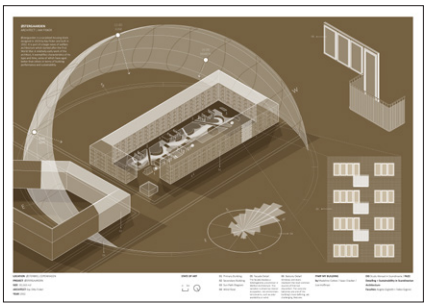
Like in "Instructions and Manuals", also in "Pimp my building!" the renounce of publishing the 'original' drawings of the designers is a mandate. Nonetheless, no limit in terms of content, type of information, or technique is imposed from above. These conditions imply a key responsibility: whatever the students' choice, the employment of the full array of techniques of representation have a big visual impact on how the project is represented. About the readership, the artboards are conceived as a project to read and not just a mere description of design facts. Texts, diagrams, and drawings concur to expand the knowledge of a context of which the project was only the foreground. Due to the obvious limitations in terms of area, the idea is to use a particular type of *disegno* as the core for an array of secondary —but no less important— representations, aiming at highlighting specific features of the project. The type of the focal representation is chosen to let the students' interpretation of an authorial project emerge: this strategy requires a deep understanding of the considered project, and to allow conceiving the project from a kaleidoscopic and inter-disciplinary angle.

"Foresturbia: a Manual for a Landscaped City" plays a role in driving the students' strategies in relation to the sustainable pimped version. The manual was shaped as a tool for encouraging and spreading collective shared knowledge about sustainable living. It contains a wide array of landscape and urban strategies combined with technological solutions. A manual in five scales, from the territorial one to devices that establish a common ground among decision makers, designers, and citizens, in the Nordic territories. It aims at setting new standards in the field of landscape, green approaches, and practices, boosting the potentialities already available within the city. The goal is to introduce topics and strategies that could be very complex in a new immediate understanding. It is based and relies on a common language, which can be easily understood by a diverse group of people. The manual is a cluster of instructions organized in correspondence with a detailed visual layout, where both words and illustrations work together. Texts and drawings form constellations of contents which define new horizons of meaning. But most important it turns out to be a crucial vehicle of knowledge when shared with students coming from other continents to study in Copenhagen.

4. OUTCOMES

In conclusion, this paper presented a formal course designed for exchange students, which focuses on the study of Danish modernism to encourage sustainable design experimentation and cultivate contextual awareness with a strong emphasis on social aspects. The aim of the methodology is not to develop a replicable intervention criterion based on modern heritage education, therefore understanding which are the modern theories, principles and elements that student's study and explore in the pimped proposal is out of the scope of this paper. The aim of the methodology is rather to emphasize how drawing can serve as a tool for fostering critical distance in spatial analysis and facilitating





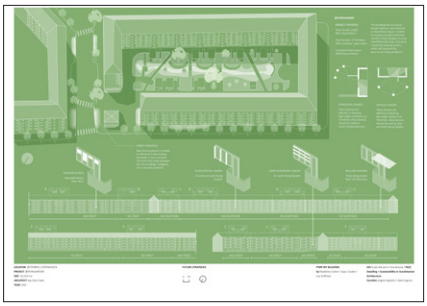


Figure 1. Carlson, Zach, Priya Moorkoth, and Aidan Rich. *Sofiegade – Study about the toxicity of the Insulation*. Gigone, Fabio, and Angela Gigliotti, eds. Spring 2024. Drawing on paper, 297 x 420 mm. © DIS – Study Abroad in Scandinavia, Copenhagen.

Figure 2. Cotton, Madeline, Isaac Cracker, and Izzy Hoffman. Østergaarden - *State of Art*. Gigone, Fabio, and Angela Gigliotti, eds. Fall 2022. Drawing on paper, 297 x 420 mm. © DIS – Study Abroad in Scandinavia, Copenhagen.

Figure 3. Cotton, Madeline, Isaac Cracker, and Izzy Hoffman. Østergaarden - *Pimped*. Gigone, Fabio, and Angela Gigliotti, eds. Fall 2022. Drawing on paper, 297 x 420 mm. © DIS – Study Abroad in Scandinavia, Copenhagen.

an understanding of the past, present, and future of Danish modernism. Additionally, another key objective of the course pertains to recognizing that architectural drawing, despite being considered a method of tacit knowledge, is not universally accessible but rather specific to a particular place and audience. Understanding that architectural representation is inherently tied to cultural and social contexts is essential for effectively interpreting and evaluating the significance of information presented in architectural documents, and, even more important those silenced and neglected, as the female agencies in the modern colophon has been for too long.

At the pedagogical level, an achievement of the course is how the individual mode of production is rooted in diverse backgrounds. Usually, this is the only collaboration among each team since these students often meet at DIS for the first time and enrolling in this course in their Danish semester. So, once they are tasked of a collective product, they often encounter challenges due to cultural and educational background, team working, learning styles, priorities, and expectations where the spreads produced are used as a common ground and battlefield at the same time. The pedagogical objective is to experience the multidisciplinary and team-based collaboration as it happens in practice, and to bridge the gap between American and Scandinavian educational cultural-contexts. Despite all, they act towards a collective outcome, both at the level of the team, of the class and even of future and past semesters. Each student ends the course having contributed to the outline of pimped edition of the initially addressed guidebook. Each drawing becomes thus a part of a collective outcome across several semesters: as they were commissioned of a special issue of a journal whose spreads would host "pimped" representations by Danish neglected actors. The students are asked to actualize the guidebooks upgrading the chosen buildings towards sustainable development goals using

only drawings, graph, and texts and the inherent tools of the architectural profession. As faculties, our role is to act as educator, advisors, and supervisors but also as curators and art directors of the students' authored contributions.

It is important to reflect on the flexibility and resilience at the basis of the shown practice-based experiences that turned-out to also be fruitful pedagogical tools for approaching the design tasks within academia.

First, the potential of representing an object as a combination of components –like elements, layers, spheres of influence, etc.– embedded in the artboards. This perspective helps those approaching the design practice to undress an architecture studied for its aura. Finally, what before were hermetic art pieces could here instead be described with an objective set of tools. The process of representing a project using the *disegno* finally matched with the cognitive process at stake during the learning phase. The appropriation of a range of analytical tools is the first lesson as faculties we see in this series of pimped interpretations by students.

Second, the focus on the precision and denotation of the graphics emphasized the meaning of the adopted means: lines and patterns, control and differentiation of the lines' thickness and transparency of the fills, the position and relationship among drawings, diagrams, and texts, etc., reinforced the existence of a personal –although explicit– point of view, applicable without awe to a research subject. This quality is what emerges from the similar looking, but all unique artboards collected across semesters.

Third, the combination of abstraction and narration offers a twofold depth in the reading. Architecture, and design in general, are realms which apparently produce separated outcomes, 'conventional' projects, or theory. But digging into the reasons and meanings of the design field, praxis and theory must constantly inform and influence each other. In this regard, the implementation of a specific technical and analogical terminology for architecture is an essential pedagogical goal which must inform the learning and unlearning of architecture at all levels.

As a result, the final representations of these buildings outlined by the students should not be regarded as mere interpretations of the architects' design intentions. Instead, they represent genuine design proposals that adapt early 20th-century Danish architecture to contemporary values and principles of social sustainability. A shift from welfarism to social sustainability. ■

BIOGRAPHIES

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TRANSFORMING A CONVENTIONAL RIGID CLASSROOM INTO A STIMULATING SPACE

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ABSTRACT

The article describes how the architecture of modern school buildings of the second half of the 20th century can be transformed into a platform that enables contemporary educational principles that increase the individual's sensitivity to their environment without the need for complex physical transformation. Through the example of educational programs created by architects and educators, the transformation of the classroom space into an unfinished structure suitable for child exploration is demonstrated, leading to better development of children's cognitive functions as defined by Piaget while encouraging social interactions.

A case study of workshops tested in classrooms whose form was influenced by the efficiency of school construction in the 1950s-1980s demonstrates how the space of a standard school building can become a full-fledged space that meets the standards of contemporary pedagogical requirements. The active experience of space leads to the creation of memories through which society can come to terms with the memory of the influence of the communist regime.

Linking the work with the psychological development of the child and encouraging social interaction becomes the basis of pedagogical methodologies. The most common type of space for education in the Czech Republic is rectangular classrooms, allowing frontal teaching. This rigid formative classroom type has become a narrative based on the construction and modernization of education under the communist regime. The form of schools emerged as an ideal for the education of system-compliant citizens.

Education focuses on the creative use of information and ecological thinking. Conceptual changes are causing a transformation in the spatial arrangement of the different parts of schools and their openness. The principles of open-plan schools encourage children to use the learning space and move freely to experience and understand the principles of the environment in which they live, which is proving pivotal in the ecological crisis we face.

1. THE DEVELOPMENT OF THE STANDARDISED CLASS IN THE CZECHOSLOVAK SOCIALIST REPUBLIC

In the current Czech Republic, the socialist regime had a great influence on the shape of the existing school system and the related construction of school buildings. From 1948 to 1989, the so-called " efficiency of education" took place, the purpose of which was to provide education for all children of the working class and thus prepare the youth for all kinds of work and to prepare the population for the future socialist republic.[1] All this was reflected in the school buildings by the necessity of establishing facilities for practical instruction, such as workshops for woodworking, metalworking, papermaking, as well as food cultivation.

Given the Communist Party's goals and the growing population, it was necessary to increase school capacity for all children at the lowest possible cost. The answer was the plans to build system and prefabricated schools.

The new Education Law from 1948 created conditions for the application of the principles of socialist pedagogy, including the requirement that the teacher should play a leading role in the educational process.[2]

The main indicator of class formation was the economy and connection of practical work. The children's manual work corner was either directly adjacent to the classroom, separated by a glass partition, or accessible from a common corridor. The typical classroom itself remained rectangular in shape. The 1960 Methodology for the Construction of Schools specifies the ideal classroom size as a rectangle of 9 m by 6.6 m.[3] This allowed pupils freedom of movement and guaranteed an ideal environment for frontal teaching. The layout of desks was always arranged so that sunlight approached from the left. This form of classroom became formative for the following decades up to the present day.

This process of typification of school buildings created the shape of schools in Czechoslovakia and determined the controlled development of education until the Velvet Revolution in 1989. The narrative of the school classroom influenced generations of children and their descendants who grew up under the communist regime.[4] From the "test schools"[5] established after 1961, the system of lightweight desks and chairs allowing for variation in arrangement proved valid. Class sizes in the standardised school system have so far been in the range of 25 pupils. In recent years, inclusion has become a theme, bringing more staff (assistants) into the physical space of the narrative classroom, which brings new possibilities for using the space and greater variability in teaching methods.

2. EDUCATIONAL METHODS AND SPACE

In the 20th century, experiments and applications of educational reform reflecting new teaching methods in architecture were taking place around the world. Alternatives to the frontal style of teaching are being sought.[6] Across methods, the emphasis on cognitive development of individuals and learning from social connections is also changing.

1. Zdenka Veselá, *Vývoj* české školy *a učitelského vzdělání* (Brno: Masarykova univer-zita, 1992).

2. K. J. Laboutka, *Výstavba* školních *budov v ČSSR: Stručné zhodnocení dosavadní výstavby* škol (1961).

3. Zbyšek Stýblo, "Univerzální prostor pro výuku jeho vývoj a tendence," *Lecture* (Czech Technical University in Prague - Faculty of architecture, 2012).

4. Jan Šimek, *Historie* školních *budov: od terezián*ských *reforem po současnost* (Praha: Národní pedagogické muzeum a knihovna J.A. Komenského, 2016).

5. Šimek, *Historie* školních *budov: od terezián*ských *reforem po současnost*.

6. Paulo Freire, *Pedagogika utlačovaných Pedagogy of the Oppressed* (Neklid, 2022).

In Open Schools, the learning space is not defined by a tribal classroom. Children move freely in the open space and there is an emphasis on group work. The open space teaches respect for others. Children tend to discover and explore the diverse space with all their senses. Discovering is what, according to Jean Piaget, is most conducive to cognitive development.[7]

The outdoor environment is best for proper cognitive development. The outdoors represents an environment that is not subject to the constant control of humans. The principles of open-school architecture simulate the outdoor environment. They allow the child to choose, explore, move, discover, and regroup. They create a sense of an unfinished structure that provides similar possibilities for use as the outdoor space.

Today's pedagogy emphasises the development of the individual through individual development - psychological development, and learning from social contacts - social development. Both developments are supported by approaches other than the frontal. From the attempts to change the distribution, open schools represent the most radical form.

Open schools have recently been rediscovered as they meet the current needs for independent work or group work.[8] They offer a variety of seating options: at tables, on the floor, on stairs, in a cave. They follow the trend of open-space offices, which have been transformed from rigid grid cubicles into spaces that allow for working in different positions and atmospheres.[9] The emphasis is on working with information, not on learning quantities of facts. This brings demands on space that would support creative thinking.

3. RELATIONSHIP TO ENVIRONMENT

Today's neurophenomenology speaks of the perception of space as a thing that our body actively interprets with all its senses. Cognitive perception is an active process rather than a passive experience. The experience itself is etched onto our memory, and transmission of architectural values transcends mediated medium. The memories that become ingrained on our subconscious shape our relationship to a place. It is important to build a relationship with cultural sites, but also with the environment itself, in order to protect them.[10]

Some buildings face existential problems simply because they were built at a time that contemporary society considers wrong. The mass construction of schools in the second half of the twentieth century, under the communist regime, defined much of the font of school buildings and classrooms that we still work with today. It is because of the communist context that this construction is often perceived negatively by the public. The key to improving the public's relationship with rejected buildings is to allow people to discover their attributes. Strengthening people's connections with buildings that can either perform their original function or take on a new function but have negative connotations associated with them from the context of their creation, represents a challenge and a space for different activities.

The current school buildings and classrooms are provided because they have sufficient capacity. Most schools in the Czech Republic, therefore,

7. Farida Hanum Pakpahan and Marice Saragih, "Theory Of Cognitive Development By Jean Piaget," *Journal of applies linguistics*, no. Vol. 2, (2022): 55-60.

8. Jos Boys, *Towards Creative Learning Spaces* (Routledge, 2011).

9. Alexandra Lange, *The Design of Childhood: How the Material World Shapes Inde-pendent Kids* (USA: Bloomsbury Publishing, 2018).

10. Alberto Pérez-Gómez, "Some reflections on atmosphere and memory from the per-spective of enactive cognition and neurophenomenology," *Journal of architecture*, no. 27 (2022): 454-499.

have to work with classrooms that were built under the previous political regime. The narrative of the traditional form of classrooms is still deeply ingrained in Czech culture, despite no longer being legally mandated. In new buildings, we still encounter classrooms that are planned primarily for transactional learning.[11] Only the connection of the classrooms to the exterior and the places for pupils to meet together outside the classroom change. In addition to corridors, there are also halls, atriums and the like that allow for social gatherings not only in the classroom but also in the pupils' free time.

A general radical change in teaching is not possible from a financial and personnel aspect. The educational space, other than the alternative offered by private schools drawing methods from the reform movements, continues to be characterised by standardized classrooms established by the communist regime. Changes in teaching happen at the level of individual teachers who, at their own risk, deviate from this standard.

4. WORKSHOPS – UNDERSTANDABLE ARCHITECTURE

The project Understandable Architecture[12] was established in 2023 as an artistic-educational collaboration between architects, educators and artists. The main goal was to create an educational programme introducing Brno architecture to children. However, during the research phase of the project, it was concluded that rather than teaching children about individual buildings, it would be more beneficial to teach them to perceive the space in which they move or the environment they live in.

The educational workshops focus on exploring and transforming the classroom space. Pupils engage in physical activities, using all of their senses and collaborate in groups. The stimulus to create their own experience leads to the creation of their own memories, imagination and thus builds a relationship with the environment.

The workshop has two versions, in accordance with the age of the pupils, considering the cognitive development of the age groups. Each version has been tested twice in different groups in learning spaces based on standardized classroom design in primary schools. Version I is designed for individuals aged 7 to 10 years. Version II is for 11- to 15-year-olds.

5.1. VERSION I

Introduction

The workshop programme was presented as a collaborative exploration of the learning space environment. A pop-up method discussion was conducted on what is architecture and who is an architect. Some children did not have any notion of the term architecture, others mentioned terms such as structure, building, house. The discussion ended with the conclusion, "Although the architect is often considered the creator of the environment, the people who inhabit the space have a big part in how the environment looks."

Exploration

The activity began in the hallway outside the classroom. The children were invited to become explorers. Using all their senses and together with

11. Zdenka Veselá, *Vývoj* české školy *a učitelského vzdělání* (Brno: Masarykova univer-zita, 1992).

12. Workshops Understandable Architecture for Primary Schools were created by the team of Anna Kotlabová, Suzan Malý and Adéla Šoborová in cooperation with Brno University of Technology and Masaryk University in Brno.

the lecturers and teachers, they were asked to feel the perimeter of the classroom. The children explored the architecture, the furniture, the bulletin boards. After about 3 minutes of exploration, they returned to the corridor where the task was reflected upon. In both workshops, the group agreed that they perceived the classroom to be larger after feeling it. Some children found it dry, and warm.

The following research assignment focused on classroom material. The children were asked to use a wax crayon on blank A5 paper to represent the textures of the materials found in the classroom. They brought their images back to the corridor. This task took 5 minutes, during which time each pupil managed to depict at least three different materials. In the next step, the children had to take the image of the materials recorded by their classmates and glue the records to the places where they were created. Transferring the records back to the classroom took pupils more than 5 minutes, and not all records were correctly matched.

The following task was based on the frottage spread around the classroom. These served as coloured spots to be connected. The children had to divide into groups of 3-5 and form a human chain to connect the papers of the same colour with their bodies. The movement and body work continued with the next task, where children had to estimate and then check how many bodies were needed to connect the opposite sides of the class diagonally. When asked about the first of the dimensions, the individual guesses of the numbers differed more than the second or third time. It may be said, therefore, that the direct experience has refined their estimation.

Use of space

The children had to choose a place in the classroom where they could not be seen. They hid under desks, behind objects lying on the floor, in cupboards, behind radiator covers. The following instruction was that the children should get to the places where they could be seen the most. They began to step on the desks, window sills, and chairs in the space or create attention-grabbing body poses. Another instruction was to find the place where your body fits best. The children found this under their desks, on chairs, or in alcoves.

Transformation

The children were to form groups of up to 3-5 pupils. Together, they defined the group's space in the classroom with tape to transform it so that the whole group felt comfortable there. For the transformation, they could use everything in the classroom and the materials brought by the lecturers especially for this workshop (flat materials - foil, fabric, cardboard; bar materials - foam tubes, wooden bars and prisms; connecting materials - tape, strings, pegs). The pupils created bunkers that they all fit into. They also used tables, chairs, furniture, mattresses and various hooks they found in the classroom to make their constructions.

Reflection

Reflection took the form of group visits in the created structures. Each group had to present its structure. All bunkers included a roof and in different ways tried to resemble a human dwelling – a house.

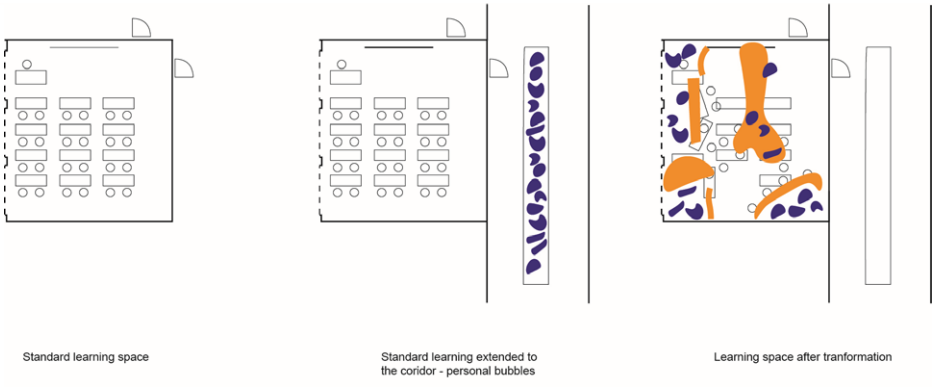
Figure 1. Transformation - workshop at the primary school © (Anna Kotlabová, 2024)

Figure 2. Transformation - workshop at the primary school © (Adéla Šoborová, 2024)

Figure 3. Diagram of the transformation of the teaching space © (Adéla Šoborová, 2024)







The structures contained chimneys, openings for communication with the neighbours, and windows overlooking a completely private space. Some groups established a communication facility between the neighbours. The groups that selected the space in place of the teacher´s desk marked it as the "place of power."

5.2. VERSION II

Introduction

The phase was the same as with the younger age group. This time everyone had an idea of who the architect was. Individuals mentioned city and street planning in addition to the architect's focus on buildings.

Exploration

The probing of the classroom through the senses was the same as with the younger children. Even for the older children, the classroom seemed larger. Making colour frottages and then connecting them with bodies was the same.

Use of space

The following task took place in the corridor. The children had to sit on an unfolded long strip of paper and use a marker to define the boundaries of their personal space. Then they cut out these bubbles from the paper surface and moved them into the classroom space, to places where they would feel comfortable. They sat on their bubbles again. Not only the architecture of the classroom itself but also the social relationships between individuals played a role in the placement of the bubbles.

In the following task, we tried to deepen the pupils' understanding through the sounds of the classroom. Individuals had their eyes closed, and the instructor used the classroom as a sonic instrument. The pupils' task was to record a feeling reflecting the sounds around them on the papers below.

Transformation

The groups were formed by arranging spaced bubbles, taped off to encompass the chosen locations of all group members. The space was then rearranged to ensure that the entire group felt comfortable. The pupils were provided with the same materials as the younger age group.

Reflection

Reflection took the form of visiting, in the same way as with younger pupils. The design sophistication, form and intentions of each of the created structures were at the same level as those of the younger pupils. When asked if the children would like to leave the classroom in this condition, they replied yes, but only for 'free time', not for learning. For learning, they require a clean space at their desk that is not distracting and allows them to concentrate.

The workshops are exercises in engaging sensory perceptions and connecting them to the creative process. The methodology of the workshops will be shared with future teachers and can provide inspiration for teaching various subject areas using space. The methodologies have been designed to show pupils their classroom differently to how they experience it every day and to extend their normal learning space beyond the confines of the

classroom. By breaking stereotypical behaviour along with transforming the learning environment, the children created a memory. Promoting sensitivity to the environment rather than just casual consumption leads to awareness and subsequent conscious sustainability.

The workshops work with a typical class size of 20-25 students, and therefore, they can be applied without increased staff requirements. During the development of the methodologies, trans-disciplinary collaboration between educators and architects proved crucial. The same authors also created a methodology for secondary school students focused on the perception of public space. Understandable Architecture aims to develop interdisciplinary collaboration on a permanent basis and to increase the relationship of inhabitants with their environment.

5. CONCLUSION

In today's times, characterised by climate change, information overload and criticism of consumerism, the requirements for education are also changing. The consumerist mindset that underpins the climate crisis can be counteracted through a deeper understanding of the everyday environment and of our own knowledge and experience. The modernist cultural heritage, which is still viewed negatively in the Czech lands due to its association with the communist regime of the past, is an important part that should be understood. The mass construction during the communist period not only influenced the form of the environment but also shaped the narratives for the future development of architecture.

Understandable Architecture combines architectural thinking about space with educational methods. The combination of learning from space and the concrete linking of different learning topics represents the potential for further development of educational methods without the need for energy-intensive construction of new spaces for education. By using existing structures and using their elements in different ways than we are used to, Understandable Architecture supports the idea of sustainability itself. Furthermore, a more holistic view of architecture and the public's awareness of their own actions, choices, and their impact is proving to be an effective tool for coping with the current environmental crisis. By having a positive attitude and increasing the awareness of individuals towards their surroundings, we can not only protect cultural heritage but also contribute to sustainability and greener living. ■

BIOGRAPHY

Adéla Šoborová is a PhD student at the Faculty of Architecture at Brno University of Technology, where she is interested in the relationship between children and built space. She completed her master's degree at the FA BUT, and since 2022, she has been leading a design studio. She is a co-researcher at the Faculty of Fine Arts BUT, focusing on aspects and possibilities of edible vegetation in the urban environment, and a co-researcher of the project Understandable Architecture in cooperation with the Faculty of Education at Masaryk University. She completed a study internship at the Technical University of Graz.

(RE)SIGNIFYING AND (RE)DESIGNING MODERN SCHOOL PLAYGROUNDS. EXPERIMENTS ON COLLABORATIVE DESIGN IN PORTUGAL

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ABSTRACT

The present article aims to briefly describe experiences on collaborative design and knowledge co-creation taking place in Portuguese schools to (re)define school exterior areas in collaboration with school communities. These projects seek to refurbish playgrounds with the schools' communities, to (re)integrate them into the schools' pedagogical programs and routines.

The article will focus on the methodological approach employed in the pilot projects, offering a critical review of its application. Its primary objective is to disseminate the collaborative methodological approach along and its key findings to enable replication in diverse contexts.

Concurrently, the project aims to raise awareness within the school communities about climate change and the importance of creating more naturalized and permeable spaces. These spaces provide cooler and healthier environments, allowing for the expansion of green areas in socially and environmentally vulnerable urban areas. Portugal experiences annual increases in the heat island phenomenon and heatwaves. On a broader scale, it aims to encourage the participation and involvement of local communities in climate policy discussions to identify actionable opportunities that can be presented to local and municipal public institutions. This collaboration aims to implement relevant small-scale interventions with potential for scaling and replication. Furthermore, these projects aim to address a prevailing sense of helplessness among young people in the face of climate change issues by creating/implementing achievable actions. The outdoor spaces surrounding school buildings present a valuable opportunity to address contemporary challenges by aligning with current educational and environmental goals. This can be achieved through the inclusion of natural ventilation systems and green areas that can be offered to the broader community, all while maintaining the buildings' architectural heritage. By reimagining schools in this manner, communities can uphold their cultural legacy while simultaneously tackling urgent modern-day issues such as climate change and the advancement of educational practices.

1. INTRODUCTION

As part of the modern city, modern school buildings were designed to align with new educational policies, paradigms and demands. This transformation of school buildings has also encompassed the school playgrounds. They emphasized pedagogical practices centred around children's interests, autonomy and the integration of outdoor activities into daily routines. However, when educational policies and practices failed to integrate exterior school areas into their educational programs, these spaces' lost purpose, pedagogical significance and use.

In recent times, social and environmental values have resurfaced as key concerns among stakeholders in educational systems, particularly in cities facing extreme weather conditions due to climate change, such as heatwaves. Advocates are pushing for new roles for school exterior areas, transforming them into reference cooling zones for community use and relevant pedagogical spaces for schools. These initiatives aim to refurbish playgrounds in collaboration with school communities, integrating them into educational programs and daily routines. By providing cooler and healthier environments, these projects expand green spaces in socially and environmentally vulnerable urban areas.

The research project ROLE (The Re-design of the Learning Environments. What is changing?) is currently being developed within the thematic line "Knowledge Environments" at CITUA, IST. Its primary objective is to contribute to the (re)design of innovative, effective, and meaningful educational environments, which are deeply rooted in sustainable values encompassing social, environmental, economic, and cultural aspects. The project involves mapping new educational offerings in Portuguese schools, characterizing their educational features, target audience, and understanding their alignment with the needs of communities and territories.

As Portugal faces annual increases in the heat island phenomenon and heatwaves, ROLE seeks to engage local communities in climate policy discussions to identify actionable opportunities for presentation to local and municipal public institutions. This collaboration aims to implement relevant small-scale interventions with potential for scaling and replication. The outdoor spaces surrounding school buildings present a valuable opportunity to address contemporary challenges by aligning with current educational and environmental goals. By reimagining schools in this manner, communities can uphold their cultural legacy while simultaneously tackling urgent modern-day issues such as climate change and the advancement of educational practices.

2. SCHOOL YARDS IN THE 20TH AND 21ST CENTURIES

From the late 19th century, responses emerged to criticisms of traditional teaching methods, which had relied on a rigid model of organizing spaces centered on classroom-based pedagogy (Alegre, 2012). Inspired by Rousseau's 18th-century ideas and later defended by the New Education Movement, there was a growing appreciation for the exterior spaces of

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school premises. This shift emphasized individuality, respect for each student's abilities, and the importance of contact between children and nature. The open-air school movement, intensively expressing hygienist concepts in school architecture, introduced a pedagogical method based on outdoor learning. Similar to the New Education Movement, this model focused on the child and employed active learning methods, based on developmental psychology research, to stimulate children's abilities and personal development (Alegre 2015).

Consequently, there was a greater appreciation for the relationship between classroom interiors and their exterior surroundings, as well as the potential of outdoor spaces as effective teaching-learning spaces. This led to changes in school design, including the redesign of classrooms to incorporate more open spatial characteristics and the integration of various school spaces with the outdoor. Additionally, schools began fostering stronger connections with their surrounding community (Alegre 2012) (Lourenço, P. 2022). However, these solutions were sometimes extreme, leading to environments that became very hot in the summer and very cold in the winter due to their large glass surfaces.

In Portugal, public secondary schools underwent significant architectural change throughout the 20th century, which can be grouped into three distinct periods: (1) from the late 19th century up to 1935; (2) from 1935 to 1968; and (3) from 1968 onward. Of the total number, 23% were built by the late 1960s, while the remaining 77% were constructed after 1968, following the adoption of standardized pavilion type designs and mass construction methods (Alegre 2012). These changes in architectural typology also led to a reconfiguration of outdoor spaces.

3. THE SCHOOL'S OUTDOOR SPACE AND THE PEDAGOGY AND DEVELOPMENT OF CHILDREN AND YOUNG PEOPLE

The relationships between a child's development and the enjoyment and exploration of outdoor space are now extensively studied and documented, with the investigations of Carlos Neto standing out in Portugal (Lopes, Madeira, and Neto 2020). However, the role of school outdoor spaces in the development of young people is still much less explored today. Despite wide recognition of the importance of "being outdoors" and the role of outdoor spaces in the physical, cognitive, and social development of children, school outdoor spaces often lack specific architectural and landscaping programs, nor do they receive the same importance in funding allocation for both construction and maintenance of school equipment. Outdoor spaces that are normally framed by pedagogical objectives and integrated into school routines are generally the sports venues. The remaining spaces are essentially used for free play during non-teaching times, which are significantly shorter compared to the average time students spend at school. They are occasionally used for outdoor classes, often related to science and biology.

The importance and benefits of human interaction with natural environments continue to be widely supported in scientific research today,

considering all ages. For example, the "Attention Restoration Theory" developed by Kaplan & Kaplan (Ohly et al. 2016) argues that natural environments act as brain restorers, helping to alleviate mental fatigue and increase concentration and attention, especially if the environment provides changes in routine and involves admiration, exploration, new interests, and activities (Lester et al. 2007).

4. ENVIRONMENTAL PROBLEMS IN URBAN AREAS AND THE POTENTIAL ROLE OF PUBLIC SPACES IN MITIGATING CLIMATE CHANGE EFFECTS

Climate change and specifically global warming affect all areas of human life. One consequence of the current climate scenario is the increasingly common periods of climate extremes, such as heat waves. As the increase in temperature is a global phenomenon, the rise in average temperatures in historically warm territories is currently being felt more acutely. Cities are particularly vulnerable to extreme weather events such as "heat islands" and "heat waves." These phenomena increase climate risks, such as increased morbidity and mortality from heat-related illnesses, higher energy consumption, and deteriorated air quality. In this context, the physical characteristics of cities play a crucial role in either worsening or mitigating the effects of heat waves. As Oke et al. stated in "Urban Climates" (Oke et al. 2017), "a city creates its own climate". The redesign of cities, their public spaces, and their buildings will be fundamental in enhancing the resilience of cities to climate change.

In recent decades, many cities have initiated projects to regenerate their public spaces to increase green areas, create shaded and cooler spaces, alter exterior pavements, improve soil permeability, and open public facilities, such as schools, for community use as climate refuges. An example is the C40 project (https://www.c40.org/pt/cities/), where around one hundred municipalities from cities worldwide have come together to tackle the climate crisis.

4.1. COLLABORATIVE PROCESSES: CO-DESIGN AS A STRATEGY FOR THE REGENERATION OF PUBLIC SPACES

The participation of the school community in creating and remodelling their own school spaces seems obvious, yet it is still an exceptional practice. Collaborative and co-design processes are not yet integrated into the academic curricula of many architecture schools. Despite some examples, their implementation in professional practice remains rare and lacks support from well-established methodological frameworks (Greenall 2023). Even when collaborative processes exist in the design or redesign of recent school spaces (Heitor 2011), the focus of the participatory meetings and collaborative dynamics is usually on the school's interior spaces: classrooms, laboratories, libraries, cafeterias, etc., with no specific concern or program for outdoor spaces.

For children and young people to effectively participate in a collaborative co-design process, they must understand the project's

intentions and motivations, their role in the process, and the roles of the involved parties. Integrating communities into the design of public spaces and equipment fosters active citizenship while improving architectural literacy among users.

In this context, three exemplary cases stand out; i) In Paris, the "Oásis"[1] project, ii) in Barcelona, "Refugis Climatics"[2] and iii) in Brussels, the "Operation Ré-création"[3] program.

In general terms, the projects shared the following objectives:

i) Transform school yards into more natural spaces and reduce the percentage of impermeable surfaces, ii) Make schoolyards places of environmental awareness, hosting activities for both educational and local communities, iii) Promote intercultural and inter-generational sharing, vi) Transform schoolyards into climate refuges open to everyone during heat waves, v) Expand the supply of green spaces in the city and enhance the urban fauna and flora network.

These projects stress out a realignment with the initial objectives of pedagogues and designers who influenced school architecture during the modern movement regarding environmental awareness and the social role of the schools' outdoor spaces.

In co-design strategies, it is crucial to empower users to critically assess the spaces they inhabit while recognizing and preserving important cultural and architectural values. This dual approach ensures users can both evaluate their environments and advocate for necessary preservation or rehabilitation efforts.

5. ROLE: THE REDESIGN OF THE LEARNING ENVIRONMENTS. A COLLABORATIVE APPROACH.

Over the past year, the ROLE project team has engaged in a series of initiatives, such as visits, interviews, workshops, to better understand the Portuguese school community's needs and practices, particularly regarding outdoor spaces. In this context, the ROLE team designed and implemented a collaborative co-design methodology, which is currently being applied to three case studies. Although many schoolyards and playgrounds in Portugal share similar physical conditions, the team identified diverse needs and interests among different schools. The proposed interventions aim to address these varied requirements, recognizing that a one-size-fits-all approach is unsuitable for outdoor spaces, despite the common pavilion typology of the schools (**Fig. 1**). These schools, built according to the pavilion model, with some pre-fabrication strategies, have exterior areas that differ significantly in size.

5.1. COLLABORATIVE CO-DESIGN. EXPERIENCES FROM THREE SCHOOLS

One of the selected schools, Escola Básica de Camarate, in Loures, was part of a pilot case in a prior project, ClimAct (https://www.climact.net/), with the aim of improving the schools' environmental performance. The school design follows the educational construction plans inspired by the model

1. Ville de Paris, "Les cours Oasis," https://www.paris.fr/pages/les-cours-oasis-7389

2. Ajuntament de Barcelona, "Escoles refugi climàtic," https://www.barcelona.cat/barcelona-pel-clima/ca/escoles-refugi-climatic/

3. Bubble, "Opération Ré-Création," https://www.bubble.brussels/operation-re-creation/

projects from the late 1960s, developed using industrialized construction systems in reinforced concrete, incorporating heavy prefabricated elements. It is based on the principle of designing classroom modules with a reinforced concrete beam-and-column structure and solid slabs on the first floor. These blocks or pavilions accommodate the educational spaces (classrooms, laboratories, library, administrative services), arranged around a central module where the access stairs to the upper floor are located, naturally illuminated through a lantern system.

Following this project, the ROLE team was invited to coordinate a co-design process for the redesign and regeneration of a specific area of the school's outdoor space, the "Quinta do Charco". The school grounds include a large outdoor area already used for some educational activities. In particular, the Quinta do Charco space hosts activities related to environmental education. However, it lacks the physical conditions necessary for conducting more extensive educational or recreational activities, as well as adequate accessibility features. Besides, Additionally, it is an exterior area that is currently experiencing degradation and abandonment. Despite being a sizable green area space with potential for open use by the local community it has not yet been fully utilized or maintained (**Fig. 2**). Following this first collaboration, two more collaborative projects are currently ongoing, in two other schools, also in the metropolitan area of Lisbon, both in the municipality of Sintra.

The methodology proposed for the collaborative process was based on the methodologies used in the previously mentioned international projects; "Oásis", "Refugis Climatics" and "Operation Ré-création". The collaborative process involves the participation of students, teachers, staff and parents (**Fig. 3**). The shared objective is to address the specific needs of the school community by transforming outdoor areas into spaces that promote social equity, well-being, and resilience to climate change. These transformed spaces will also serve as foundations for learning about sustainability, biodiversity and climate change.

The ROLE team's co-design process consists of seven phases adapted from (Greenall, Wong, and Toohey 2023):

1. **Preparatory Work:** Initial meetings with school stakeholders to explain the project and gather preliminary information.

2. Co-Analysis: Workshops with students, teachers, staff and parents to identify needs, preferences, and existing problems. The goal is to collect data about the perception and attitudes towards the school's outdoor space.

3. Co-Design: Collaborative sessions to map intentions, desires and visualizations. Drawings, collages, selection of inspiring images, etc. The main objective is to understand the participants' desires regarding the transformation of the school's exterior space while simultaneously exploring the concept of sustainable construction.

4. Co-Creation: Presentation and discussion of proposals developed based on ideas collected during previous workshops. Use of AI for the development of some of the project solutions.

5. Project reviews and final proposal. Plans for construction, budgeting and implementation preparation. Availability of materials, possibility of reusing materials from demolition works in the vicinity, etc. are checked with the school, municipality and other local entities.
6. Co-implementation. Implementation of selected project with the active participation of the school community.
7. Co-evaluation. Creation with the school community of a system for monitoring results and evaluating impacts.

Each phase includes detailed documentation and participant feedback to ensure transparency and inclusivity throughout the process.

During the co-design process and interaction with the school community at Camarate, we became aware that a new project for the school buildings was under development by the municipality. The school community was not included in the process, which previews the total demolition of the original pavilions and their replacement by new pavilions.

As the school premises are wide, the intervention area scoping the co-design process was not affected by the new project. At this stage the municipality was considered as an interested party in the process and invited to participate in the working sessions.

5.2. DISCUSSION OF RESULTS AND PRELIMINARY CONCLUSIONS

The collaborative co-design process fosters a deeper understanding and appreciation of school spaces among the community while providing the research team with valuable data and insights. This approach enhances the longevity and effectiveness of interventions, ensuring that outdoor spaces meet the diverse needs of users and are taken care by the school community.

Although the process is still ongoing, the schools' community already recognize that it allows them to gain insights and a critical perspective on their school spaces. Similar interventions, currently in post-occupancy evaluation phases, have demonstrated that direct user participation in the co-creation process leads to more efficient and lasting maintenance and management of spaces. This involvement increases the functional, environmental and social value of the spaces while promoting more resilient and engaging learning environments.

Although the school community is very sensitive to environmental issues and committed to responsible material choice and solutions, they fluently discuss concepts like flexibility, durability, and the use of recycled and waste materials. However, cultural values of existing structures were never mentioned concerning both the exterior areas and the school buildings. Despite the school pavilions representing an early and uncommon strategy of pre-fabrication and modularity in Portugal, this fact was never brought up during visits and work sessions. Additionally, the idea of renewal versus new construction as a potential sustainability strategy was not considered.







Figure 1. One of the pre-fabricated pavilions at Escola Básica de Camarate, Loures © Patrícia Lourenço

Figure. 2. Plan of Escola Básica de Camarate, highlighting "Quinta do Charco" area. © Luís Roma Fernandes

Figure. 3. Students at Camarate school working on phase 3 of workshop sessions © Luís Roma Fernandes

Despite increasing environmental awareness, there is still a lack of comprehension about the environmental consequences of our actions. Moreover, the belief that new structures are better solutions than refurbishing existing ones remains prevalent. In an article on climate change, (Davidson 2021) discusses the ecological footprint of premature demolitions and advocates for the preservation and reuse of existent buildings to mitigate environmental impacts. Davidson emphasizes the need to consider a larger spectrum than legal standards and heritage classification to promote such preservation.

Linking environmental sustainability to cultural heritage preservation is a necessary and central connection that all parties must recognize. Co-design strategies can be a powerful tool to increase both awareness and literacy regarding sustainable architecture and modern cultural values. This approach reinforces the need to preserve and adapt modern buildings as a strategy to reduce environmental impacts. ■

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BIOGRAPHIES

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Teresa Heitor stands as a Full Professor of Architecture at the Instituto Superior Técnico (IST), University of Lisbon. Presently she serves as director of CiTUA. The multifaceted nature of her work encompasses a holistic understanding of the socio-cultural dynamics at play related with built environment and the communities it serves. The research focuses on understanding how physical spaces can support the needs of learning at all levels and includes advising designers, policy makers and educators on how to create physical learning environments to support the needs of education.

ADAPTIVE MODERN HOUSING: SHIFTING NOTIONS OF COMFORT AND THE TRANSFORMATION OF DOMESTIC SPACE FOR CONTEMPORARY LIVING

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ABSTRACT

The Modern Movement established ambitious housing programs to provide shelter for the greatest number and enhance human comfort. Since then, the concept of "comfort" has undergone significant transformation, challenging the conception of domestic spaces and redefining the way inhabitants live in their homes to cater to their needs and desires.

This session seeks to explore the dynamic relationship between the original design principles of Modern Movement housing and the evolving demands of contemporary living. Through an analysis of case studies and architectural examination, it aims to identify the challenges and opportunities in reconciling the preservation of resilient architectural features with the adaptation to contemporary comfort requirements.

Furthermore, the session aims to contribute to the discourse on sustainable urban development and the construction of healthier environments by highlighting the potential for adaptive reuse initiatives and the repurposing of modern architecture to align with present-day values.

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Homes are indeed a machine for living, and they play a key role in shaping our human experience. But all homes speak, whether through their presence or absence, of something else that is beyond themselves. They speak of what it means to be human, a matter that is both succinct and immense, astonishing. They speak about the knowledge that is only true when it holds the awareness of what it ignores today and will ignore until the end. They speak of the struggle for survival, with its roughness, its pain, and its tumult, but also of the transcendence we may experience. They speak about intimacy, both within and beyond the skin. They speak of silence and words, which sometimes contradict each other and sometimes not. They speak of the accomplished and the postponed, of sleep and vigil, of fraternity and the opposite, of wound and joy, of life and death.[1]

José Tolentino Mendonça, 2017

Jean Fourastié called *invisible* the revolution that took place in the three decades since the end of WWII to the first oil crisis – *les trente glorieuses* [the glorious thirty]. Nicole C. Rudolph argues that it was invisible because "it took place not in the streets, public space of the *citoyen*, but at home, within the putatively private space of the domicile".[2]

The history of housing has been extensively studied, intertwined with the sociocultural transformations that led to its development. The genesis of the term "housing question" serves as a poignant reminder of the inherently political nature of the housing subject[3]: whether viewed through the lens of ancient Greek philosophy, encapsulated by the concept of "the things concerning the πόλις (polis)", or through the modern perspective emphasizing the necessary agreements for communal living, housing remains a nexus of political and social negotiation across time and cultures. The "housing question", as raised by Friederich Engels in 1872[4], emerged from the starkly contrasting living conditions between the proletariat and the bourgeoisie. While the urban bourgeoisie enjoyed spacious accommodations, the working class endured overcrowded and unsanitary tenements near factories, lacking ventilation, sanitation, and privacy. For Engels, the solution to the housing question would only be addressed through the establishment of a socio-economic structure where housing could be treated as a fundamental human right rather than a commodity for profit, through the abolition of the capitalist mode of production. On the other hand, Le Corbusier's memorable quote "architecture or revolution" (1922)[5] stemmed the belief that efficient architecture and urban planning was the only way to avoid a class-based revolution driven by dissatisfaction with the built environment and social conditions. For Le Corbusier, architecture and urban planning had the critical role of addressing societal challenges.

Regardless of perspective, the technological revolution and social needs prompted the emergence of urban planning and social reform

1. José Tolentino Mendonça, "De que falam as casas", *O Pequeno Caminho das Grandes Perguntas,* (Lisboa: Quetzal Editores, 2017), 39. Free translation.

2. Nicole C. Rudolph, *At Home in Postwar France. Modern Mass Housing and the Right to Comfort*, (New York, Oxford: Berghahn Books, 2015), 1.

3. Fabrizio Paone and Angelo Sampieri (ed.), *ReHab. Living, Inhabitants, Houses*, Berlin, Jovis Verlag GmbH, 2022.

4. Friedrich Engels, *The Housing Question*, Michigan, Lawrence and Wishart, ltd., 1942 [1872].

5. Le Corbusier, *Vers Une Architecture*, Paris, G. Crès & Cie, 1923. *Architecture ou Révolution* was to be the original title of this publication.

movements: from Ebenezer Howard's concept of the Garden City (1898) to the Athens Charter (1933) developed within the framework of the International Congresses of Modern Architecture, numerous efforts were made to find well-being solutions for the life organization of communities in a world in permanent change. While the interwar period allowed for the pursuit of new standards for housing, capable of combining a dignified *Existenzminimum* with cost-effective mass housing solutions – enabled by the development of innovative building elements, new concepts of prefabrication, and efficient, systematic building processes – it was the end of the Second World War that gave a whole new scale to housing. After 1945, the housing production affirmed itself as a political and social project for many nations, in the framework of prosperous economic growth and profound social transformation. Whether through welfare state systems, or through the establishment of local housing authorities funded or semi-funded by the government, or through the support of private companies, civil organizations, or associations, it was the time for the large-scale application of the principles of modern architecture and engineering developed before the war. It was not only a time for re-housing families torn apart and rebuilding destroyed cities, but also a time of democratic rebirth – a defining moment for individual and collective freedoms and rights. A new Man emerges and develops itself over these years, with confidence in modernity and progress. Whether for the Engels's proletariat or for the mass-men of Garcia y Ortez (1930)[6], comfort was the basis of the search for, and production of, collective housing, in accordance with the new embraced paradigm evidenced in the 1948 *Universal Declaration of Human Rights*: "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control." Comfort would no longer only be found in bourgeois houses.

Taking the example of France, in 1929, "modern comfort" was defined by the Larousse Dictionary, as "the ensemble of provisions intended to make an apartment building more comfortable, such as central heating, a bathroom, an elevator, electricity, etc". However, it was only in 1946 that the French census first inquired about the presence of these "elements of comfort" in dwellings across the country. Back then, only 5% of dwellings had a private shower or bathtub. The introduction of the distinction between hot and cold running water reveals that, in 1962, a hot shower was not available to most of the population – only 39.6% of dwellings had it. Answering the lack of such basic needs was the first stage of comfort that was sought to be assured: sanitary housing equipped with indoor plumbing and central heating would protect health and offer security. On a second level, rational, functional, and well-lit flats layouts would offer tranquility and conditions to develop people's minds and passions. Built to the proportions of adults, children, and their needs, with the separation of

6. Ortega y Garcia, *A Rebelião das Massas*, Lisboa, Relógio de Água, 2019 [1930].

functions and filled with the features that would guarantee the physiological and psychological comfort of the inhabitants, the modern home should allow the average person the opportunity to explore and achieve their full potential. A third level of comfort would be later respecting a comfort of use associated with the possession of objects for facilitating daily life. Through the regular consumption of comfort goods, a certain luxurious comfort has been replaced by a comfort understood as useful and liberating. In the framework of an emerging consumerist society, objects of desire[7] – which extended to household occupation – was a method of self-assertion and expression. Linked to progress – of which it is a "natural consequence" – and to the notion of happiness, comfort became a central concept within society's evolution and housing production, having become a symbol of modernity. As comfort developed and established itself in everyday life, it tended to become one of the emblems of the advanced state of development of modern societies as a guarantee of a better life, giving rise to one of the current definitions of comfort by the Larousse dictionary: "psychological, intellectual and moral tranquility obtained by the rejection of all preoccupations".

Modern housing production is extensively studied and disseminated. The territorial scope is vast and the approaches that have attempted to relate housing unit, building, street, district, and city have been numerous: from towers in the centre of big metropolis to low-rise high-density developments in small towns, from serpentine mega blocks in the suburbs, to entire new towns. Some of these studies speak about utopias and the quest for building urban concepts adapted to new social orders, technical innovations, and history; others speak of failures of urban policies, social inequality, and forgotten territories. But few are the ones that address the "invisible" space hidden behind the facades – the home that shelters the daily lives of individuals, families, and communities. In many countries, the emergence of social sciences in the 1960s, coupled with political will, allowed conclusions to be drawn about the housing needs and preferences of the population: through surveys, interviews, questionnaires, and reports, postwar housing often had the privilege of being a result of collaborative work between architects, engineers, sociologists, state officials, and residents[8]. The attention to interiors has been largely neglected for a long time, preventing proper documentation of the architect's omnipresent work on domestic space and the understanding of how they imagined domestic life in the socio-cultural context of different places and times. Additionally, there has been practically no attention in the field of architectural research[9] dedicated to post-occupancy studies capable of evaluating the quality of solutions and how the home interior evolved in response to changes.[10]

Profound social, labour, and technological changes that occurred in the last half-century have impacted the use and transformation of domestic space profoundly. These changes encompass shifting family structures (including singles, patchwork families, single-parent households, multi-generational families, non-resident students, immigrants, city workers,

7. Adrian Forty, *Objects of Desire: Design and Society Since 1750*, London, Thames and Hudson, 1986.

8. Among the reference works: Chombart de Lauwe in France, Dennis Chapmann in England, Salvatore Alberti in Italy, J. P. Vouga in Switzerland, Nuno Portas and Luz Valente Pereira in Portugal.

9. This subject has been primarily developed within the field of social sciences, by researchers such as Monique Eleb, Anne Debarre, Christian Moley, Marion Segaud, François Ascher, John Burnett, Tony Chapman e Jenney Hockey, Irene Cirard, Michelle Perrot, Sandra Marques Pereira.

10. With few exceptions: Philippe Boudon, *Lived-in architecture: Le Corbusier's Pessac revisited*, Cambridge, Mass., MIT Press, 1972; Franz Graf e Giulia Marino, *Les multiples vies de l'appartement-atelier Le Corbusier*, Lausanne, PPUR, 2017.

senior citizens living alone or with a caregiver, co-living arrangements), the evolving gender roles (women's increasing independence and participation in the workforce), the increase in life expectancy. The democratization of education and mobility (increased access to education have prolonged youth and facilitated social and physical mobility, reinforced by globalization), the increased diversity of lifestyles (coming from a wide range of phenomena, such as emigration, digital nomadism, remote work), technological evolution (with the diffusion of home automation, diversification of means of information, communication, exchange, and remote access to goods and services), and the increasing awareness of environmental issues and global emergencies lead to different needs and preferences of domestic life. In these transformation processes, attention also must be given to the housing complexes developed in territories formerly colonized, the procedures that gave rise to them, and the manner of occupation and transformation after independence, through studies that relate architecture, colonialism, and post-colonial identity, which are fortunately beginning to gain prominence.[11]

The housing policies have also undergone profound changes: the oil crisis, beginning in 1973, not only weakened many economies but it has also dissipated the optimism in the idea of progress of earlier decades. Radically changing the socioeconomic paradigm, the Keynesian economic values of the post-war years were replaced by free-market policies. Within the framework of the current neoliberal economic model, architecture ceased to be seen as a social instrument. Private and individual values gained preference over public and collective ones, leading to a growing crisis in affordable housing, even for the middle classes, and increasing homelessness.

Edmundo Desnoes said that underdevelopment is the inability to accumulate experience[12]. The modern era of the 20th century was an incredibly fruitful period for housing production in many parts of the world, resulting from a remarkable combination of political will, technological capability, and awareness of the importance of architectural thought and planning for improving the quality of life of communities. Looking at this production brings us three responsibilities for the future:

1. Faced with the global housing crisis impacting the world today, we must learn from the past and not reinvent the wheel every time we consider housing solutions. This refers to both the design of housing and the formulas that combined interdisciplinary efforts among policymakers, civil society, and the fields of knowledge involved in housing production (architecture, engineering, urban planning, and landscaping).
2. Understanding how people inhabit these houses today is crucial. As Dirk van den Heuvel and Nelson Mota stressed, "the second life of modern housing projects needs further problematization"[13]. Post-occupancy studies, capable of identifying residents' needs and tracking transformations made to the houses over time, are essential for diagnosing these projects. It is essential to understand the influence of shifting notions of comfort on the transformation

11. David Morton, *Age of Concrete: Housing and the Shape of Aspiration in the Capital of Mozambique,* Athens, Ohio University Press, 2019.

12. Edmundo Desnoes, *Memorias del Subdesarrollo*, La Habana, Casa de las Américas, 1965.

13. Dirk van den Heuvel and Nelson Mota, "Modern Housing and the Aesthetics of Growth and Change", in Ana Tostões and Zara Ferreira (ed.), *Adaptive Reuse. The Modern Movement towards the Future. Proceedings of the 14th International Conference*, Lisboa/Porto, Docomomo International/Casa da Arquitetura, 2014, p. 784.







Figures 1-3: Manuel Costa Martins, Hernâni Gandra, Manuel Coutinho Raposo and José das Neves Galhoz, Olivais Sul, Lisboa, Portugal, 1960s. © Zara Ferreira, 2022.

of Modern Movement domestic spaces to meet inhabitants' needs and desires, to analyse enduring design principles that remain functional and relevant today and to identify obsolete elements and spatial configurations on that require adaptation. This is also both relevant for intervening in the existing housing stock but also to inform new housing developments based on past experiences.

3. To explore successful case studies that demonstrate balanced solutions between transformation and preservation within Modern Movement domestic spaces[14]. Many of the transformation processes occurring within housing are carried out by the residents themselves, often without technical knowledge, and sometimes to the detriment of their own comfort. It is essential to align the needs and desires of residents with the professional skills of the architect.

The contemporary agenda highlights the urgency to foster healthier territories. By delving into the interplay between Modern Movement housing interiors and the ever-evolving comfort needs of contemporary society, this session aims to offer valuable insights into the adaptable nature of modern domestic spaces. The exploration of how occupants repurpose modern architecture, aligning with present-day values, holds potential for sustainable urban development and adaptive reuse initiatives. The goal is to contribute to developing efforts towards the effective reuse of existing building stock and inform new architectural endeavours that may harmonize Modern Movement knowledge with current and future requirements. Among potential themes to explore are reinterpreting original spatial layouts to optimize contemporary comfort, adapting interior spaces to accommodate diverse family structures and lifestyle choices, sustainable solutions for energy-efficient transformations in home interiors, the social and psychological aspects of preserving modern aesthetics while fostering well-being, the impact of processes such as gentrification, digital nomadism, emigration, or tourism on the transformation of domestic spaces, and comparative studies between different Modern Movement housing projects and their adaptive reuse in various cultural contexts.

Through this session, we aim to bring together scholars, architects, and enthusiasts to engage in a comprehensive discussion about the evolving meaning of comfort and its profound influence on the redefinition of domestic spaces within Modern Movement housing. By sharing diverse perspectives and case studies from around the world, the session seeks to advance knowledge in the field and inspire innovative approaches to adapting modern architecture for the needs and desires of contemporary living.■

14. Ana Tostões (ed.), *Modern Heritage. Reuse. Renovation. Restoration*, Basileia, Docomomo International/Birkhäuser Verlag, 2022; Ana Tostões and Zara Ferreira (ed.), *Docomomo Journal*, n. 54 – "Housing Reloaded", 2016; Ana Tostões and Zara Ferreira (ed.), *Docomomo Journal*, n. 65 – "Housing for All", 2021.

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MODERN ARCHAEOLOGIES: SUSTAINABLE STRATEGIES FOR SOCIAL HOUSING BUILDINGS IN ATHENS, 1950-1970

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ABSTRACT

Social Housing Buildings (1950-1970) in Athens stand out for their innovative technology, unique housing conditions, and spatial design influenced by the international modern movement. Architects incorporated global trends with local spatial concepts that strongly influenced the organisation of rooms, the connection between indoor and outdoor spaces, as well as the broader Athenian urban fabric. These complexes offer ideal conditions for urban living with low heights and communal open spaces. Their grid-based construction allows for flexibility, conversions, extensions, and additions. Whether independently or as parts of housing developments, these dwellings are living records of the reconstruction and the economic and spatial evolution of the Greek metropolis.

The Rentis Housing Complex consists of 378 residences, each with a distinctive architectural layout. Each building consists of a semi-outdoor staircase at the centre of the axis, on either side of which three-room apartments are arranged per floor. The complex is designed according to the modern, free-standing building system, creating internal courtyards within plots of various shapes. The facades are made up of the concrete grid frame and infill walls of brickwork, painted in subtle earthly tones. Rooftops were originally designed with laundry rooms and open-air pergolas, thoughtfully preserving views towards the Acropolis.

While tenants' continuous occupancy has helped to maintain most of the infrastructure, significant challenges persist. These challenges include the abandonment of public spaces due to lack of funding, concrete structural decay, inadequate energy efficiency, façade deterioration, and societal shifts that occurred over seven decades.

This paper explores the research, methodology, and design approach undertaken in the elective undergraduate course "Modern Archaeologies: Sustainable Strategies for Social Housing Buildings in Athens 1950-1970" at the School of Architecture, National Technical University of Athens, Greece, from 2022 to 2024. It showcases the outcomes of student projects, emphasising innovative strategies for preserving and adaptively reusing this social housing complex.

This paper was written in collaboration with Dr. Maria Balodimou, Tina Mikrou (NTUA School of Architecture Teaching Assistants) and Ioannis (Ionas) Mountogiannakis (Architecture Student at University of Thessaly).

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1. THE BROADER CONTEXT OF SOCIAL HOUSING IN ATHENS

Public housing projects in Athens were initiated by the Greek Ministry of Social Care around the 1920s, as a solution to house large waves of war refugees and clear the slums of the city centre. The new 2-story condominiums were erected within the limits of the city. In 1954, following the rapid expansion of the urban centres and seeking to address the housing of internal immigrants, the Greek Ministry of Employment and Social Security established The Workers' Housing Organisation (OEK). "As with other public housing construction initiatives, the policy of the Workers' Housing Organisation was to promote homeownership, in this case for working-class and employee families."[1] During the 1950s and 1960s, the OEK continued the with the same policy of the 1920s by constructing identical complexes, bigger in scale and with more floors, in the newly formed urban areas in Greece.

This trend was fully embraced in Athens because of its rapid urban growth. Pioneer Greek architects collaborated with the OEK to implement the functionalist principles of modernist architecture in the layout of the buildings and the new settlements. They were heavily influenced by the principles of garden city and modern architecture, as these were introduced by CIAM workshops, the Bauhaus style, and the ville radieuse[2]. Aris Konstantinidis, while working in the OEK (1955-1965) laid the foundation for the aesthetics of the new settlements through the use of exposed, reinforced concrete as the skeleton and the exterior plastered brick walls recessed. The layout was simple and functional with every couple of units sharing a common stairwell. Konstantinidis placed importance on the exterior balcony with its recessed space as a counterbalance to the monolithic volume of the buildings. He also arranged the complexes in such a way so as to form inner courtyards, resembling the traditional way of living. Konstantinidis' influence remained strong for many years following his departure from the OEK.

Modern social housing complexes built during that era feature a combination of enclosed and open spaces, setting them apart from the prevailing trend of continuous construction and prioritisation of private space over public space, in Greek cities at the time. This is a unique feature that still remains evident in these complexes today. On the other hand, the social housing complexes were never integrated into their surroundings, as they have always existed on the outskirts of city limits, as they happen to be placed at the borders between municipal areas[3]. Their extensive public spaces and street network, originally designed but never implemented, contribute to their poor connection with the rest of the city. Vaso Trova states that "the fact that free building was not applied to dwellings of other social classes, helped to identify this model with the workers, thus acquiring a social stigma".[4]

The intense post-war development of the centre of Athens led to a feeling of discomfort among citizens, resulting in the first exodus from the city centre. Suburbs began to flourish, offering better living conditions

1. George Kandylis, Thomas Maloutas and Nikolina Myofa, "Exceptional Social Housing in a Residual Welfare State: Housing Estates in Athens, Greece" in *Housing Estate in Europe, Poverty, Ethnic Segregation and Policy Challenges,* ed. Baldwin Hess, Tiit Tammaru, Maarten van Ham (Cham, Switzerland: SpringerOpen, 2018), 77-98.

2. Kandylis, Maloutas and Myofa, "Exceptional Social Housing in a Residual Welfare State: Housing Estates in Athens, Greece," 77-98.

3. Kandylis, Maloutas and Myofa, "Exceptional Social Housing in a Residual Welfare State: Housing Estates in Athens, Greece," 77-98.

4. Vaso Trova, "Workers' housing, the other side of modernism" in *The Modern notebooks,* ed. Panayiotis Tournikiotis (Athens: Futura, 2006), 77.

for those seeking more autonomy and privacy, as lifestyles changed. Additionally, the dissolution of the Soviet Union and its Bloc contributed to an influx of economic migrants seeking better living conditions in Greece. This, combined with Greece's economic crises, resulted in a significant number of people from diverse social, economic, and ethnic backgrounds (unemployed, immigrants) residing in social housing complexes. These social housing complexes represent the current condition of extensive areas at the Athenian centre; "that is the gradual deterioration of the building stock, abandonment of urban housing by its original residents, settlement of migrants and other low-income groups or of socially marginalised groups, deterioration of urban infrastructures, further degradation of the environment, a further exodus of the previous residents, etc. to the point of the complete devaluation of the buildings."[5]

2. THE CASE STUDY OF RENTIS HOUSING COMPLEX

2.1. THE COMPLEX

The housing complex is located near the centre of Athens, in the broader area of Rentis, a heavy industrial area with scattered housing blocks (Fig.1). Prior to its industrialisation, the area was fertile farmland, next to Kifisos river with small private farms that provided the city markets with fresh products. Post-war development of the city altered the area and industrial units along the new Petrou Ralli avenue were built. The OEK developed three social housing projects in the area. The largest of these is the case study complex, covering a plot area of 36,000 sq.m. bordered by Petrou Ralli Avenue to the north and Agias Annis Street to the east. The design was executed by a team of architects, supervised by George Skiadaresis and the construction completed in 1959. The complex comprises 29 four-story buildings, totalling 378 apartments. The basic unit consists of a semi-outdoor staircase on the centre of the axis, on either side of which, three-room apartments are arranged per floor. The complex is arranged according to the modern, free-standing building system in plots with regular or irregular shapes, creating inner courtyards. The facades are made of a grid frame of concrete and infill walls of brickwork painted in light earthy tones. Rooftops were originally designed with laundry rooms and open-air pergolas for drying clothes. An effort was made by the architects to maintain the view from the top of the buildings towards the Acropolis.

2.2. THE PUBLIC SPACE

The main feature of the social housing projects in Athens is the open space between them. The public space in most Athenian neighbourhoods consists of streets and occupies between 15 and 25 percent of the territory. On the contrary, the public space of the social housing complexes, like the Rentis complex has up to 80 percent of open space consisting of green spaces, streets, sidewalks, and small squares[6].

Additionally, in the Rentis complex, there are some communal spaces and shops located on the ground floor of building 28 and 29 with cafes

5. N.Papamichos, "From the 'antiparochi' to the Stock Exchange" in Metapolis 2001: The Contemporary (Greek) City, ed. Y.Aesopos, Y.Simeoforidis (Athens: Metapolis Press,2001), 85.

6. Trova, "Workers' housing, the other side of modernism," 77.

placed next to the southern eastern side of the complex. These shared areas were intended to provide opportunities for social interaction, relaxation, and appreciation of the close connection with the outdoor environment. Overall, the apartment buildings on Petrou Ralli Street exemplify the synthesis of European modernist influences, as seen in the form, and local design elements, through materiality. The complex offers a blend of modernity and contextual relevance, contributing to the visual appeal and livability of the urban environment.

2.3. THE UNIT LAYOUT

The original floor plan is a functional design approach that prioritises the requirements of standard living of its residents. The carefully considered spatial organisation aims to provide comfortable and efficient living spaces for the working-class population. The floor plan maximises the available space while ensuring a practical layout that accommodates the essential amenities required for everyday living. Upon entering a unit, there is a hallway that is open to the living area, which is separated from the kitchen by a wall. A small passageway is connected to it, along with two bedrooms, a kitchen, and a bathroom. The architects also included two balconies in the plan. One is connected to the living room, and another is connected to the kitchen. The incorporation of the two balconies is intended to enhance the residents' living experience. The architects recognised the importance of outdoor spaces and integrated these balconies into the design to provide an extension of the living areas and provide a connection between the indoor and outdoor environment. The first balcony, accessible from the kitchen, provides a convenient outdoor space directly connected to the kitchen, promoting a seamless transition between the indoors and the outdoors. The second balcony, accessible from the living room, provides residents with another outdoor area where they can unwind, socialise, or enjoy the views of the surrounding environment. The balconies not only offer additional living space but also contribute to the connection with nature and the surrounding environment. The inclusion of these balconies demonstrates the architects' commitment to creating a comfortable and enjoyable living environment for the residents. These outdoor spaces add value to the overall design, offering residents the opportunity to embrace the outdoor lifestyle and enhance their quality of life within the housing complex.

3. CURRENT SITUATION OF THE COMPLEX

Despite the tenants' continuous use, which has helped preserve most of the buildings' core infrastructure, significant issues have emerged in the complex. Among these issues is the abandonment of open public spaces, stemming from insufficient funding even from the original construction phase. Furthermore, the concrete structures present severe decay and can no longer comply with the current safety requirements and regulations. Another important issue is the buildings' poor to non-existent energy efficiency due to both weaknesses in the original construction methods and the current energy

efficiency requirements. Moreover, the partial or widespread deterioration of the façade elements indicates the structures' aging conditions which is also a pressing concern **(Fig.3)**. Additionally, various interventions by tenants, such as the alteration of exterior porches and balconies into interior rooms to maximise space and the application of awnings without complying with any rule whatsoever, further compound the challenges.

4. THE METHODOLOGY OF THE INTERPRETATION

The initial step in this analysis involved a meticulous examination of the original architectural design of the buildings. To do this, the original blueprints were used as a foundation and students carefully selected, categorised, and then examined separate building elements, such as the concrete skeleton, the stairwell, the façade with its various components (windows, doors, and balconies), the unit itself, the rooftop and/or the open public space between the buildings. This comprehensive assessment was facilitated by employing a range of survey tools, including archival drawings, site visits, bibliographic research, and interviews with tenants.

Following the survey, students focused on assessing three main areas of interest. The first area delved into the structural integrity and deterioration of architectural elements, energy inefficiency, and alterations on the building envelope made by residents over time. The second area focused on the public space either between the buildings, including inner courtyards and access streets, or the shared common public space within the units, focusing on stairwells and rooftops. In this area, attention was paid to the deterioration and neglect of these spaces, as well as their abandonment by the residents of the complex. The third area focused on the housing programme, examining the problems occurring with the outdated layouts of the existing units.

5. PROPOSED STRATEGIES AND INTERVENTIONS

The second phase of the projects explored strategic interventions aimed at addressing the issues that were identified in the earlier stage of the process. Proposals differed in themes and scales, encompassing restoration of modern architecture, implementation of new housing programmes through modifications of the existing structures, and expansions - redesign of public and semi-public areas of the complex. In addition, efforts were made to interpret original layouts through on-site documentation and archival research, and invent ways to adapt in order to accommodate the diverse needs of the residents, and investigate preservation principles to guide the framework of the interventions.

Many projects tackled issues related to circulation and accessibility, proposing and designing new staircases or introducing elevators, and ramps for disabled and vulnerable tenants of the complex. Others focused on the design of new, passive bioclimatic systems, including the redesign of common rooftops or the integration of bioclimatic façade elements. Numerous students also proposed expanding the outdoor space of each apartment,

introducing new programmes to increase square footage and enhance quality features. In other instances, the extended balconies were connected to encourage interaction and shared use by groups of tenants. Additionally, certain groups of students addressed adaptive layouts to meet the needs of emerging residents such as war refugees and new types of families, as well as responding to changing patterns of occupancy (co-housing, ephemeral occupancy). In some cases, this resulted in unifying apartments, creating communal kitchens for each building unit and thus allowing for ground floor apartments to become communal hubs for work or study.

The proposed interventions, although different in approach, all took advantage of the buildings' structural grid, allowing for the accommodation of multiple programmes. As a result, new imaginative housing narratives were developed envisioning solutions in a shifting socio-economic reality, while at the same time applying strategies for restoration which included modifications of spaces, façade elements, and the integration of new and repurposed components. The proposals spanned a broad spectrum from applicable restoration approaches to more experimental interventions, reflecting the students' effort to address the multifaceted challenges of the 21st century.

6. CONCLUSIONS

Between 1950 and 1970, numerous Social Housing Buildings were constructed in many areas around the Athenian city centre. These buildings are not only unique for the technology used in their construction but also for the housing conditions and spatial experiences they offer. Influenced by the international modern movement, the architects incorporated local, spatial assemblies in the organisation of the rooms, in the connection between indoor and outdoor and with the urban fabric. The complexes maintain ideal conditions for urban habitation due to their low height and the open, public space between them. Their construction system based on a grid, allows for flexibility, conversions, extensions, and additions. These dwellings, both independently and as parts of housing complexes, are living archives of the reconstruction and the economic and spatial formation of the Greek metropolis.

The course's primary objective is to uncover forgotten cases of Greek modern architecture by examining the as important architectural and social elements. Rentis social housing complex is a fine example of the radical design and theory that was originally developed by Aris Konstantinidis and applied by others, such as the project architect, George Skiadaresis. The complex showcases the power of architecture to address social issues and improve quality of life for ordinary people. The modernist approach and focus on social housing projects have left a lasting impact on Greek architecture. The design of the complex, characterised by a modular layout, relief structure, depth-enhancing techniques, and carefully positioned balconies, exemplifies the potential for creating successful and harmonious architectural solutions that transcend specific locations.

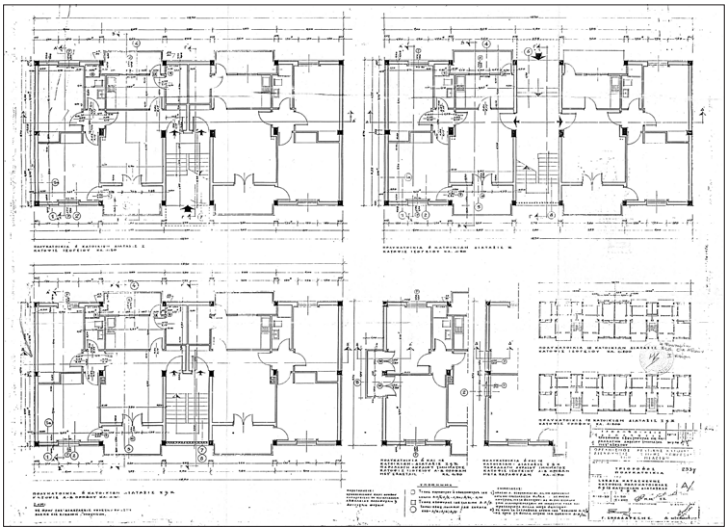
Following a thorough analysis of the original design and the adaptations made by the inhabitants, the proposed interventions aim to provide adaptive



Figure 1. Complex situation. © Khaira Abimbola, Lauren Antoine, Lea Bartels, 2023.

Figure 2. Original blueprints of a typical floor. © G. Skiadaresis, 1958.

Figure 3. Degradation of the building elements. ©Khaira Abimbola, Lauren Antoine, Lea Bartels, 2023.





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solutions that respect the individual needs and motivations of the residents. Proposals cover a wide range from small, key interventions to larger alterations such as expanding spaces, removing partition walls and unifying interiors, adding new programmes of housing, and revitalising the common and public areas. These interventions create a sense of spaciousness and grant residents the possibility to use their domestic space in diverse ways. The interiors become lighter and the common areas more open and inviting.

By working with existing modern architecture, students become familiar with an important part of our shared history and discover valuable tools and applications of reuse and repurpose. ■

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BIOGRAPHIES

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SPATIAL DECOLONISATION OF THE MODERN MIDDLE-CLASS HOUSING OF MOZAMBIQUE

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ABSTRACT

As decolonisation initiatives spread throughout the African continent, the Portuguese government tried to assert and legitimise its presence in the colonial spaces by promoting, among other means, migration from Portugal to the "overseas territories". In Mozambique, most of this wave of European settlers fell within a middle-class socio-economic profile. As such, they became the main target of the housing developments that assisted the migration process until the country's independence in 1975.

This paper focuses on the neighbourhood promoted by the *Sociedade Imobiliária e de Administração Lda* (SIAL) in the early 1970s to accommodate this new middle-class population on the outskirts of the Mozambican capital. Following the urban pattern of the garden city, the single-family houses were designed by architect João José Tinoco, who conceived a series of standard dwellings with a wide range of dimensional and distributive variations that would allow for different modifications both at the time of execution and once built and put into use. This transformation process spread after Mozambique's independence when the new inhabitants who came to occupy the dwellings began to change them to accommodate their evolving comfort needs.

The paper analyses these transformations by focusing on the inhabitants' discourses and new spatial practices. The aim is to understand how the post-colonial occupation of Mozambique's modern domestic environments and the contemporary living requirements of the users have subverted this architecture's spatial and symbolic structure. In doing so, it has been possible to verify that, despite their sometimes-radical nature, these changes have not erased the essence of the project. On the contrary, they have become signs of decolonisation that have added to it the richness of finding that, more than 50 years after its construction, this ever-changing habitat is still being actively inhabited.

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1. INTRODUCTION

The decolonisation of the African continent was not only a fundamental historical process in the political evolution of the world after the Second World War but also for the redefinition of modern architecture. Framed by the rise of emancipatory movements, Africa emerged in the second half of the 20th century as a territory in rapid urban development. New housing paradigms were then advanced by confronting the modern with the continent's environmental, historical, cultural, political and social realities.

These paradigms significantly influenced the CIAM's discussions on the notion of habitat. Among others, Georges Candilis drew from the studies carried out by GAMMA and ATBAT-Afrique groups on "the housing for the greatest number in Morocco" to introduce in CIAM IX (Aix-en-Provence, France, 1953) the concept of *habitat* évolutif [evolving habitat]. Based on the idea that "it is for the architect to make it possible for the man to make the flat his home […] man shall have the liberty to adapt [its habitat] for himself",[1] this concept endowed architecture with a temporary character, open to the transforming action of the inhabitants.

The *Nid d'abeille* and *Semiramis* buildings, designed by G. Candilis and Shadrach Woods in the Carrières Centrales district of Casablanca, were presented as paradigms of this *habitat* évolutif. Articulated by courtyards superimposed in height, the buildings were configured through functionally indeterminate rooms aiming to accommodate changes in the inhabitant's living practices.[2] Once they were occupied, these rooms began to acquire different characters as a reflection of the identity of each of their users. The overlapping courtyards have also started to be used as rooms, allowing the inhabitants to increase the original living space of the dwellings. As such, the *habitat* évolutif designed by G. Candilis and S. Woods has taken on new meanings as an ever-changing habitat that users continue to transform through their everyday experiences.

Taking the example of Casablanca as a starting point, this paper analyses the processes of transformation of the *habitat* évolutif designed by João José Tinoco[3] in the neighbourhood promoted by the *Sociedade Imobiliária e de Administração Lda* (SIAL) in Mozambique. Built in the 1970s to accommodate the middle-class population serving the Mozambican capital, this neighbourhood has undergone a process of spatial decolonisation since the new inhabitants who came to occupy the dwellings after the country's independence in 1975 began to change them to accommodate their evolving comfort needs.

To examine this ever-changing habitat, the paper focuses on the inhabitants' discourses and new spatial practices based on interviews conducted by the author in 2019. The redesign of the dwellings complements the field observation, providing a solid base to understand how the post-colonial occupation of Mozambique's modern domestic environments and the contemporary living requirements have subverted this architecture's spatial and symbolic structure.

1. Alison Smithson, "Team 10 Primer 1953-62," *Ekistics* 15, no. 91, Modern cities: a jungle of buildings (1963): 355-56.

2. Tom Avermaete, "Habitat du plus grand nombre grid, 1953: Gamma," in *Team 10 1953-81: In search of a utopia of the present*, ed. Max Risselada and Dirk van den Heuvel (Rotterdam: Nai publishers, 2005), 26.

3. For more information on the architect João José Tinoco, see Vitor Tomás, "A arquitectura de José João Tinoco," (Maputo: Faculdade de Arquitectura e Planeamento Físico. Universidade Eduardo Mondlane, 2003); and António Matos Veloso, José Manuel Fernandes, and María de Lurdes Janeiro, João José Tinoco - Aquitecturas em África (Lisboa: Livros Horizonte, 2008).

2. FROM HABITAT ÉVOLUTIF

As decolonisation initiatives spread throughout the African continent, the Portuguese government tried to assert and legitimise its presence in the colonial spaces by promoting, among other means, migration from Portugal to the "overseas territories". Two strategies were used for this purpose: one aimed at creating agricultural settlements scattered in rural areas, the so-called *colonatos*, while the other was based on free and spontaneous emigration, primarily to urban areas. The latter, the most numerous according to Cláudia Castelo, was the one that determined the socio-economic profile of the population of European origin that began to settle in Mozambique during the second half of the 20th century. Employed mainly in the public administration or the tertiary sector,[4] this mass of urban population brought new housing demands, resulting in the expansion of housing developments for the middle class.

In the Mozambican capital, Maputo (known as Lourenço Marques during the colonial period), middle-class real estate developments became widespread and increasingly vertical. The lack of urbanised land, owned by a small number of large companies; the municipal government's inability to provide infrastructure in developable areas;[5] and the proximity of surrounding suburban areas that limited the possibilities for horizontal urban expansion, are among the reasons that favoured this process of vertical densification.[6]

In this context of accelerated urban growth, the city of Matola gained relevance from the 1960s onwards as a sprawling residential area to the west of the Mozambican capital. This housing development did not follow the densified pattern of the former Lourenço Marques. Instead, it moved closer to the principles of the garden city, with detached and semi-detached single-family housing as the preferred prototype. The aim was to contribute to solving the housing problems of the so-called "economically weak". However, as António Rita-Ferreira pointed out,[7] their main users ended up being the middle-class population of European origin and the few local populations to whom the "*Estatuto do Indígena*" had given the label of "assimilated".[8]

In the case of SIAL, the settlement was developed in a designated area of the Fomento neighbourhood following the plan approved by the Matola Municipal Council in 1969. The so-called "economic" houses were designed by architect João José Tinoco, who conceived a series of standard dwellings with a wide range of dimensional and distributive variations that would respond to the inhabitants' diverse aspirations and financial capacities. The combination of different housing models surrounded by gardens would eventually materialise a vast horizontal grid to meet the housing needs of middle-class settlers arriving in Mozambique.

When designing the functional scheme of the dwellings, the architect used a horizontal division of the programme to establish a separation between service areas, assigned to household personnel, and the living and intimate areas, restricted to the family's use. The predetermined nature of these three zones contrasts with the indeterminacy of the mezzanine room located on the first floor – in the two-storey dwellings. This room reflects the desire "to provide a framework in which man can again be master of his home".[9]

4. Cláudia Castelo, "'O branco do mato de Lisboa': A colonização agrícola dirigida e os seus fantasmas," in *Os Outros da colonização - Ensaios sobre o colonialismo tardio em Moçambique*, ed. Cláudia Castelo, et al. (Lisboa: Imprensa de Ciências Sociais, 2012), 30.

5. Maria Clara Mendes, Maputo antes da independência. Geografia de uma cidade colonial (Lisboa: Instituto de Investigação Científica e Tropical, 1985), 417.

6. Paul Jenkins, "Maputo and Luanda," in *Capital Cities in Africa: Power and Powerlessness*, ed. Göran Therborn and Simon Bekker (Johannesburg: Human Science Research Council, 2011), 145.

7. António Rita-Ferreira, "Os Africanos de Lourenço Marques," *Memórias do Instituto de Investigação Científica de Moçambique* 9, no. Série C (1967-1968): 212.

8. The "Statute of the Indigenous" in force until 1961 had separated the majority of the African population, known as "Indigenous", from the rest, the "non-indigenous". In the middle were the so-called "assimilated"; Africans who, according to the colonial regime, had internalised Western values and behaviours. Eduardo Mondlane, Lutar por Moçambique (Maputo: Centro de Estudos Africanos, 1995), 43.

9. Smithson, "Team 10 Primer 1953-62," 355-56.

The double height linking the mezzanine room to the main living area further reinforces this desire. Connected to the ideas developed by Le Corbusier in his *Immuebles Villas*, this element provides an understanding of space as a simultaneity of events where space and time are intrinsically linked. The front and rear porches also foster this dynamic perception. As conceived, these "in-between spaces" would not only serve to protect the interior from the direct incidence of solar radiation but would also act as "thresholds" capable of hosting a plurality of additional uses valuable for the inhabitants' lives **(Fig. 1).**

Through these elements, the SIAL houses incorporated a latent idea of a flexible and transformable construction that, starting from a fixed organisational scheme, would support different modifications to be contemplated at the moment of execution and, later, once built and put into use. In other words, the dwellings were planned so that they could be extended beyond the originally defined boundaries, allowing for constant evolution – just like the *habitat* évolutif proposed by G. Candilis.

3. TO EVER-CHANGING HABITAT

At the time of Mozambique's independence in 1975, SIAL suspended its activities in the territory, and most of the homeowners abandoned the houses the company had built in the city of Matola. Those who had the chance sold their homes before leaving. Others handed over their properties to a friend or acquaintance. But most left the Mozambican territory abruptly, leaving the neighbourhood virtually empty for the next few years. The new occupants began to arrive in 1977 in a gradual process organised by the State rental agency, APIE, following the nationalisation of the abandoned housing stock in 1976.[10] Since then; the inhabitants have transformed the original layout and the ways of using it to accommodate their daily living requirements.

On one hand, the plots have undergone a process of densification due to the addition of new buildings detached from the original dwelling. Apart from outdoor kitchens, toilets or laundry areas, these "annexes" have begun to accommodate new uses other than those envisaged in the project, such as offices, gyms, beauty salons, small shops and even entire houses for other family members.

> *We've been living here for over 40 years. The house has three bedrooms, a living room, kitchen, and bathroom on the ground floor, as well as a living room and bedroom upstairs. We have since extended the house at the back, adding an outbuilding with a bedroom, bathroom and kitchen. We also covered the service patio to make a veranda for sitting outside in the summer (Dweller 1).*

Where new constructions have been added, the kitchens of the main house have often been moved outside to allow the use of charcoal as fuel or to keep the interior free from clutter. In the same way that cooking is done outside, there is also a tendency to eat outside to take advantage of natural

10. For more information on the housing nationalisation process that followed Mozambique's independence, see David Morton, Age of Concrete: Housing and the Shape of Aspiration in the Capital of Mozambique (Athens: Ohio University Press, 2019); and Patricia Noormahomed, "Towards the Definition of an Ever-Changing Heritage: A Reading of the (Re)Appropriation Processes of the Torres Vermelhas in Mozambique," *Curator: The Museum Journal* 65, no. 3 (2022)

ventilation. In these cases, the indoor space has become a formal area only used on special occasions and for certain guests.

> *We mainly use the outdoor kitchen for cooking; the one inside is just for small things. The living room is only for visitors. We watch TV upstairs [in the mezzanine] because there you can open the windows on one side and the balcony doors on the other, and the air flows through (Dweller 2).*

These alterations reveal new domesticities with the renewed use of the outdoors: living is no longer restricted to the interior; the exterior becomes an extension of the home. In this process, not only have occupancy rates increased, but the very conception of the housing prototype has been significantly altered. As dwellings have come to accommodate different generations of the same family due to cohabitation practices, they have gone from single-family to multi-family.

> *The house is exactly as we bought it. It has three bedrooms, a bathroom, a kitchen and a common room on the ground floor and a mezzanine floor where there is another living room and two bedrooms with another bathroom. We're using the house as we found it. The only thing we've changed is the backyard because as the family has grown, the house is no longer enough for everyone. So, we built small rooms outside for the children and an outdoor kitchen (Dweller 2).*

Similarly, as the new building extensions are being used for commercial and other activities related to the tertiary sector, the residential prototype and its surroundings have begun to take on new meanings as an overlapping of mixed uses in their "in-between spaces".

In the interior of the dwellings, João José Tinoco's évolutif design has also allowed the space to undergo a wide range of modifications throughout its different temporalities without compromising the original formal expression. Most of these transformations aim to increase the living area of the dwellings. To this end, the backyard porch has been, in some cases, closed off to extend the living room and kitchen area **(Fig. 2).**

> *We extended the back of the house to enlarge the kitchen as well as the living room and create a dining room – that way, the house was tailored to our liking. We also built another garage opposite the original garage (Dweller 3).*

Some garages and front porches have also been partially or entirely enclosed to incorporate their surface into the indoor living space.

> *Some people have altered their homes. Some have enlarged the living room by closing off the front porch. Others have done the same*

but with the garages. Others have been more radical and made a staircase outside the house that connects directly to the first floor. As the top floor is spacious, they now have two independent houses, one upstairs and one downstairs (Dweller 4).

In other cases, extensions have been made by taking advantage of the large attic below the steeply pitched roofs in those models initially designed with a double height. The indeterminacy of the mezzanine floor has thus achieved its purpose of allowing the dwellings to grow vertically. As a result, the dwellers have been able to increase the number of bedrooms to adapt the space to their diverse family structures. In doing so, they have diluted the horizontal separation of the programme as proposed by the original schemes.

We bought the house with two bedrooms and then extended it to add two more. The house originally had only a ground floor, but it was already prepared to have a second floor because it had stairs leading to the mezzanine and the attic. […] We then built an upper floor with two bedrooms, a balcony, and a library (Dweller 3).

The most interesting aspect of this process is that some of the modifications were already carried out during the execution of the dwellings.

Initially, the house was designed with three bedrooms downstairs, but during construction, we asked them to remove one of the bedrooms to make the living room bigger. So, the house was left with just two bedrooms. At that time, we only had two children, so it wasn't a problem. Later, we had another one, so the girl slept in one of the bedrooms downstairs, and the two boys slept on a bunk bed in the mezzanine studio area. Then, in the year 2000, we modified the upper floor and added another bedroom and a small living room (Dweller 5).

In short, as needs change, the inhabitants echo them by transforming the space to adapt it to the specific requirements of each stage of their lives. In the process, the reinforced concrete structure of the houses has not only remained safe and unaltered but has also proved its flexibility in easily accommodating each change **(Fig. 3).**

4. CONCLUSIONS

Overall, the transformations observed in the SIAL neighbourhood reflect the process of spatial decolonisation that the modern housing of Mozambique has undergone since independence. In response to their changing perceptions, desires, needs and aspirations, the inhabitants have transformed and adapted the space and given it new meanings according to their different identities. However, despite their sometimes-radical nature, these changes have not erased the essence of the project. On the contrary, they are signs

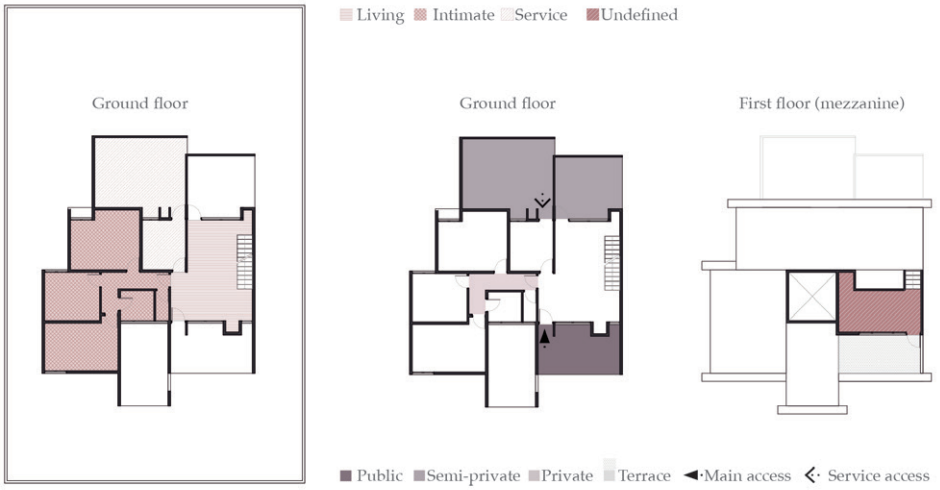


Figure 1. João José Tinoco, SIAL neighbourhood, Matola, Mozambique, the original type A model. © Author.



Figure 2. João José Tinoco, SIAL neighbourhood, Matola, Mozambique, contemporary transformations on the type A dwelling. © Author.



Figure 3. João José Tinoco, SIAL neighbourhood, Matola, Mozambique, contemporary transformations on the type A dwelling. © Author, 2021, 2023.

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of decolonisation that have added to it the richness of finding that, more than 50 years after its construction, this ever-changing habitat is still being actively inhabited. ■

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BIOGRAPHY

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DEPARTURE FROM THE CHANDIGARH STYLE: CONTEMPORARY ADAPTATION TO THE REGULATED MARLA HOUSE

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ABSTRACT

This paper analyses critical design principles of indigenous modernism in the *Marla* house- a colloquial term for the private row house of Chandigarh- and their relevance and obsolescence under the changing notion of comfort. The Marla House was derived from government housing that modernized domestic living in post-independent India. Marla House attempted to provide dignified housing with scarce resources, address climate challenges, and adapt to cultural needs. A lesser deliberated fact is that the development controls of the 1950s regulated these houses. It created uniquely similar spatial planning through similar layouts and facades through standardized openings and projections derived from Corbusier's Modulor, material limitations of exposed brick, and whitewashed projections, and a limited built volume imbibing Corbusier's 'sun space and verdure.' This standardization is intended to achieve dignified urban living and fasten development at a time when there were limited architects. It also standardized everyday life and the notion of comfort.

Since the 1990s, relaxations in dated regulations have been catering to changing lifestyles and expanding the design agency of the residents to transform their homes and evolve their notions of comfort. The transformations have foregone critical features like verandahs, terraces, and brick *jaalis* for space maximization - increasing and merging rooms, introducing attached toilets, and making open and modular kitchens. Transformations from the Modulor-sized window openings to glass fascination depart from the modernist tropes.

The study identifies transformations in the row houses through an architectural survey. It collates the affordances of the house, everyday practices, and the need to retrofit through semi-structured interviews of residents, architects, administration stakeholders and experts. This study gives an insight into the trajectories of lesser-known Marla house transformations as a departure from mid-20th-century Indigenous modernism and the residents' changing notion of comfort and value of these houses as a modern heritage as future practices.

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1. INTRODUCTION

Chandigarh's modernism, besides being rooted in principles of CIAM, neighborhood unit, and Garden City, is layered with aspirations of nation-building, a new way of dignified living in independent India, negotiations with modernity via the colonial baggage, austerity in scarcity[1], and the ideologies of multiple and contesting authorships[2] that came from a messy transnational collaboration[3]. Chandigarh, therefore, is often seen as two cities, one of Le Corbusier's footprints - the Capitol Complex and the grand schema of planning, and one of the everyday city that borrows part of Corbusier's modernism, Jeanneret-Fry-Drew's contextual sensibilities and attempts by Indian counterparts like MN Sharma, SD Sharma, and Aditya Prakash to interpret and indigenize modern architecture. The simultaneity in negotiating the region's uniqueness and the universals of science and function can help build the concept of 'Indigenous modernities,'[4] most visible in domestic architecture.

Factors like climate, technology, materials, and the forces of tradition that shape domestic space, when imposed by a standardized and aesthetic regulatory framework, direct toward political and moral complexities of identity, ownership, and dehumanization. However, the volumetric regulations can be seen as integral to modern life for health and safety, a tool to facilitate the construction and integration of technological advancements.

This paper deliberates on how regulations in Chandigarh standardized private domestic space use, the notion of comfort in the 1950s, and its relaxations in the 1990s introduced the agency to alter the houses with the changing lifestyle. It identifies common renovations and resilient features but also questions the role of regulations in balancing the values of modernist idioms and present-day comfort and urban order.

2. DECODING THE REGULATED MARLA HOUSE

The perspective of spatial organization for a house and the uses a house enables builds the interconnection of what the space is and what it does – ensuring what it affords the resident. This affordance builds a notion of comfort. The Marla house was drawn from the already developed designs of government houses. These houses attempted to address aspects of climate cost and culture and established a 'Modern Indian Vernacular.'[5]

The Marla houses draw from their spatial planning (along with façade design) to accommodate regional practices of outdoor sleeping in private outdoor enclosures, using ground stoves (*chulhas*) in the kitchens, and toilets away from the house for hygiene. It aided the notion of comfort of the 1950s. More importantly, they set the city's benchmark through Development Controls for private domestic architecture.

Private housing accounts for 70% of the total housing, of which *Marla houses*[6], a colloquial term for row houses, account for almost 50% of this private housing. This study focuses on Marla houses – the most common being 5Marla, 7Marla, and 10Marla. The need to regulate private domestic architecture arose due to the initial haphazard development,[7] and the Capitol Project Team[8] held the design agency. Other relevant reasons were the lack

1. Karim, Farhan. *Of Greater Dignity Than Riches: Austerity and Housing Design in India*. United States: University of Pittsburgh Press, 2019.

2. Perera Nihal, "Contesting visions: Hybridity, liminality and authorship of the Chandigarh plan", *Planning Perspectives*. 19, no. 2 (2004): 175–99.

3. Prakash Vikramaditya, "Messy Work: Transnational Collaboration in Chandigarh", in *Messy Urbanism: Understanding the "Other" Cities of Asia*, ed. Chalana Manish (Hong Kong: Hong Kong University Press, 2016), 175-192.

4. Hosagrahar, Jyoti. *Indigenous Modernities: Negotiating Architecture, Urbanism, and Colonialism in Delhi*.

5. Desai Madhavi., Desai, Miki., Lang, Jon. *The Bungalow in Twentieth-Century India: The Cultural Expression of Changing Ways of Life and Aspirations in the Domestic Architecture of Colonial and Post-colonial Society*. United Kingdom: Ashgate, 2012, 110.

6. *Marla House* derives its name from the local unit of measurement – *Marla* and *Kanal*. One Marla measures roughly 225 sq ft. A kanal is roughly one-eighth of an acre. All Marla houses and the 1-Kanal houses were row houses.

7. Prakash Aditya, "Architectural Control, Shops, Flats, etc." *Marg*, XV, 1, (December 1961): 39-41.

of qualified architects, the demand for building quickly, and a vision to have a distinctly urban character.

The Development Controls include Zoning, Architectural Controls, Frame Controls, and Standard Drawings for the private houses. The regulations included detailed drawing sheets and clauses about the limitations on the volume, setbacks, façade design, and integration of services. The Chandigarh Style[9], connotated as "simple, austere brick houses with plastered, whitewashed bands of *chajjas* (cantilevers)"[10], also encompasses the Marla houses through these regulations. They stipulated door-window sizes derived from the Modulor, façade materials, and location of services. While the volume and façade were coded and regulated, the spatial planning also got standardized. The controls ensured a visual urban order, Corbusier's 'Sun Space and Verdure'[11] as standards for dignified urban living.

3. SPATIAL PLANNING OF THE REGULATED MARLA HOUSE

The city was planned in two phases, and the regulations for houses varied in both. Phase 1 had Architecture Control applicable on V4 streets and Frame Control on houses up to 10 Marla. Phase 2 only had Frame Control. While Architecture Controls dictated the external façade design, volume, and initially even the internal planning, Frame Controls were limited to the volumetric extents, outer frame within which the house was to be built, and the façade aperture sizes as per a template of Modulor dimensioned door-window sizes. However, a study of the archival drawings and the architectural survey suggests standardized planning even in Frame-Controlled houses that resemble government house plans, architectural control drawings, and standard drawings. Therefore, all houses had *barsaatis* (a low-height roofed structure above the house), brick *jaalis* (lattice screen), *roshandaans* (clerestory top hung window and mesh), chulhas and flue, two-bay layouts, gallery spaces, verandahs, separated toilet units - all of which defined interior spatial planning and interstitial spaces. Most of these elements attempted to reduce cost, counter the climate, and accommodate local cultural practices. The typical spatial configurations are mentioned below.

3.1. REGULATING THE VOLUME OF THE HOUSE

A narrow front and a deep plot had economized land value and services. The controls accommodated a regional practice of outdoor sleeping and regulated it in the built form. Phase 1 houses had two and a half floors – almost a box-like structure, and the half floor on the top accommodated a *barsaati* that was used as a shelter for sleeping, especially during the rains. This began to be commonly called the Dhai-manzil (two and a half floors). Indian counterparts altered the Marla house for Phase 2 by introducing recessed terraces on each floor for outdoor sleeping and making it three floors **(Fig. 1D, E, and I)**. Window openings on the facades of Frame Controlled houses were regulated under the Modulor proportions. The small windows were preferred to reduce lintel and glass costs, reducing daylight intake into the Marla houses.

8. The Capitol Project Team was Le Corbusier, Pierre Jeanneret, Maxwell Fry, Jane Drew and Indian architects Aditya Prakash, M N Sharma, S D Sharma, and Eulie Chaudhary. Archival records show Aditya Prakash introducing frame controls and names of Pierre Jeanneret, M N Sharma and Aditya Prakash on Architecture Control drawings

9. Sabikhi Ranjit, "The City of the Future" *Architecture + Design*, (September-October, 1987): 43.

10. Wattas Rajnish, "An Icon in Transition" *Architecture + Design*, (January, 2005): 35.

11. 'Sun, Space and Verdure' was a planning concept by Le Corbusier. Refer - Randhawa MS, "Landscape and Gardening" *MARG,* (December, 1961): 49-50 and *Chandigarh Master Plan 2031*.

3.2. CONFIGURATION OF DOMESTIC SPACE

A typical plan had two bays due to the structural limitations of load-bearing walls. Larger houses had an additional gallery (corridor) space between the rooms to segregate a passageway for the cleaners and sweepers. Two bays had independent access from the front and back yard – and some residents recall renting one bay in the initial days for income that pays off the loan. Each bay had two interconnected rooms, one leading to the other. The division between these two rooms usually had storage units. The wood-paneled, half-double-doors between the bays in the interior would save circulation space within the narrow bays.

Verandah afforded adjacency to the kitchen, toilet, and backyard (also in the front adjacent to a toilet and staircase in Phase 2) **(Figure 1 A,B,C for Phase 1, D,E for Phase 2, Figure 2a)**. The rear rooms opened into this shaded and semi-enclosed configuration of verandah. Residents, therefore, vouched for its comfort in rain, winters, summer mornings, and evenings and cited it as the most used space.

The architectural survey showcased standardization of the toilets' location, layout, and access based on proximity to the service lanes to save cost and access to toilets from outside for hygiene **(Figure 2a)**. Phase 1 had toilets at the back, and Phase 2 had toilets at the front of the house. Separate WC, bathing, and washing sufficed to have a toilet module on each floor. While Architecture Control stipulated that houses should have staircases in the front, it became a common choice in Frame Control houses as it enabled an easy and independent floor renting.

3.3. INTERSTITIAL SPACES AFFECTING INTERIOR PLANNING

The semi-enclosed spaces - the terraces and verandahs became interstitial spaces that helped transition from a built to an unbuilt space. It facilitated the idea of an enclosure and a sense of control concerning the level of exposure to neighbors. In Phase 1, the upper floors had verandahs and barsaati, and in Phase 2, each floor had a 12 ft recess to accommodate terraces.

Brick *jaalis* determined the interstitiality of the barsaati in Phase 1 and terraces in Phase 2 by partially enclosing them **(Figure 1a, b, d, Figure 3b)**. The jaalis' height, location, and brick patterns were largely regulated to ensure ventilation, cut the harsh sunlight, and provide a visual buffer from the neighbors. The Jaalis became a cheaper, quicker, and integral decorative element in varying permutations of brick. Therefore, these architectural elements collectively defined an interiority in the Marla house in the 1950s –outdoor yet private and established an aesthetic play in the regulated street picture.

4. RELAXATIONS IN THE MARLA HOUSE

The 21st-century domestic space derives comfort through space maximization and expanding interior spaces to accommodate independent multigenerational family units, renting floors, and new domestic technologies in the house. Since the 1990s, the Chandigarh Administration, to accommodate such needs, has proposed piecemeal relaxations that have enabled significant changes in spatial planning and aesthetics of the façade.







Figure 1 Plans for Marla Houses. Phase 1 – Old houses and renovations (A) and (B), Rebuilt (C). Phase 2 – Renovations (D) Rebuilt (E) Sections – (F) Phase 1 old, (G) Phase 2 – Old, (H) Rebuilt – both for phase 1 and 2, (I) Renovations within the old built area. © Author

Figure 2 Interior of the Marla Houses. The original Verandah, toilet, and room configuration (A), Kitchens engulfing verandahs (B), Merging of two rooms using steel beams (C) and modular kitchens that extend into the backyard as a tail (D) © Author

Figure 3 Phase 2 - Recessed Terraces (A), Photo from the extensions showing back-to back hovels (B), Front Elevation of one old and one rebuilt house adjacent to each other in Phase 1 (C) © Author

A critical relaxation has been the increase in permissible built-up areas. From an estimated 50% ground cover, the Marla houses today can build almost a 70% of plot area (all floors), including a partial backyard cover and permitted basements. Additionally, relaxations permitted a percentage of floor area to be used as a workspace for select professionals, everyday amenity services of the STD-PCO-FAX[12]-Internet cafes, photostats, creche, and rent to paying guests. They also introduced a controversial Apartment Act[13] of floor-wise ownership. Another façade relaxation permits any size and shape of openings, discarding the Modulor. These relaxations paved the way for elaborate renovations in Marla houses.

Interviews with the stakeholders gave divergent stands, while the stakeholders in the administration claimed these were the best possible strategies based on needs. However, two former chief architects observed that the changes were "greed-based" and shortsighted. Ar. SD Sharma, the initial Capitol Project Team member, resonated with the latter, pointing out that a Marla house has a limit to what the house can provide. While this directs to the affordances – the changing notion of comfort and space use – exceeding the maximum capacity has threatened the urban order.

5. THE 21ST CENTURY EXPANDED MARLA HOUSE

Renovations in the last 30 years have shown that residents are adopting open floor plans and flexibility in space use **(Figure 1 and Figure 3)**, and

12. STD-PCO were Telephone services for local and national calling. FAX was a photocopying service.

13. Apartment Act enabled the floor-wise sale of plots where the house may be subdivided into separate dwelling units with not more than one dwelling per floor. After many objections, this Act was put on hold in 2007. However, the builders (and lawyers) found ways around it and started selling properties as a 'percentage shareholder-ship' - Ground floor 50%, First 30%, and Second 20%. With the area relaxations, this subdivision would be altered to 40-30-30.

interior changes were often independent of the relaxations. The interiors began accommodating fridges, air-conditioners, televisions, microwaves, oven-toaster grills, washing machines, and many more household items. The interviews suggest most renovations were piecemeal, with limited civil work and interior alterations. The most common renovations have been integrating toilets, enclosing verandahs, and renovating kitchens. Without fail, residents cited the kitchen and rooms as small in size, implying that the size of these spaces is obsolete today. Kitchens mostly have become open and modular kitchens. Verandahs have been enclosed - either in opening glass panels or with walls and openable door windows for an additional room, or extended the kitchens into the verandahs to make larger, open, and modular kitchens, sometimes combined with small dining (**Figure 2b,d**)

A practicing architect who renovated more than 100 Marla houses explained the lifestyle changes that affect room sizes. A room initially 100 sq ft now becomes an individual living unit accommodating an attached toilet and wardrobe, increasing the size to 300 sq ft. The tripartite toilet unit for each floor now integrates the washbasin, bathing, and WC into a single unit with 2-3 toilet units per floor. Some houses have stores converted into toilets.

Another change has been merging the two interconnected rooms into a large open plan for drawing-dining using steel girders for structural stability **(Figure 2c)**. In interviews, residents claim the renovations allow space use flexibility, openness, and ease of hosting guests. The storage almirahs that separated the two rooms now moved adjacent to the new toilet modules. Considering the two-bay division is a structural wall, residents prefer not to touch it and keep the room separate from the drawing-dining. However, the gallery spaces have been merged into rooms. These examples showcase the adaptability of the Marla house.

However, renovations that enclose the interstitial spaces threatened the modern idiom of sun space and verdure. The piecemeal relaxation on the ground floor has permitted extensions in the backyard that initially started from a store, now allowing a 4ft width of the plot extension and a tail into the backyard **(Figure 3a,b)**. In Phase 2, the stepped terraces are permitted to be enclosed as box-like houses (**Figure 1h, Figure 3a**). These relaxations have increased the proximity with neighbors at the rear end of the house. A resident commented that neighbors now use the roof of the tail extension as a terrace, which visually invades their privacy in the backyard. Another resident commented on the reduced sunlight and closing in of their backyard due to extensions on both sides. Further, protruding balconies have discarded the *jaalis*. The rationale for the Modulor seems obsolete with a freehand on opening sizes. However, facades now have full-height glass panels with a limited cantilevered shade that defeats climate responsiveness toward heat gain **(Figure 3c).** The large glass windows have exposed the interior domesticity and raised electricity bills. The built form no longer adheres to the climatic responsibility or urban order due to the relaxed regulations.

6. CONCLUSION

The adaptability of space reflects the relevance of the indigenous modernist tropes accommodating the changing needs. However, the extent of expansions and additions based on market-driven approaches is questionable. Three renovation tangents emerge. First - Minor expansions within the Marla house retain integral historic values and reflect adaptability for minor renovations, such as expanding to accommodate domestic technologies, larger kitchens, and larger toilets or merging rooms. Second, the Marla houses, now with permissions, encroach onto the interstitial space that showcases space maximization on the same plot. Third, Marla houses are rebuilt under the relaxations to monetize the selling of the house as a percentage of the stakeholder scheme (Apartment Act).

The second and third trajectories exceed the initial stipulated footprint and disrupt the urban order. The Marla house loses its value as a modern heritage, intrudes into the privacy of neighbors' backyards, and resembles back-to-back hovels of industrial towns.

However, renovations within the initially permitted-built floor plan reflect the adaptability and incremental nature of the Marla house. They reflect the current relevance of passive strategies within the house as a climate response. When supported with careful relaxations that continue to respond to climate, new construction techniques, and domestic technologies, there is a possibility to retain heritage value and yet expand the design agency rather than a mere floor area. ■

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BIOGRAPHY

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REFLECTIONS ON MINIMUM SPACE LIVING IN MACAU

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ABSTRACT

The present paper contemplates the ground of research of emerging forms of inhabiting spaces in contemporary urban territories, with a precise focus on Macau's 1960s housing production and its building lifetime. The focus goes to domestic space's architectural conception of resettlement housing production, seen as paradigmatic cases of colonial municipal response to the housing shortage recognised in the Pearl River Delta.

Within the context of valorisation and conservation of Modern Movement architecture, presenting pressing intricate challenges intimately tied to cultural significance, this proposal aims to analyse and present resettlement realities which combine valid minimum format living solutions and adaptive design circumstances.

In order to settle a comprehensive understanding about first statements of architectural modernity in the field of modern housing built in the Pearl River Delta's region as hybrid interpretation of Modern Movement's ideals in colonial Asian territory, this paper aims to approach a case study which shows adaptation of Modern features to sub-tropical cultures, climate, and environment.

Drawing on archival documents, architectural records, oral histories and photographic surveys, the present reflection investigates problematics and potentialities of single space compartment unit format, within consideration of ways in which residents adapted to and coped with the constraints of minimum space living.

The present essay aims to unravel similarities and differences in the spatial constraints faced by inhabitants from 1960s' building inauguration to their lifetime forms of occupation, reshaping how individuals inhabit their homes to meet evolving needs and preferences within domestic behaviours.

Looking to unveil how housing design solutions from the Modern Movement era can effectively address changing necessities and improve spatial comfort while simultaneously striving to achieve objectives such as climate comfort and flexibility, the main goal of this proposal is to identify potentialities for innovative solutions between variations of housing typologies and spatial distributions in high-density living condition.

This work has been funded by national funds, Fundação para a Ciência e a Tecnologia (FCT) in the framework of project UIDB/05703/2020 from the research unit CiTUA. Written in collaboration with Daniela Arnaut, assistant guest professor, CiTUA - IST - University of Lisbon.

1. INTRODUCTION

When governments globally implemented ambitious housing initiatives to offer shelter to a larger public and enhance living standards, they portrayed it as a hallmark of progressive and democratic society. This decisive path included revolutionary changes in urban landscapes, embracing fresh perspectives of architectural design, exploring innovative materials and methodologies, redefining spatial arrangements, and fostering social change.

Currently, to navigate the complexities associated with this historical legacy represents an effortful challenge within a dynamically evolving milieu. Buildings are required to meet new characteristics and adhere to contemporary rigorous criteria, alongside the rapid fluctuations in sociocultural, political, and economic paradigms.

During the early 20th century, continental Europe undertook significant endeavours to transform nascent industrial cities into refined and green urban centres. Advancements in sanitation, public health, and provision of social housing played pivotal roles in metamorphosing dilapidated and unsanitary slums into habitable urban environments. Thus, erstwhile inhospitable sites were transfigured into symbols of modern civilization.

Subsequent to World War II, the domain of social housing witnessed a robust expansion consolidating itself worldwide, albeit with varying degrees of growth and implementation across different latitudes.

In case of Macau, former Portuguese colony, the urbanization process has primarily evolved within the framework of Western urban planning models and architectural conventions, with few adjustments made to accommodate local nuances. The historical integration of Western architectural styles, coupled with the emergence of novel modernist endeavours, underscores the distinctive nature of South China Sea's concession as atypical case studies.

Macau, characterized by its dual cultural heritage and simultaneous connections to both, West and East traditions, assumes a pivotal role in exploring intersections of modernist principles, rooted in Eurocentric ideologies, with rich Asian cultural legacies, uncommon climatic conditions, and local knowledge systems.

Macau area, during the whole 20th century, has been hit by uncontrolled cross-border immigrants flew; due to the persistent socio-economic upheavals and the proliferation of socialist movements within mainland China, people intermittently sought refuge by crossing borders into Pearl River Delta's colonies. The short available land of Macau's Island, beyond the consolidated historical urban framework, was mostly occupied by improvised shelters and unorganized areas.

Due to the urgent necessity to offer decent homes to a larger public and enhance living standards, first developments of public housing in Macau were primarily designed as temporary resettlement housing scheme. The case study on focus in this paper is unfolded in this background.

2. ILHA VERDE RESETTLEMENT HOUSING – KNOWLEDGE FROM THE PAST

Resettlement Housing Block of Ilha Verde Area, designed during 1962 and inaugurated in 1964 by young Portuguese Architects Manuel Vicente and Natalia Gomes, is one of the inaugural resettlement housing buildings built in Macau region.

The building under analysis, as part of an urban plan addressed to economically vulnerable families, is a single-block experiment replicated into a second volume located on the north side of the plot.

As one of the first gest of social housing in Ilha Verde Area, north-west of Macau, it pretends to maximize the assessment of available space, with a total of 90 apartments distributed over 5 storeys.

The project divides its floor plan into 18 residential units, and it is characterized by a rational space distribution in plan and section.

Affordable Housing Block's vertical distribution is provided by a unique central core of walk-up stairs located in the middle of the rectangular perimeter, dividing the volume into two wings. Horizontal distribution is made by an exterior common gallery which walks along the interior perimetral line of the building, on the opposite side of the street-facing façade, which allows each unit to benefit from private access and natural cross-ventilation. Minimum available area is given to circulation with the intention of maximising living-use spaces.

Each unit, of about 25 m^2, is composed of a single-compartment solution with integrated facilities. In order to suggest living/sleeping activities in the internal main space, the room is divided into two zones without resorting to a wall, but with a two-step stair and an item of fixed furniture. The south-facing apartment's side is furnished with a balcony so that the living experience can advance outside. The exterior space is obtained by a volume subtraction, which provides diagonal sun protection in response to the hot and humid subtropical climate. The informal outside living area is sheltered from high temperatures of the rising sun (east and west) and a concrete fixed washbasin is integrated with the handrail protection, in order to solve washing laundry needs. Water facilities, for economic reasons, assume a minimum space format, sharing plumbing and drainage systems with the neighbours' dwellings. The bathroom, equipped by modest installations, opens to the balcony because of hygienic purposes. The kitchen, divided by open fixed wood vertical and horizontal partitions, participates in the main household dynamics.

Units' walls and ceilings are not coated, but just painted; only the balcony surfaces, for conservation and weather protection reasons, are thought to be covered with marbleite, which does not require frequent maintenance.

The building is supported by a structural frame of reinforced concrete and infill panels of concrete blocks forming double-wall partitions. The air chamber in between units satisfies thermal and acoustic insulation. The bottom floor ceiling concrete slab is covered by fibre cement sloping panels. Inclined roofs combined economic and efficient materials with climate prevention to occasional heavy subtropical rains and typhoons.

In the façade, the architect expresses strong relationship between the interior and exterior, showing light filters and maximum functionality. The visual portrait is marked by the adoption of the interior matrix and enriched by a gentle setback of the open balcony in the principal line. A set of interesting rhythms of void and volume is maintained by the staircase core located in the middle of the two apartment's wings, also setback towards the street line.

The use of raw concrete, steel, and glass gave to Affordable Housing Block of Ilha Verde a bold and innovative character. The white-painted structure creates a grid-like pattern that emphasizes the modular units of the building, while also providing a sense of simplicity and functionality. The overall result is an orthogonal plain minimal design that is both striking and functional.

The building in question, like most other examples of Modern Architecture in Macau, is in a state of severe disrepair and very poor state of conservation, exacerbated by numerous significant modifications. Economic considerations supersede heritage values, and this important architectural example in Macau's urban landscape can be considered as endanger of fade over time.

3. ILHA VERDE RESETTLEMENT HOUSING – FROM THE PRESENT

Looking to unveil how housing design solutions from the Modern Movement era can effectively address contemporary needs, while simultaneously striving to achieve objectives such as comfort and flexibility, the present analysis regarding the project on focus aims to discern opportunities and solutions amidst diverse forms of occupation of the housing typology and interior spatial configurations within high-density living condition.

By juxtaposing the original architectural design with the present occupancy, we can delineate the progression of significant sociocultural shifts that have influenced modifications of domestic spaces and assess the responsiveness of the case study to the changing comfort necessities over the past decades.

The main two goals were, on one hand, to recognize principal metamorphoses within the domestic sphere undertaken to accommodate evolving comfort requisites subsequent to 60 years of occupancy; and on the other hand, to identify resilient and obsolete features, assessing their capacity for adaptation and alignment to evolving comfort requirements.

Reflections on interior design schemes regarding the appropriation of space within the apartments throughout its lifespan encompass a nuanced exploration of spatial dynamics, patterns' utilization, and socio-cultural influences. The analytical endeavour about Resettlement Housing of Ilha Verde Area delves into the evolution of single-compartment apartment's form and function over time, considering factors such as resident demographics, lifestyle changes, and external societal trends.

By scrutinizing the spatial adaptations, rearrangements, and modifications undertaken within the typology, the appropriation of the external spaces

through terrace enclosures has been the most common character to notice. The necessity of a larger internal area in such a minimum living format resulted in a fundamental feature among our survey. This behaviour changes inhabitants' interactions with their living environment, as well as broader contextual shifts shaping contemporary domesticity and new plasticity of the external façade.

Looking at the interior configuration, the old terrace, most of the time, hosts relocated kitchen counters, dining areas or laundry corners equipped with modern washing machines and storage furniture.

Besides, the present analysis not only illuminates pragmatic considerations driving spatial appropriation but also unveils deeper narratives regarding identity, memory, and cultural expression embedded within the domestic realm. Another clear interpretation of spatial shift can be given by the current quantity of users occupying each unit. The number of inhabitants of most flats dropped from the original 4/5 people expected at its inaugural stage to mostly 2/3 people. In those cases, the interior elevated entrance platform is occupied by tiny double rooms furnished with double beds and wardrobes. Thin dry walls define and separate day/night use areas following the proportions suggested by the architects, guaranteeing comfortable living rooms. The room's minimum format fits perfectly basic furniture, providing different variations according to users' preferences.

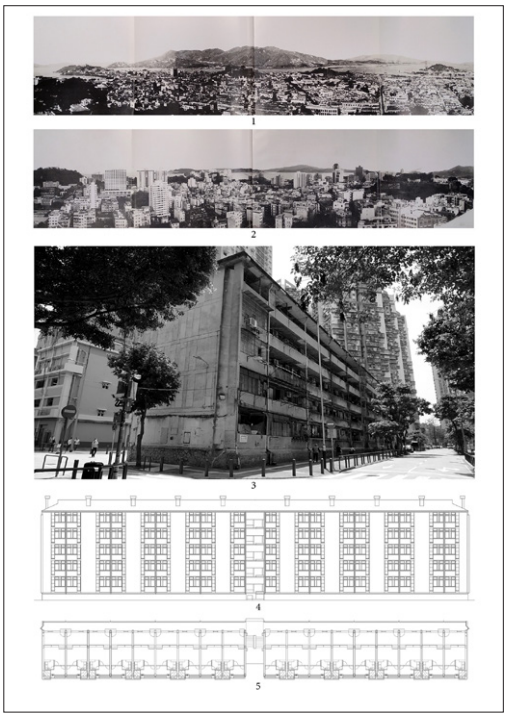
When the occupancy keeps crowded standards (up to 6 users), the open compartment layouts are organized by the adoption of bunk bed disposal as a basic module. The most common case is the location of two bunk beds on the kitchen area's side and a double bed at the entrance corner, maintaining the original cooking facilities location and dining table on the side of the façade line.

Occasionally, units located on the ground floor changed function programs, turning into commercial or service use.

Street-facing retails create activities and public spaces which engage and dialogue with the current urban framework. Within the use of fixed step-up stairs in the front façade, the ground floor arcade's elevated access is made through the principal side of the building. By this, public shops bring new rhythms and communal corners, enhancing the building's integration with the surrounding area but keeping privacy of the apartments' entrance side.

Moreover, in this case of switched ground floor programs, the interior orthogonal scheme proposed in the original project by the architects leads to accurate proportions, suggesting subdivision of public, semi-public and private spaces.

Through a multidisciplinary lens, the study of interior design's reflection on space appropriation in living units offers valuable perspectives on the dynamic relationship between individuals, their habitats, and the societal milieu in which they reside.



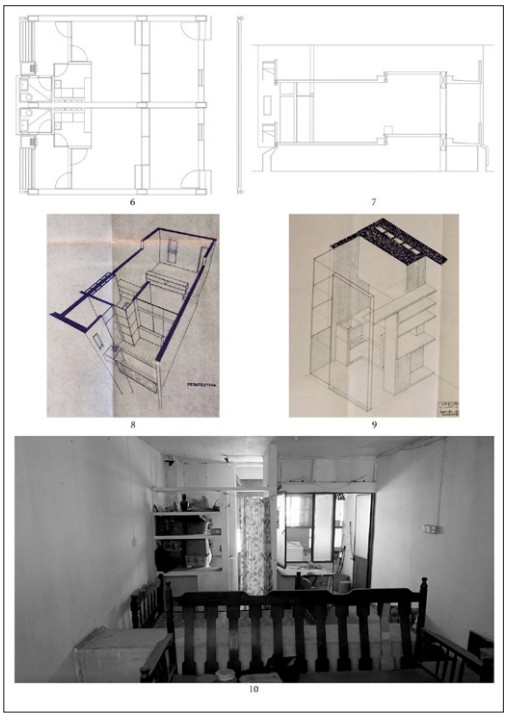




Fig. 1: - 1. Skyline of Macau 1950's. © Figueira F, ICM 1988. - 2. Skyline of Macau 1950's – 1980's. © Figueira F, ICM 1988. - 3. Resettlement Housing of Ilha Verde Area. © Niccolò A. Galliano, 2023. - 4. Resettlement Housing of Ilha Verde Area. Façade. Own elaboration based on CD-FAUP. - 5. Resettlement Housing of Ilha Verde Area. Floor Plan. Own elaboration based on CD-FAUP.

Fig. 2: - 6. Resettlement Housing of Ilha Verde Area. Unit Floor Plan. Own elaboration based on CD-FAUP. - 7. Resettlement Housing of Ilha Verde Area. Unit Section. Own elaboration based on CD-FAUP. - 8. Resettlement Housing of Ilha Verde Area. Unit Axonometric. © CD-FAUP. - 9. Resettlement Housing of Ilha Verde Area. Kitchen Axonometric. © CD-FAUP. – 10. Resettlement Housing of Ilha Verde Area. Unit. © Niccolò A. Galliano, 2023.

Fig. 3: - 11. Unit Floor Plan. Type 1. Own elaboration based on CD-FAUP. - 12. Unit Floor Plan. Type 2. Own elaboration based on CD-FAUP. - 13. Unit Floor Plan. Type 3. Own elaboration based on CD-FAUP. - 14. Unit Floor Plan. Type 2. Own elaboration based on CD-FAUP. – 15. Resettlement Housing of Ilha Verde Area. Unit Type 3. © Niccolò A. Galliano, 2023. – 16. Resettlement Housing of Ilha Verde Area. Shop. © Niccolò A. Galliano, 2023. - 17. Resettlement Housing of Ilha Verde Area. Unit Type 1. © Niccolò A. Galliano, 2023.

4. CONCLUSIONS

Against a backdrop of rapid urbanization, population growth, and economic transformation, within the current housing scenario, the findings of this reflection aim to contribute to the broader debate on complexities and opportunities inherent to the delicate balance between transformation and preservation of domestic spaces.

By offering insights from historical roots to contemporary housing issues in the extremely densely populated city of Macau, the present article questions possible interpretations of domestic comfort which lived substantial evolution reshaping how individuals inhabit their homes.

Portuguese architects Manuel Vicente and Natalia Gomes found in Macau fertile grounds to approach the minimum format housing question within European and Asian cross-influence scenarios.

The project on focus displays evolutions of modern traits and advancements of resettlement architecture approaches in the Macanese built environment tracing lines of nitid distinction.

At distance of around 60 years, the building hosts the same program upfronting different realities and urban scales surroundings. Current forms of unit occupation highlight valid architect's vision of shaping typology solutions, directing the internal layout and gathering functional aspects of the dense and informal local culture of Macau.

"Affordable Housing Block of Ilha Verde" can be considered a "see around" building, which contains and draws rules and instruments to accommodate basic living needs.

Architects, with the adoption of single compartment solutions and minimum format unit plans, integrate technical facilities and draw flexible lines providing adjustable spaces according to user's behaviour. Even in the case of use/function relocation, the horizontal manners proposed by the architect in the original project guaranteed order, maximizing the assessment of available space.

Architects Manuel Vicente and Natalia Gomes, in this project, demonstrate how the modern conception could be interpreted, understood, and enriched in terms of content. They were able to face and respond to diverse physical and social conditions, experimenting innovative solutions which remain currently interesting and valid.

As part of the architectural scenario endanger of fade over time, Resettlement Housing of Ilha Verde Area, among other housing works representing part of Modern Macanese foundations, deserves further consideration and interaction with public interest and memory. ■

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EXPLORING THE EVOLUTION OF THE MASS-EMPTY SPACE RELATIONSHIP FOR SOCIAL SUSTAINABILITY IN SHUSHTAR NEW TOWN: INSIGHTS FROM KAMRAN DIBA'S DESIGN

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ABSTRACT

Social housing projects bear significant historical and architectural importance within modern architecture, arising as responses to the urgent need for affordable and adequate housing for the working class during rapid urbanisation. Completed in 1977 by Kamran Diba Architect, Shushtar New Town in Iran stands out as a rare example of modern development in Iran built with attention to regional vernacular architecture. Its primary purpose was to house employees of a specific company, although the city was designed to accommodate families from different income groups. Today, maintaining social sustainability is a universal factor in the generic discourse of social housing. Although the term "social sustainability" was coined after the emergence of Shushtar New Town, Diba's design considerations reflect an attempt to maximise the social sustainability of the complex. Diba conceived Shushtar New Town based on the idea of creating social and civic engagement. This research focuses on examining the role of open and semi-open spaces, such as open areas, courtyards, terraces, and patios, in promoting social sustainability within residential areas in Shushtar New Town. By analysing the resident-led changes and their underlying dynamics, the research aims to derive valuable insights for future design projects and heritage preservation efforts in social housing. Open spaces play a vital role in the social sustainability process as they offer more. The proposed methodology ensures a comprehensive understanding of spatial transformations and resident experiences in these social housing projects. In this regard, the research employs descriptive-analytical methods, library-applied research, and case studies. This research is part of an ongoing PhD thesis, at FAUP, supervised by Prof. Helder Casal Ribeiro.

1. INTRODUCTION

In the early 1970s, Iran experienced a sharp rise in oil revenues and the political ambitions of the government led to large-scale investments. This resulted in a boom in housing construction and new urban developments. Prefabricated housing emerged as a response to the growing housing market and to shorten construction times. This method of construction, which seemed more economical and practical, was welcomed by investors. The prevailing conditions were based on a Western materialistic and quantitative approach, which was alien to the cultural and social values of Iranian society. On the other hand, the sudden development and abundance of jobs due to the expansion of industry caused massive population migration from rural areas, leading to the need to create residential complexes to house the workforce migrating to cities, and numerous residential complexes were built. The "Shushtar New Town" was also designed and implemented during these years to accommodate employees of the Karun Agro-Industry Company.

"This project is located near the ancient city of Shushtar in the southwest of Iran and follows the traditional urban pattern of Iranian cities with an interwoven urban fabric and bricks (mud) as building materials".[1] The design intentionally incorporated the traditional elements of Shushtar's historical architecture to maintain cultural continuity and respect for the region's heritage.

Upon completion of the first phase of the project in 1977, the outcome was an impressive new hybrid city that effectively reintroduced Shushtar's traditional architectural features within a modern framework. This blending of old and new elements created a unique urban environment that celebrated the historical aesthetic of Shushtar while also accommodating contemporary needs.

2. SOCIAL HOUSING

According to Davis (1995), "Social housing projects hold considerable historical and architectural significance within the realm of modern architecture. They arose in response to the urgent need for affordable and suitable housing".[2]

'The core concept of "public housing" or "social housing" in Iran was formed as a result of the advent of modernisation in the 1940s'.[3]

The creation of social housing was undoubtedly a tool for their social engineering programme and agenda to project a progressive global image for Iran. However, this resulted in a rise in inadequate social housing provision during the 1960s and 1970s, affecting the country's identity and people's attitudes towards the Iranian-Islamic way of life. Criticism from opposition groups led the government to explore alternative solutions to social housing design.[4] Shushtar New Town was presented as an alternative for developing social housing that could address the environmental and cultural aspects while meeting the physical and psychological needs of its residents (**Fig. 1**).

3. INTRODUCING DIBA'S LINE OF THINKING IN DESIGN

Kamran Diba is one of the prominent Iranian architects, having greatly influenced the evolution of contemporary architectural discussions in Iran.

1. Mohammad ali Sedighi, Shushtar New Town, Shushtar (IR), Kamran Diba (DAZ Architects Planners & Engineers, Global housing, 2016, 246.

2. San Davis. *The Architecture of Affordable Housing* (Berkeley: University of California Press, 1995.)

3. Rahmatollah Amirjani "Shushtar New Town: A Turning Point in Iranian Social Housing History." (PhD diss., University of Canberra, 2020), 3.

4. Amirjani, "Shushtar New Town: A Turning Point in Iranian Social Housing History.", 3.

"Diba designed Shushtar New Town based on his own perception and understanding of the region and its vernacular architectural elements".[5]

Diba's design method for residential projects prioritised regional cultures and people's behaviour over the functionalist approach of Modern architecture. Diba regarded himself as a "human-friendly" or "culture-friendly" architect, aiming to meet people's desires through design practices rooted in social and humanistic principles.[6]

Overall, Kamran Diba's design for Shushtar New Town reflects his commitment to enhancing quality of life and social sustainability through a design approach that is both innovative and deeply rooted in cultural context. Diba's architectural works bridge traditional Iranian architecture with modern architecture.[7]

Thus, Diba's approach was characterised by a mediating strategy, balancing modern innovations with respect for local traditions. He focused on updating traditional design elements rather than imposing radical new concepts, maintaining a harmonious blend of old and new.[8]

4. KAMRAN DIBA'S THEORIES IN OPEN SPACE

Diba's thinking in the design of New Shushtar reflects his loyalty to traditional and Iranian architecture. The central courtyard, which is one of the important elements of Iranian architecture, plays a prominent role in the spatial organisation of the investigated works. The combination of volumes in the plan has created a different shape of the central courtyard and has added to the spatial diversity of the semi-open space.

"Indeed, Diba replaced the concept of void, a Western phenomenon, with a central courtyard, an important vernacular housing element, to produce a more culturally friendly residential typology".[9]

Diba has been able to enhance the visual appeal through the spatial sequence, which is created through open, closed and semi-open spaces, and to enrich the emphasis on form such as symmetry, rhythm and movement. This type of design aims to provide individuals with a heightened awareness of the created space, and strengthens presence.

"Shushtar New Town is clustered low-rise carpet housing with medium density settlements. This project is laid out on an undulating site near Shushtar, overlooking a river".[10]

Shushtar New Town units are designed according to a courtyard housing model, providing privacy along with other well-known typological features. These designs include various two to three-bedroom and two-story houses, which are the most common types among the units. Additionally, Diba dedicated two sections of his planned project to low-rise units.[11] In addition, the dwellings are designed to incorporate the possibility of unit extension.

5. THE ROLE OF SOCIAL SUSTAINABILITY IN SHUSHTAR NEW TOWN

Today, maintaining social sustainability is a universal factor in the generic discourse of social housing.

5. Rahmatollah Amirjani, "An Analogical Quotation," in *Quotation, Quotation: What Does History Have in Store for Architecture Today?. Proceedings of the 34th Annual Conference of the Society of Architectural Historians, Australia and New Zealand*, ed. Hevork Hartoonian, and John Ting (Canberra: SAHANZ, University of Canberra, 2017), 17.

6. Reza Daneshvar, "A Garden between Two Streets: 4001 Days in the Life of Kamran Diba" (Tehran: Bongah, 2016), 115.

7. Mohammadreza Shirazi, "From Utopia to Dystopia: Shushtar–E–No, Endeavour Towards Paradigmatic Shift". in Urban Change in Iran (New York: Springer International Publishing, 2016), 234.

8. Shirazi, "From Utopia to Dystopia: Shushtar–E–No, Endeavour Towards Paradigmatic Shift", 235.

9. Rahmatollah Amirjani, "Shushtar New Town: A Turning Point in Iranian Social Housing History." (PhD diss., University of Canberra, 2020), 176.

10. Amirjani, "Shushtar New Town: A Turning Point in Iranian Social Housing History.", 167.

Social sustainability interaction is one of the most valuable criteria in architecture, influenced by physical elements and serving as a common language among people. Architectural spaces vary and fulfil users' needs in different situations. Therefore, in architecture, people's relationships, social interactions, security and safety, as well as the quality of communal spaces, all play a significant role in social sustainability.[12]

In the Shushtar project, Diba designed the houses to be closely attached to each other, considering the horizontal density of the buildings because he believed that a certain interaction, coherence, and dialogue among residents would occur in the space between such buildings. These spaces allowed for activities such as children playing under parental supervision and residents socialising in green areas.[13]

Additionally, to address the extreme southern heat, Diba designed Shushtar's streets and open spaces to retain night-time coolness, prioritise pedestrian comfort, and enhance social interaction by eliminating car traffic and narrowing alleys.[14]

He avoided public greenery due to high maintenance costs, instead opting for using private courtyard gardens for shade and greenery. Although incomplete, planned gardens between housing phases were intended to keep the air cooler and fresher. These sustainable design choices aimed to provide shade, improve air circulation, enhance safety, and ensure privacy.

Shushtar´s mass-empty space pattern also heightens these notions through a clear hierarchy of courtyard implementation from urban to individual unit level. The spinal open space stretching through the complex serves as an urban courtyard, and the central open space the community courtyard, and each residential unit enjoys its individual interior courtyard. Community courtyards are more effective in this project, since every residential cluster has been organised around a central open space, reflecting Diba's focus on social sustainability.

At the same time, Diba incorporated the possibility of growing and extending the Shushtar New Town houses through a few simple modifications to the walls between the units.[15] This design approach enhances families' eco-dynamic and social sustainability and diversity.[16]

6. RESIDENT - LED SPATIAL TRANSFORMATION:

6.1. REASONS AND ADJUSTMENTS/ APPROPRIATIONS /UNDERTAKINGS

The design and construction of the new city of Shushtar began in 1974, and coupled with Diba's departure from Iran and the changes of the revolution, the construction of the complex was slow at first and then completely halted in 1979. After that, with the start of the Iran-Iraq war in 1980 and the arrival of war refugees to the unfinished New Shushtar, the social and physical structure of the city faced challenges in providing a well-organised and hospitable environment for its residents.

With the onset of the Iran-Iraq war, residents of war-torn cities were forced to abandon their homes and seek refuge in both nearby and distant cities. Some of them settled in Shushtar New Town; not only in the newly

11. Kamran Diba, "The Recent Housing Boom in Iran- Lessons to Remember," in Linda Safran (eds.),Housing. Process and Physical Form (Philadelphia: Smith Edwards Dunlap Co., 1980), 41-44.

12. Esmaeil Zarghami, Dorsa Fatourehchi, and Mohammad Karamloo, "Impact of Daylighting Design Strategies on Social Sustainability through the Built Environment ." *Sustainable Development* 25, no. 6 , 2017, 27.

13. Fatemeh Farnaz Arefian, and Seyed Hossein Moeini, *Urban Change in Iran: Stories of Rooted Histories and Ever-Accelerating Developments*. (New York: Springer International Publishing, 2016.)

14. Mohammad Shirazi, "New Towns-Promises Towards Sustainable Urban Form from "Shushtar-No" to Shahre Javan Community." In Young Cities Research Paper Series. (Berlin: TU, 2013), 42-45.

15. Shahryar Khanizad, Farzane Ehsani Moayed, "Kamran Diba and the Human-Friendly Architecture , 2014." (Tehran: Honar-e Memari-e Qarn Publications, 2014), 208.

16. Rahmatollah Amirjani, "An Analogical Quotation," no. July." SAHANZ 2017 Annual Conference Proceedings 14, 2017, 16.

constructed houses of Phase1 but also in unfinished houses and buildings, some of which lacked doors, windows, balcony railings, and had incomplete sanitary facilities. As a result, the town was occupied before it was truly ready, and under unauthorised conditions.

The residents of Shushtar New Town social housing project actively sought to personalise their houses and adjust them according to their evolving needs and preferences. Open spaces, including open areas, courtyard, terrace, and patio, played a vital role in this process. These spaces offered residents opportunities to create buffer zones, enhance privacy, foster social interactions, and more.

However, the many changes that have taken place in New Shushtar are disappointing: in one-story residential houses, some users filled up the windcatcher holes located in the courtyard walls. Second, almost all of the early tenants blocked the openings facing the pedestrian walkways. It is evident that both of these interventions were aimed at creating more privacy for families.[17]

For privacy, a number of residents modified their courtyards and blocked their windows to prevent visual access from other units. Some even extended the walls up to the second floor and roofed the void from above.

In three-story residential homes, due to overcrowding from war and an influx of refugees, terraces have been either walled off to expand interior space, fenced in for security, or covered for increased privacy.

Due to the increase of immigrants, multiple families occupied each unit, with each family in a single room, and occupants sharing service areas. Most of the families transformed the rooms to suit their individual needs. Some occupants even installed new doors to separate their entrances.[18]

"Cars, originally and intelligently planned to be parked at specific, external points in favor of social interaction and walking priority, are now either parked in front of the houses or within the garage converted. Many demolished the external courtyard walls and replaced the entry doors with gate-like doors to house cars".[19]

It is not expected that the needs of the city will be halted over a period of time. Dynamism and change are factors that ensure the sustainability and vitality of an environment. However, what is lacking is a custodian with the responsibilities of a mayor who can control and guide the construction and changes under proper management.

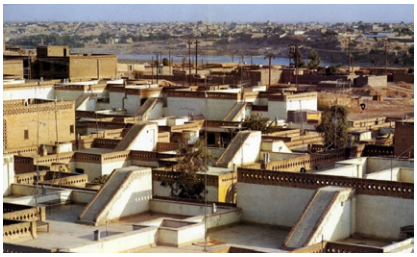
7. CONCLUSION

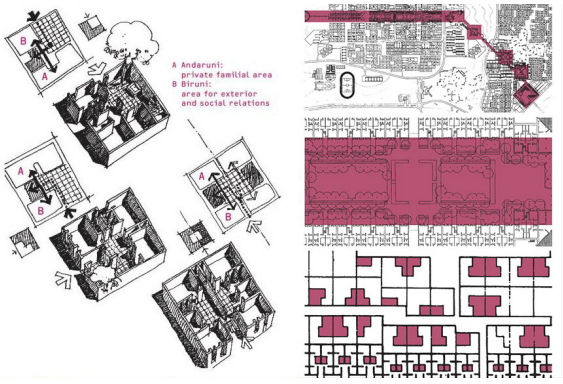
Based on what has been discussed in this research, it could be stated that the main objective of Shushtar New Town has been to strive for improving the quality of life for its residents. Although unforeseen social events may have hindered the project from achieving its intended outcomes, Shushtar New Town remains an important and illustrative example among new towns. Kamran Diba considers the use of all valuable environmental potentials and resources essential in creating an environment that aligns with culture, tradition, and humanity in the process of producing an architectural work. He is among contemporary architects who carefully consider various dimensions of the design context in their projects. In most of his projects, Diba, besides

17. Mohammad Shirazi, "New Towns- Promises Towards Sustainable Urban Form from "Shushtar-No" to Shahre Javan Community." In Young Cities Research Paper Series. (Berlin: TU, 2013), 42-45.

18. Amirjani, Rahmatollah. "Shushtar New Town: A Turning Point in Iranian Social Housing History." (PhD diss., University of Canberra, 2020), 214.

19. Kamran Diba, and Faryar Javaherian. "Shushtar New Town." In New Towns, ed. Iraj Eetesam (Tehran: New Towns Development Cooperation, 2005), 17–30.





Reasons	Spatial transformation	photograph[1]
Privac	• Filling the windcatcher holes located in the walls of the courtyard. • Blocking openings facing pedestrian crossings. • Creating a roof for the courtyard and blocking the windows to prevent the visual access of other units.	
Security	• Converting a private yard into a parking lot. • Replacing the entry doors with gate-like doors for cars. • Extending the wall up to the second floor and roofing the void from the top.	
War	• Transforming the rooms according to their own condition and needs. • Building walls inside the rooms, creating new spaces for sleeping or as kitchens. • Converting a large number of balconies into small rooms.	

Figure 1. Kamran Diba, Shushtar New Town, Shushtar, Iran, 1974-1977.

Figure 2. Urban courtyard, community courtyard, and individual courtyard, Shirazi, after Diba, 1981.

Figure 3. Author, Table 1, Resident-led spatial transformation[20]

addressing the compatibility of functional needs, emphasises the physical situation created by the confrontation of social patterns and group behaviour, and does not separate his architecture from social meanings and dimensions. In fact, what distinguishes this project from other similar projects, both nationally and internationally, is the underlying social approach embedded within it.

Taking into account the two-way relationship between the user community and the physical structure of this town, regulated based on social-cultural interactions and ties, further emphasises its significance. This new town aims to establish a physical continuity with the historical city of Shushtar and, in addition, can be considered one of the few towns loyal to cultural-indigenous and local indices.

In the design of some units, a method has been employed that allows for the expansion of adjacent units by removing the courtyard walls. This possibility of expanding dimensions leads to internal social transformation in the neighbourhood and provides an inherent dynamic for socio-economic movement. In Shushtar New Town, Diba introduced a valuable pattern according to the needs and lifestyle of a new identity, which has a regional identity and is derived from the same social context. Although Diba's theory offered an exciting living environment and he hoped to enhance the social sustainability of the complex by increasing interaction between users and between the old and new towns, the project's incompleteness ultimately prevented it from achieving these goals. Considering that in residential complexes designed and built using mass construction methods, residents attempt to align the architecture with their lifestyle and needs by making changes. In the absence of a plan, established laws, or a management scheme for these modifications, this can lead to chaos and disorder. This results in the deterioration of the design quality, as well as wasted time and resources.

20. Source of all table photos: Amirjani, Rahmatollah. "Shushtar New Town: A Turning Point in Iranian Social Housing History." Doctor of Philosophy in Architecture, University of Canberra, 2020. (photographs reproduced with the permission of Rahmatullah Amirjani)

Therefore, the work does not end with the completion of the construction; rather, consistent and ongoing management of the habitation and modifications is necessary. Consequently, effective management throughout the design, construction and post-occupancy phases is crucial. In this complex, it appears that a lack of management and disorganisation has enhanced related issues. ■

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CAPTURING TIME INSIDE ARCHITECTURE

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ABSTRACT

Gesamtkunstwerk is one of the mottos of modern architects at the beginning of the 20th century. Following a romanticism placed between Richard Wagner and William Morris, the Modern Movement brought innovative interior design concepts, experimenting with housing and public equipment. Based on the vision that the spatial and construction creation must address everything, designers are often responsible for the interiors of their works. However, interior design has specificities that differentiate it from building design. Several variables can intervene, compromising the strict *Gesamtkunstwerk* concept and allowing hybrid contaminations at conception or throughout its life. The first of these is the greater susceptibility to intervention by the clients, who often assume the role of designer, understanding that they know more about the use and functioning of the building than the architect. The other is the power of time, which is responsible for the many natural changes and transformations of life, working to support the transience of the interior in attempting to keep up with and adapt to those changes. Therefore, as fundamental as recognizing interior design as part of the modern project is to consider that it is essentially an open system, more susceptible to changes and more affected by time. Change is its essential feature! We could also understand it as an ongoing process. In this context, we expect to address questions like how we should deal with interior documentation, conservation, or even reuse. In other words, how should we deal with interior heritage? We invite articles that observe and interpret this subject from the point of view of the transformations that take place in the interior and what is preserved or not, considering not only analyses of specific case studies but even the subject as a field of historical and theoretical reflection on the preservation of the Modern inner Heritage.

1. INTRODUCTION

Gesamtkunstwerk is one of the mottos of modern architects at the beginning of the 20th century. Following a romanticism between Richard Wagner and William Morris, the Modern Movement introduced innovative interior design concepts, experimenting with housing and public equipment. Based on the vision that the spatial and construction creation must address everything, designers are often responsible for the interiors of their works. However, interior design has specificities that differentiate it from building design. Several variables intervene in specific ways, sometimes compromising the strict Gesamtkunstwerk concept and allowing hybrid contaminations at conception or throughout its life.

2. INTERIORS AND CLIENTS

The first of these variables is the greater susceptibility to client intervention. Clients often assume the designer role, understanding that they know more about the building's use and functioning than the architect.

2.1. EDITH FARNSWORTH'S HOUSE BECAME THE FARNSWORTH HOUSE

Mies Van der Rohe met the doctor Edith Farnsworth at a dinner party in 1945. It was only a short time before she asked him to design her weekend house. Five years later, in March 1951, she began occupying the house. However, the interior images that we usually have access to, whether in books and magazines or on the internet, are relative to how the house was when it was opened to the public in 1970, when the second owner, Peter Palumbo, opened it for visitation and publicity. Mies and Lilly Reich designed furniture and arranged it according to the layout in the plans he drew. In the house itself - which is now visitable and functions as a museum of itself - the setting we find is very similar to Palumbo's version, with the addition of some pieces designed by Dirk Lohan, Mies' grandson. The pieces designed by Mies and Lilly Reich are the Tugendhat, Brno, MR, and MR 10 chairs, the MR chaise lounge, the Barcelona stool, and the daybed. All are structured in steel, flat or tubular, and covered in leather, and upholstered with pigskin cushions. There are also side tables structured in steel with glass or wood tops and a dining table in steel and wood. (**Fig. 1**)

That version is quite different from the house Edith Farnsworth lived in between 1951 and 1954 when a significant flood damaged its furniture and draperies. "Far for being naïve in choosing Mies,"[1] she was a very cultured person, a friend of many artists, architects, and designers, and had sincerely adhered to the architect's proposal since hiring him. Even so, some disagreements began to occur during the internal setting in mid-September 1950. She wanted to choose her furniture and the colour of the curtains. To top it off, it was precisely the furnishing stage that was responsible for the main problem between client and architect: the staggering increase in the initial budget. So, when she moved into the house, the furniture was far from complete, and the client and architect were fighting in court.

The house had curtains - chosen by him - and a few pieces that the resident bought little by little. She had a pair of chaise lounge chairs designed

1. Nora Wendl ed., *Edith B. Farnsworth* (Plano: Edith Farnsworth House, 2021), p.22.

by Bruno Mathsson of laminated beech wood with woven hemp straps; another pair of Jens Risom low lounge chairs, produced by Florence Knoll, structured in wood; a pair of bamboo sleeper chairs; a daybed probably designed by Harry Weese, this structured in steel; two wool hugs; a dining table, with a metal structure and wooden top, with six wooden chairs in two different models, both with rattan seat and back. In short, she created an environment that is very different from that found in the frozen house that people can visit today. Instead of the homogeneity composed of furniture structured in steel and covered in leather or with a wooden top like that of the central core, Edith Farnsworth's version is structured in wood and covered in different materials, with a more casual character.

After the 1954 flood, when she lost a lot of things, Doctor Farnsworth opted for a much more pragmatic version: bookshelves attached directly to the spring-panelled core, an upholstered couch, and Roller blinds. That atmosphere remained for more than a decade until she sold the house.

2.2. CONTEMPORARY APARTMENTS GO BACKWARD TO BECOME MODERN

A case to observe is the history of most modern apartments for the upper middle class in Brazil. In São Paulo and Rio de Janeiro, this collection included examples of excellent quality designed by prestigious architects such as Lucio Costa, Oscar Niemeyer, and Vilanova Artigas. Many buildings replaced old mansions, exploring an image linked to the luxurious comfort of progress and technological advancement. However, despite the avant-garde exterior and innovative architectural elements, their units remained reminiscent of the 19th-century bourgeois house, albeit with smaller dimensions. The interior layout continued to reflect a hierarchical structure. The program was usually organized into three distinct sectors: social area, bedrooms wing, and service rooms, with two independent accesses, one for residents and another for domestic servants or service providers, each connected to a specific vertical circulation.

The potential of reinforced concrete structures, allowing fluid and connected spaces, was underexplored. There was no greater spatial integration between rooms, much less between sectors. Likewise, the decoration was not modern. Thick, opaque curtains overlooked the glass facades, and an excess of robust upholstered furniture, rugs, and objects occupied the social rooms. When looking at content and continent together, these modern buildings that housed 19th-century interiors were a heterogeneous product.

The real estate market neglected this collection of buildings in the 1980s and 1990s. In the 2000s, however, it was rediscovered by people for whom appreciating something "modern" has become a symbol of refinement. More than the original quality of the construction, they admired the luminosity and the beautiful views provided by the large openings, the height of the ceilings, the generous square footage, and the flexibility of the concrete structures, allowing all the necessary internal adaptations. These apartments also had competitively low prices compared to newly built competitors.

On the other hand, there were many operational and programmatic demands of contemporary life. According to Marta Peixoto,[2] the most common renovations included eliminating servants' quarters, integrating kitchens with social areas, renovating bathrooms, creating suites, implementing air conditioning systems, modernizing finishes, and electricity and plumbing installations. In most cases, there was a decrease in the density of users as they became smaller families without daily employees. As a result, some of these units have become two-bedroom apartments, one-bedroom apartments, or even large studios. The service doors became little used, restricted to the arrival of purchases, eliminating the original rigid hierarchical system and the chambered monofunctional spaces.

Rather than distorting the original building designers' ideas, these contemporary projects often do the opposite. In the 1950s, the envelope was more "modern" than its content. The language and principles of modern architecture appear strongly in the renovations carried out in the 2000s, incorporating integrated layouts and fluid spaces and visually connecting the interior to the exterior, attributes do not present in the first occupation. It seems that these apartments could only be completed 50 years after their construction when the interior became in tune with the exterior, and they became a harmonious whole.

3. AS TIME GOES BY

The other is the power of time, which is responsible for the many natural changes and transformations of life, working to support the transience of the interior in attempting to keep up with and adapt to those changes.

3.1. THE GLASS HOUSE: LINA BO BARDI'S KALEIDOSCOPE

It is crucial to point out that Casa de Vidro, the house Lina Bo Bardi designed in 1951 for her and her husband to live in, was born a hybrid. It was made up of a glass box supported on slender pilotis, containing the social areas, while the bedrooms were organized in masonry wings around a patio solidly set on the ground. She also designed the house's interiors, blending contemporary furniture with valuable antiques. Initially, the internal ambiance was naked, with few objects and furniture. Over time, a gradual process of accumulation led to another arrangement. The original Baroque statues and Renaissance Cassoni began to live side by side with colonial artifacts, Art Nouveau vases, contemporary design furniture, and even ordinary objects. The residence's ambiance had become something else, filled by the residents with furniture and objects. The glass box turned itself into a container full of memories, as Marta Peixoto observed.[3]

On the outside, soon after the work was completed, Bo Bardi built a new garage, which was made of masonry covered with a rough layer of mortar, rocks, and ceramic shards, replacing the previous metal porch. These walls have small holes where some vegetation grows attached to the rocks. Bo Bardi also took care of the house's gardens, restoring the native forest. Years later, in 1986, she built the Casinha (little house) with André Vainer and Marcelo

2. Peixoto, Marta. "Caleidoscopio: dentro de la casa de vidrio de Lina Bo Bardi." *Summa+*, v.1, n.168. (December 2018): 110 -113.

3. Peixoto, Marta. "Ahora lo moderno es vintage!," *Summa+*, n. 170 (April 2019): 102-107.

Ferraz, where she installed her office. The building is made of a freestanding wooden structure with wooden fences and a ceramic tile roof. These changes, inside and out, indicate that Casa de Vidro was no longer the same.

In 1990, the Bardi couple created the Instituto Bardi, housed in Casa de Vidro. When Lina Bo Bardi died (1992), her widower donated the house to the institution. Although listed as heritage by state (1987) and city (1991), much of its content was taken by Pietro Maria's descendants after his death (1999). Today, the existing house, listed as a national heritage in 2009, is the third version of the original project, no longer a house but a cultural centre, and set as such. The institution, founded by its former residents, has become responsible for preserving and disseminating the couple's artistic legacy.

Furthermore, is where the public has access to Lina Bo Bardi's work, in addition to temporary exhibitions and events offered to the community. Nevertheless, the content that characterized Casa de Vidro as the Bardis' residence has no longer existed. (**Fig.2**) This detachment between the house and its content goes against the architect's beliefs, her understanding that the architectural work is an indivisible whole. Despite the architect having designed everything, from the landscape to the interior arrangements, the heritage protection measures focused only on the building shell.

3.2. THE TUGENDHAT HOUSE RADICAL GESAMKUNSTWERK

Through a combination of a precise design, good construction, advanced technologies, and outstanding materials, Mies van der Rohe, together with Lilly Reich, satisfied the Tugendhat family's wish for innovation and originality, creating an exceptional way of modern life based on an open plan. As Ana Tostões observed, the house of Greta and Fritz Tugendhat, in Brno, designed in 1928-1929, consists of a unique global work of art – Gesamtkunstwerk – in terms of its placement into its natural setting, spatial organization, construction, technical equipment, and interior furnishings.[4]

In December 1930, the couple moved into the house, where they lived with their children for seven happy years in the most avant-garde interior design atmosphere. In terms of space arrangement, the 2000m2 of the house was designed on three levels, with different plans related to the variation of the slope of the terrain, considering an innovative distributive solution. The entrance is situated at the top level, together with the family wing area. The social areas are disposed on the floor behind, along with the kitchen and servants' area. The basement behind this main level integrated Fritz's photo laboratory and facility rooms for technical equipment such as central heating water and central air-conditioning. About the technical innovations, they were outstanding: the windows could be retracted down to the floor while the heating system underground along the glazed wall prevented the glass misting; a sophisticated air-conditioning system combines heating, ventilation, and humidifier, providing filtered and thermally treated air in the main living room.

Valuable and rare materials have been used in the interiors, primarily made by Lily Reich: Italian travertine, polished chrome columns in the grand room; the semi-circular wall of ebony from Macassar, defining the dining

4. Tostões, Ana, "Modern Built Heritage Conservation Policies: How to Keep Authenticity and Emotion in the Age of Digital Culture," *Built Heritage*, n. 2, vol. 2, (June 2018): p. 17-34.



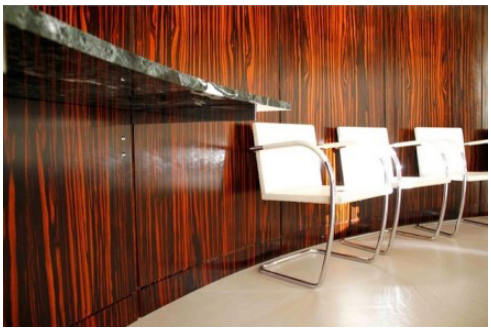




Figure 1. Mies van der Rohe, Edith Farnsworth House, Plano, United States, built in 1951. Current photo of the house. © Marta Peixoto Archive.

Figure 2. Lina Bo Bardi, Casa de Vidro, São Paulo, Brazil, built in 1951. Current photo of the house as headquarters of the Bardi Institute. © Marta Peixoto Archive.

Figure 3. Mies van der Rohe and Lilly Reich, Tugendhat House, Brno, Czech Republic, built in 1930. Current photo of the house. © Ana Tostões Archive.

room; the massive onyx - from Morocco - wall separating the library from the living room. The inner furnishings were made from tubular and strip steel and noble woods. Every piece of furniture was designed specifically for each place of the house and specified upholstery colours and textile furnishings.

The Tugendhat family lived there until 1938 when they fled from Czechoslovakia. The villa was confiscated by the Gestapo in 1942 and became illegal property of the German Reich, suffering radical changes. After 1945, the house was used for military purposes, as a private dancing school, and as a rehabilitation centre for children. After being classified as a National Monument in 1963, the first renovation attempts were undertaken during the 1980s. However, they led to damage to many of the original elements, neglecting the importance of the furniture and the interior design while adapting the house to a guesthouse.

Following a declaration by the Tugendhat family that the villa should be opened to the public, the house became a museum in 1994. Herewith efforts towards the restoration of the villa began and Villa Tugendhat was listed as a UNESCO World Heritage in 2001. Therefore, a careful conservation-science research study, coordinated by Ivo Hammer, was undertaken. As Ana Tostões observed, the aim of the restoration was the lifetime prolongation of the monument in its original state and the reconstruction of missing original parts.

In the interiors, the curtains and the carpets were selected based on historical photo documentation. The restoration of the wooden furniture

required restoring original and preserved elements and replacing all the missing furniture pieces with exact replicas recreated through research on surviving original pieces and archive photographs. The semi-circular Macassar wall is worth mentioning, as this unique element was destroyed in the 1940s. It had been impossible to properly restore the wall until several of the original Macassar panels were found in the former headquarters of the Gestapo at the University of Law in Brno in 2011. Finally, the villa was adapted for use as a museum, which included public access management and a walking route through the house for groups of visitors. (**Fig.3**)

4. FINAL CONSIDERATIONS

Therefore, as fundamental as recognizing interior design as part of the modern project is to consider that it is essentially an open system, more susceptible to changes and more affected by time. In fact, change is its essential feature! Or we could also understand it as an ongoing process. In this context, we expect to address questions like how we should deal with interior documentation, conservation, or even reuse. In other words, how should we deal with interior heritage?

We invite articles that observe and interpret this subject from the point of view of the transformations that take place in the interior and what is preserved or not, considering not only analyses of specific case studies but even the subject as a field of historical and theoretical reflection on the preservation of interior Modern Heritage. ■

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Ana Tostões is an architect, critic and architectural historian, professor at IST where she is the leader of the Heritage research line at CiTUA. Visiting professor at the University of Tokyo, Navarra, Porto and KULeuven. President of Docomomo International and editor-in-chief of the Docomomo Journal between 2010 and 2021, she is member of the ISC Interior Design and chair of the ISC Publications. She has edited Key Papers in Modern Architectural Heritage Conservation (with Liu Kecheng, 2014) and Modern Heritage. Reuse, Renovation, Restoration (Birkhäuser, 2022). PI research on African architecture whose publication Modern Architecture in Africa was awarded the Gulbenkian Prize.

Marta Peixoto is an architect (1985) with a Ph.D. in History and Theory of Architecture from the Architecture Doctorate Program - PROPAR (2006), UFRGS - Universidade Federal do Rio Grande do Sul, Brazil. She is a full professor at the Department of Architecture - UFRGS, and at PROPAR-UFRGS. She is the Coordinator of DOCOMOMO Brazil, secretary of the Interior Design Committee of DOCOMOMO International. She has written for architecture journals and books and has had a federal productivity grant as a researcher since 2019. Maintains research activity focused mainly on Interiors, Modern Interiors, and Modern Heritage.

RECOGNIZING CULTURAL VALUES IN CHANGES TO MODERN INTERIORS

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ABSTRACT

Between the 1980s and 2010s, modern heritage conservation would generally focus on one of two goals. If the building was an icon, one should recreate its original condition, reflecting a primary interest on the intentions and design from the creation time. If it was *ordinary*, it should meet contemporary performance standards, with little regard to the extent of the changes to be inflicted upon it. That approach left little room for recognising the values associated with the time span between creation and present – the historical trajectory of the building. To fill that gap, and considering the latest developments to the theme, this paper addresses the cultural values of intentional alterations in buildings over time. The research analyses the relationships between original design, subsequent changes, historical data and cultural values in the interiors of three Brazilian churches: Brasília Cathedral (Oscar Niemeyer, 1958-1970), the Church of the Lord's Ascension in Salvador (João Filgueiras Lima, 1973-1975), and the Church of the Divine Holy Ghost in Uberlândia (Lina Bo Bardi, 1976-1982). These cases illustrate situations such as the incorporation of alterations into the building's imagery, updating the perception of the work and replacing its original state as the main collective reference; the gradual accumulation of artworks through time as an accumulation of value attributes; and user-made changes as relevant attributes to be kept. The findings underscore the importance of individualised assessments for each heritage object and consolidate the understanding that changes in modern interiors can be significant cultural value attributes. Moreover, the cases support methodological approaches developed considering heritage built in other periods as also valid for modern heritage.

1. INTRODUCTION

In the text "The Icon and the Ordinary," Hubert-Jan Henket synthetises reflections on conservation of modern architecture that were developing in the early years of Docomomo. According to him, architectural icons should return to their original condition, to convey the intentions of their author and to continue being a reference for design culture. In contrast, ordinary buildings should be pragmatically adapted to current needs, through *adaptive reuse* – a strategy focused on functionality, energy efficiency and meeting contemporary standards.[1] Those strategies were seen as continuing the Modern Movement – praising the design to be restored or the functionality to be recovered.[2]

The two approaches described were highly influential to the conservation of modern buildings in the following decades and were often seen as the only viable pathways. Thus, the *icons* were thought of through their inaugural image, frozen in continuously republished photographs, rather than considering their physical experience.[3] Meanwhile, *ordinary* architecture was primarily seen through the lens of contemporary usefulness.[4]

However, over three decades of international practice of preserving modern heritage have led to a wider conservation scope. Works that present comprehensive views on themes as action principles,[5] varying ways of preservation worldwide,[6] design experiences,[7] and building materials conservation[8] show different developments. They share a broader understanding of the historical trajectory of modern heritage and its interiors, often considering the time span between its origin and the present. Whether from perspectives linked to continental Europe and the Venice Charter or from perspectives linked to Anglo-Saxon countries and the Burra Charter, professionals have become able to assess values related to changes to spatial arrangements and furniture. They have started to appreciate time overlays, once seen as disruptive.[9] The recognition of modern heritage temporal complexity has freed it from the unchangeable icon or the irrelevant ordinary as its sole points of reference.

Considering that conceptual framework and acknowledging the contemporary discontinuity in relation to Modern Movement, this paper explores how intentional changes, accumulated in buildings over time, can bear relevant cultural values. Thus, it analyses three Brazilian listed churches: Brasília Cathedral (Oscar Niemeyer, 1958-1970), the Church of the Lord's Ascension in Salvador (João Filgueiras Lima, 1973-1975), and the Church of the Divine Holy Ghost in Uberlândia (Lina Bo Bardi, 1976-1982). The choice of three churches allows for a closer comparison and a finer analysis of their changes, which can't be deemed inevitable, since they keep their use. Moreover, churches are traditionally prone to historical accumulation of built elements.

Internal spaces changes were assessed in relation to history, original design, conservation conditions, legal protection and user interests,[10] leading to the discussion of the following issues:

a) the integration of changes into the buildings' imagery, updating their reception and overcoming their primary condition;

1. Hubert-Jan Henket, "The icon and the ordinary", *Docomomo Newsletter* no. 8 (January 1993): 36–38.

2. Simona Salvo, *Restaurare il novecento. Storia, esperienze e prospettive in architettura* (Macerata: Quodlibet Studio, 2016), 53, 84.

3. Susan Macdonald, "Materiality, monumentality and modernism: continuing challenges in conserving twentieth-century places". In *(Un)Loved Modern* (Sydney: Icomos Australia, 2009): 8; Fabio Mangone, "Emblemi del Movimento moderno e immagine fotografica: il restauro alla Dorian Gray", *Confronti. Quaderni di restauro architettonico* 1, no. 1 (December 2012): 102–5.

4. Wessel De Jonge, "Sustainable renewal of the everyday Modern", *Journal of Architectural Conservation* 23, no. 1-2 (2017): 62–105.

5. ICOMOS ISC20C, *Madrid-New Dehli document: approaches for the conservation of twentieth-century cultural heritage*, 2017; David Fixler, "Towards APT Consensus Principles for Practice on Renewing Modernism", *APT Bulletin* 48, nº 2–3 (2017): 6–8.

6. Ugo Carughi and Massimo Visone, *Time frames: conservation policies for twentieth-century architectural heritage* (London: Routledge, 2017).

7. Ana Tostões, *Modern heritage. Reuse, renovation, restoration* (Basel/ Lisbon: Birkhüser/ Docomomo International, 2022); Simona Salvo, *Restaurare il novecento. Storia, esperienze e prospettive in architettura* (Macerata: Quodlibet Studio, 2016).

8. Luciano Cupelloni, *Materiali del moderno. Campo, temi e modi del progetto di riqualificazione* (Rome: Gangemi, 2017); Sara Di Resta, Giulia Favaretto and Marco Pretelli, *Materiali autarchici – Conservare l'innovazione* (Padua: Il Poligrafo, 2021).

b) the accumulation of artworks through time as an accumulation of value attributes;
c) user-made changes as relevant attributes to be kept.

2. BRASÍLIA CATHEDRAL – A NEW IMAGE

Oscar Niemeyer designed Brasília Cathedral in 1958, during the construction of the new capital of Brazil. It was built in three stages. Between 1958 and 1960, the structure was erected and so it remained, as part of the landscape of the Ministries Mall. Between 1969 and 1970, the glazed enclosure and the liturgical elements were installed, allowing for the opening of a building with exposed concrete and double grey glass facades (**Fig. 1**). From 1976 to 1978, the sacristy, baptistery and bell tower were completed, with funding from the Ministry of Education, made possible by the listing of the unfinished building in 1967.[11]

About twenty years after the listing of the Cathedral and ten years after its completion, Niemeyer proposed replacing the internal layer of glass with an artistic stained-glass panel by Marianne Peretti. The architect had already expressed dissatisfaction with the existing glass and intended to reduce the sunlight inside the building. The structure was also to be completely painted white – an idea suggested by the architect in the 1970s, that came true together with the stained-glass, perhaps under the influence of Peretti.

These changes deeply altered the perception of the building, specially of its interiors. When viewed from inside, the structure was previously darker than the glass enclosure, and this relationship was reversed. The space became more welcoming, with calm colours interspersing the white, instead of the harsh contrast between exposed concrete and clear glass. The upward, centripetal thrust of the interior was balanced by the predominantly horizontal and concentric lines of the stained glass. The initial conception lost some of its sharpness and momentum, but the building gained in humanity (**Fig. 1**).

The new appearance merged into local landscape and heritage conservation rules. It has become the very Cathedral image, not just its most recent version. For the public, photographs of the exposed concrete structure evoke the unfinished work, not those fifteen years after its opening.

Brasília Cathedral ultimately results from successive configurations that proved provisional. The changes it has been through were so powerful that they created new artistic and architectural values, having definitely moved the building away from its original design. The case shows how even in iconic buildings it is possible to update their image, which can be other than the initial one.

3. CHURCH OF THE ASCENSION OF THE LORD – NEW FOCAL POINTS

The Church of the Ascension of the Lord, by architect João Filgueiras Lima (Lelé), was designed and built from 1973 to 1975. It was the chapel of the new Administrative Centre of Bahia, in Salvador (CAB's Chapel), in an expansion zone of the city, and it became a parish church in 2016. In 2020, it was listed in local level.

9. Teresa Cunha Ferreira and Luís Martinho Urbano, *Nenhum sítio é deserto – Álvaro Siza – Piscina de Marés (1960-2021)* (Porto: FAUP/ Afrontamento, 2022).

10. For details on methodology, check the thesis that originated this paper. Juliano Loureiro de Carvalho, "Valor de antiguidade em edifícios brasileiros do século XX" (PhD Diss., Universidade de Brasília, 2023).

11. IPHAN-DF, *Catedral metropolitana de Brasília – Inventário* (Brasilia, [unpublished document], 2017), 11–28.

The nave is defined by columns of exposed concrete, which open up into petals, forming the ceiling and the roof. Steel-framed windows and an exposed stone perimeter wall make up the external enclosure. The roughness of the materials is balanced by the curved shapes. Neutral colours, indirect lighting and the centralised space invite to introspection and quietness (**Fig. 2**). This feeling is accentuated in the baptistry, which has a lower ceiling and less daylight.

Until the 2000s, the building's interiors underwent numerous changes: the nave gained plastic seats, depictions of saints and sound equipment, and the cross above the alter was replaced by a painting of Jesus Christ. The sacristy became storage space, and other secondary spaces had their furniture and finishes replaced by ordinary, new ones.[12]

From 2010 on, a newcomer priest made additions to the existing liturgical elements, under the supervision of architects Doris Vilas-Boas and João Martins de Oliveira – who was an advisor for liturgical spaces to the National Conference of Bishops of Brazil at that time.

The presbytery bears a wooden panel with stained-glass details, by Athos Bulcão. It gained a side altar with an image of Our Lady of the Presentation, a new crucifix instead of Christ's painting, and a golden front piece for the altar table. In the baptistry, the new features were a golden front piece on the altar table, an altar piece of ceramic mosaic depicting the consecrated host, and a side altar dedicated to the Virgin Mary (**Fig. 2**).

Due to their simple shapes and neutral colours, the new side altars and the crucifix seamlessly integrate into the whole. The golden front pieces stand out and stress the altar tables as sacred, focal points, but don't clash into other elements, since they are simple and isolated. Differently, the exuberant colours and square shape of the altarpiece in the baptistery bear too much contrast to the greyish colour and organic texture of the exposed stone wall onto which it hangs, affecting that space negatively. Overall, the new character of both nave and baptistery is richer, less ascetic than Lelé designed them, but they keep its calmness and introspection. The additions are significant works of art and architecture and also the offer of the current generation to the building. Even if not specifically referred to in the listing process, they are new attributes of heritage value. The awareness of the symbolism of these additions is visible in the commemorative plaque of the parish's creation, which combines the images of the well-known facade and the new crucifix, pointing simultaneously to the continuity of the use of the building and to the new status of the community.

Even without reversing the damage previously inflicted to the secondary spaces of the building, the works carried out in the Church of the Lord's Ascension demonstrate the potential cultural value of additions to modern interiors and the importance of their design quality.

4. CHURCH OF THE DIVINE HOLY SPIRIT – NEW SOLUTIONS

The Church of the Divine Holy Spirit, in Uberlândia, 350km South of Brasília, was designed starting from 1976 by Lina Bo Bardi, who called it Chapel of the

12. Ana Carolina Bierrenbach and Marcela Carvalho Porto, *Dossiê* técnico de *tombamento*. *Igreja da Ascensão do Senhor* (Salvador: unpublished document, 2020).

Holy Ghost of Cerrado. It was opened in 1982, still unfinished, and became a Parish Church in 1985. State level heritage listing came in 1997.

The three cylindrical volumes (church, parish house and meeting pavilion) correspond to three interior spaces with different characters and different relationships with the exterior (**Fig. 3**). Over time, the community altered those spaces, aiming to improve their cleaning and security conditions. For instance, the meeting pavilion was enclosed by a mid-height bamboo wall, which was later replaced by a full height roundwood one; in the nave, the internal perimeter, that once featured exposed bricks, was painted white, while the main doors, originally in wooden lattice, were sealed with boards (**Fig. 4**). The plastering of the nave was a particular point of contention between the users and the architects involved with the church, as it deviated from the Bo Bardi's intention.[13]

The building underwent a major intervention between 2008 and 2014, led by Marcelo Ferraz and André Vainer, collaborators of Lina Bo Bardi and co-authors of the project. Works included the maintenance of the reinforced concrete structure, brickwork and wooden elements. It also addressed accessibility, user safety concerns, and the construction of a new, semi-underground parish house. A newbuilt garage and the existing water tank, built differently from the original design, were demolished.

Marcelo Ferraz stated that the his goal was "finishing the things that needed to be finished", but this should be considered together with his assertion that "buildings also have lives and have moments of life different from others, they evolve, devolve."[14] Indeed, although the intervention "showed interest in recovering characteristics of the original design, many alterations carried out over time are understood as irreversible"[15] – including the previously noticed plastering of the nave, enclosing of the pavilion and closure of the door lattice (**Fig. 4**).

Here, the demands for functional adjustments along time have led to successive suppressions and additions, which substantially altered the appearance and spatial feeling of the building. Even in a listed building, the duly approved conservation design by its co-authors acknowledges the use value of significant changes to the original design. Instead of erasing them, the architects allowed for the emergence of new values, such as in the discreetly dissonant dialogue between additions and existing elements. Unlike the other case studies, where new design has led to new architectural and artistic values in modern interiors, in this case, the modest alterations are on the borderline between physical conservation, recognition of already established use values and the creation of new ones.

13. Ariel Luís Lazzarin, "A Igreja Espírito Santo do Cerrado e suas alternativas à arquitetura brasileira" (MA Diss., Universidade de São Paulo, 2015), 124-126, 136, 142.

14. Natália Achcar Monteiro Silva, "Um olhar sobre a igreja Divino Espírito Santo do Cerrado" (MA Diss., Universidade Federal de Minas Gerais, 2014), 138.

15. Lazzarin, "A Igreja Espírito Santo do Cerrado e suas alternativas à arquitetura brasileira", 139-140.

5. DISCUSSION AND CONCLUSIONS

In Brasília Cathedral, Oscar Niemeyer succeeded in creating a new interior space by altering the building's envelope. This case demonstrates how deep changes to the interiors of a modern icon might update that icon.

The Church of the Lord's Ascension is another modern building where new architectural and artistic values arise from the insertion of items



Figure 1. Oscar Niemeyer, Brasília Cathedral, Brazil, 1958-1978. Building's interior, with exposed concrete and grey glass (c. 1970); building's interior, with white-painted structure and stained glass (current view). © Augusto Carlos da Silva Telles/ Instituto Moreira Salles; Juliano Carvalho, 2022.

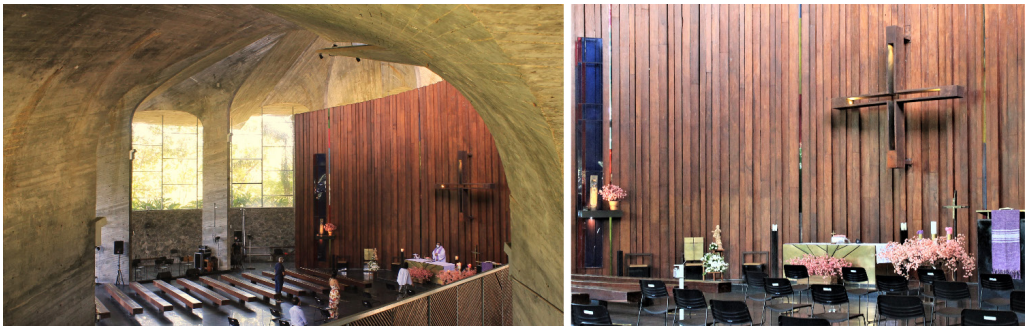


Figure 2. João Filgueiras Lima (Lelé), Church of the Lord's Ascension, Salvador, Brazil, 1973-1975. Nave; presbytery, with the new main alter table in the centre and the new Virgin Mary's side altar to the left. © Juliano Carvalho, 2020.

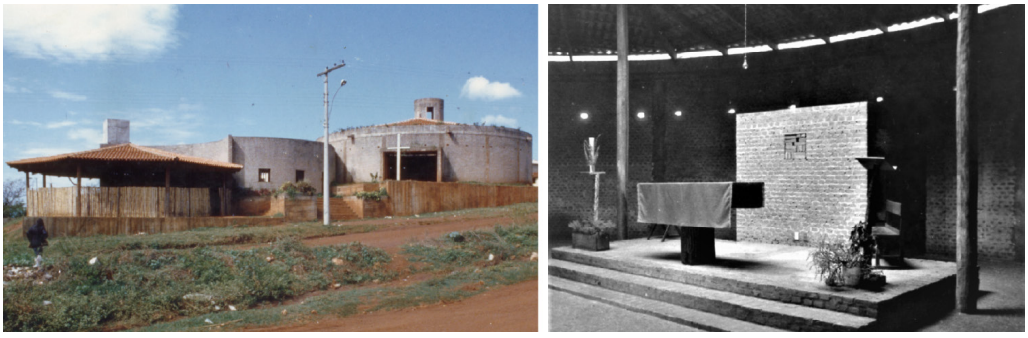


Figure 3. Lina Bo Bardi and collaborators, Church of the Divine Holy Spirit, Uberlândia, Brazil, 1976-1982. General view (1982); nave and altar, with its exposed brickwork wall (c. 1982) © Instituto Bardi, published in Bo Bardi, *Igreja Espírito Santo do Cerrado*, 1999, p. 7, 23.



Figure 4. Church of the Divine Holy Spirit, current state. Interior of the meeting pavilion; nave and altar, with its white-painted wall © Juliano Carvalho, 2021.

that were absent from the original design. When Oliveira and Vilas-Boas conceived those additions, the church was not listed. Nevertheless, they adopted a witty approach, balancing the need of a specific character for the liturgic elements and the intention of adjusting to the existing spaces. The permanence of previous inadequate alterations points to the limits of conservation action in face of usage demands.

Limits related to context and usage also override the intention of returning to the initial condition in the Chapel of the Divine Holy Spirit. The conservation intervention by Brasil Arquitetura Office ensured the long-term physical integrity of the building, recognized the use value of elements that altered the original design and solved extant functional challenges through further changes.

The three churches drift from their original designs while significantly adding new cultural values to them, that – values that arise from the work of different agents. The cases help expanding modern architecture conservation approaches, since they bring the time span between design and the present moment, and its traces, as sources of value attributes to be kept. That doesn't mean that *any* changes are valuable; conversely, it points to the need of a critical, case-based reasoning to decide about it.

Since avoiding generalisation and tracking the continuous history of buildings and their interiors are guidelines for heritage from all time periods, the case studies bring methodological approaches developed for heritage in general as also valid for modern heritage. ■

BIOGRAPHY

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MELCHIORRE BEGA CORPORATE INTERIORS (1959-70): TRANSIENCE AND CARE

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ABSTRACT

Melchiorre Bega (1898-1976), architect and designer, was a refined interpreter of 20th century Italian culture. His long activity documents the investigation on the design possibilities at different scales: from stores to villas, from corporate architecture to tall buildings. From Bologna to Milan, Bega's work expresses a world of relationships that led his production outside national borders. As well as in major projects where he spanned five decades and different seasons of Italian architecture, Bega introduced new interior design concepts experimenting with domestic and public furniture.

The research conducted on the Melchiorre Bega fund (Archivio Progetti, Università Iuav di Venezia), analyses the innovation features of three corporate buildings realised in Milan in the second half of the 20th century, where interior design represents an integral part of the modern project: Galfa tower (1959), Stipel headquarters (1964) and Selection from Reader's Digest offices (1970). These buildings represent important examples of Bega's legacy, now at risk (or partially lost) because of a triple fragility that endangers modern heritage: the first is related to the status of modernity that has prevented the historicization and recognition of their values; the second is intrinsic to the lack of durability of industrial building materials and techniques; the third is linked to the limits of national regulation in protecting private heritage built less than 70 years ago.

The study examines the transformative phenomena of the selected buildings relating them to the case-study of the Axel Springer headquarters in Berlin (1966). The analysis of the current state of the interiors, usually intended as an open system more susceptible to changes and more affected by time, allows to highlight different roles of time and use, and to identify physiological transformations capable, in a few cases, of generating hybrid but careful contaminations.

1. INTRODUCTION

Melchiorre Bega (1898-1976), architect and designer, was a refined interpreter of 20th century Italian culture. His long activity documents an intense investigation on the design possibilities at different scales: from stores to villas, from corporate architecture to tall buildings. Bega's architecture expresses a world of relationships that would also lead him outside national borders working in Germany, United States, South America, and Africa. As well as major projects, where he spanned five decades and different seasons of Italian architecture, Bega has introduced new interior design concepts experimenting both with domestic and public furniture: from upper-middle class housing in the 1930s and 1940s, to the bars and stores, Bega confirmed himself as an eclectic designer capable of ranging from the monumentality of the café Grande Italia in Rome (1938) to the rationalism of the Motta store in Milan (1934), from the principles of the International Style of the Motta motorway restaurant in Cantagallo (1959) to the codes of brutalism of the Congress centre in Bologna (1975).

The research analyses innovation features and transformation path of three emblematic corporate buildings realised in the second half of the 20th century in Milan, where interior design represents an integral part of modern project: Galfa tower (1959), Stipel headquarters (1964) and Selection from Reader's Digest offices (1970).

The buildings represent important examples of Bega's legacy, now at risk (or partially lost) because of a triple fragility that endangers modern heritage: the first is related to the status of modernity that prevented the historicization and recognition of their values; the second is intrinsic to the lack of durability of industrial building materials and techniques: products whose transience is linked to the high degree of innovation; the third is finally caused by the limits of national regulation in protecting private heritage built less than 70 years ago[1].

The study documents a context of great uncertainty about the concrete possibility of transmitting modern interiors to the future, due to the heavy losses and damages caused by renovation works carried out in a city, like Milan, that looks to the future often erasing the past. The research analyses the main transformative phenomena relating them to the case-study of the Axel Springer headquarters in Berlin (1966). The current state of the interiors, usually intended as an open system more susceptible to changes and more affected by time, highlights different roles of time and use, and to identify physiological transformations capable, in a few cases, of generating hybrid but careful contaminations.

1. Cf. art. 12 of the Italian Code of Cultural Heritage and Landscape (Legislative Decree 42/2004) on cultural interest assessment.

2. FRAGMENTS OF MILANESE MODERN INTERIORS

An important aspect of the research that has oriented the investigation is the already-mentioned gap in the Italian regulation on protection of modern heritage which leads to the substantial impossibility of listing the Melchiorre Bega's work built after 1954.

Identifying the processes that altered and modified these "clear and light architectures"[2] allows to document a wide range of interventions, from

2. Pier Carlo Santini, "Il palazzo della Stipel a Milano," *L'Architettura – cronache e storia*, no. 115 (May 1965): 6-13.

complete renovations to tangible and intangible micro-histories of use that accompanied the architectures to the present day.

In the second half of the 20th century, Melchiorre Bega has significantly contributed to architectural and construction research on tall buildings, realising, besides many projects remained on paper, important works. The Galfa tower is the result of a re-interpretation of American skyscrapers and embodies an early form of adherence to the aesthetics of the International Style. "The most chaste of Milan's skyscrapers"[3], as defined by Giuseppe Vaccaro, was designed to house the offices of the Attilio Monti's Sarom (Società Anonima Raffinazione Oli Minerali) and became one of the symbols that changed the skyline of Milan during the economic boom of the 1950s.

The building is the expression of the correspondence between concept and construction that qualifies the Bolognese architect's legacy. If in certain contexts Bega's work reflects a highest level of craftsmanship, in Galfa tower the themes of technological development, innovation and industrialisation address both the design and the construction phases. The building stands out for transparency and sobriety, although it has totally lost the advertising status initially accorded to the skyscraper typology.

The tower is 102 metres high, with a rectangular plan developed on 31 floors and 2 floors below ground, which housed technical plants and parking areas. From a structural point of view, the complex combines a pillar structure on plinths with more unusual foundation walls employed in the tower. The principles of standardisation and prefabrication can only be found in the definition n of the envelope and internal partitions, since "the Galfa skyscraper is all cast-in-place"[4].

The decision to set back the vertical load-bearing elements about 2.5 metres from the façades enabled the realization of a continuous curtain wall, produced by the company Luigi Greppi, a mechanical manufacturer involved in post-war reconstruction.

The research on the combined use of traditional and industrial materials connects Bega's work with that of other Italian architects such as Gio Ponti, Piero Bottoni and Luigi Caccia Dominioni. The window frames, in natural anodised Duraluminium and Thermophane glass, followed a rhythm offsetting the alignment of the vertical uprights made of extruded and painted black Duraluminium, in contrast with the silver-coloured fixed profiles.

Thanks to the technical contribution of Gaetano Altieri and Gianfelice Bertolini, the building had an innovative air-conditioning system, characterised by extremely small appliances housed in the thickness of the floor slabs, integrated with furniture (**Fig. 1**). The comfort requirements were also guaranteed by the attention paid to acoustic issues, which led Bega to develop, together with the companies Vis and Valzaretti Modigliani, a solution based on the interposition of a damping layer of glass fibre and a layer of silk and basalt fibre.

A rubber flooring supplied by Domosic, a Castiglione Olona-based company specialised in plastics for the construction industry, was laid on the distribution screed and the anhydrene subfloor. The characteristics

3. Giuseppe Vaccaro, "Il Grattacielo Galfa a Milano," *L'Architettura – cronache e storia*, no. 48 (October 1959): 370-377.

4. Stefania Mornati, "Il più casto dei grattacieli milanesi," in *La Torre Galfa di Melchiorre Bega. Architettura e Costruzione*, ed. Laura Greco and Stefania Mornati (Rome: Gangemi, 2012), 46. On the themes of the construction site, see also, Stefania Mornati, "Il valore della trasparenza: la Torre Galfa di Melchiorre Bega," *L'ingegnere. Edilizia, ambiente, territorio*, no. 43-44 (May-August 2012): 4-11.

of polychromy and polymateriality were recognizable starting with the flooring of the underground garages, made of red stoneware with the insertion of white bands, contrasting with the black painted reinforced concrete pillars.

The access to the hall, covered with slabs of white Christall marble from the Camonica Valley and furnished with tables of Imperial red granite from Sweden, was through the double glass wall made of Vis crystal and Duralumin frames. The floors were made of Swedish light blue Labrador granite slabs, while the concrete surfaces of the central block of five lifts were cladded with Duralumin sheets.

The offices were located on a central pathway and realised with movable wooden partitions coated by Flexa panels, equipped with glazed transom and Duraluminium frames. The building structure was always concealed by suspended ceilings and cladding panels, chosen in relation to the qualities of the different spaces.

In 1964, the Stipel offices (Società Telefonica Interregionale Piemontese e Lombarda) were inaugurated a few blocks from the Galfa tower. The building, designed with the engineer Ubaldo Castagnoli, represented a horizontal counterpoint to the verticalism of the nearby towers. Like the tower, Stipel offices were characterised by the rationality outcome of the methodological approach in solving technical and technological problems posed by such buildings[5]. It was a hi-tech machine founded on the idea of materials' quality, maintenance simplicity, and plant system efficiency, all factors contributing to the definition of the building image.

The approximately 4600 square metres of façades were defined as rhythmic diaphragms that expressed the internal design criteria emphasising the alternation of two types of materials: Vis Cromo and Thermopane glass by the Fontana company. The aluminium components were produced by Curtisa, a Bologna-based company, while the iron window frames by Cossa, a Milanese company. The secondary façades were clad in grey ceramic mosaic produced by Ceramica Joo Milano, a company that became renowned thanks to the 'diamond' tiles designed by Gio Ponti.

The most outstanding interior qualities were laid in the public hall, where 52 counters were located, emblematic of the relationship that the company established with society. Here again, the combination of industrial and traditional materials was a distinctive feature of the Bega's production. The roof of the public hall was made with iron struts hidden by walnut panels and transparent Perspex elements, a material that allowed both natural and artificial lighting. The lamps were entirely provided by Greco company, with standard and special lighting elements.

Bega expressed his long experience as a decorator precisely in the hall, where he found a balance between adherence to function and creation of a welcoming atmosphere for the public. The polychromy of the hall was enhanced by the Swedish red granite floor, used also on the walls in combination with travertine, the warm tones of the wood and the bronze beam anchored to the ceiling, in correspondence with the desk.

5. Cf. Pier Carlo Santini, "Il palazzo della Stipel a Milano," *L'Architettura – cronache e storia*, no. 115 (May 1965): 7.

The design of the entrance was particularly meticulous and refined, with the access through glass doors that allowed a glimpse from the outside of the decorative panel created by Professor Cinti[6] (**Fig. 2**). Almost all the furnishings of the Stipel offices were created by Melchiorre Bega, confirming his organic design approach from large to small scale[7].

Between 1968 and 1970, the architect built the new offices for Selection from Reader's Digest, together with the architect Renzo Durand De la Penne and the collaboration of Maurizio Dominissini. The building showed substantial differences from the previous ones, both in terms of cultural references and technical solutions. The design idea was based on the composition of plastic volumes, whose façades were strongly characterised by reinforced concrete.

A light-sensitive plaster coloured by "mother-of-pearl fragment"[8] dematerialised the curved surfaces in sunlight.

Unlike the first two buildings based on transparent envelope, this 'concrete monolith' represents the first step of experimentation that would culminate in the design of the Congress Centre in Bologna (1975). It is precisely the ability to evolve over different seasons of architecture that makes Melchiorre Bega an outstanding professional of Italian modernity, with a production capable of maintaining a high quality in various fields.

The building had three basement floors that housed the heating plant and a parking area for about 160 cars, and a seven-storey, open-plan main body that housed offices and reception.

Four smaller volumes defined the complex as a multi-functional system: these latter buildings housed a meeting room, a canteen for two shifts of 200 people, a mechanical centre, and a concierge.

The stark contrast between the massiveness and solidity of the concrete volumes, and the transparency and lightness of the interiors was emphasised (**Fig. 3**).

As in his other corporate works, great care was finally devoted to the well-being of the workers and the welcoming atmosphere of the interior spaces, both in terms of the soundproofing and the quality of the furnishings.

3. CAREFUL CONTAMINATIONS VS FUTURE OBLIVION

Melchiorre Bega made an important contribution to Italian modern interior design concepts, particularly experimenting in public equipment for companies and stores[9]. However, the transience of that idea of interior design arose soon, firstly due to physiological changes induced by clients, then to the power of time, responsible for many radical transformations of a heritage not easily adaptive to changes.

The analysis of the three case-studies shows how the recognition of formal and technological obsolescence alongside the non-recognition of cultural values of modern interiors led to their complete loss.

The Galfa tower housed its original functions until 1980. In 2008, after the discovery of asbestos in the building shafts, the complete demolition of internal partitions and surfaces was carried out. In 2016, the retrofitting by BG&K Architects transformed the tower into a multifunctional building

6. Cf. *Nuova sede Stipel, Milano 1964*, IUAV-AP-FMB, NPR 076484-060. On the back of the photo is a handwritten note, probably by Melchiorre Bega: "The decorative panel is by Prof. Cinti" (translated by the author).

7. The furniture was supplied by Arredamenti Bega S.p.A., with chairs from Cassina and Meda companies.

8. Cf. "Un complesso per uffici a Milano," *Domus*, no. 484 (March 1970): 9.

9. Cf. Massimiliano Savorra, "Architetture aziendali, 1945-2000," in *Comunità Italia. Architettura, città e paesaggio dal dopoguerra al 2000,* ed. Marco Biraghi and Alberto Ferlenga (Milan: Silvana Editoriale, 2015), 52-55; Massimilano Savorra, "Il lusso borghese negli anni '30. I negozi di Melchiorre Bega," *Casabella*, no. 878 (October 2017): 26-34.









Figure 1. Melchiorre Bega, Galfa tower, Milan, 1959. © Archivio Progetti, Fondo Melchiorre Bega.

Figure 2. Melchiorre Bega, Stipel offices, Milan, 1964. © Archivio Progetti, Fondo Melchiorre Bega.

Figure 3. Melchiorre Bega, Selection from Reader's Digest offices, Milan, 1970 (part.). © Archivio Progetti, Fondo Melchiorre Bega.

Figure 4. Melchiorre Bega, Axel Springer headquarters, Berlin, 1966. View towards the original access on Kochstraße. © Archivio Progetti, Fondo Melchiorre Bega.

housing a hotel with 145 rooms and 63 flats. The original curtain wall was completely removed and redesigned with a higher-performance enclosure according to the Bega's design. While the image of the building was preserved, the interiors were removed and updated for the new functions, highlighting two different forms of heritage loss.

Even in the case of the Stipel offices, the abandonment by the original client marked the fate of the building. Telecom Italia owned the complex until 2018, until its sale to a company involved in the urban regeneration plan for the Porta Nuova district. In 2019, the international competition won by Park Associati and Snøhetta architects led to the hard retrofitting of the building, intended as its complete redesign. The project foresaw the complete removal of the external envelope, the internal surfaces, and the technological apparatus, with the partial preservation of the reinforced concrete frame. The original glazed volume has been cladded with fibreglass-reinforced concrete panels, while the new volumes with prefabricated terracotta cells, returning a building that coincides with the Bega's offices only for part of the load-bearing structure.

The Selection from Reader's Digest offices also document transfiguration processes that are damaging the heritage of the second half of the 20th century. After the abandonment in 2015, the change of the intended use was part of the broader Isola district regeneration programme. The project carried out by Asti Architetti destined the building to house 70 flats. The original planimetric layout is the only preserved feature of Bega's work, deeply modified by new external structures grafted to create large terraces. The surfaces were hidden by new cladding, supporting an idea of luxury and novelty that is currently endangering many other modern buildings in Milan.

In a context of risk for the permanence of Bega's entire work, the research intends to document an ongoing process of care and continuity of use that is preserving qualities and characteristics of a significant modern space of memory.

The headquarters of the publisher Axel Springer were designed by Melchiorre Bega and Gino Franzi with the German architects Franz Heinrich Sobotka and Gustav Müller, inaugurated in Berlin in 1966. Almost 60 years later, the office building is still a landmark for the city. The external envelope is realised with a curtain wall composed of Thermopane safety glasses and aluminium profiles, that give the façades a golden tone. Anodised aluminium is also used for the matt cladding of the minor fronts. The use of metals also qualified the interior spaces, where the partitions consisted of movable modular walls coated with nitro lacquered steel sheet, while bronze-olive coloured aluminium sheets were also used as finishes of the lift block (**Fig. 4**).

Like all vital organisms, the complex has changed over time without losing its principal characteristics. The interior design, part of the Bega's project, was considered essentially as an open system, where adaptability to change represents an essential factor for its preservation.

Among the significant but careful transformations[10] realised to better respond to changes in publishing, representative elements of the "glass and steel skyscraper one metre from the Berlin Wall"[11] interiors remain. Still preserved are examples of plant devices that characterised the technological building such as the two 'paternosters', perpetual motion open lifts, now musealised, designed for a more agile connection between floors, capable of documenting the innovation of mechanical connections that in the 1960's could reach a speed of 3 metres per second[12].

Another preserved feature of modern interiors is the integration of the curtain wall with the plant engineering solutions: the shielding of the sun's rays was originally achieved with Luvar curtains placed between the cabinets of the air conditioning system and the glazed façade. The plant system is now changed, but the integration of furniture and technical solutions has been retained, as well as the spatial layout of the offices and the interiors of significant floors.

The experience of the Axel Springer headquarters shows that the quality of design and the users' awareness make modern heritage – and modern interiors – adaptive to changes. Capturing time inside architecture means indeed supporting dynamic processes that can embrace the need for modern heritage to evolve in order to be preserved, identifying correct strategies and defining the limits. ■

10. Cf. Sara Di Resta, "Del tempo sull'opera. Memoria, conservazione, trasfigurazione," in *Melchiorre Bega. Architetture. Interni. Allestimenti*, ed. Rosa Chiesa and Sara Di Resta (Milan: Silvana Editoriale, 2023), 204-227.

11. Vittorio Brunelli, "Grattacielo di vetro e d'acciaio a un metro dal muro di Berlino," *Corriere della Sera* (7th October 1966). See also, Stefano Zironi, *Melchiorre Bega architetto* (Milan: Editoriale Domus, 1983), 96.

12. Cf. *Bauwelt*, no. 41, 1956. Translation of the article into Italian language, Archivio Progetti, Fondo Melchiorre Bega.

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MODERN OVER MODERN. THE SOM INTERIORS RESTORATION OF THE FRANK LLOYD WRIGHT'S ROBIE HOUSE (1967-1975)

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ABSTRACT

Despite being one of the world's most recognized modern houses of the 20th-Century, the Frank Lloyd Wright's Robie House (1910) has undergone a complex series of events in more than a century as changes in ownership and function, threats of demolition, and restorations, whose traces are latent in the current appearance of the house.

This contribution aims at investigating and interpreting the 1967-75 phase, when the Robie House was turned into the headquarters of the Adlai Stevenson Institute through a project by the Chicago's firm Skidmore Owings and Merrill (SOM) that remodeled its interiors.

This prestigious tenant, entitled to Adlai E. Stevenson II (1900-1965), who was twice a candidate for the American Presidency, converted the house into a multipurpose building, with a reception area, a library, office rooms, conference halls, and public relation spaces, resulting in a rare and stimulating modern addition over a modern authorial house.

This study will provide information about the SOM phase, analyzing its related architectural interventions and their compatibility with the existing palimpsest through a bibliographical, archival, and on-site research.

The current image of the house, frozen in a suspended time, lacks any reference to this period, whose traces were lost, together with the original Wrightian furnishings. The most recent restoration, lasting from 1997 to 2018, led to a new configuration of the house where the Wrightian phase was favored through the salvation of the original vestiges and the partial reproductions of some fixtures.

The outcomes of this paper will ultimately provide new perspectives on a renowned international modern landmark prompting new considerations over its current use and configuration, trying to complicate the concept of authenticity and authorship in the ambitious intention to capture time evolution in a modern architectural interior.

1. THE INTERNATIONAL SIGNIFICANCE OF THE ROBIE HOUSE FOR THE PRESERVATION OF MODERN HERITAGE

Since the early '90s of the 20th Century, within the cultural climate that led to the foundation of docomomo[1], it became central for preservationists to question how established strategies and theories would fit for Modern heritage[2].

More than one critical position came from Italy[3] by scholars who aimed at reconciling the preservation of the Modern within the rooted theory of restoration[4] against an emerging international tendency intent on opening to non-western concepts of authenticity[5].

Famous restorations of modern houses in East and North Europe followed this second approach, such as the Tugendhat House in Brno, Czech Republic, (1928-30) by Ludwig Mies van der Rohe (1886-1969), restored between 2010-12, or the Shröeder House, in Utrecht, Netherlands, (1924) by Gerrit Rietveld (1888-1964) restored in the 2000s. These interventions raised questions related to the period of significance to which these houses were brought back[6]. Preservation, in both these cases, was seen as the process of refurbishing the architectural fabric as close as possible to the original conditions with the reinstatement of new seemingly-original materials through the help of diagnostic scientific processes, historical investigations, and photos[7]. This approach aroused again divergent visions from Italy[8], with an underlying common appraisal intended to let the architectural palimpsest emerge also in modern houses[9].

On the other shore of the Atlantic, the American approach towards conservation had already distanced from Europe with the refusal to adopt the Venice Charter, leading to a national theory applied mainly to patriotic landmarks, where intrinsic architectural values were often secondary to the narration of patriotic events[10].

Frank Lloyd Wright's architecture represented the first spread American type of modern architecture in which intrinsic values were paramount. The restorations over Wright's heritage motivated in-depth studies on how the practice of preservation changed in the US to conserve this material legacy[11].

In the context of Chicago, a city that was the world's epicenter of modern architecture and suburban revolution[12], it was inevitable that pioneering events would occur also in the field of preservation of the Modern, with valuable outcomes also on an international level.

The Robie House, completed in 1910 and owned by three different families in its troubled history, was threatened to be demolished in 1957 by the Chicago Theological Seminary and then saved through an international protest[13]. Citing Daniel Bluestone, «the successful 1957 campaign to preserve the Robie house soon loomed nearly as large in preservation history as the building did in architectural history»[14].

In 1963, after its salvation through the involvement of a private entrepreneur and the creation of the Robie House Committee, the house was donated to the University of Chicago, urging this institution to find other users not to divert funds from ordinary activities.

The Committee's mission was also aimed at collecting funds for a necessary restoration. However, out of the proposed $250.000 they were

1. "What happened? Fourteen years of DOCOMOMO", in *Docomomo Journal – The History of Docomomo*, n. 27, (June 2002), 8.

2. H.J. Henket, H. Heynen, *Back from Utopia: the challenge of the modern movement* (Rotterdam: 010 Publishers, 2002).

3. Dezzi Bardeschi Marco, "Conservare, non riprodurre il Moderno", *Domus,* no. 649, (1984), 10-13.

4. Giovanni Carbonara, *Avvicinamento al restauro. Teoria, Storia, Monumenti*, (Napoli: Liguori Editore, 1997), 591.

5. Susan MacDonald, "Moving On: Approaches and Frameworks for Conserving the Heritage of the Postwar Era and Beyond, in *The 6th Baltic Sea Region Cultural Heritage Forum. From Postwar to Postmodern – 20th Century Built Cultural Heritage*, (Riksantikvarieambetet, Swedish National Heritage Board 2017), 124.

6. Marie-Thérèse van Thoor, *Form and Space. Rietveld Schröder House. Challenging the Future* (Delft, Delft University of Technology, 2019).

7. Ana Tostões, Ivo Hammer and Zara Ferreira, "The Re-Birth of the Tugendhat House", *Docomomo Journal – The Hertiage of Mies*, 56, vol. 1, 45-55.

8. Fabio Mangone, "Emblemi del Movimento Moderno e immagine fotografica: il restauro alla "Dorian Gray", *Confronti*, no. 1 (January 2012), 102-105.

9. Renata Picone, "Il moderno alla "prova del tempo". Restauro e deperibilità delle architetture del XX secolo", *Confronti*, no. 1 (January 2012), 52-61.

10. Donatella Fiorani, "The Other Shore. Preservation and the Past in the United States", *Loggia. Arquitectura & Restauraciòn*, no. 26, (2013), 8-37

only able to raise $65.000, used for an urgent roof repair in 1965[15]. Notably, one of the main individual donors of this campaign was the architect Walter A. Netsch (1920-2008), who had a pivotal role in the SOM interior remodeling of the house.

In 1967, the Adlai Stevenson Institute of International Affairs opted to set its headquarter in the Robie House, relieving the University from the management costs, and hiring Skidmore Owings and Merrill as architects for its restoration. In lacking the necessary funds for comprehensive conservation, the house only underwent interior remodeling. The main protagonists in the design were Walter A. Netsch as managing partner and director, Donald Ohlson as project manager, and Donald Powell and Robert Peters as interior designers[16].

2. THE INTERIOR REMODELING OF THE ROBIE HOUSE BY SOM

The previous condition of the Robie House as a guest house for young ministers of the theological Seminary had hardly ever been photographed or recorded. An enthusiastic and rare memory of a Chicago Theological Seminary attendee recalled the emotions of living in a Frank Lloyd Wright's house with a brief description of the house first floor used as a common space[17].

Attracted by the demolition rumors, the most compelling authorial photo campaign was conducted in 1956 by Aaron Siskind (1903-1991) and Richard Nickel (1928-1972).

However, they were focusing on the original fixed elements such as patterned grids for integrated radiators, oak latticework screens, light fixtures, bulbs, and smooth oak trims, that together produced a Prairie version of a *Gesamtkunstwerk*, disallowing in their reports to comprehensively understand the interiors arrangement before 1967. The house conditions before the remodeling weren't even designed by the architects in charge of the project, keener on surveying the space feature to comprehensively modernize it, rather than catching minor elements of previous conditions.

Therefore, to figure out the SOM intervention it is practical to follow Donald Hoffmann's extensive research on the Wrightian phase of the Robie House[18], supported by the third owners' photos, the Wilbers family, and symbolically walk around the interior space to understand the differences between the two configurations.

Starting from the disguised entrance on the west side of the house, secluded and darkened by an upper balcony, the entry hall was originally characterized by an intentional compression as a prelude to the spatial release exalted by colored sunlight beams at the first floor, directly accessible through the interior staircase. This entry hall was intended by Wright as a visiting ticket giving an immediate essence of the house in its smallest details, as in the cloth motifs above the entry table's vertical rails connected to oak legs. These symbolic features, such as thin oak stiles, and cantilevered smooth planes, characterized the whole composition of Wrightian furniture.

From the entry, remaining on the ground level, two opposite doors opened to the two elongated rooms on the west and east sides, respectively the billiard room to the west, and the playroom to the east.

11. Richard Longstreth, "The Impact of the Work of Frank Lloyd Wright (and Louis Sullivan) on Historic Preservation Practice in the United States, 1950-1980", in *Rethinking Frank Lloyd Wright. History, Recepetion, Preservation*, ed. by Neil Levine, Richard Longstreth (Charlottesville and London: the University of Virginia Press, 2023), 179-212.

12. Michelangelo Sabatino, *Modern Houses for Modern Living in Chicago*, in *Modern in the Middle. Chicago Houses 1929-1975*, ed. Susan S. Benjamin, Michelangelo Sabatino (New York: The Monacelli Press, 2020), 10-37.

13. Davide Galleri, "Raising the Stakes to Save and Restore Frank Lloyd Wright's Robie House: A Modern Architectural Palimpsest Between Politics and Preservation Practices (1957-1967)", *Prometheus Journal*, no. 7, (May 2024), 35-39.

14. Daniel Bluestone, "Wright Saving Wright: Preserving the Robie House, 1957", in *Rethinking Frank Lloyd Wright. History, Recepetion, Preservation*, ed. Neil Levine, Richard Longstreth (Charlottesville and London: the University of Virginia Press, 2023), 213-240.

15. *Financing of Robie House Renovation as of September 30, 1968*, Chicago, Hanna Holborn Gray Special Research Center (hereafter HHG), Levi Administration Records 1918-1975, Box 69, Folder 7.

16. *The University of Chicago Robie House Restoration, 1967*, Chicago, Skidmore Owings and Merrill Private Archive, Project number 106179-000.

17. *Ms. Jean Duncan Hall, Requested for records by Charles D. O'Connell, March 11, 1988*, Chicago, HHG, Series II, Individual Buildings, Robie Hosue, Box 20, Folder 159.

18. Donald Hoffmann, *Frank Lloyd Wright's Robie House: The Illustrated Story of an Architectural*

The SOM intervention of the ground floor consisted of a complete reinterpretation of the existing spaces (**fig. 1**). Originally, these two areas, as easily comparable in the Wilbers' photos, weren't furnished by Wright and were freely filled with sofas, carpets, fittings, and music instruments, whose forms were dissonant to the aspired homogeneity of the architect's conception.

In 1967, the western billiard room became the new public library of the Adlai Stevenson Institute. Its remodeling involved a partial reuse of the vertical back stiles chairs, originally used on the first floor around the dining table, and, at the same time, the realization of new pieces, such as the consultation table, made of stylistic Wrightian bands mitigated in their ornamentations (**fig. 2A**). This table was a reinterpretation of a typology typical in many Prairie houses, as can be seen in the original Ward Willits House (1902) in Highland Park, or in the Frank Lloyd Wright's Home and Studio (1898) dining room table, all characterized with embossed wooden strips to accentuate the horizontal dimension. In this case, however, SOM did not reuse an existing piece but realized a softened reproduction with the table's feet slightly rotated, in line with other furnishings.

In the creation of this pleasant atmosphere, SOM's design approach recalled the naturality of materials used by Wright flanked by a modernistic ideal, especially in the newly added elements, as for the bookshelves on the long sides, filling the void spots between the two radiators oak covers. Another bookcase covered the vault entrance at the western end wall, and the presence of box-shaped new armchairs defined a charming and relaxed reading space in accordance with the general volumes of the house.

The other side of the ground floor, the playroom, was equally devoid of Wrightian elements and was turned into a conference space with a table occupying the room in its length designed by SOM.

On the first floor, the remodeling scheme was analogous. As the plan shows (**fig. 1**), the eastern living room, characterized by the perspective continuity, saw the only permanence of a reproduction of the Wright-designed and George Mann Niedecken-supervised[19] sofa, complemented by wooden stripes running on its sides to disguise and break its mass from its steps to the overhanging side armrests.

This uninterrupted spatial flow, lacking any doors or partitions at the sides of the main central chimney, was accentuated by SOM with a lounge area consisting of gathering spots made of modernist chairs, seats, sofas and coffee tables disposed to leave a void at the center (**fig. 3A**). As shown by the photos of the time, the SOM drawings were partially changed in the execution. Instead of a double-headed prow table at the west end, the angular alcoves were filled with *ad-hoc* designed chairs made of circular cushions inscribed in a square plan.

What is worth noting is also the absence of the original built-in cushioned inglenook attached to the fireplace. This void gave room to expose the plans of the new SOM Robie House replacing the original cupboards lost over the years (**fig. 3B**).

Masterpiece, (Mineola, NY: Dover Publications, 1984).

19. Cheryl Robertson, Terrence Marvel, *Frank Lloyd Wright and George Mann Niedecken: Prairie School Collaborators*, (Milwaukee: Milwaukee Art Museum, 2005).

The living room image became partially modernistic with Bauhaus-like chairs that, instead of spoiling the comprehensive house idea, exalted with their neutrality the window geometrical patterns, the laylight grids, and the milky overhanging globes of the upper ornamentations.

What Wright didn't intend as an isolated work, but as a combination of art, architecture, and craftmanship, was kept alive in this comprehensive remodeling through a general respectful sense of compatibility and distinguishability of the additions. Especially in terms of space, the dynamic fluidity of the plan "which springs from the south doors and returns at the north windows, expressing a plastic continuity of wall and ceiling"[20], was enhanced in its intrinsic architectural sense.

On the east side, the "majestic dining table guarded by its tall chairs"[21] and decorated with art glass lights had already been taken out, sold, and exposed in a private collection in the 1950s[22]. The central space of the dining room was remodeled with a new table made of triangular movable elements suggesting a plurality of configurations according to various conference typologies and needs.

The realized reinterpretation of the dining room by SOM was the final executive result between a range of solutions all linked by the intention of reconfiguring the core space with a table, surrounded by the original corner oak caseworks, that survived the house changes with the only loss of the latticework screens separating the staircase.

The eastern end prow, as the western, was filled with another set of square-shaped chairs, while the adjacent kitchen and all the servants' areas were turned into offices, retaining their lower prominence in the new configuration.

Another space worth mentioning redesigned by SOM was the main bedroom on the top floor. This space was characterized by a fireplace in exposed roman brick and surrounded on three sides by art glass windows, which produced unique reflections on the wall plasters (fig. 2B). With the SOM intervention, it was turned into the main office, with a central table in a triangular base, whose bowling ball was wider than those characterizing the prow windows. In the wrong assumption that it was part of the original design, the triangular table was wrongly repositioned amid the prow windows on the first floor in the further phases of the house after 1975, with obvious differences in angles matching.

In 1975, soon after the Adlai Stevenson Institute left the house, the University of Chicago started to sublet the indoor spaces to a plurality of renters related to the University activities, such as the Center for Studies in Criminal Justice, the Center for Far Eastern Studies, the Ruth Adams of the American Academy of Arts, the Atomic Scientists Society, or the Shimer College, that led to the inevitable fragmentations of its use, opening to a progressive phase of dismantlement of this secondary phase, whose traces slowly disappeared over time, as happened to the first Wrightian arrangement.

20. Hoffman, *Frank Lloyd Wright's Robie House: The Illustrated Story of an Architectural Masterpiece*, 70.

21. Hoffman, *Frank Lloyd Wright's Robie House: The Illustrated Story of an Architectural Masterpiece*, 73.

22. Chicago, Art Institute of Chicago Collections, John Vinci Papers, Box FF.9.

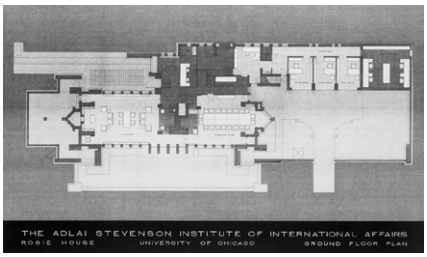






Figure 1. The Adlai Stevenson Institute of International Affairs, Robie House, University of Chicago, First Floor Plan, Project by Skidmore Owings & Merrill (not entirely realized as shown in the plan). © 1967 Chicago, SOM Library Records and Archive, Courtesy of Skidmore, Owings and Merrill LLP.

Figure 2. (A) Frederick C. Robie Residence, Chicago, IL, 1906-1909. Frank Lloyd Wright, Richard Nickel, photographer. © Richard Nickel Archive, Ryerson and Burnham Art and Architecture Archives, Art Institute of Chicago. Digital file #201006_240607-003. (B) Frederick C. Robie Residence, Chicago, IL, 1906-1909. Frank Lloyd Wright, Richard Nickel, photographer. © Richard Nickel Archive, Ryerson and Burnham Art and Architecture Archives, Art Institute of Chicago. Digital file #201006_240607-002.

3. THE ERASURE OF TIME EVOLUTION IN THE FOLLOWING PHASES OF THE ROBIE HOUSE

In 1981, the University of Chicago reclaimed use of the house and, given the significance of this architectural masterpiece, only part of the edifice was turned into the Alumni Office spaces. The main floor, with a new configuration made of randomly organized furnishings and aligned velvet seats, served for touristic tours.

In the years 1980-1984 the architect John Vinci, an already established figure of the time in the Chicago's restoration movement, conducted several punctual interventions of repairs to keep the building operable, as tuckpointing, new water collection systems, and structural improvements.

From 1990, Wilbert R. Hasbrouck (1931-2018), another key figure in the local preservation field, begun a photo and survey campaign aimed at

Figure 3. (A) The Adlai Stevenson Institute of International Affairs, Robie House, University of Chicago, First Floor Plan, Photo by Williams & Meyer, First Floor looking west, with the plan of the new configuration by SOM Shown on the right side. © 1967 Chicago, SOM Library Records and Archive, Courtesy of Skidmore, Owings and Merrill LLP. (B) Frederick C. Robie Residence, Chicago, IL, 1906-1909. Frank Lloyd Wright, Richard Nickel, photographer. © Richard Nickel Archive, Ryerson and Burnham Art and Architecture Archives, Art Institute of Chicago. Digital file #201006_240607-001.

drafting a comprehensive restoration plan, completed by his firm, HPZS in 1993. It included a thorough leaded glass windows analysis subcontracted to the conservator Julie L. Sloan.

The transformation of the ground floor into office spaces with the addition of temporary partitions, had overshadowed the space flow of the house. It set another low point for the house, aggravated by air conditioners, masonry degradations, and the loss of authentic interiors fragments. This phase was reported in Hasbrouck's documentation and can be analyzed today as an important testimony in the evolution of the house.

The restoration plan became effective only in 1997, when the Frank Lloyd Wright Trust became "perpetual" user of the house[23], and a slow process was set in motion, with a first step taken in the early 2000s, when the exteriors were fully restored and brought back to their original appearance, with an intervention conducted by the in-house architect Karen Sweeney. A second phase of extensive restoration, which is today the most recent intervention, was conducted between 2012 and 2019 by one of the leading American experts in this field, the Chicago firm Harboe Architects, directed by the former ISC20C international president Gunny Harboe.

The current condition of the house, following more than a century of alterations that compromised its architectural authenticity and material legacy, is a display of the remaining authentic elements and decorations. Rather than reproducing the Wrightian ornamental apparatus, the restoration architects let the primary authorial phase emerge by means of removal of all additions unrelated to Frank Lloyd Wright, in order to match the mission of the clients to highlight the connections between this architectural masterpiece and its master architect.

In the impossible condition to restore what lost, however, the house lies inevitably in a suspended time. Even if it still represents an international reference for its pioneering architectural modernity, it embodies also a microcosm of restoration approaches occurred within the conversion of the edifice from a house to a house-museum.

In the current international discourse on preserving modern architecture, the Robie House is undoubtedly one the most complex case studies that can arouse questions and undermine established certainties.

Inquiring approaches on modern houses open new lights and elevate the level of debate in conserving architectural masterpieces. These works are world-recognized milestones of the 20th-Century architectural revolution, and methodological inquiries should pursue the relentless ambition to defend the authenticity of this unique, fragile and universal heritage. ■

23. *Frank Lloyd Wright's Prairie Vision, Frederick C. Robie Conservation Management Plan*, Frank Lloyd Wright Trust, May 2019.

BIOGRAPHY

Davide Galleri is an Italian architect and Ph.D. Candidate in architecture at the University of Naples, Italy. He has been visiting scholar at the Illinois Institute of Technology of Chicago and is a Fulbright Fellow. His research is focused on interpreting different approaches on preservation of modern architecture, especially in the relationship between Italy and the US, with a keen interest in Frank Lloyd Wright's architecture and the Chicagoan built heritage. He has published several research papers related to modern heritage and won architecture prizes and bursaries on a national and international level.

MUSEUM BUILDING AS A LIVING ARCHIVE AND A "TIME MACHINE". THE CASE STUDY OF MUDE – MUSEU DO DESIGN, LISBON

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ABSTRACT

MUDE is a design museum housed in a block formed by four main arteries of the modern Pombaline plan that rebuilt Lisbon in the XVIII century. Once the headquarters of the National and Overseas Bank, the site is modern in its spatiality, but nationalist and imperialist in the grammar of its interiors in result of the transformation underwent between 1951 and 1967, designed by Luis Cristino da Silva (1896-1976). Conceived as a total work, the Portuguese architect carefully studied the interiors but at the beginning of the 21st century, they were almost demolished transforming the building in a complex, fragmented and eclectic space. This paper looks at the museological and architectural concepts of the building full requalification to accommodate the museum with three major objectives: firstly, understand how the building becomes a living archive, through the gestures of infrastructure / restore / replace / adaptative reuse; secondly, comprehend how the strategy of re-contextualising the heritage reinterpreted the *Gesamtkunstwerk* concept, transforming MUDE's building into a "time machine" that reinforces its uniqueness; third, evaluate how they overcome the dichotomous container (building) *versus* content (artworks) considering the building itself as one main content of the museum. The paper's methodology is based on the study that the author has been developing within the scope of her responsibility in the museum concept, and combines research in historical archives, analyse of descriptive memories and technical drawings, and monitoring of the works in the building. In addition to demonstrate how the three objectives were achieved, this paper aims to highlight the importance of this museological strategy in the current context of reviewing historical narratives and decolonisation of museums, by transforming the building initially thought of as a closed, hierarchical and segregated space into a democratic, intergenerational and multicultural place, without a destruction of heritage.

1. INTRODUCTION

The history of the block where is now housed MUDE – Museu de Design is mingled with the history of the city and the architectural culture in Portugal since the 18th century. Formed by four main arteries of the modern Pombaline plan that rebuilt Lisbon after the 1755 Earthquake, it was once the headquarters of the National and Overseas Bank (BNU) between 1898 and 1989. During the 20th century, the building underwent two major transformations: in the mid-1920s, when the concrete and the modern structure of pillar-beam-slab were pioneering introduced by the architect Tertuliano Marques (1883-1942); and between 1951 and 1967, when the building was ennobled to become a metaphor of the bank's power in a project by the architect Luis Cristino da Silva (1896-1976). In both cases, the interiors were carefully studied as an essential element to create an integral environment, with a strong identity. In the beginning of the 21st century the interiors were almost demolished due to a new architectural project that sought to meet the new banking requirements. The works were interrupted, following an intervention by the Portuguese Institute of Architectural Heritage. Consequentially, the building was transformed in a complex, fragmented and dissonant space, with several historical layers identified by naked eye. Due to demolitions, the building became bare and "stripped" of finishes, floors, plaster and false ceilings, allowing to identify the system of pillar-beam-slab that created a modern spatial organisation. Finally, in 2016, as a museum, started the building full refurbishment to accommodate the technical needs required to its new functionality, with the building expected to be reopen in mid-2024[1].

While the exterior elevations (except the main façade) maintained the Pombaline model, the interior spaces were extremely eclectic, having, side by side, explicitly modern references and signs of a historicist taste. Ideologically the building reflected an authoritarian, imperialist and colonialist power, perfectly represented in its monumentality, in the site-specific artworks and in the segregated spatial organisation[2].

To evaluate how the close articulation between the museological concept and architectural project converted this complex legacy into a significant heritage, conceived the building as a living archive and a "time machine", this paper will present examples of the gestures of infrastructure / restore / replacement / adaptive reuse to explain how the assertion of the building as one of the main content of the museum fostered the re-contextualisation of the heritage, leading to a reinterpretation of the concept of Total Work, and transforming MUDE's building into a "time machine" where past, present and future are interconnected. With what, we aim to highlight the relevance of this museological strategy in the current context of reviewing historical narratives and decolonisation of museums.

2. REQUALIFY = INFRASTRUCTURE + RESTORE + REPLACEMENT + ADAPTIVE REUSE

The requalification of MUDE's building involved the gestures of infrastructure, restore, replacement of heritage and adaptative reuse of

1. Bárbara Coutinho, MUDE. *Design and Fashion Museum. Francisco Capelo Collection, Lisbon*. (Lisbon/London: Scala Arts & Heritage Publishers, Câmara Municipal de Lisboa, 2014), pp.12-26.

2. Bárbara Coutinho, Raquel Santos and Ana Fernandes. "Space Syntax as a Tool for an open museum practice: The case of MUDE Museum" in *Proceedings of the 11th International Space Syntax Symposium* (Lisbon: Instituto Superior Técnico, 2017), pp.8.1-8.5

spaces, always thought and developed in close and permanent coordination between museology, architecture and technical projects. The primary objective was to adequately requalify the building so that it could have a good performance to the new functional requirements as a museum, making it a more meaningful, sustainable, adaptable and therefore more durable architecture. The impossibility of define a rule to apply to the whole building, due to the heterogeneity of the elements presented and the museological intention of preserving them, turned the architectural project into a site-specific and case-by-case study, since it was necessary to adapt the intervention methodology to each specific situation and solve together the difficulties between the heritage preservation strategy and the application of current regulations, particularly in terms of fire safety in buildings or the implementation of new technologies and ecological energy solutions.

2.1. INFRASTRUCTURE

One key element was the building structural reinforcement to provide it with the capacity to withstand a seismic event. This work was guided by the museological objective of making the building a live lesson of architecture and engineering, and such, allowing the visitor to perceive the chromaticism, textures and construction processes in the materiality of the different times. The core of the solution was the construction of a "cage" made up of 12 mm thick steel sheet frames addorsed to all the façade windows openings in all the floors. Welded rods that cross the gaps between vertical, horizontal and diagonal, connected them to each other. The finishing of the steel sheets followed the materiality of the walls where they were located, namely white lacquered or aged and stabilised Corten **(Fig.1)**. Conceptually, can be established a connection with the Pombaline cage reference in that an attempt was made to recover the idea of providing masonry walls with confinement elements along the entire wall. This was fundamental to guarantee the value given to the pre-existing materiality (in particularly, masonry, concrete and stone), while gave visibility to the different layers of architecture and building techniques[3].

2.2. RESTORE

The restoration of pre-existences was a continuous process, as it was necessary to dismantle and preserve several historical elements, repair and reapply them. The diversity of materials, with a predominance of wood, stone, tiles, decorative mosaics and stucco, constituted a challenge, as it required the presence of several conservation expertise. The compatibility between the requalification intervention (that had to guarantee the right performance of an old building to the current legislation) and the restore of the heritage led to inevitable conflicts and tensions. If the reminiscent pre-existences, in marble, wood, tiles, paint or metal, showed the quality of the drawing and the mastery of the several arts & crafts, their restoration inscribed in each fragment a high-quality manual labour that adds one more sign of time and humanity in the site, in the wake of what John Ruskin (1819-1900) argued to be one of the values of architectural heritage.

3. Bárbara Coutinho, (editor; scientific coord.). *EDIFÍCIO MUDE Transformações na perspetiva do design* (Lisboa: Câmara Municipal de Lisboa/ INCM — Imprensa Nacional-Casa da Moeda. 2024), pp.14-16

One of the spaces restored was the auditorium, designed in 1990-1991, when the bank's administration carried out a major transformation on the 2nd floor to install it with foyer and bar, evaluated also the possibility of install a museum on the 1st floor to present the bank's collection. The designer invited was António Garcia (1925-2015), who had developed, over more than half a century, a vast and diverse work of design and architecture, contributing to the awareness and consolidation of the modern design practice in Portugal. António Garcia's drawings[4] demonstrate the care he always took in the proportion and scale of each element; his sensitivity to materials, especially wood; and the attention he paid to the liveability of each space and the quality of execution of all details. The result was an auditorium with 200 seats, translation booths, and foyer and bar, which stands out for its comfort, good accessibility, visibility and acoustics. It is worth highlighting the well-being that results from the unevenness of the audience, the arrangement of the seats and the spacing between rows; the exquisite wooden covering on the walls and pillars; and the physical and visual connection between the auditorium and the bar **(Fig.2)**.

In this project, António Garcia invited to collaborate with him Daciano da Costa (1930-2005), another pioneer of modern design in Portugal with whom he had associated, in 1974, in the direction of the Risco Design Office – Projectists and Design Consultants. Daciano da Costa is the author of the auditorium seats. The 1989 sketches and the prototype created by Metalúrgica da Longra (1990/1991) deposited by the Daciano Family in MUDE, reveal that the seats in the BNU auditorium, despite the different colour, are the same Daciano da Costa initially designed for the main auditorium of Centro Cultural de Belém, at the time on construction[5].

After being equipped with the mandatory infrastructure, the preservation of this auditorium in MUDE represents a special opportunity to the public experience a cohesive environment from the 1990s, designed and furnishing by two important modern Portuguese designers. In this way, the auditorium itself became part of the museum's living heritage.

2.3. REPLACEMENT

The return to the building of artworks, furnishing and equipment belonging to BNU (currently owned by Caixa Geral de Depósitos) stands out with the aim of replace *in situ* or temporarily exhibit them with due contextualisation and historical framing. While the artworks were replaced to where they were originally designed, the furnishing, lamps and equipment may recreate some of the building's interiors and be study due to their relevant cultural value. Special mention is given to the painting on wooden boards by Jaime Martins Barata (1899-1970) entitled "Overseas Development and the Metropolis" (1964) **(Fig. 3)**. Martins Barata was one of the leading painters of his time with a diverse body of work, especially his large-scale works on public buildings, such as universities, courts, town halls. The composition is dominated by a radiant sun, symbol of Life, and the figure of Mercury who links the past and the future, articulating them with the economic and financial role of the BNU. Behind Mercury, a navigator, a friar and a captain are identified next to a compass

4. António Garcia Office Drawing, Views of the Auditorium's articulation with the Bar and details 1991. Private Collection in Bárbara Coutinho, (editor; scientific coord.). *EDIFÍCIO MUDE Transformações na perspetiva do design* (Lisboa: Câmara Municipal de Lisboa/INCM — Imprensa Nacional-Casa da Moeda. 2024), pp.162-169.

5. João Paulo Martins. *O CCB por Daciano da Costa. Design de equipamento e mobiliário (1993-2023)* (Lisboa: Tinta da China e Atelier Daciano da Costa, 2023), pp.156-157.

rose. In front of him, the progress, science and arts are personified by a series of figures who research, teach, build, manufacture and cultivate. With this strategy, the museum intends to recognise the artistic and technical value of the works, looking back, at the sometime, to debate the Eurocentric narratives in museums and the nationalistic discourse.

Drawings, photography's and furnishing that were rescued show how cohabitate the decorative grammar of the Empire Style side by side with modern metal and tubular steel design. Some brands and companies that played an important role in the development of modern architecture and interiors in the 1960s, equipped the BNU's building, such as FOC – Fábrica Osório de Castro, Casa Jalco and Joaquim Mitninsky Decoration that proposed several interiors, showing a modern comprehensive of furnishing to the definition and organisation of spaces[6]. Now, in the context of MUDE, they contribute to a better understanding of the portrait of the country and its material culture during the years 1950-1970. They are also an opportunity to address the urgent need of recognise, dignify and promote the handicrafts, while allows evaluating how Cristino da Silva conceived the bank's interiors as a Total Work, relying, to this end, on the collaboration of the best artists, designers and craft masters. As a result, they contribute to the understanding of the BNU building as a metaphor for the bank's power during the Estado Novo dictatorial regime.

2.4. ADAPTIVE REUSE

The morphological organisation of the building, particularly the accesses, circulations and partitions, reveals its closed and hierarchical nature. The bank's customers entered through three public entrances (the main one, on Rua Augusta; and the others on Rua da Prata), and they only had access to the ground floor and the 1st floor, with circuits clearly determined. For the bank's administration and employees, the accesses were completely distinct and segregated. On Rua de São Julião, there was the employees' entrance and on Rua do Comércio, the administration entrance. The internal circuits were also private and individualised, with this distinction being evidenced by the application of materials, nobles in the administration areas, common on the employees' places of work. Functionally, the vault rooms were located in the basement; the main customer services were located on the ground floor, arranged inside the counter; the bank's administrative and management services were located on floors 1 and 2, along the entire Rua do Comércio elevation; various bank services were located on floors 3, 4 and 5, while another private administration area with a terrace and lounge (dining room) was located on floor 6. We can conclude that the spatial configuration of the bank portrayed the established social structure and an autocratic organisational culture[7].

MUDE's museological concept preserves all the bank's main spaces, accesses and vertical circulation, but greatly expanding public accessibility and free movement throughout the building. To engage the public, all vertical accesses (stairs and elevators) are active to create open and inclusive accessibility to all areas of the building[8]. Nothing was destroyed, everything

6. Bárbara Coutinho, Conceição Amaral. (coord. ed.). *Nacional e Ultramarino. O BNU e a arquitectura do poder: entre o antigo e o moderno/ National and Overseas. The BNU and the architecture of power: between ancient and modern*. (Lisboa: Câmara Municipal de Lisboa/ MUDE, 2012).

7. Coutinho, Santos and Fernandes, "Space Syntax as a Tool for an open museum practice: The case of MUDE Museum", 8. 13.

8. Coutinho, Santos and Fernandes, "Space Syntax as a Tool for an open museum practice: The case of MUDE Museum", 8. 13.









Figure 1. Perspective of the third floor of MUDE with the "cage" with its 12 mm thick steel sheet frames addorsed to all the façade windows openings. ARA, Alves Rodrigues e Associado's project, MUDE's building structural reinforcement. © MUDE/Luísa Ferreira, 2022.

Figure 2. António Garcia, Auditorium, MUDE, 2° floor. General perspective. © MUDE/FGSG. 2013.

Figure 3. Jaime Martins Barata's painting "Overseas Development and the Metropolis" (1964). Replacement *in-situ* on the ground floor at MUDE, in 2023. © MUDE/ Luísa Ferreira, 2023

Figure 4. Visualisation of MUDE Design Library, on once the meeting room of the Bank's Board of Directors. Table, chairs and stools designed by Gonçalo Prudêncio. © MUDE/18—25|Research Studio.

was transformed by an adaptive reuse. The administration dining room will be the museum public restaurant; the bank's administration office becomes the MUDE offices; the governor rooms will be spaces of workshops; and the safe-deposit room will become an exhibition gallery; on the ground floor, the counter returns to its original function – as the museum reception desk and ticket office – while it utterly inverts the use of its previous highly restrictive and controlled interior by transforming it into a museum shop where everyone enters[9]; and a major room used by the bank's administration will become the MUDE library specialised in design (**Fig. 4**).

3. CONCLUSION. BUILDING AS CONTENT

Time in museums is essentially long! Through the objects in their custody, the past, present and future coexist. At MUDE, this prismatic dimension of time is reinforced by the building, a pre-existence in which the bare interiors allow us to see what is normally imperceptible to the eye – the layers of different times materialised – for example, in the different bricks, masonry and reinforced concrete systems. This journey through time allows to reconfigure

9. Coutinho, Santos and Fernandes, "Space Syntax as a Tool for an open museum practice: The case of MUDE Museum", 8. 13.

different forms of resignification of the built heritage, generating diverse links between past, present and future that go beyond the linearity of time, allowing intergenerational and multicultural encounters. Behind this strategy is the concept of the building as a museum content. To this extent, the museum building is the first manifestation of the museological policy of the institution that protects it. In MUDE, it is particularly important how the usual container is intentionally understood as content, being transformed in a living archive and a "time machine". In heritage terms, this integrates and makes cohabit different times, rather than radically breaking up. Thus, MUDE gains relevance as an example of how heritage conservation might be more effective when it is based on an adaptive reuse that reinforces its cultural durability, especially when we are facing risks of civilisational setbacks never foreseen for Humanity in the 21st century, as the resurgence of fundamentalism and political extremism. By considering this architectural heritage as content and by contextualising each object *in situ*, MUDE can contribute also to the decolonisation of museological narratives, debating the past and the recent history of Portugal. ■

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BIOGRAPHY

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MODERNITY AND *CUBANIDAD*: CLARA PORSET, TIME, AND IDEOLOGY

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ABSTRACT

In the early 1930s, the modern concept of *cubanidad* (Cuban identity of transculturation), which was already present in literary and artistic circles, became the impetus behind the first generation of Cuban modern architects. The national expression of modernity emerged in architectural circles, and it was increasingly tested by issues of national identity—Spanish, American, and later in the 1950s, African. Eventually, it is the young designer Clara Porset who opened the way with her 1931 lecture titled "La decoración interior contemporánea. Su adaptación al trópico" at the University School of Architecture by advocating the use of the three "P"s— *patios* (courtyards), *portales* (arcades) and *puntales* (columns)—as the ABC of a modern Cuban architecture that would use tradition, history, and adaptation to climate to express the modernizing national identity of the island. Invited back to Cuba for an extended cycle of ten lectures at the University of Havana in 1948, she furthered the thesis that would articulate modernity and *Cubanidad*, working with the climate, the heat, and the intensity of light. The essay argues that, within the tropical environment, modern interior design becomes part of modernity as it is fundamentally conditioned by the indoor-outdoor relationship of transparency and ventilation, and by extension the concept of the natural house. Specific examples from before the 1959 revolution highlight how material devices including *persianas*, *vitrales*, modern *moucharabieh*, and integrated furniture created a unique tropical aesthetic of air, light, and colors. Until the mid-1960s, the post-1959 regime did not fundamentally alter those principles but rather attempted to extend them to the programs of public housing and rural modernization. The elevated cost of energy has so far maintained most climatic devices in place, but it is to be feared that the rise of air-conditioning would destroy the unique indoor-outdoor synthesis in Cuban modern architecture.

1. PORSET AND SOCIAL

In April 1936, the Cuban periodical *Social* devoted a special issue to the *Casa cubana* (Cuban House), and more specifically to the principles that should, according to various authors, guide the development of the modern Cuban house.[1] By the 1930s, residential design had become the natural testing ground for new innovative ideas on architecture and modern life throughout Europe and Latin America, but the Cuban profession and its upper- and middle-class clientele had fallen behind. In the late 1920s, the Cuban periodical *Arquitectura*, published by the *Colegio Nacional de Arquitectos de Cuba* [National Institute of Cuban Architects], opened its columns to articles discussing works by Bruno Taut, Adolf Loos, Frank Lloyd Wright, Le Corbusier, Walter Gropius, and others. Figures such as Josef Albers, Richard Neutra, and Gropius visited the island in the 1930s, and lectured at the University of Havana School of Engineering and Architecture. At the same time, *Arquitectura* began publishing essays and illustrations on Cuban vernacular architecture, bringing to light the historical importance, design simplicity, and modest beauty of both colonial and rural buildings in Havana, Santiago de Cuba, and many other small towns, villages, and landscapes. Hence, the modern concept of *cubanidad* (Cuban identity of transculturation), which was already present in literary and artistic circles gave the impetus to the first generation of modern architects. The national expression of modernity—how to be modern and Cuban at the same time—emerged in Cuban architectural circles during that time, and it was increasingly tested by issues of national identity—Spanish, American, and later in the 1950s, African.

The entrance of *Social* in the discussion of the modern house was thus critical, as the monthly magazine was primarily read by the high bourgeoisie and thus could be influential in directing clients to accept new typologies and esthetic. In his introductory essay "Nuestra casa de ayer y de hoy" (our house of yesterday and today) Joaquín Weiss explicitly argued that the untarnished "rationalism" of Cuban colonial architecture deployed along centuries of use "connected it ideologically with the contemporary architectural trends."[2] For the author, the large size of the rooms, the patio, the portal or colonnaded arcade, the large balconies, the windows, and their protective louvers and screens were the "rational" elements of colonial architecture, most of them linked to the climatic conditions and ensuing urban culture, that had disappeared during the last decades of architectural development.

2. THE OVERLOOKED SIGNIFICANCE OF PORSET'S WRITINGS

In reality, it is the young Cuban designer Clara Porset (1895-1981) who had opened the way by promoting modern ideas about furniture, materials, interior design, and international architectural trends by writing thirty-four articles in *Social* in 1931-32 dealing with Le Corbusier, Robert Mallet-Stevens, the International Exposition of Stockholm in 1930, etc. Following her early studies in New York at Columbia University, she moved to Paris for two years, continuing her courses of architecture and interning with the Art Deco designer Henri Rapin. She eventually built a memorable career as furniture

1. The primary reference for this essay is Victor Deupi and Jean-François Lejeune, *Cuban Modernism: Mid-Century Architecture 1940-1970* (Basel: Birkhäuser, 2021).

2. Joaquín Weiss, "Nuestra casa de ayer y de hoy," *Social* 20, no. 4 (April 1936): 11.

and interior designer between Cuba and Mexico, but the importance of her writings for the development of modern design and architecture on the island has been totally overlooked in favor of her work on tropical furniture and the role of other actors, such as Eugenio Batista (1900-1992). Particularly important was the remarkable lecture that Porset gave on the 22nd of May 1931 at the University of Havana School of Architecture and published under the title "La decoración interior contemporánea. Su adaptación al trópico."[3] The elaborate text detailed the evolution of modern architecture and design internationally, discussing forms, materials, and adaptation to context. For the first time, she advocated the use of the three "P"s— *patios* (courtyards), *portales* (arcades) and *puntales* (columns)—as the ABC of a modern Cuban architecture that would use tradition, history, and adaptation to climate to express the modernizing national identity of the island.

Encouraged by these intellectual exchanges, architects like Rafael de Cárdenas and Batista initiated their search, focusing on the functional logic of design and in particular, ventilation, light, and hygiene. Commissioned in 1938 by the wealthy industrialist and philanthropist Eutimio Falla Bonet, Batista designed the first Cuban modern house. Organized around a series of patios, lined with arcades and windows protected by wooden louvers, the Falla Bonet house (1939) was widely published but remained an isolated example.[4] Indeed, considering the convulsed political times—the fall of Gerardo Machado's dictatorship, the new Constitution of 1940, the Second World War—one had to wait until the end of the 1940s to see the built impact of the new tenets and the burgeoning of a new generation of Cuban architects. They structured themselves in 1941 as the *Agrupación Tectónica de Expresión Contemporánea* (Tectonic Group of Contemporary Expression, or ATEC).[5] In 1943, they set up an innovative exhibit of colonial architecture titled *Trinidad, lo que fue, es y será* (Trinidad, what was, is, and will be) in the heart of Havana. The exhibition advocated that the urban and architectural qualities of Trinidad should be historically preserved, not as a "romantic" expression of Cuban culture and way of life, but rather as an example for the future. The curators concluded that Trinidad could inform contemporary architecture and progressive urban design, while avoiding any temptation to a false historicism. By and large, the exhibition was a continuation, at the urban and regional scale, of Porset's thesis about the three "P"s and the invariants of Cuban architecture—in a manner that can be compared with Giuseppe Pagano's *Architettura rurale italiana* (1936) or José Luis Sert's essays about Ibiza in the Catalan periodical *Arquitectura contemporánea (A.C., 1931-1937)*.

Owing to her political convictions and advocacy, Porset left the island in 1932 during Machado's dictatorship, and eventually moved to Mexico City with her husband Mexican painter Xavier Guerrero. In January 1948 on the invitation of Luis de Soto y Sagarra, professor of art at the University of Havana and influent promotor of the popular arts in Cuba, she returned to Havana to teach a course titled "Espacio interior para vivir en Cuba."[6] The course was organized in ten lectures dealing with architecture and interior design in relation to climate and the specific natural, social, and cultural conditions of the island.

3. Clara Porset, *La decoración interior contemporánea. Su adaptación al trópico* (Havana: Úcar, García y Co, 1931).

4. The Falla Bonet house was widely published, including in the United States. See for instance "Havana, Cuba: All Rooms in this House Open on Courtyards," *Architectural Record* 86 (July-Dec. 1939): 45-46.

5. The group included Eugenio Batista, Miguel Gastón, Nicolás Arroyo, Gabriela Menéndez, Manuel Tapia Ruano, Carlos Alzogaray, Beatriz Masó, Rita Gutiérez, Emilio del Junco, Eduardo Montoulieu, Alberto Beale, Frank Martínez, Ricardo Porro, Martín Domínguez, Nicolás Quintana, and others.

6. Clara Porset, "Espacio interior para vivir en Cuba. Gestación de la síntesis cubana," manuscript republished in Ana Elena Mallet, ed., *Clara Porset: la Vida en el Arte* (Mexico City: Alias, 2020), 121-122.

In addition, she gave two lectures at the School of Architecture and one at the Lyceum. Within these presentations, she furthered the thesis that would articulate modernity and *Cubanidad*, referring to the necessity of working with the climate, the heat, and the intensity of light. Each lecture was thematically focused, ranging from the analysis of the Taino hut and Le Corbusier's relation to the vernacular to the absence of social housing across the island. Porset's lectures aimed to exploit the potential of the tropics to develop a new design vision but also sought to control, civilize, and transform social reality within the contradictory context of North American neocolonialism.

She specifically emphasized the importance of the ATEC as "the group which has given us examples of how to organize space for living in Cuba… how to assimilate the vital elements of our architectural heritage, how to make concrete the universal principles that will fructify in giving them a Cuban expression… it is the member of ATEC who have embarked on the task, which is in the last instance a full-fledged battle against the climate… The fight against the hurricanes, against the light and the excess of noise, and even more so, the FIGHT AGAINST THE HEAT… it is the eternal fight of man against nature."[7] From that year onward, the members of the group—with the most prominent being Batista, Nicolás Quintana, Frank Martínez, Ricardo Porro, and Mario Romañach—produced scores of houses that were not only unabashedly modern but genuinely Cuban in their typological organization and response to climatic conditions. Following the lessons of Porset for the tropical environment, modern interior design became part of modernity as it is fundamentally conditioned by the indoor-outdoor relationship of transparency and ventilation, and by extension the concept of the natural house. Various material and technical devices including *persianas*, *vitrales*, modern *moucharabieh*, and specially designed furniture by Porset, Myrrtha Vega and Ricardo Porro, created a unique tropical esthetic of air, light, transparency, and colors.

Among the most important houses are Mario Romañach and Silverio Bosch residences for the Julia Cueto de Noval (1948) and José Noval Cueto (1949); also by Romañach, the houses for Aristigueta de Vidaña (1953), Ana Carolina Font (1956), and Rufino Alvarez (1957)—this last one summarizing the work of the architect with exceptional wood detailing, stained-glass windows, various patios, terraces, and gardens on multiple levels, as well as a complicated concrete structural system providing light and ventilation from the roof structures. The plan of the house of the neurosurgeon Carlos Ramírez Corría, built in 1957 in the Alturas de La Coronela neighborhood by Nicolás Quintana, resembles that of a sprawling Pompeiian villa, with multiple courtyards, terraces, a large porch, gardens, and wall paintings. Quintana's other masterpiece, the house of Mardonio Santiago (1957), consisted of three volumes of different heights connected by ground-floor galleries with patios on either side, but the most interesting aspect of this house was not the plan but rather the plasticity of the wall and roof surfaces that wiggle throughout in an angular manner. The walls are filled with colored glass, screens, and wooden louvers to retain the sense of a traditional Cuban residence.

7. Ibidem

3. POLITICAL CIRCUMSTANCES AS AGENT OF PRESERVATION

At the outset of the revolution, a large majority of the architectural profession embraced the hope that the new regime would remedy the problems of the Cuban society by focusing on housing needs, schools, and recreational complexes for the urban and rural population. These were times of both great expectations but also anxieties. Amidst the political turmoil and the uncertain choices that faced the professional architects, major actors of the 1950s such as Eugenio Batista and Nicolás Quintana published important texts that suggested—and perhaps expressed the hope—that the post-1959 architecture would continue to be based upon the critical principles advocated since the early 1930s. Published in 1960, Batista's essay *La casa cubana* (The Cuban House) reaffirmed, three decades later, Porset's concept of the three "P"s—he is credited to have repeatedly advocated them through his teaching at the University—with, however, an important variant, replacing the "p" of *puntal* with that of *persiana* (louver).[8]

In 1964, Alejo Carpentier's essay *La ciudad de las columnas* (The city of the columns) coincided with the emerging nationalist rhetoric that the revolution had deployed from 1959.[9] In this context, colonial Havana, appeared as an environment of defiance against the hegemonic architectural and urban forms coming from international modernism and the United States in particular. Carpentier's poetic essay was dedicated to the old city, its syncretic fusion of styles, and its invariant elements celebrated since the early 1930s by Porset and others. In an essay of 1960, Jean-Paul Sartre intuited the dilemma: "The revolution attempts a beautiful architecture, raising from the earth its own cities. In the meantime, it fights Americanization by opposing it with the colonial past. In the past, Cuba invoked, against the hungry metropolis that was Spain, the United States' independence, and freedom; today it searches its national roots against the United States and resuscitates the dead colonizers ..."[10]

Given that all private initiative and construction was halted immediately, Batista and Quintana's appeal resulted useless, yet, for a couple of years, the regime did not alter the pre-1959 architectural tenets but rather attempted to extend them to the programs of public housing and rural modernization, for instance a series of rural school buildings and vacation cabins. Back in Cuba, Porset embraced the regime's focus on the countryside and its infrastructure, resuming her research on low-cost rural furniture, led with her husband Xavier Guerrero, and designed for a 1941 MoMA competition on "Organic Design for Home Furnishing." Directly commissioned by Fidel Castro to help create the new *Ciudad Escolar Camilo Cienfuegos* (today known as the University of Matanzas Camilo Cienfuegos), she designed and produced thousand seats and tables for the children of the *Ciudad Escolar*, as well as other designs for the University of Havana and the Cuban National Art Schools by the trio of architects Ricardo Porro, Garatti and Gottardi. Disillusioned, Porset returned to Mexico in 1963 and settled there permanently.

Perhaps the last expression of Porset's architectural principles in response to the tropical environment, and a demonstration of the unique continuity of envisioning architecture across four decades, took place in the late 1960s.

8. Eugenio Batista, "La casa cubana," *Artes Plásticas* 2 (1960): 4–7. Nicolás Quintana, *"Arquitectura cubana: una busqueda de la verdad," Arquitectura*, no. 309 (April–May 1959): 167.

9. Alejo Carpentier, *La ciudad de las columnas* (Barcelona: Editoria Lumén, 1970).

10. Jean-Paul Sartre, *Huracán sobre el Azúcar* (Montevideo: Ediciones Uruguay, 1960), 8.



Figure 1. Mario Romañach. House of Rufino Alvarez, Reparto Biltmore, Havana, 1957. View of the entrance. © Collezione Mario J. Romañach, The Architectural Archives, University of Pennsylvania - Courtesy Maria Romañach.



Figure 2. Emilio Fernández. House of Avelino González, Guira de Melena, province of Havana, 1955. Interior with furniture. © Emilio Fernández Collection, Cincinnati, Ohio.

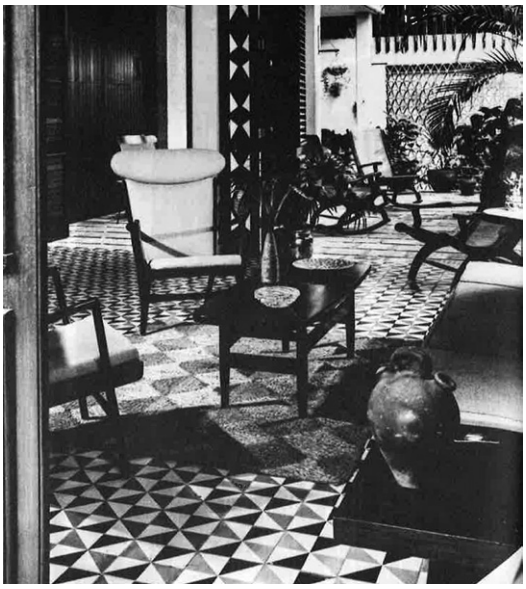


Figure 3. Carla Porset. Interior of the house for Orlando Álvarez, Havana, Cuba, 1958-1959. © Archivo Clara Porset, UNAM.

Architect Fernando Salinas (1930-1992) developed an experimental house prototype using the Multiflex concrete modular system that he designed with his students at the University of Havana School of Architecture and was first presented at the contest held during the *IX International Union of Architects* (U.I.A., 1967) in Prague. Deployed in 1971 in the suburban town of Wajay, Havana, the system consisted of a kit of parts with a support structure in the form of a central column that held up six by six-meter panels and allowed for growth in multiple directions. In addition to the panels, there were prefabricated kitchens and baths, while doors, windows, and closets, also prefabricated, maintained the screening principles necessary to the control of light and natural ventilation seen throughout the 1950s for the tropical environment. Amongst the various models proposed, the single space unit or studio was selected as an experiment of the possibilities offered by this coordinated furniture-building design, demonstrating once again the continuity of Porset's vision: "The lack of an established tradition as regards this type of

dwelling gave us the occasion for demonstrating the possibility of obtaining: an environmental coherence without resorting to the immobility entailed by the simple repetition of identical furniture pieces as part of a *set*."[11] The Multiflex was simple, flexible, and easy to assemble even though it never developed into a large-scale production system. It was eventually abandoned by the Ministry of Construction in favor of mid- and high-rise housing and heavy prefabrication technology imported from the Soviet Union.

This strategic decision marked the end of a vision of a modern Cuban architecture in relation to nature and climate. Despite the degradation of the built environment, the elevated cost of energy has so far maintained the climatic devices—doors, windows, louvers, vitrales—that created the modern Cuban identity, not only of private houses, the focus of this essay, but also the apartment houses by Mario Romañach and Max Borges, as well as important public structures. However, it is to be feared that the rise of air-conditioning would in the future destroy the unique indoor-outdoor synthesis in Cuban modern architecture. ■

11. Reinaldo N. Togores. Wajay: Furniture for an Experimental Housing Project (1971): https://www.togores.net/arquitectura-y-diseno/premisas/wajay.html

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BIOGRAPHY

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TEXTILES IN THE MODERN INTERIOR: DISCOVERING THE HIDDEN LOCAL AND GLOBAL STORIES BETWEEN THE WEAVES

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ABSTRACT

The design of the interior has been a zone for diverse actors and agencies during the modern movement period. Staging architects, decorators, and homemakers who shaped answers to modernity in various ways, its outcome is manifold. Due to its pluralism, the modernist interior offers, for this reason, an important lens when investigating the many narratives constructing the history of modernism. Across the different approaches, sometimes expressing the idea of an architectural ensemble, sometimes characterized by constellations of material objects or decoration, the interior often featured certain recurring components, but always differently. Exploring the construct of the interior through such components, i.e., materials, details, colors, objects, furniture, etc., offers the potential to generate new knowledge that might contribute to an international collective memory, inviting a variety of voices to the discussion. The production of textiles, i.e., rugs, carpets, upholstery fabrics, tapestries, etc., was in the modernist period, often balancing at *the intersection of art, applied arts, design, mass production and craft*. It moreover could involve several 'authors' such as the creator and the producer. In addition, the analysis can also develop from the consumers' angle, in relation to users' influence on modern interior textiles, as one of the most personal of interior components, adding to the individual character of the modern interior space. Within modern interiors, textiles are perhaps the interior element that is the most fragile due to being renewed parallel to stylistic tendencies and maintenance purposes. This creates opportunities for discussion related to *temporality and ephemerality*. Thus, in this session, we *focus on the use of textiles* in the modern interior. Using textiles as a catalyst for reflections and investigations into how the modern interior was conceived, new narratives of what influenced interior design and its expression can surface and shed light on multiple, hopefully uncovered perspectives.

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1. INTRODUCTION

Investigating and writing the historiography of the modern movement interior is a work in progress. Unlike architecture, interior design is a relatively young field of research. The fact that research into the modern movement interior has remained relatively poor until the last decade can be explained by a number of reasons.

Interiors have, for instance, been seen as the domain of women, often associated with domesticity and decoration and, therefore, inferior to architecture. In a male-dominated architectural culture, interiors were often anxiously avoided, both in theory and history writing. Another reason for the underexposure of interiors in research could be the simple fact that interiors are regarded as an integral part of the architectural design and, as a result, 'dissolve' within the architectural narrative, not being approached as a distinct matter. Furthermore, this issue may be explained by the pace of change regarding interiors. Interiors need to respond and adapt quickly to the needs of the daily life taking place inside them, changing for instance, due to functional as well as trend requirements. Due to ephemerality, research into interiors is often obstructed.

However, recently, interest in the history and theory of interiors and acknowledgment of interiors as a field of research in its own right has risen. Organizations such as the Society of Architectural Historians with the installation of the Historic Interiors Affiliate Group (HIG) and DOCOMOMO, with the formation of the International Specialist Committee – Interior Design (ISC-ID) demonstrate this progress. The activities within the Historic Interiors Group are manifold and develop within working committees, each of which has a particular focus: Research, Events & Conferences, Communications, Emerging Scholars, and Pedagogy. While the DOCOMOMO International Specialist Committee – Interior Design pays sharp attention to the interior in the Modern Movement, the Historic Interiors Affiliation Group investigates historic interiors in the broadest sense. Through annual events, it offers, for instance, a platform for the research of emerging scholars from around the world and across a variety of disciplines, including design, preservation, history, and education. In the past, topics like 'digitality in relation to the study and practice of historic interiors,' 'Exhibiting interiors / interior exhibitions,' 'Spatial education,' and 'Between architecture and archive,' to name some, have been brought to the table. The DOCOMOMO International Specialist Committee – Interior Design has in the past organized symposia on the themes 'Plastics in Modern Movement Interiors conservation and (re)design of Plastic Finishes, Furniture and Products' (2018), 'Living in Colour – Colour and Paint in the Modern Interior and Related Restoration Practice' (2019), Learning from Modern Movement Interiors in Times of Pandemic (2021) – and recently, on Modernist Women Interior Designers and Artists: To Deepen the Reading of the Different Expressions of Female Creativity (2024).

In addition, many educational institutions are steadily embracing interiors as a discipline equal to others, teaching not only how to design interiors but also how to study and expand knowledge about them through research.

This session contributes to this progressive evolution of research into interiors by suggesting a particular methodology: exploring the modern movement interior through the lens of textiles.

2. A METHODOLOGY FOR STUDYING MODERN INTERIORS

The design of the interior has been a zone for diverse actors and agencies during the modern movement. Staging architects, decorators, and homemakers who shaped answers to modernity in various ways, its outcome is manifold. For this reason, modern movement interiors offer an important perspective when investigating the many narratives constructing the history of modernism.

Across the different approaches, sometimes expressing the idea of an architectural ensemble, sometimes characterized by constellations of material objects or decoration, the interior featured certain recurring components such as materials, details, colors, objects, furniture, etc., - but always differently. Exploring the construct of the interior through such components offers the potential to generate new knowledge and historical evidence. By extension, each of these interior components prompts explorations into history, theory, craftsmanship and its various artistic and applied mediums, manufacturing and production, national and global stances and differentiation, labor and gender, etc., thus solidifying and expanding the historiography of interiors.

In this session, we introduce this inductive research approach, addressing the use of textiles and bringing forth insights into modernist interior design approaches and textile characteristics. The aim is to investigate a variety of textiles, such as rugs, carpets, upholstery fabrics, tapestries, curtains, etc. – both in the public and the private sphere. Also, we wish to elaborate on questions relating to textiles in the modern movement interior, such as the impact of interior textiles globally and locally, textile patterns, women's role and influence, challenges related to the preservation of textiles, etc.

If the value of interiors in the past has been downplayed, the issue of textiles has been even more stigmatized. Often being aligned with the women's domain, the feminine, and associated with decoration, questions arise regarding women's merits and position in the modern interior. Modernist architects frequently diminished the use of textiles, leading to limited research and a lack of documentation of textiles throughout the modern movement.

3. TEXTILES IN MODERN INTERIORS

The minimizing of the modern movement interior undoubtedly also affected the development of theories on textiles, which are still scarce today. However, several seminal texts and sources prove the significance of textiles in the modern movement interior. So did the German architect and art historian Gottfried Semper, with his thoughts about textiles as the origins of building, known as *das Bekleidungsprinzip*,[1] inspire modernist architects to think about textiles as an essential part of architectural space. Lasc has mentioned that Semper's theories on textiles in the interior, prioritizing textiles in architecture, touching upon the role of textiles in the development of the field of interior design, had influenced several

1. Gottfried Semper, *The Four Elements of Architecture and Other Writings* (Cambridge: Cambridge University Press, 2010).

modern architects such as Otto Wagner, Josef Hoffman, Adolf Loos, and Frei Otto.[2]

Loos's essay "The Principle of Cladding" is well-known. In it, he argues that the essence of architectural space results from the wall "dressing" rather than from the structural support behind it, which should be of only secondary importance to the architect.[3]

Another important contribution to the creation of a theory of textiles comes from writings by Bauhaus weavers, including Anni Albers, Gunta Stözl, and Otti Berger.[4] Albers saw textiles, for instance, as an "integral architectural element" and "a counterpart to solid walls."[5] She believed in a strengthened role of textiles, representing more than decoration for an interior space.

Well-known architects such as Le Corbusier, Mies van der Rohe, Turkish interior architect Sadun Ersin, and the Belgian Tapestry artist Julien Van Vlasselaer saw textiles, their textures, interfaces, and patterns as integral ingredients with a strong identity rather than as decorative elements added at the end of the design process. Le Corbusier started to work with tapestries in 1936. In 1948 he developed the theory of the Muralnomad, regarding tapestries as a mobile component in interiors that could be "detached from the wall, rolled up, taken under the arm at will and hung elsewhere.[6]" His production of tapestries is said to be a counterreaction to the critique of the modern interior often perceived as "radically imposing" their "smooth" and "new" surfaces **(Fig. 1)**.[7]

Van Vlasselaer had a similar take on the role of tapestries in interiors. In 1976, he wrote a plea for the reintegration of tapestries in architecture, praising their properties as a "sumptuous" and "irreplaceable" building material with which architects can compose space. Historically, he argued, tapestries united art and architecture. Originally stemming from castles, palaces and religious buildings, tapestries were used to "humanize large surfaces" and "to create warmth and atmosphere," and because of their suppleness and their size, they could easily be relocated and transported. They could be hung in larger spaces and serve as room dividers; outdoors, tapestries could become space definers, and on travels, and owners of tapestries could use them as portable walls when traveling, reconstructing their home environment. From the 15th century onwards, however, this tradition was lost. During modernism architecture was cleansed from decorative elements and camouflaging details, aiming at accuracy and purity. To overcome architectural aridity, Van Vlasselaer pointed out, modernists started to use natural materials without adornment – and they turned to the arts as a means to complete their architectural projects. Van Vlasselaer saw a great opportunity in this development, as it could afford the revival of tapestries, again becoming part of architectural space. Such revival demanded though a close collaboration between architects, artists, and craftsmen, - a condition which he considered possible.[8]

Textiles in the modern interior require their own spotlight depending on their individual functions. They differ in their ephemerality and effect. For instance, while furniture upholstery can be seen as more of a necessity, curtains have often been criticized, being regarded as effeminate and part

2. Anca Lasc, "Soft Spaces: From the Textile-Clad Interior to Modern Interior Design" in *Textile, Technology, and Design: From Interior Space to Outer Space*. Eds. Deborah Schneiderman and Alexa Griffith Winton., (London, England: Bloomsbury Academic, 2016), 17-30.

3. Rebecca Houze. "The Textile as Structural Framework: Gottfried Semper's Bekleidungsprinzip and the Case of Vienna 1900." *Textile: The Journal of Cloth and Culture* 4 (3), 2006, 292–311. https://doi.org/10.2752/147597506778691486

4. T'ai Smith, *Bauhaus Weaving Theory: From Feminine Craft to Mode of Design*. (Minneapolis: University of Minnesota Press, 2014)

5. Anni Albers. "The Pliable Plane; Textiles in Architecture." *Perspecta* 4,1957, 40, https://doi.org/10.2307/1566855.

6. Jean-Louis Cohen, *Le Corbusier: An Atlas of Modern Landscapes* (New York: MoMA, 2013), 33.

7. Julien Van Vlasselaer, "Integratie van de beeldende kunsten in de architectuur: het wandtapijt", *Mededelingen van de Koninklijke Academie voor wetenschappen, letteren en schone kunsten van België. Klasse der schone kunsten*, 1976

8. Vlasselaer, "Integratie van de beeldende kunsten in de architectuur: het wandtapijt"

of the decoration. When used, they can be stated to be appropriated to the modern movement, with their folds, swags, and patterns greatly reduced[9]. Textiles exude messages about lifestyle and choice, comfort, and well-being, as well as interpretations of representation, experimentation of form and terminologies that expand and enable a clearer understanding of modern design[10]. Textiles have gained additional meaning in the modern period as they enable an element of play for modern interiors[11].

In the modern interior, patterns stand out as the "face" of textiles, especially with bold colors and geometries in the modernist period. However, the nature of the textiles is rarely discussed. Nor can this information find a place for themselves in archives, books, or academic research. Several local applications present themselves; such as, felt, kilims, and other regional textiles brought into the modern interior space.

Textile producers followed the requirements of the modern movement, and adapted the type and patterns accordingly. Turkish textile producer company Sümerbank helped shape the modern aesthetic of a whole nation developing textiles parallel to both architects' as well as women's needs as the decision makers regarding all fabrics in the domestic interior. Sümerbank was also in contact with IKEA and Wolf Company, producing textiles and patterns for this company **(Fig. 2)**. Moderno Turkish furniture company designed whole living room sets, complete with its textile components to inspire the new way of living **(Fig. 3)**. Sadi Öziş, a sculptor and furniture designer, founder of Kare Metal, combined traditional stories of the spiritual "Rumi" figure (a wise religious person) on his designs. These types of local interpretations and collaborations may be seen internationally and it is valuable to research the transnational effects in this regard[12].

That being mentioned, textiles are difficult to grasp in terms of historiography today as they are perhaps the most vulnerable components of interiors and, therefore, the items to be replaced frequently due to maintenance issues, damage from exposure to light and warm and damp conditions that may result in mold[13] (Williams, 1981). Thus, it was critical to emphasize the urgency to focus on textiles in the modern interior in the call for papers in this session, which turned out to respond to this need. The research in this session ranges from national design identities to traditional weaving practices, specific designers, and modernization of ancient motifs in used in textiles in the modern interiors around the world.

4. CONCLUSION

In conclusion, in this session, we focus on the use of textiles in the modern interior as well as local representations of the modern movement with commonalities and differences. In fact, using textiles as a catalyst for reflections and investigations into how the modern interior was conceived is only one of many other perspectives that we can explore to grasp the characteristics and properties of the modern interior. The contributions to this session reveal a richness of approaches and manifold unexpected insights. They broaden our scope and open even more doors into fields of investigation.

9. Açalya Allmer, "Soft or Modern? Delineating Curtains in Domestic Interiors of Modern Architecture," *Textile Society of America Symposium Proceedings*, 2008, Paper 76. http://digitalcommons.unl.edu/tsaconf/76

10. Emily Baines, "Modernism in textiles and wallpaper", Nene College Conference (November, 1994)

11. Virginia Gardner Troy, "Textiles as the face of modernity: artistry and industry in mid Century America." *Textile History* (2019)

12. Ender Bulgun, Elvan Adanır, and Dilek Himam, *TUDİTA: Türkiye baskı desenleri tarihi: Sümerbank örneği 1956- 2001* (Izmir, Turkey: IZKA, 2015). and Cemre Eryilmaz and Hasirci, Deniz, "Sümerbank Textiles and the Modernist Aesthetic in Turkish Interiors," *Işık University Journal of Art, Design and Architecture (Işık JADA)*, (2024): 5-12.

13. John C Williams. *Preservation of Paper and Textiles of Historic and Artistic Value II* (Washington, DC: American Chemical Society (1981).







Figure 1. Commissioned by Jørn Utzon in 1958, Le Corbusier designed the tapestry *Les Dés Sont Jetés*. It was hung in Utzon's own house in Hellebæk in Denmark. © Utzon Archives / Aalborg University & Utzon

Figure 2. Sümerbank Pattern Design for IKEA in1 975 (© Bulgun, Adanir, and Himam, TUDITA, 2015)

Figure 3. Moderno Turkish furniture company, "Living Room Set 1" Designers, Fazıl Aysu and Baki Aktar, 1950s (© Önder Küçükerman and DATUMM Archives, Tuna Ultav, Hasirci, Borvalı, Atmaca, DATUMM, datumm.org, 2015).

Textiles not only contribute to the identity of the modern interior, emphasizing local interpretations of the modern movement around the world, but also reflect the character of the user as they find their place on furniture, carpets, curtains, table cloths, and wall coverings. Oftentimes, textile panels can also be observed as abstract art in interiors around the world. The life cycles of different interior textile components vary, but all are quite limited and ephemeral, which creates a mystery and several possible routes for research around the issue.

The association of women with textiles and the softer side of the modern interior adds a significant layer to the discussion. It can be seen from rare examples that not only women designers, but also women artists, artisans, and weavers collaborated with architects and interior designers during the modern movement. Most of these women have not been credited and this is an important lack in literature. We believe that the quest to unearth the significant role of textiles in modern interiors and the place of women in these processes globally, is an ongoing quest and a relevant one in the years to come. This has been an attempt to delve deeper into these issues and raise necessary questions for future research. ■

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BIOGRAPHY

Eva Storgaard is a lecturer and researcher in interior architecture at the Faculty of Design Sciences at the University of Antwerp. She has a specific interest in the culture and history of the Modern Movement and holds a Ph.D. in which she explores less-known aspects of the architectural culture of Danish modern architecture between 1930-70. She is an active member of the International Specialist Committee - Interior Design of DOCOMOMO. Currently, she is co-authoring a book about the teaching model of transformation strategies of modern movement heritage as practiced in the master design studio of interior architecture at the University of Antwerp.

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WEAVING (AS A DISCIPLINARY REFERENCE FOR) STAINED-GLASS WINDOWS IN MODERNIST LITURGICAL INTERIORS

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ABSTRACT

I propose to discuss the parallels between two artistic disciplines: the stained-glass window and architectural textiles. Parallels, which can provide new insight into how the modern interior was conceived.

Traditionally, architectural stained glass was classified as part of the applied arts, but during modernism, and influenced by changing ideas on Roman Catholic liturgy, the status of stained glass became more fluid.

The canon identifies the starting point of modernist stained-glass as Josef Albers' remarkable window for the entrance hall of the early-Bauhaus Sommerfeld House in Berlin-Steglitz, a Gesamtkunstwerk. In the same total art concept, his later wife, Anni Albers, experimented with textile. In the article *Beyond Weaving: Transdisciplinarity and the Bauhaus Weaving Workshop*, with Anni Albers as a prominent figure, Erica Warren identifies striking parallels between the respective disciplines.

Starting from this article, we would like to develop these parallels by turning to the work of Michel Martens (1921-2006), one of the foremost stained-glass artists in post-war Belgium. He likened stained-glass windows in church interiors to a fabric, woven, as it were, in between opaque walls. In his vision, the wall was continued over the opening, transitioning into a translucent state that modifies daylight in order to create suitable interior conditions.

As the stained-glass window was no longer required to serve as a narrative, it could function similarly to textile in the modern interior: providing colour, texture, and daylight mitigation. Warren describes Anni Albers' Black-White-Red textile design (1926–27) as 'a play between striped and window-pane designs'. The lead-line pattern too can remind of a woven structure, even a form of architecture. These interdisciplinary parallels between textiles and stained glass illustrate the extent of modernism's transdisciplinary mindset and the potential effects on the interior.

1. INTRODUCTION

This paper aims to discuss the striking parallels between two quite distinct artistic disciplines: the stained-glass window and architectural textiles. Parallels, which can generate reflections on how the modern interior was conceived. In the article *Beyond Weaving: Transdisciplinarity and the Bauhaus Weaving Workshop*[1], in which Anni Albers is a prominent figure, Erica Warren identifies striking similarities between the respective disciplines. We would like to further develop these findings by turning to the work of Michel Martens (1921-2006), one of the foremost stained-glass artists in post-war Belgium. He likened stained-glass windows to a fabric, woven in between opaque walls. In his vision, the wall was not being interrupted but continued over the opening, only transitioning into a translucent state to create suitable interior conditions. We wish to demonstrate that the likeness between stained glass and textile not only lies in the variable degree of translucency but also in the weaving of patterns.

2. WINDOWS AND WEAVINGS BY THE ALBERS

The canon identifies the starting point of modernist stained-glass art in the context of the early-Bauhaus Gesamtkunstideal as Josef Albers' (1888-1976) remarkable window for the entrance hall of the Sommerfeld House in Berlin-Steglitz[2]. Though few have survived, there is evidence that Albers frequently experimented with free glass compositions, in which black and white lines seem to echo the traditional lead line, such as in his 'Upward' piece from ca. 1926[3].

In line with the Bauhaus principles of the unity of arts under the cupola of architecture, Anni Albers (1889-1994), experimented with textile at the Bauhaus weaving studio. In the article *Beyond Weaving: Transdisciplinarity and the Bauhaus Weaving Workshop*[4], Erica Warren identifies striking parallels between the respective disciplines of stained glass and woven textile.

The dialogue between Anni's weavings and her husband Josef's stained glass work of the mid-1920's has been noticed before by Briony Fer. The manifest application of horizontals and verticals as a grid, the appearance of a net(work), the presence of black, can all be read as a reference to the lead line, the structural element of every stained-glass window. Her 'Design for a wall hanging' from 1926, featuring white, light yellow and ocher patterns, could perfectly be considered as a model for a stained-glass window. Fer attributes this to the introduction of the grid and the role of transparency and glass in modern architecture, writing that there is 'some kind of intermediary or transitional relation to glass [in modernism] on the one hand and the wall on the other'[5].

An example of Anni's transdisciplinary approach is 'Black-White-Red' textile design (1926–27). Warren describes the composition as 'a play between striped and window-pane designs'[6]. In her book *On Weaving* from 1965[7], Anni writes about the windowpane designs featuring perpendicular lines that suggest the foundational meeting of threads on a two-dimensional

1. Erica Warren, "Beyond Weaving: Transdisciplinarity and the Bauhaus Weaving Workshop", *TEXTILE*, 20 no 4, (2022): 439-456.

2. Britta Kaiser-Schuster, "Bauhaus Reflections in Glass", *Neues Glas. New Glass*, no 1, (1995): 28-33.

3. Sandblasted opaque flashed glass, black paint, Musée d'art moderne, Paris

4. Warren, "Beyond Weaving: Transdisciplinarity and the Bauhaus Weaving Workshop"

5. Briony Fer, "Close to the Stuff the World is Made of: Weaving as a Modern Project", in Coxon, A., B. Fer, M. Müller-Schareck (eds.), *Anni Albers,* London: Tate Publishing, (2018): 26-27, 37.

6. Warren, "Beyond Weaving: Transdisciplinarity and the Bauhaus Weaving Workshop", 444.

axis, forming a small section of a grid. She emphasises the structural and planar qualities of her work, not only essential when planning and documenting a woven fabric, but also reflecting concerns that transcend the medium and discipline. Her thinking leads into the field of anthropology and certain archetypes[8]. As modernism wanted to go back to the essence, an anthropological perspective on weaving should not surprise.

In accordance with the theoretical framework of the Bauhaus weaving workshop, Anni Albers' 'Black-White-Red' works both as an autonomous piece exploring materiality, technique and composition, and as a functional object within architectural space, providing colour, texture, separation and acoustic dampening. The rectangular pattern showing a window motif may be read as an abstract rendition of a multi-story building. While Gropius proclaimed that the ultimate aim of all visual arts is the complete building, for Anni, the connection between weaving and architecture was more elemental. In her essay "The Pliable Plane: Textiles in Architecture"[9], she articulated the relationship between both disciplines, repeatedly situating the two as analogous beyond the common purpose of providing shelter and being products of skilled workmanship. Demonstrating an ability to navigate disciplinary distinctions, she explained the correspondence as follows: "if we think of clothing as a secondary skin we might enlarge on this thought and realise that the enclosure of walls in a way is a third covering, that our habitation is another 'habit'"[10].

3. THE CHURCH WINDOW IN THE LITURGICAL MOVEMENT

Since the start of the Liturgical Movement around 1900, the Roman Catholic Church had created an opening to the ideals of sobriety, which resonated well with modernist ideas. No longer required as a 'Biblia pauperum', the stained-glass window could function similarly to textiles in the modern interior: providing colour, texture and a dampening of daylight, akin to a curtain.

The window as an element of architecture is directly related to the requirement of daylighting the interior, while influencing the experience and functionality of the space. From an architectural viewpoint, the (abstract or non-figurative) stained-glass of a church intends to direct the space toward an inner spirituality, visually separating the interior from the outside world by a combination of lead lines and cut pieces of glass, a network of opaque and translucent elements. In this function and aesthetically, stained-glass windows show many parallels with hanging textiles, especially curtains. Both the modern stained-glass window and the textile function in a similar way within an architectural space, providing colour, texture and a filter between exterior and interior space[11]. The church window, like a curtain, is an interface provoking interior interactions through atmospheric qualities. The Liturgical Movement and its translation in modernism replaced the narrative of the figurative church window by this elemental function. Stained glass was no longer meant to attract attention, elicit admiration, tell a story or conjure up Devine Light.

7. Anni Albers. *On Weaving*. New Expanded ed. Princeton: Princeton University Press in association with the Josef and Anni Albers Foundation, [1965] (2017).

8. Fer, "Close to the Stuff the World is Made of: Weaving as a Modern Project", 37.

9. Anni Albers,'The Pliable Plane: Textiles in Architecture', *Perspecta The Yale Architectural Journal*, Vol. 4 (1957): 36-41.

10. Anni Albers (1957): 40.; Fer, (2018): 43. *Oral History Archives of American Art*, Smithonian, 5 July 1968, in Coxon, Ann and Maria Müller-Schareck, "Anni Albers: a Many-Sided Artist", in Coxon, A., B. Fer, M. Müller-Schareck (eds.), Anni Albers, London: Tate Publishing, (2018): 171 footnote 31

11. Warren, "Beyond Weaving: Transdisciplinarity and the Bauhaus Weaving Workshop" 444, 445.

It became an integral element in tune with their character, materiality and colouration, in order to create the conditions for worship, a turning inward, literally and metaphorically[12]. This echoes Anni Albers' statement that a woven fabric can both define and transform space[13], similarly to a semi-transparent screen like a stained-glass window.

Albers' curtains for office buildings, especially her work for Knoll (1958), are primarily developed to filter light. Realised in a very loose weave, they emphasise the individual threads like an architectural art piece, while shaping our behaviour by influencing light and openness[14]. This approach can be traced back to her Bauhaus teacher, Paul Klee, whose investigation of the effects of rhythmic and pure repetition of (almost) identical geometrical forms was entitled 'architecture'[15]. In the Bauhaus weaving classes, textile was never an autonomous decoration, but always part of the furniture (chair), the floor (carpet), the wall (tapestry or wall hangings) or the light control (curtain). It put textile and stained glass on equal footing as elements of architecture. By reducing weaving to its essence, the elemental structure of weft and warp, Anni's work in particular comes even closer to the essence of stained-glass: a pattern of cut glass and lead lines.

4. A LINE FROM THE MIDDLE AGES TO MICHEL MARTENS

Paul Klee's instructions in the Bauhaus workshops related to a thread or a line, such as "take a line for a walk", have been pointed out before[16]. In later autonomous work, Anni Albers reflects on this attitude, for instance in her 'Pictural Weavings', which investigates the elemental act of weaving or braiding as the basis of a tissue or fabric[17].

The association between pulling a thread and drawing was far from new. The Cistercian architecture and art regulations from the 12th century prohibited unnecessary ornamentation, colour and figuration in order to prevent idolatry and to avoid distractions from religious life. These strict rules encouraged the development of novel, geometric patterns for stained-glass windows, that strengthened the relationship between the window and the architecture[18]. Among the surviving patterns, many demonstrate a design which resembles loosely braided ropes, like in the church of the Aubazine Abbey in France. When rediscovered in the 19th century, these monochrome 'lead lights' were likened by some to damask, and appreciated exactly because of their noble simplicity and inextricable bond with the architecture[19].

An interesting case of comparison is Michel Martens (1921-2006), one of the foremost stained-glass artists in Belgium, who likened the role of stained glass in church interiors to a fabric. An autodidact, not bound by the tradition of figurative stained-glass windows but all the more convinced of religion's changed position as a more private matter, he grew toward abstraction. In accordance with both the Liturgical Movement's progressive ideas and the Bauhaus ideals of Gesamtkunst, he approached his work as architectural glass. In his view, the liturgical interior didn't need conspicuous

12. Rudolf Schwarz, "Eucharistischer Bau", *Das Münster*, 9-10 (1960): 297.

13. *Oral History Archives of American Art*, Smithonian, 5 July 1968

14. Fer, "Close to the Stuff the World is Made of: Weaving as a Modern Project",37, 38.

15. For a visual see the painting 'Architecture', by Paul Klee, 1923, oil on carbord, Neue Nationalgalerie, Berlin in Wikimedia pictures accessed 03 June 2024 https://en.wikipedia.org/wiki/Architecture_(Klee)#/media/File:Architecture_Paul_Klee.jpg

16. See Nicholas Fox Weber, "Afterword", in Albers, Anni, *On Weaving*, New Expanded ed. Princeton: Princeton University Press in association with the Josef and Anni Albers Foundation, [1965] (2017): 210.; Warren, "Beyond Weaving: Transdisciplinarity and the Bauhaus Weaving Workshop", 451.

17. Danilowitz, Brenda, "Tangles, Knots, Braids, Loops and Links", in *"Anni Albers: a Many-Sided Artist"*, (2018): 86-105.

18. L'Abbé Texier, *Histoire de la peinture sur verre en Limousin*, Parijs: Victor Didron (1847).

19. Vande Velde, M. H., "Les vitraux incolores des anciens monuments de Belgique", in *Annales de l'Académie d'Archéologie de Belgique*, 21 (1865): 5-40. ; Böröcz, Zsuzsanna, 'Archeologische aantekeningen bij vensterglas. Of hoe een studie uit 1865 onze huidige kennis aanvult [Archaeological notes on leadlights. Or how an 1865 study adds to our current knowledge]', Monumenten en Landschappen, 3, 37, (2018): 47.

stained-glass windows, but only windows that supported a fitting atmosphere for worship. He received many commissions for war-damaged churches in need of new stained-glass windows. Inspired by and subservient to the architecture, Martens' windows are not the centre of attention in the interior. On the contrary, they support the contemporary, modern(ist) idea of the interior shaped by the architectural shell, with windows woven over the openings like a fabric. In this vision, the wall was not negated by but continued over the opening, only transitioning into a translucent state allowing in filtered daylight to create interior conditions fit for purpose.

5. THE MAKING OF / MEANING OF

On discovering the ancient pattern-making in Mexico, Anni Albers continued experimenting with geometric structures[20], finding the modernist legacy reflected in Central-American artifacts. "While the useful is defined by its context (the modern interior), the useless defines its own function transcendentally (existential solitude)'", writes Manuel Cirauqui on the relation between craft and art in the work of Anni Albers[21]. Translated into the church window, the first dimension may relate to the necessity of openings in the shell for light, the second to the manipulation of the light to allow a metaphysical experience. For this duality, Semper used the twofold expression of the core form ('Kernform'), that is materially (and functionally) conditioned, and the artistic form ('Kunstform') that envelopes it[22]. Influenced by the writings of polymath and cultural philosopher Oswald Spengler (1880-1936), Semper also made a link to the metaphysical order, which he saw visually manifested in the knot, describing the archetypal 'wall' as a sheet of textile[23]. This association goes back far in architectural theory, to Vitruvius coining the phrase 'weaving a wall'[24].

Looking at the later work of both Albers and Martens, more parallels emerge. From the end of the 1960's, Martens designed almost exclusively abstract stained-glass, creating geometric patterns according to the laws of how antique glass naturally breaks into shards, in order to avoid unnecessary forces and risks of cracking, and omitting all painting on glass. One such example are his two lancets for the late-gothic Saint-Michael's parish church in Ghent. Here, some glass pieces were replaced by mirror glass to lend a lively atmosphere to the interior even after sunset when the interior is artificially lit, counteracting the fact that windows become a black wall after dark when lit from the interior. Comparing these windows with Anni Albers' aquatint 'Second Movement IV' from 1978[25], striking parallels emerge in her pattern of triangles, ordered in 4X4 identical quadrangles, using a limited number of colours but still resulting in a vibrant effect.

Such parallels, which can be explained not by direct influence but by a comparable attitude towards two different but kindred media, by artists who saw their craft in the light of architecture. The parallel receives an intriguing extension in the work of contemporary Belgian textile artist Maryse Krutwage (*1952), who, visiting the St. Peter and St. Paul's church (arch. Louis Delacenserie 1899-1905) in Ostend Belgium, became fascinated

20. Fer, "Close to the Stuff the World is Made of: Weaving as a Modern Project", 32

21. Manuel Cirauqui, "The Two Fases of Waeving", in *On Weaving*, [1965] (2017): 215, 216.

22. Payne, *From ornament to object: genealogies of architectural modernism* 38.

23. Payne, *From ornament to object: genealogies of architectural modernism*, 40, 41, 55.

24. Payne, *From ornament to object: genealogies of architectural modernism*, 41, footnote 67.

25. Courtesy of the Josef and Anni Albers Foundation.

with Martens' windows. Though not her medium, the windows inspired her without being aware that he made the comparison between textile and stained-glass in the context of this, his most important commission in the reconstruction period.

6. CONCLUSION

These interdisciplinary parallels between textiles and stained glass in modernist (church) interiors demonstrate the extent of modernism's transdisciplinary mindset and the potential application thereof in interior spaces and beyond through traditional processes. Modernism was intent on breaking boundaries and hierarchies in an attempt to create a better society. The masterly, correct and magnificent play was not for its own sake, but for what it could catalyse: societal change, equity, better living conditions for all. Against this background, it is good to see that weaving a wall or a window or pulling a thread through glass or air can result in elements that are both functional and help us contemplate what is beyond. In current times it seems this legacy is still very relevant. ■

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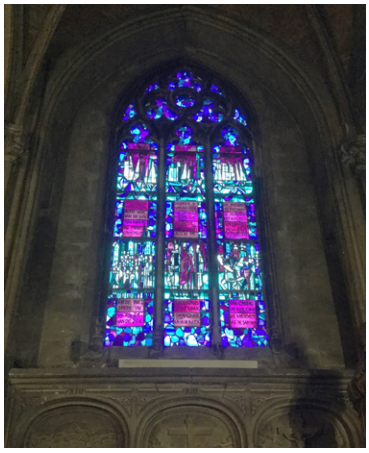




Figure 1. *Anni Albers Drawing for a Rug II*, 1959, Gouache, diazotype on paper © The Josef and Anni Albers Foundation

Figure 2. Michel Martens, Stained glass window, nave of the St. Peter and St. Paul's church (arch. Louis Delacenserie 1899-1905) in Ostend Belgium, around 1960 (photo: Zsuzsanna Böröcz 2021)

Figure 3. Maryse Krutwage, *Robert I, Count of Flanders and Saint Martin,* 2019, plastic, merino wool and yarn, in St. Peter and St. Paul's church (arch. Louis Delacenserie 1899-1905), Ostend Belgium (photo: Mara Poels 2020)

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"ORIGIN: MODERNISED FROM ANCIENT TURKISH MOTIFS"[1]: A CASE STUDY ON HEREKE SÜMERBANK CARPET COLLECTION IN 1965

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ABSTRACT

The 1965 Sümerbank[2] Carpet Collection encompasses not only many traditional and orientalist carpet weavings but also some examples that could be described as abstract and occasionally expressionist crafts by prominent artists and designers of the era, i.e. Belkıs Balpınar, Selahattin Gönenç, Orhan Çolak and Hamdi Berdi. These carpets include modernised versions of Anatolian kilim motifs, stylised renditions, and stylised depictions of picturesque Anatolian village-scape. In the catalogue, each carpet is accompanied by the respective cities they belong to, and in this catalogue, the origin of the aforementioned abstract and expressionist works are indicated as "modern" or "modernised from Ancient Turkish motifs." So, what do these works, departing from tradition, signify, and what kind of preliminary work and socio-political environment do they represent? The study examines the influence of the Villageism movement during the period, as well as their influence on craft-base design, on Sümerbank carpets.

1. INTRODUCTION

This study examines the significant transformations in the Sümerbank factory's carpet designs, including variations in local styles, as it transitioned from an Ottoman imperial entity to a key part of the new Republican national infrastructure. Operating between the 1930s and 1980s, Sümerbank factories, which were active in various fields, from fabric to carpets and from shoes to yarn, provided clothing for the whole of society, from the wealthy to the impoverished, and played a significant role in shaping the new Turkish identity that emerged with the Republic.

The 1965 Sümerbank Carpet Collection encompasses not only many traditional[3] and orientalist carpet weavings but also some examples that could be described as abstract, and even expressionist crafts, created by prominent artists and designers of the era, i.e. Belkıs Balpınar, Selahattin Gönenç, and Orhan Çolak. These carpets include modernised versions of Anatolian kilim motifs, stylised renditions, and stylised depictions of picturesque Anatolian village-scape. In the 1965 Sümerbank Carpet Catalogue, each carpet is identified by city of origin, and in this 1965 Sümerbank Carpet Catalogue, the origin of the aforementioned abstract and expressionist works is indicated as "modern" or "modernised from Ancient Turkish motifs." So, what is the significance of these works, departing from tradition, and what kind of artistic tradition and socio-political environment do they represent? It is no surprise that this movement, sometimes known as Villageism, which emerged in the 1930s and dominated the 20th century with its romantic gaze, came to the fore with a group of artist-craftsmen working at the Hereke Sümerbank Carpet Factory.

Located to the east of Istanbul on the shores of the Sea of Marmara, the Hereke Factory was launched as a private broadcloth factory in 1842.[4] Initially, European painters were employed at the Hereke Imperial Factories. However, with the founding of the School of Fine Arts (Sanayi-i Nefise Mektebi) in 1882, this role was taken on by graduates of that school, such as Greek Orthodox Yorgaki, Armenian Osgan Efendi, and Tovmas (Baldasar), who would later go on to become prominent local artists. While the factory's early output mimicked European styles, later, there was a concerted effort to cultivate a cohesive Ottoman style through the involvement of local artists.[5] [6] During the decline of Ottomanism, and then the resurgence of the empire's golden age, Hereke carpets began incorporating design elements inspired by Ottoman territories, including motifs derived from tiles, architectural features, and stone interiors. This initiative aimed to cultivate a national repertoire.

During the Ottoman period, certain Hereke carpets became renowned as classics, typically identified by names associated with their unique designs, such as Polonez and Seven Mountain Flowers. With the establishment of the Republic of Turkey, the Hereke Factory operation was transferred first to the Industry and Metal Bank (Sanayii ve Maadin Bank) in 1925, and then to Sümerbank in 1933. It was generally believed that traditional compositions and canonical patterns like Tebriz, Milas, Polonez and Kafkas had reached the climax of their aesthetics, and thus were unsuitable for redesigning or adapting.

1. In the 1965 Süperbank Carpet Catalogue, abstract and expressionist works are indicated as "modern" or "modernised from Ancient Turkish motifs." This effort represents a struggle to rediscover and highlight the Turkish identity that had been overshadowed by Iranian carpets.

2. In the 1965 Sümerbank Carpet Catalogue, each Turkish city was represented by its traditional patterns.

3. After it was transformed into an imperial factory (Hereke Fabrika-yı Hümayun) in 1845, Hereke factory started producing textiles and carpets for local and international markets, and became an important centre for a series of modernisation projects implemented in the late Ottoman Empire.

4. Didem Yavuz Velipaşaoğlu, Crafting an Empire: Hereke Factory Campus (1842-1914), PhD dissertation, NJIT, New Jersey, August 2018, 154; BOA Y.MTV. 15.7 1301.N.21 (July 15, 1884); HH. HRK. 35.42 1313. Ca.18 (November 6, 1895).

5. Hasan Aksakal, Türk Politik Kültüründe Romatizm, İletişim Yayınları, İstanbul, 2015, 141.

6. Ziya Gökalp, Halka Doğru, in Türkçülüğün Esasları, ed.Mehmet Kaplan, Milli Eğitim Bakanlığı Yayınları, Istanbul, 1990, 47-8.

2. UNDER THE INFLUENCE OF VILLAGEISM

In his article titled "Beginnings of Folk Civilization-I," published in the 14th issue of *Halka Doğru* during 1913-1914, sociologist Ziya Gökalp (1876–1924) argued that the time had come to focus on the people. He attributed the Turkish word, *Halkiyat*, to the science that examines this traditional civilisation, whose rules are unwritten and is transmitted orally from generation to generation. Alongside this scholarly endeavour, Gökalp emphasised the importance of retaining the influence of Romanticism.[7]

We should pay particular attention to the following words of Gökalp: "What should one do? …To listen to their poetry, their music, to watch their dances, their plays. … To appreciate the beauty in their clothing, the arrangement of their homes, the simplicity of their furniture."[8] Ziya Gökalp invited closer examination into village life, and the agrarianism ideology played a significant role in the emergence of Turkish nationalism.[9]

Throughout the 20th century, Villageism emerged in relatively less-developed countries for various reasons. It is worth noting the increased interest in villages and peasants was fuelled particularly due to the upheaval caused by peasant uprisings in Eastern Europe following the 1917 Russian Revolution and the aftermath of World War I. Indeed, Villageism was a driving force in all the major revolutions of the 20th century.[10] This can be seen in Atatürk's opening speech of the third session of the first term of the Grand National Assembly: "The true owner and master of Turkey, the genuine producer, is the peasant," which would later become the slogan of the early Republican period.[11]

It can be argued that Gökalp's cultural romanticism can be seen in a range of works, ranging from the establishment of the Republican People's Party's (RPP) political principles, including populism, to various activities, like the Turkish Studies Institute and the People's Houses. Gökalp's cultural romanticism is considered evident in these endeavours.[12] The agrarianism glorified rural life and peasants, who they depicted as living in a utopia.[13]

The Homeland Tours (*Yurt Gezileri*) was an event aimed at bringing art together with the public, specifically in villages. Between 1938 and 1943, six tours were organised by the RPP. However, they came to an end with the transition to a multi-party system, and during the era of the opposition Democratic Party, the paintings created during these tours were neglected and eventually disappeared.[14] However, this practice of on-site observation and interaction with villages continued, particularly within the context of Sümerbank, into the 1960s. In a 2021 oral history study,[15] Belkıs Balpınar recounts that during her Chief Draftsmanship years at Sümerbank in the 1960s, the factory artists would take trips to villages to observe local kilim, carpet, and weaving practices. This approach, which blends the modern with the local, is, however, removed from the more populist rhetoric of the multiparty period of the 1950s, and aims to emphasise the local and folkloric as resistance to Americanisation.

In the 1950s, Americanisation had started to become evident in many craft sectors; particularly among Turkish artists, and notably ceramic artists,

7. M. Asım Karaömerlioğlu, Türkiye'de Köycülük, Modern Türkiye'de Siyasi Düşünce, 2009, Volume 2, 284-297

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10. Hasan Aksakal, Türk Politik Kültüründe Romatizm, İletişim Yayınları, İstanbul, 2015, 143.

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12. Başak Katrancı, 'Yurt Gezilerinin Kültür ve Sanat Ortamına Yansıması (1938-1943)', EJOS, IX (2006), No. 4, 1-169.

13. Interview by Esra Bici Nasır, 2021, in the context of Research Project: Didem Yavuz Velipaşaoğlu ve Esra Bici Nasır (2021). "Sumerbank Carpet Designs as a Modernization Path in the 1960s". 2021 SALT Research Funding

14. Sarah-Neel Smith, *Metrics of Modernity: Art and Development in Postwar Turkey*, Oakland, CA: University of California Press, 2022, 129.

15. Sarah-Neel Smith, *Metrics of Modernity: Art and Development in Postwar Turkey*, Oakland, CA: University of California Press, 2022, 148.



Figure 1. Mirage, 3050, origin: modern, Orhan Çolak, Türk Halı Desenleri: Sümerbank Halı Albümü, Sümerbank, 1965

who were supported by the Rockefeller Foundation.[16] The artist-craftsmen of Turkey, embarked on a journey to revive ancient, Byzantine, Turkish, and Ottoman crafts, by rediscovering lost colours and forms in their works. For example, ceramic artist Füreya was acclaimed by American critics for her distinctive ability to reinterpret "the heritage of Byzantine mosaics and Turkish tiles" and integrate them into modern artworks.[17] One could argue that the village excursions of Sümerbank in the 1960s could be interpreted as an expression of the aspiration to reestablish the cohesion and continuity of Turks as a nation. The artists mentioned in this context, were less affected by Orientalist discourses, and rather, embarked on a journey of self-discovery through craft, merging the ancient archetypes they unearthed with contemporary art movements.

We should briefly examine the literature on carpets produced during the Republican Period. Among the hundreds of sources, two understandings stand out in terms of pioneering perspectives: first, the carpet is related to an ethnic identity, centred on a nationalist discourse; and second, carpet weaving is a blend of local traditions that reflects cultural amalgamation expressing the image of local artefacts on a volatile material, i.e., carpets. For many historians, the carpet and kilim tradition of Anatolia emerged after the Turkic invasion of Anatolia in the 11th century and was related to the weaving techniques of nomadic cultures to produce shelters. For instance, among a myriad of similar approaches, for Kazım Dirik, an author an officer of Ottoman Army and later a general of the Turkish Army, carpet weaving is central to Turkish identity, which he argues in his book, *Eski ve Yeni Türk Halıcılığı ve Cihan Halı Tipleri Panoraması (The Old and New Turkish Carpet Industry and A Panorama of World Carpet Styles)* in late 1930.[18] On the other hand, the book Goddess from Anatolia, written in the late 1980s by Belkıs Balpınar, one of the key figures in this study as the designer of the aforementioned abstract and stylised carpets, delves into the origin of kilim, or tapestry, in ancient Anatolian civilizations rather than in the culture of Turkic nomads. At this point we can trace the concept of *Anadoluluk* (Anatolianism) and its successor, Villageism, and consequently, an inevitable multicultural heritage. The motives and the patterns of the kilims, according to Belkis Balpınar, have been derived from "our" tradition, *gelenek görenek*, but are independent of any nationalist discourse. In her controversial hypothesis, she connects the tradition of kilim to various images, including reliefs, wall paintings, illustrations of humans from the shrine, cave and niche forms, depictions of goddesses as realistic "birth symbols", mythological images, the floral and zoomorphic features of the local environment (such as goats, and leopards). She specifically focuses on the Neolithic settlements of Hacılar and Çatalhöyük. These images were created in early Neolithic periods, she argues, and remained unchanged over the centuries because, for generations, young girls in the pastoral communities learned the weaving styles from their elder relatives and neighbours. The weaving girls did not design a new pattern or style, for Balpınar, since they were "performers" rather than "composers."[19] As has been shown, Balpınar approaches kilim and carpet weaving independently of ethnic identity, instead, establishing its

16. Kazım Dirik, 1938, Eski ve Yeni Türk Halıcılığı ve Cihan Halı Tipleri Panoraması, A. Kiral Basımevi

17. Belkıs Balpınar,1989, The Goddess from Anatolia, volume IV, Anatolian Kilims past and present, p: 8, Eskenazi

18. Orhan Çolak, Desen Çalışmaları Hakkında Görüşler, *Sümerbank Halı Semineri Özel Sayısı*, Volume 5 N: 49-50, 1965, 28-29.

19. Selahattin Gönenç, Halıda Resim, *Sümerbank Halı Semineri Özel Sayısı*, 1965, Volume 5 N: 49-50, 29-30.

connection with a particular place, in this case, Anatolia, and discussing the transmission of this ancient craft across generations.

3. THE 1965 COLLECTION AND THE CARPET SEMINAR OF 1965

Orhan Çolak's work depicts Anatolian motifs unearthed from the depths of darkness. Turkish motifs emerge as if shining through the darkness of the previous era. Portraying stark, simple carpets on the one hand, and traditional Anatolian rugs on the other, this style of work is significant not only for carpet art but also for Turkish painting. **(Fig 1)** Orhan Çolak emerges as the most open-minded individual regarding innovation in carpet and kilim weaving. Çolak participates in seminars in which his colleagues Yusuf Durul and Kenan Özbel argue the notion that not even the slightest detail of ancient motifs should be altered. Çolak disagrees and suggests that new compositions can be created and that this act symbolises the confidence of artists and the era in which they live. According to him, enshrining motifs does not constitute progress in terms of art; on the contrary, it leads towards stagnation and regression. He further explains that "Patterns are not static and fixed; they have undergone changes throughout every era, resulting in our rich archive today. Climate conditions, proximity and distance between regions, powers, and religious beliefs all manifest their influence on carpet patterns." He proposed that a carpet artist should work like an archaeologist, meticulously examining each motif and making necessary corrections and additions to understand the intricacies and anatomy of the design, thus revealing faithful and enhanced versions of the original character.[20]

Selahattin Gönenç, the Carpet Chief of the Hereke Factory, takes another approach to the ancient motifs, but with only a minor touch in his compositions, and in his speech, equating carpet-making to the act of painting. According to him, the harmony and coherence that variously coloured wool threads would express on the surface of the carpet are its most important qualities. While the preparation of the material has always been a commercial and industrial activity, the act of painting is a fine art and the work of an artist, and therefore, the pictorial aspect is the most prominent quality of a carpet. According to him, new carpets must portray themselves as nothing but simple imitations of a very rich past. Accordingly, it was a mistake to underestimate the carpets and designs created by the country's tribes and nomads in their own style. In this view, Turkish carpet designs should be in the hands of skilled and artistic carpet painters.[21] His carpet design featured exaggerated and emphasised geometric patterns adopted from the western Anatolia region. **(Fig 2)**

Belkıs Balpınar, the Sümerbank carpet designer, and perhaps the boldest among this trio in creating new compositions, begins her speech by recalling her participation as a Sümerbank representative at the 1965 Brussels Paris Carpet Fair, and she explains that there was significant interest in their offerings. For her, handwoven carpets were superior to machine-made ones, and the European demand market displayed a variety of preferences ranging from orientalist elements to more geometric patterns. Therefore, according to Balpınar, at that time, the carpet industry experienced a climate of great diversity in which it was possible to produce carpets to cater to every taste.



Figure 2. Migration, 3057, Origin: Modern, Selahattin Gönenç, Türk Halı Desenleri: Sümerbank Halı Albümü, Sümerbank, 1965



Fig 3. Cypress, 3055, Origin: Modern, Belkıs Balpınar, Türk Halı Desenleri: Sümerbank Halı Albümü, Sümerbank, 1965

20. Belkıs Balpınar, Halıcık üzerine 3 konuşma, *Sümerbank Halı Semineri Özel Sayısı*, 1965, Volume 5 N: 49-50, 140-141.

21. Kenan Özbel, Bildiriler üzerine görüşler, *Sümerbank Halı Semineri Özel Sayısı*, 1965, Volume 5 N: 49-50, 96-97.

#34



Fig 4. Village Song, 5004, Origin: Modernised from old Turkish Motifs, Belkıs Balpınar, Türk Halı Desenleri: Sümerbank Halı Albümü, Sümerbank, 1965

"There is no reason for us not to serve the carpet industry to the fullest extent. Therefore, it is necessary to see a lot and work extensively."[22] What is remarkable is that Balpınar mimics an idyllic village landscape adorned with cypress and poplar trees in her studies, which are typical of Anatolian village landscapes. Her figurative experiments are intriguing, as according to art history professor Kenan Özbel, the images on Turkish carpets are not portrayals, but interpretations; they are abstract and stylised. To him:

> *Motifs like a bird, a snake, or a tiger in a carpet occupy the imagination of an artist, inhabit their spiritual world, and symbolize their religious beliefs in an abstract, non-figurative sense on the carpet. Unlike Persian carpets, Turkish carpets do not depict miniatures or figures but rather incorporate abstract figures, placing interpretation, or naturalism on the carpet.*[23]

In light of this, one could argue that Balpınar's carpet designs are unique in exhibiting a stylised form of figurative artistry that narrativises, places an interpretation and depicts a visual narrative. **(Fig 3-4)**

4. CONCLUSION

In 1965, Sümerbank's markets included Austria, Belgium, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom. In addition, there was a noticeable surge in the market in North America. One of the most important competitors in the market was the brown, pale-coloured Afghan carpets.24 One could argue that the aforementioned artists in question choose bright and pastel colours together to set themselves apart in the market. Furthermore, it could even be stated that the unusual lines in the 1965 Sümerbank Carpet Catalogue are explicitly intended to enhance the identity of Turkish carpets, which had been under the influence of Iranian motifs since the decline of the empire. The perspective of closely attending to the folk, which began with Ziya Gökalp, emerged as Villageism in the Republican era and transformed into picturesque motifs with the rediscovery and renewed interest in Anatolia. Sample motifs blend geometric archetypes inherent in Turkish culture and carpets with stylised pictorial village depictions to offer a modern composition rooted in Turkish carpets. Here, the focus is no longer on endlessly repeating "patterns;" rather, it is a "composition" in which the designer is involved. In other words, draftsmen, who, since the 1950s, have identified themselves as artist-craftsmen, break the conventional cycle of being mere "performers" as shown in Anatolian carpets by Belkıs Balpınar, and now become "composers" themselves. ■

22. Şark Halısı Ticareti Piyasa Durumu, trans: Ünal Saraç, *Sümerbank Halı Semineri Özel Sayısı*, 1965, Volume 5 N: 49-50, 144-146.

BIOGRAPHY

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TAPTA–SIMONE GUILLISSEN-HOA: COLLABORATIONS AND CROSSING BORDERS BETWEEN TEXTILE ARTS AND MODERN ARCHITECTURE

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ABSTRACT

In Belgium, the first architects and weavers trained at La Cambre came into practice between the wars. Considering the historical context of the binarisation of genders (men/women) and disciplines (architecture/decorative arts; major arts/minor arts), this study examines the personal and professional relationship between two significant women artists of the same generation. Architect Simone Guillissen-Hoa (born Simone Hoa; Beijing, 1916 - Brussels, 1996) and textile sculptor/artist Tapta (born Maria Irena Boyé; Kościan, 1926 - Brussels, 1997) will be the focus, exploring the gender issues specific to their respective artistic practices, the scales of artistic creation of these two protagonists, as well as the networks between women artists enabling the circulation of creative ideas, solidarity in the professional field and access to commissions. To transcend traditional binary categories, in all senses of the term, and highlight overlooked constellations that have been overshadowed by male names to legitimise women's artistic production and qualities, the mobilisation of the theoretical field articulating gender and art will enable us to comprehend and understand the circumstances surrounding production and the emergence of these artists and the specificities of their artistic fields. This exploration of unpublished archives will reveal a little known interpersonal history. Finally, the analysis of three object-works —Tapta, *Untitled* (Chaise-Coquille, Shell Chair or Diamond Chair covered with ropes), circa 1980; Tapta, *Untitled* (hand-woven shawl), 1970s; Tapta, *Untitled* (fresco/mural sculpture), circa 1981— will examine their textile productions in various modern interiors and their collaborations from a multiscalar prism. This approach transcends the strict boundaries that traditionally separate utilitarian objects from works of art, furniture from architecture.

1. TAPTA / SIMONE GUILLISSEN-HOA: COMMON SOURCES

Simone Hoa (1916-1996) was born in Beijing in 1916 to a Chinese engineer father and a Jewish Polish author mother. She grew up in China, France, and England before moving to Brussels to complete her studies. In 1935, she enrolled in the architecture section of La Cambre, graduating in 1938.

Maria Irena Boyé (1926-1997), known as Tapta, was born into a Polish Jewish family in Kościan in 1926. Her father was an engineer and her mother a painter. After the Warsaw Uprising in 1944, she moved to Brussels with her husband and enrolled in the Weaving workshop at La Cambre in 1946, graduating in 1949.

Founded in 1926, La Cambre School aims to break away from academic traditions. It combined decorative arts and architecture with industry and craftsmanship to (re)value expertise. It was the first time in Belgium that contemporary modern architecture was taught there in a formal language[1], and a *Tissage-Tapisserie* (Weaving-Tapestry) section, teaching textile art, opened within the artistic curriculum. These new pedagogies attracted students, particularly women.

Upon completing her studies, aware of the "woman question" ("*question de la femme*")[2], Simone Guillissen-Hoa was ready to conform to the prevailing gender norms by leveraging her skills in the decorative arts sector[3] to advance professionally. During the post-war shortage of commissions, she balanced her desire to work as an architect with the socio-professional roles expected of her. In 1947, she received a commission and completed her first house, Villa Faniel (Brussels, 1947).

In textile arts, La Cambre graduates faced a more complex professional status. There was no law regulating the profession of *Arts du Tissu* (Textile Arts), and some practices still adhere to the tradition of guilds and manufacturers. La Cambre offered a blend of artistic and craft practices, a dual status reflected in the careers of Tapta and her peers. Tapta's case is therefore unexceptional in a system where the exception is the rule.

Following her studies, Tapta moved to the Belgian colony of Congo from 1950 to 1960, continuing her textile research there. In 1963, she participated for the first time in the Lausanne Biennale, during which she realised that other artists shared her interest in a *Nouvelle Tapisserie* (New Tapestry)[4]. While Tapta's stance on gender issues in the early 1970s (coinciding with the second wave of feminism) is not explicit, her works offer clues. Her rope sculptures play with gender stereotypes, managing to combine preciousness and roughness, warmth and rigour - concepts that art critics maintain in a formal and gendered opposition[5]. Furthermore, in 1972, on the occasion of the first *Journée de la femme* (International Women's Day) recognised by the United Nations, Tapta exhibited *Ouvrage de femme ou Oser voir grand (Women's Work or Dare to Dream Big)*[6]. One can discern an intention to blur codes.

While the two women share a common artistic background and both claim a certain "modernity," they also share a personal experience: both Jewish and Polish (by origin for one, by nationality for the other), they are heirs to these identities and cultures. The connection that likely emerged

1. Elisabeth Gérard, Premières architectes femmes en Belgique (Mémoire de Master, Bruxelles, Université Libre de Bruxelles, 2022), 74.

2. Simone Guillissen-Hoa, Lettre de Simone Guillissen-Hoa à Alfred Roth (131-K-22-G-3:1-2), 23 February 1941, gta Archives / gta Zurich, Fonds Alfred Roth.

3. Guillissen-Hoa.

4. X., "Rencontre Tapta", *Arts Antiques Auctions,* September 1975.

5. Marie-Josèphe Bonnet, *Les Femmes Dans l'art: Qu'est-Ce Que Les Femmes Ont Apporté à l'art ?* (Paris: La Martinière, 2004), 24; Catherine Gonnard, *Femmes artistes, artistes femmes: Paris, de 1880 à nos jours* (Paris: Hazan, 2007), 324; Marjan Sterckx, "Dans La Sculpture, Moins de Jupons Que Dans La Peinture. Parcours de Femmes Sculpteurs Liées à La Belgique (ca. 1550-1950)," *Art&Fact* Femmes et créations, no. 24 (2005): 56; Aline Dallier, "Transgression et Extension Des Frontières de l'art," in *L'audace En Art*, ed. Dominique Berthet, L'Harmattan (Paris, 2006), 41–53.

6. Joan Z. Shore, "Women's Day Big Success," Brussels Times, no. 381 (16 November 1972).

between Tapta and Guillissen-Hoa in the late 1970s to early 1980s may be rooted in these similarities, although it is not documented. However, three works and the nature of their acquisition attest to the relationship between the two artists.

Thus, this article relies on previously unpublished monographic data from primary archives (registers, personal photos, interviews, etc.). Additionally, it employs theoretical knowledge that connects gender and art history to place the narratives of Simone Guillissen-Hoa and Tapta within a socio-historical context. The combination of these elements is supported by the analysis of three works that reflect their artistic, personal, and political positions, highlighting the connections between Guillissen-Hoa and Tapta.

2. TAPTA X SIMONE GUILLISSEN-HOA: A MEETING AND THREE RELAY-OBJECTS

2.1 TAPTA, UNTITLED (SHELL CHAIR OR DIAMOND CHAIR COVERED IN ROPES), CIRCA 1980, METAL AND WOOL.

The first work is a Shell Chair, created around 1980 by Tapta. The artist reappropriates the Diamond Chair by designer Bertoia, covering it with a wool rope cushion. Traditionally rooted in domestic, craft, and feminine connotations, textile practices were fully reinvented in the 1970s. Artists of the New Tapestry (*Nouvelle Tapisserie*) —mostly women— felt the need to reclaim fibres to give them a new life, oriented towards monumentality, power, and expressiveness. Terms like "textile sculpture" (sculpture textile) or "soft sculpture" (*sculpture souple*) emerged[7]. These intentions intersected at the time with those advocated by the second wave of feminism in search of a "feminine culture" (*culture feminine*), defined as "an experience linked to the history of women's condition" ("*une expérience liée à l'histoire de la condition des femmes*")[8]. These artists questioned the traditionally established boundaries between major and minor arts, fine arts and decorative arts, art and crafts. The Shell Chair precisely plays with these codes. Is it a customised utilitarian object, a limited-edition designer collectable, or a textile work produced in few copies? The distinction matters little, and indeed, what would be the use in fixing its status? Is its interest not precisely in its form and hybrid status?

Simone Guillissen-Hoa commissions or purchases two Shell Chairs for her studio-apartment **(Fig. 1)**. This space, between private and public, domestic and professional, subverts gendered territories. This hybrid programme between residence and studio is spatially supported by several architectural innovations, including the free design of the ground plan (*plan libre*) that offers real porosity between functions. The free design of the façade (*façade libre*) creates an extension between the interior and exterior. Conceived as a whole, the studio-apartment blurs the binary categories opposing architecture and interior decoration: the architect designs every detail of the place and redraws the contours of her discipline. It is not a surprise to find Tapta's Shell Chairs there, works blending textile arts, sculpture, and decorative arts.

7. Jenelle Porter et al., eds., *Fiber: Sculpture 1960-Present* (Munich; New York: Prestel, 2014); Giselle Eberhard-Cotton and Magali Junet, eds., *From Tapestry to Fiber Art, The Lausanne Biennials 1962-1995*, Fondation Toms Pauli / Skira (Lausanne / Milan, 2017).

8. Dallier, "Transgression et Extension Des Frontières de l'art," 46.

2.2 TAPTA, *UNTITLED* (HANDWOVEN SHAWL), 1970S, WOOL.

Tapta's second work acquired privately by Guillissen-Hoa or given by Tapta to the architect, probably around 1980, is a shawl **(Fig. 2)**. A small label on the edge of the fabric states "Handwoven by Tapta" ("*Tissé main par Tapta*"). The artist claims the artisanal, "handmade" aspect of her pieces while affixing her artist's signature. If the trend in sculpture in the early 1970s led to a form of dematerialisation of the object, resulting in a relative effacement of the artist[9], textile arts, on the contrary, valued materiality and organicity. Artists in this field do not wish to fade away but rather seek to assert themselves in a male-dominated art world.

Since the 1970s, the reinvention of artisanal vocabulary has been seen in the reflections of architects of the second modernist wave, of which Guillissen-Hoa forms a part. The inseparable relationship between modern and regional[10], between structural revolution of the building and ancestral know-how characterises this second and new generation of modernists, the "post-war modernism"[11], with a hybrid aesthetic language. While the link to the "handmade" dimension is not explicit and the one to a form of "history of women's condition" ("*histoire de la condition des femmes*") is non-existent in the architectural discipline of that time, the use of natural, local materials, anchored in history, innovates and disturbs.

2.3 TAPTA, *UNTITLED* (MURAL FRESCO/SCULPTURE), CIRCA 1981, THICK FUR RUG, WOODEN CYLINDERS, AND LAMINATED WOOD STRUCTURE.

As early as 1968, Guillissen-Hoa was invited to erect the first House of Culture in collaboration with the local agency Winance, Pirson & Ginion. Through various art integrations and collaborations, the architect here surpasses "the mystique of architectural authorship."[12]

The monumental work commissioned by the architect to Tapta is a textile wall sculpture designed to adorn the hall's staircase cage. The custom creation consists of two frescoes directly glued to the walls of two flights of stairs **(Fig. 3)**. It integrates into the space by engaging with its place of reception. Unfortunately, the work was destroyed. Only a few oral testimonies[13] and rare archival photographs remain.

Guillissen-Hoa's architecture offers the House of Culture a spatial arrangement that articulates landscape, architecture, and details in a single harmonious proposition. Tapta's work completes this triptych of scales, invoking monumentality and the everyday, softness and roughness, becoming both an expansive landscape and an intimate envelope.

3. TAPTA–SIMONE GUILLISSEN-HOA : TROUBLE AND TRANSCENDENCE OF BOUNDARIES

By the 1980s, Tapta began to "feel constrained" in this sort of "ghetto" of textile art[14]. She also asserts, despite occasional participations, to have a "horror" ("*horreur*") of exhibitions dedicated to "women's art" ("*l'art des femmes*"), which "undermine the feminist cause" ("*desservent la cause féministe*").[15] This position illustrates the ambivalence within the textile

9. Frank Popper, *Art, action, participation* (Paris: Chêne, 1975); Lucy R. Lippard, *Six Years: The Dematerialization of the Art Object from 1966 to 1972* (Berkeley: University of California Press, 1997).

10. Pierre Puttemans, "In memoriam: Simone Hoa et l'architecture," *A+*, no. 141 (1996): 14.

11. Région de Bruxelles-Capitale, ed., *L'architecture depuis la seconde guerre mondiale* (Bruxelles: Région de Bruxelles-Capitale, 2008).

12. Hilde Heynen, "Genius, Gender and Architecture: The Star System as Exemplified in the Pritzker Prize," *Architectural Theory Review* 17, no. 2–3 (August 2012): 331–45, https://doi.org/10.1080/13264826.2012.727443.

13. Entretien avec Jacky Legge, ancien animateur des expositions de la Maison de la Culture de Tournai, interview by Apolline Vranken, 31 October 2023; Entretien avec Philippe Deman, ancien directeur de la Maison de la Culture de Tournai, interview by Apolline Vranken, 31 October 2023; Entretien avec Jean-Pierre Hoa, interview by Apolline Vranken, 23 December 2022.

14. Michel Baudson, *Tapta, Collections d'Entretiens et d'Images*, Artgo (Bruxelles, 1994), 14–17.

15. Baudson, 14–17.







Figure 1. Simone Guillissen-Hoa, Langeveld building (Guillissen-Hoa'as apartment-studio), Brussels, Belgium, 1963, living room with two Shell Chairs by Tapta. © Architectenwoning. AW GUILLISSEN-HOA, 2022.

Figure 2. Tapta wearing one of her shawls, © Fonds Tapta, Archives de l'Art contemporain en Belgique (MrBAB), undated (circa 1970).

Figure 3. Simone Guillissen-Hoa (in collaboration with Winance, Pirson and Ginion), Maison de la Culture, Tournai, Belgium, 1968-1982, Tapta's wall sculpture in the main stairwell, © Fonds Simone Guillissen-Hoa, Archives CIVA, undated (circa 1981).

art renewal movement, torn between seeking a common feminine culture and pursuing singular individuality. Tapta also seeks to go beyond the "decorative" character that, according to her, still sticks to the skin of textile art.[16] She would have liked to use textiles without posing limiting questions, to practice an art "without any label" ("*sans aucune etiquette*").[17]

In a professional sector structured by gender division[18], Guillissen-Hoa's use of the *woman category*, was useful during her early years as an architect. However, towards the end of her career, she shifted towards a collective struggle for women's rights. In 1978, the architect participated in the founding of the Union of Women Architects of Belgium (*Union des Femmes Architectes de Belgique*). Despite the non-binary nature of the Union, its discourse is not essentialist but well emancipatory. Guillissen-Hoa, it seems, would also have liked to practice an art "without any label."

4. CONCLUSION

At the beginning of their careers, Guillissen-Hoa and Tapta share similar backgrounds in terms of family, culture, and identity. However, their enrollment in distinct disciplines at La Cambre, 11 years apart, marked different gender experiences. La Cambre, despite its avant-garde reputation, presents a gender disparity among its sections, a divergence that the two artists subsequently experience in their professions,

16. Wiesława Wierzchowska, "Tapta," *Pokaz*, no. 21 (1997): 14.

17. Baudson, *Tapta, Collections d'Entretiens et d'Images*, 18.

corresponding to a binary gendered social structure. Comparing these two artists highlights these hegemonic mechanisms. However, their artistic relationship reveals other dimensions of their practices: the circulation of creative ideas and professional solidarity among women.

These principles emerge through the three analysed works (shell chair, shawl, mural sculpture), which serve as relay objects, "both parameter and network element"[19], witnesses to connections, and intertwining practices across multiple scales of artistic creation. Tapta sought to break free of the stigmatised codes of textile arts, while Guillissen-Hoa blurred boundaries by exploiting curtain wall qualities and engaging in various professional aspects. Their common assertion of the inextricable link between textile/material - object/sculpture - space/architecture through the creation of their own vocabulary proposes a "new dynamism of space" ("*nouveau dynamisme de l'espace*").[20]

This analysis is not about attributing these experiments to a particular gender identity but about showing how Tapta and Guillissen-Hoa subverted traditional practices and revalorised previously depreciated disciplines (through an argumentation based on gender). They redefined their qualities and statuses, extracting themselves from the societal dictates assigned to their gender.

Their artistic stances and works evolved over the decades, influenced by political, economic, and professional conditions, personal situations, and artistic intentions. Their commitment is understood in light of political, economic, and professional conditions, personal situations, and artistic intentions. They have dealt with the gendered expectations of their time while emancipating themselves from them. While one, Tapta, adopts an artistic position desiring to move away from the "ghetto" of textile art and "women's art," the other opts for a political and activist commitment by co-founding the Union of Women Architects of Belgium. In conclusion, while both are concerned about the positioning of women in the practice of art and their statuses in society, whether social or professional, they formulate different responses to these challenges. ■

18. Élise Koering, "Décoratrice-ensemblière : une étape vers la profession d'architecte dans les années 20 ?," *Livraisons de l'histoire de l'architecture*, no. 35 (15 June 2018): 118, https://doi.org/10.4000/lha.976

19. Anne Perrin Khelissa and Émilie Roffidal, "La notion de réseau en histoire de l'art : jalons et enjeux actuels," *Perspective. Actualité en histoire de l'art*, no. 1 (30 June 2019): 241–62, https://doi.org/10.4000/perspective.13613

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BIOGRAPHY

Apolline Vranken is passionate about questions of gender relations in space and urban equality. She investigates these themes in her final thesis Des béguinages à l'architecture féministe. After graduating in architecture in 2017, she worked for over two years as an architect. Today, she is a FRESH-FNRS doctoral researcher at the ULB Faculty of Architecture. She founded "L'architecture qui dégenre" in 2018 and organises many activities, including the Belgian edition of the Women's Heritage Days. Her research focuses on the methodologies of a feminist history of modern architecture, analysing the career of Simone Guillissen-Hoa, one of Belgium's first female architects.

Virginie Mamet has a degree in art history from the Université Libre de Bruxelles (ULB). She teaches at the Académie royale des Beaux-Arts de Bruxelles, works in the Cultural Mediation Department of the Royal Museums of Fine Arts of Belgium, and works independently for various Brussels non-profit organisations and institutions. Her research focuses mainly on textile art. Her master's thesis centred on the relationship to the body in the soft textile sculptures created by artist Tapta in the 1970s.

DUMBARA WEAVING - MINNETTE DE SILVA THREADING A 'MODERN REGIONAL ARCHITECTURE IN THE TROPICS'

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ABSTRACT

This paper builds on the work of the architect Minnette De Silva, highlighting the relevance of textiles in her architectural legacy. Particularly, it explores how the revitalization of the ancient practice of Ceylonese *dumbara* weaving determinedly contributed to her unique and pioneering modern interior designs.

Self-coined "an experiment in Modern Regional Architecture in the Tropics", De Silva performed an innovative synthesis fusing modern principles, mastered at the Architectural Association of London, with an assemblage of arts and crafts objects and practices embodying Ceylon's traditional history.

Among them, *dumbara* weaving was especially dear to De Silva. To revive these centuries-old textiles, hand-threaded with plant fibers and portraying symbolic motifs, she founded a handloom studio using up-to-date technologies, and learned how to weave. Therefore, De Silva expanded the applicability of *dumbara* from tapestries, rugs, or cushion covers, incorporating it into architectural elements such as curtains, and panelling. Furthermore, De Silva adapted vernacular designs into modern-styled garments, namely saris that she personally wore. The architect's profound collaboration with local artistry socially uplifted these practices, preventing their extinction, while simultaneously transmuting them into symbols of pre-colonial authenticity during Ceylon's independence.

From this remarkable production of objects, few reached nowadays, emphasizing their ephemerality and challenging archival preservation. Nonetheless, while diminishing, *dumbara* weaving persists today. Integrated into the author's doctoral research, this paper focuses on De Silva's autobiography and fieldwork in Sri Lanka. It involved visiting the architect's remaining œuvre and the Dumbara Valley, unveiling the current revival endeavour. The research aims to draw a theoretical reflection on the construction of the modern interior through De Silva's overlooked legacy and special dedication to textiles, emphasizing how profoundly the thread of the weaver created artistic, social, epistemological, and cultural identity. Besides, it crystallized personal expressions and community history through a complex system entangling gender, class/caste, and colonial-political connotations.

1. INTRODUCTION

The Ceylonese architect Minnette De Silva (1918-1998) is a crucial figure regarding the entanglements of modern architecture and textiles. The revival of Sri Lankan *dumbara* weaving is vital to De Silva's distinctive modern interior designs and significantly contributed to her architectural expression and multifaceted legacy, encompassing architectural, artistic, cultural, social, and even colonial/political dimensions.

De Silva's pioneering theoretical and practical contributions to the Ceylonese, Asian, and worldwide architectural grounds mismatch the attention she has received from historiography. Only a handful of authors dedicated research exclusively to her œuvre[1]. Moreover, if De Silva's architectural legacy remains broadly understudied, even less has been scrutinized about her innovative approach to textiles[2], disclosing investigation gaps this paper aims to address. Furthermore, if vast is the literature about the history of textiles[3], research connecting textiles and the Modern Movement is rare[4]. The Sri Lankan case, and specifically the topic of *dumbara* weaving, is scarcely documented[5]. Conversely, despite *dumbara* not being gender-specific, literature directed to feminine craft contributions provides insightful perspectives to theorize the rich but "overlooked and often despised categories of women's decorative arts (…) as sites of important cultural and social work"[6].

Hence, by stressing De Silva's connection with textiles and *dumbara* weaving as crucial aspects of her modern interior design layouts, this paper aims to contribute to a theoretical discussion about fabrication methods that are frequently overlooked, particularly those beyond the West.

Diverse challenges shaped the methodological approach. On one hand, despite recent efforts in the international context to address women architects' work, De Silva is affected by literature that systematically favors Western patriarchal frameworks, with the Sri Lankan context adding further gender bias. On the other side, the absence of a formal and centralized archive for De Silva's work requires diverse research methodologies and visits to multiple locations. Therefore, the investigation comprises a thorough analysis of De Silva's autobiography. *The Life and Work of an Asian Woman Architect*, which documents De Silva´s œuvre in a lively scrapbook format, is the key textual primary source. The investigation was complemented by extensive fieldwork in Sri Lanka, namely the visit to De Silva's remaining legacy in Colombo and Kandy, including Karunaratne, Pieris, and Fernando Houses, which illustrate the paper, and where De Silva had full freedom to compose the interiors. Additionally, the weavers' work was observed on a visit to the Dumbara Valley. Assisted by a translator, qualitative data was collected through semi-structured interviews. This engagement greatly fostered the understanding of the practice. Subsequently, additional archives were consulted, adding depth to the research. At the Henri Cartier-Bresson Foundation in Paris, photographic material documenting the visit of the French photographer to Ceylon in 1950 showcased *dumbara* weaving. Moreover, despite being tangential to

1. Ellen Dissanayake, 'Minnette De Silva: Pioneer of Modern Architecture in Sri Lanka', *Orientations* 13, no. 8 (August 1982); AA School of Architecture, *David Robson - Minnette de Silva: The Life and Work of an Asian Woman Architect*, 2016, https://www.youtube.com/watch?v=R4JKQHLi8IU (06-05-2024); Tariq Jazeel, 'Tropical Modernism/Environmental Nationalism: The Politics of Built Space in Postcolonial Sri Lanka', *Fabrications* 27, no. 2 (4 May 2017): 134–52; Sharmini Pereira, ed., *Second Volume - The Watapuluwa Housing Scheme by Minnette De Silva* (Colombo, Sri Lanka: Museum of Modern and Contemporary Art Sri Lanka, 2024).

2. Anooradha Siddiqi, 'Crafting the Archive: Minnette De Silva, Architecture, and History', *The Journal of Architecture* 22, no. 8 (17 November 2017): 1299–1336.

3. Annette Weiner and Jane Schneider, eds., *Cloth and Human Experience*, Smithsonian Series in Ethnographic Inquiry (Washington: Smithsonian Books, 2013); Jennifer Harris, *5000 Years of Textiles* (Washington: Smithsonian Books, 2004); Virginia Postrel, *The Fabric of Civilization: How Textiles Made the World* (New York: Basic Books, Hachette Book Group, 2020).

4. Virginia Troy, *Modernist Textile: Europe and America, 1890-1940* (Aldershot, Hampshire, U.K: Lund Humphries, 2006); Didem Ekici, Patricia Blessing, and Basile Baudez, eds., *Textile in Architecture: From the Middle Ages to Modernism* (London: Routledge, 2023).

5. *Ananda Coomaraswamy, Mediæval Sinhalese Art (Broad Campden: Essex House Press, 1908); M. D. Raghavan, The Kinnarayá: The Tribe of Mat Weavers, Ethnological Survey*

this topic, material documenting Le Corbusier and De Silva's friendship, consulted at the Le Corbusier Foundation, also in Paris, and De Silva's participation in the C.I.A.M.s[7], consulted at the gta archives at ETH Zürich provided important insights to frame her architectural discourses. Overall, the author is deeply grateful to everyone who supported the research journey for being instrumental in the investigation[8].

2. MINNETTE DE SILVA AND *DUMBARA* WEAVING

Historically, arts and crafts have played a crucial role in Sri Lanka's identity. During feudalism, they thrived under the religious and sovereign monarchy patronage, particularly during the Kandyan Kingdom (1469-1815). Afterward, beneath British rule (1815-1948), and affected by industrialization, these traditional practices entered an irreversible decline that echoes today. During the independence momentum, culminating in 1948, the revival of vernacular vocabularies became vital in fostering nationalism. As the final stronghold of the authentic pre-colonial Ceylon, the city of Kandy emerged as a relevant national symbol.

1948 was the year that Minnette De Silva returned home, after graduating from the Architectural Association of London (1945-1948) under a modern curriculum. Simultaneously, she was firmly rooted in her country's cultural heritage and greatly influenced by the arts and crafts of her hometown Kandy. Therefore, De Silva's architectural expression became a fusion of modern and vernacular principles and elements, in a synthesis self-coined "an experiment in Modern Regional Architecture in the Tropics"[9]. In her houses, a repertoire of geometric façades, free plans, and concrete structures cohabited with a profusion of murals, clay tiles, earthenware pottery, lacquered wood carvings, and hand-woven *dumbara* mats. The vibrant dichotomy contributed to a rich interior design layout.

Among these objects and practices, *dumbara* weaving was especially dear to De Silva. Besides childhood encounters, her relationship with textiles is set in her autobiography in 1950, during her mourning for her father. She "pledged to collaborate with the craftsmen and the artists" working on her houses, willing to "research and experiment." The same year, while in London, she attended a private weaving school in Kensington, "so that on my return I could sit with the weavers and together work out new methods for the old"[10].

The 'old' regarding *dumbara* signifies weaving with *hana*, a long, thorny point-leaved hemp. Less than two hours from Kandy, nestled in the Dumbara Valley, Thalagune and Uda Dumbara are villages where this traditional process can still be experienced as described in Ananda Coomaraswamy's seminal book *Mediæval Sinhalese Art* **(Fig.1)**:

> *The well-known* Dumbara *mats, called* kalalaya*, are made by men and women of the* Kinnaraya *caste, practically the lowest of Kandyan castes (…). The fiber of which the mats are made is niyanda, the bowstring hemp (…). The rounded green leaves of this common*

of Ceylon (Colombo: National Museums of Ceylon, 1951); J. Tilakasiri, Handicrafts of Sri Lanka (Moratuwa: Srimati Tilakasiri, 1994).

6. Maureen Goggin and Beth Tobin, Women and Things, 1750-1950: Gendered Material Strategies (Farnham, England: Ashgate, 2009), 1; Maureen Goggin and Beth Tobin, *Women and the Material Culture of Needlework and Textiles, 1750-1950* (Farnham, England: Ashgate, 2009).

7. *Le Congrès Internationaux d'Architecture Moderne*.

8. The attempt to research local archives yielded either non-existent, scarce or not particularly relevant.

9. Minnette De Silva, 'A House at Kandy, Ceylon', *Marg*, June 1953, 4.

10. Minnette De Silva, *The Life & Work of an Asian Woman Architect* (Colombo: Smart Media Productions, 1998), 163.

*xerophitic plant are gathered, and scraped against a log (*niyanda poruva*) with a wooden tool (*ge-valla*) (…). This scraping removes the fleshy part of the leaf, leaving the white fiber, which is oiled and brushed, and then ready for use almost immediately. Part of the material is left white, the rest dyed red, yellow, or black (…). The loom (…) is a low horizontal contrivance, something like the loom used in cotton weaving, but much more primitive. There is no* alvala*, or pit for the weaver's feet; the operator squats on the mat itself*[11].

Dumbara belongs to the broader highly-significative Ceylonese arts and crafts scene. Henri Cartier-Bresson, visiting the island in 1950, remarked on how the designs were connected with the good taste of the peasants that he observed in the East[12]. Indeed, *dumbara* weaving's essence and uniqueness depend on its intricate and traditional design motifs and the weaver's taste and expertise. Representing spiritual and cultural meanings, including flowers, leaves, animals, and geometries, these designs significantly lengthen the *dumbara* process. Accordingly, an updating endeavor has been undertaken to fight globalization and the declining interest of younger generations in a low-profit caste-related practice which has condemned many handlooms. In line, weaving techniques were adapted and other looms and materials are currently employed, such as cotton, silk, and synthetic yarns. Indeed, *dumbara* was inscribed on the UNESCO List of the Intangible Cultural Heritage of Humanity in 2021, illustrating its enduring adaptability. Further steps in the research should assess the measures' effectiveness for continuing the practice.

A similar approach had been taken by De Silva seven decades earlier. Despite trying *hana*, she utilized cotton yarns, and "traditional weaving was adapted to suit modern conditions and the use of modern looms which were less labor intensive"[13]. De Silva's early creations are showcased in her first commission, Karunaratne House (1947-1951). Located in a sloping terrain overviewing Kandy Lake, the house is built in concrete, featuring glass brick walls and locally supplied wood and stone. A London-trained De Silva designed flexible plans, opening the house to the landscape. Concurrently, Kandyan arts and crafts are also present. Terracotta tiles with vernacular subjects on the façade wall preannounce the interior: lacquer woodcarvings on the staircase railing, decorative earthenware jars in traditional designs placed throughout the space, and a mural from a local artist marked the setting. Traditional colours, displayed in ancient temples, still persevere in the pillars and walls, yet red, gold and black tones were also used in the remaining elements.

In Karunaratne, *dumbara* mats are incorporated in several elements **(Fig.2)**. Usually applied as wall hangings, tapestries, rugs, or cushion covers, De Silva also used them as floor rugs, chair covers, and table mats. Still, she expanded and repurposed their applicability by incorporating them into architectural elements. For instance, *dumbara* drapes and curtains were "based on the traditional weave (which craft is fast dying out,

11. Coomaraswamy, *Mediæval Sinhalese Art*, 243.

12. Henri Cartier-Bresson, 1950, 56G-688-18, Henri Cartier-Bresson Foundation.

13. De Silva, *The Life & Work of an Asian Woman Architect*, 163.

only a few good traditional weavers are left) but woven on modern looms, with designs improved on traditional patterns and motives and colours, to suit contemporary taste and needs"[14]. Furthermore, *dumbara* was also used as ceiling panelling and "for the first time as door panelling"[15]. An example is the 'tree of life', a traditional motif, weaved in *hana*, in traditional colours. Conversely, geometric designs were present in Pieris and Fernando Houses **(Fig.3)**.

All these elements are stated as woven in the architect's studio. Indeed, a newspaper clipping from 1950 reported: "When Minnete [sic] is neither at the studio nor at the site, then she is busy at the weaving centre in her home" where she worked in her own loom and employed "three girls", one of them weaving *dumbara* mats[16]. However, De Silva commissioned weaving as well. In a letter, also dated 1950, she inquired about the possibility of accomplishing a certain design for curtains of a nursery. To achieve De Silva's design the weaver suggested adjustments, namely creating a white border so that a yellow background could accommodate the desired white figures[17].

Additionally, De Silva's experiments with textiles went beyond architectural elements. Her autobiography showcased a handloom practice-cum-business, where she experimented *dumbara* mat motifs in cloth. Called 'Ceylon Kandyan Handlooms', the studio's brochure, dated 1967 to 1968, included the types of clothes produced, namely robes, coats, jeans, shirts, sarongs, accessories, cloth bags, etc, along with textures, prices, and even transport time by sea and air, denoting international commercial aspirations. Images of certain garments are showcased, with De Silva noting her wearing some of these attires. The textiles were handwoven based on motifs such as "geometrical and natural forms on a background weave of 'boxes' of colour or plain or striped", adapted for Spring/Summer modern-styled clothes. Regrettably, regarding cloth weaving, De Silva reported "little support", "little encouragement" and limited resources, resulting in the closure of the study center[18].

The aforementioned narratives represent De Silva's closest relationship with textiles and the culmination of her production of material objects, as they are not detailed re-addressed in her autobiography. The saris she created and wore until her final years were testified by a family member as her most beloved belongings[19]. In post-colonial Ceylon, and alongside Minnette De Silva, other prominent women's work with traditional crafts and textiles, such as Barbara Sansoni and Ena de Silva, was also influential[20].

3. CONCLUSION

Visiting De Silva's legacy today comprises diverse outcomes. For instance, from the three mentioned houses, Karunaratne is in an advanced state of dilapidation, Fernando was recently demolished and Pieris is inhabited in an impeccable state of conservation. However, despite the persistence of other forms of arts and crafts (tiles, grids, wood carvings), the absence of traces of *dumbara* is a common factor. It emphasizes the ephemerality and

14. De Silva, *The Life & Work of an Asian Woman Architect*, 127.

15. De Silva, *The Life & Work of an Asian Woman Architect*, 117.

16. De Silva, *The Life & Work of an Asian Woman Architect*, 164.

17. De Silva, *The Life & Work of an Asian Woman Architect*, 163.

18. De Silva, *The Life & Work of an Asian Woman Architect*, 166.

19. Siddiqi, 'Crafting the Archive: Minnette De Silva, Architecture, and History', 1324.



Figure 1 - Dumbara Valley, Sri Lanka, Traditional *dumbara* weaving, 2023 (Author)



Figure 2 - Karunaratne House, Kandy, Sri Lanka, View from the entrance to the living room showcasing *dumbara* curtains handwoven in De Silva's studio, 1950/2023 (De Silva, 1998/ author).

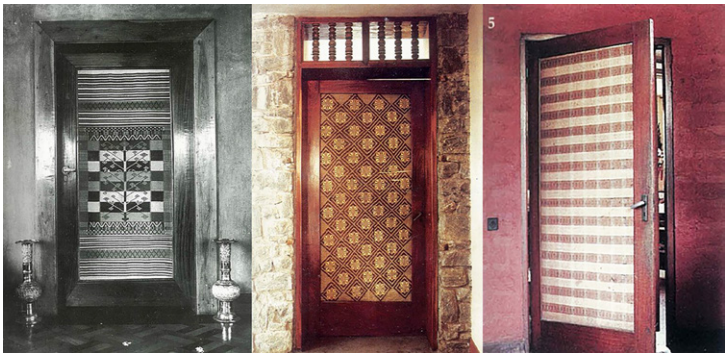


Figure 3 - Karunaratne House, Kandy; Pieris and Fernando Houses, Colombo, Sri Lanka, Examples of ***dumbara*** mats used as door paneling present in De Silva's autobiography, 1950s (De Silva, 1998 - Composite image by author).

challenging archival preservation of textiles, exposing their fragility within the realm of interior design.

Another aspect worthy of examination is the lack of studies dedicated to crafts, particularly textiles. Indeed, these practices often slide into the material or mundane categories, considered a lower rank in the hierarchy of art, and therefore have been largely overlooked by architectural historiography. Simultaneously, not only craftsmen became despised and "threatened with categorical 'deskilling' in a world that apparently no longer appreciates what it once praised in them" but also industrialization fated "the political weakness of those whose competence is specifically local"[21]. Mindful of these power systems and exclusion mechanisms, De Silva's revitalization of *dumbara* encompassed manifold connotations,

20. Martino Stierli et al., *The Project of Independence: Architectures of Decolonization in South Asia, 1947-1985* (New York: The Museum of Modern Art, 2022).

21. Michael Herzfeld, *The Body Impolitic: Artisans and Artifice in the Global Hierarchy of Value* (Chicago: University of Chicago Press, 2003), 1,2.

(arguably) above all, social ones. The artisans, especially the weavers, were neglected and underpaid as part of the lowest strata of the Ceylonese caste system. De Silva's revitalization efforts aimed to uplift practices and practitioners, avoiding their extinction.

Furthermore, since this revival occurred during Ceylon's independence momentum, political and colonial outcomes also imply. During this period, arts and crafts emerged as national symbols of resistance, becoming meaningful for embodying pre-colonial authenticity. Parallelly, since De Silva was closely tied to India, two personalities were perhaps influential. Firstly, the photographs of her weaving displayed in her autobiography seem inspired by the Gandhian spinning wheel as a representation of self-sufficiency. Secondly, De Silva's close friendship with Kamaladevi Chattopadhyaya, an activist who propelled the crafts in India in order to uplift the craftsmen, is also noteworthy. Both connections denote the socio-political power of cloth and suggest likely entanglements with De Silva's line of thought[22].

Lastly, artistic connotations should be addressed. De Silva's architectural discourses preceded the vision later defended by George Kubler that "art can be expanded to embrace the whole range of man-made things (…) By this view the universe of man-made things simply coincides with the history of art"[23]. In tune, other authors underscored craft's "undeniable humanizing appeal"[24] and how it "met human needs in a more sensitive way than contemporary (…) methods do. It is this belief that sends us back to the past, and that sends us to the local and the specific"[25]. In addition to being meaningful epistemological processes of knowledge-making and essential tools for understanding and crystalizing the history and culture of humanity, craft plays an important role within architecture, defining architectural space, also in modern layouts. Referring to Karunaratne, De Silva emphasized how traditional craftwork "adds a richness of feeling and human touch to this modern house"[26]. Concurrently, she also stated: "In this house the architect, the craftsman and the artist have worked together"[27], a reference to Sigfried Giedion's concept of the "synthesis of the arts"[28].

In sum, De Silva's incursion into textiles illustrates a rich and complex network of relationships and meanings. Over time, weavers threaded their history through this practice, creating personal expressions and community ties, and, overall, contributing to materializing Ceylon's identity. *Dumbara* weaving was as crucial to De Silva's modern interior designs as she was to its revival, opening doors to its endurance until today. ■

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22. Weiner and Schneider, *Cloth and Human Experience*.

23. George Kubler, *The Shape of Time: Remarks on the History of Things* (Yale University Press, 1962), 1.

24. Sandra Alfoldy and Janice Helland, eds., *Craft, Space and Interior Design, 1855–2005* (Routledge, 2010), 1.

25. Janet Abu-Lughod, 'Disappearing Dichotomies: Firstworld-Thirdworld; Traditional-Modern', *Traditional Dwellings and Settlements Review* 3, no. 2 (1992): 10.

26. De Silva, 'A House at Kandy, Ceylon', 8.

27. De Silva, *The Life & Work of an Asian Woman Architect*, 119.

28. Sigfried Giedion, *Architecture, You and Me; the Diary of a Development* (Cambridge, Harvard University Press, 1958).

BIOGRAPHY

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EDUCATING COMMUNITIES THROUGH INDUSTRY: JOHN COTTON DANA'S, *THE HERITAGE OF 3000 YEARS OF ART IN MODERN RUGS AND CARPETS* EXHIBITION AND *FLOOR COVERINGS EXHIBITIONS*, 1929- 1930

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ABSTRACT

This paper addresses the question of how the Newark Museum, inspired by John Cotton Dana, managed to engage with its community through education, industry and the appreciation of traditional crafts. Two major textile exhibitions were held in 1929 and 1930 which contributed to local industry and commerce. To achieve this objective the exhibition presented a historical perspective on weaving intertwined with what could possibly be the first instance of modern furniture being placed alongside arts, or as an artistic object. It engaged with the visitors using department store conventions by placing them inside staged interiors. This exhibition will undergo a review through the examination of archive material collected at the Newark Museum. Consideration of Dana's visionary approach to museography and art objects and reviewing the textiles displayed will allow us to explore the significance and conventions of the modern interior through textiles and how the message was delivered to visitors.

1. INTRODUCTION

John Cotton Dana was a prolific librarian and the museum director of the Newark Museum of Art in the United States. Born in Woodstock, Vermont, in 1856, he spent his early days as director of Denver Public Library, where he established his vision of the relationship between books and objects and access to them as a means of promoting education and engaging with local communities. For Dana, libraries and museums had to "transform from a temple of wisdom undisturbed, to an open workshop of delight and learning"[1]. After Denver, he began to implement his pragmatic but radical ideas on art and education directing the Newark Public Library from 1902 until his death in 1929[2]. The idea for an art Museum for the city of Newark, began on the fourth floor of the Newark Free Public Library in 1904, but after its formal incorporation as a museum in 1909, several exhibitions were held in the library building until the New Museum was inaugurated in 1926, continuing with the long-term premise "what can museums do for the community?"[3].

The museum intentionally set itself apart from traditional art museums. Instead of competing in terms of artworks with major museums "within an hour's drive of Newark"[4], it sought to improve and display the products of local industry, influencing and "moving its communities to greater proficiency in the arts of living," displaying everyday objects that showcased industrial techniques, educating the eye through material history, as other industrial museums had done in England or Vienna in the early 20th Century[5]. Dana believed that museums could serve as educational tools to connect everyday life with industry, bringing art into people's homes by improving the design of domestic objects. He saw the Newark Museum as a means of local education, focusing on "the historic development of the industries which produce them (objects); and the relationships of those industries to the development of social conditions"[6]. Dana's main concerns about the utility of museums were addressed by organising important exhibitions that combined art, craft and industry. His interest in connecting with the everyday led to interesting curatorial choices, showing objects in use, recreating past environments such as the Colonial Kitchen exhibition, or recreating processes such as the 1915 New Jersey Clay Products Industrial Exhibition or the 1916 New Jersey Textile Exhibition[7]. The Museum's exhibitions featured pottery, textiles and other industrially made objects which were displayed, alongside the process and talent behind the making of those objects. Dana intended for those objects to demonstrate their teaching value as "subject to improvement in adaptation to purpose and skill in production," but most of all, to "add a surplus of art beyond the needful, which is the foundation of decorative arts"[8]. Most importantly, these exhibitions were important in helping visitors understand that the objects they have at home, which are locally manufactured, are the result of an artistic process as significant as the masterpieces exhibited in most museums of art. By understanding and explaining the process in the exhibition, accompanied by the historical narrative that links object, tools, forms and artist with ancient techniques and material processes, the object becomes an artefact of beauty, and art.

1. Stephen Weil, "Introduction," in John Cotton Dana, *The New Museum selected writings by John Cotton Dana*, (Newark: American Association of Museums, 1999), 14.

2. "A Museum and its Cities", Newark Museum of Art, accessed May 5, 2024, https://newarkmuseumart.org/wp-content/uploads/2021/09/Selected Works-History-Extract.pdf

3. John Cotton Dana, "the New Museum Opens its Doors" in *The New Museum selected writings by John Cotton Dana*, (Newark: American Association of Museums, 1999),179.

4. John Cotton Dana, "the New Museum Opens its Doors",181.

5. John Cotton Dana, "Museums and Community" in *The New Museum selected writings by John Cotton Dana*, (Newark: American Association of Museums, 1999),111.

6. John Cotton Dana, "The New Museum", , 73

7. John Cotton Dana, "A plan for a useful Museum", in *The New Museum selected writings by John Cotton Dana*, (Newark: American Association of Museums, 1999), 32. Also, "A museum and its city", Newark Museum of Art, accessed May 5, 20204, https://newarkmuseumart.org/wp-content/uploads/ 2021/09/Selected-Works-History-Extract.pdf.

8. John Cotton Dana, "The experiment of the Newark Museum", in *The New Museum selected writings by John Cotton Dana*, (Newark: American Association of Museums, 1999), 175.

9. Similar strategies were used by the Werkbund. The way of arranging the exhibits and the protagonism of the materials were in line with the ideas of the Werkbund and the importance given to the window display as

Dana firmly believed that department stores had taken the lead in integrating modern art into everyday lifestyles and homes. They fostered a symbiotic relationship with local communities, by including living spaces and tactile experiences of everyday objects with customers. The department store display encouraged the use of objects in a domestic context[9]. This is crucial to understand, as his connection with department stores was not only substantial in terms of display and exhibition, but also because the building designed to be the new Newark Museum of Art, was made possible by a generous donation from Louis Bamberger, a renowned department store owner and proprietor of Bamberger & Co. Bamberger & Co., and would also be the location for hosting the 1929 exhibition, *The Heritage of 3000 Years of Art in Modern Rugs and Carpets*, which was followed by a similar exhibition inside the Newark Museum called *Modern Rugs and Carpets*[10].

Both exhibitions demonstrated how modern textiles had evolved from historical techniques and how textiles were already defining new relations with modern interiors, furniture and the importance of department stores in terms of production, consumption and industry. The foreword to the *3000 Years of Art in Modern Rugs and Carpets* exhibition catalogue emphasised the role of department stores by asking "now that we have department stores, do we need museums?" Dana considered that "to adorn the utilities as our factories produce them, is to make them strong competitors with the foreign, the ancient, the rare and the costly, and thus by their readier sale to profit the artist who planned, the designer who adapted, the mechanic and the inventor who created and adjusted the productive machine, the corporate stockholders who made the factory possible and the distributor in the department store"[11]. All those benefits came from merchandising, fostering sales and applying all the arts of presentation, the Department stores had taken the lead in promoting industrial arts, while Museums continued to work as mere vessels of unobtainable art[12].

2. TEXTILES AND NEWARK MUSEUM.

In 1912, Dana travelled to Europe to collect objects while simultaneously organising one of the most important exhibitions of the Museum, titled *Modern German Applied Arts*. This exhibition was considered the first modern Industrial exhibition in the United States[13]. The shift in museum exhibitions was not only in regards to the theme and carefully chosen objects, curated by Dana with the intention to "leave out everything which imitates the antique and does not show creative impulse"[14], but it also aimed to train local industries and expand their production possibilities. Dana incorporated a notable innovation in this exhibition, as the objects on display were likely to be purchased by visitors, thus expanding the agency of the museum within the Newark community. A price list was available at a desk in the exhibition rooms, allowing visitors to inform themselves immediately of the prices.

The German Applied Arts exhibition, included a complete section on Textile Fabrics. The catalogue provides a clear and compelling rationale for the next textile exhibitions at the Newark Museum. It states "the weaving industry, which in the nineteenth century obtained its necessary patterns from the rich archives of

a way of connecting consumers with the product in a practical and educational way. Lilly Reich is a great example of this search and relation between industry and consumer through her most relevant exhibitions. See: Magdalena Droste, "Lilly Reich: Her career as an artist", in *Lilly Reich: Designer and Architect* (New York: The Museum of Modern Art, 1996), 47-59.

10. *The heritage of 3000 years of art in modern Rugs and carpets* (Newark: L Bamberguer & Co). This catalogue was also made possible with documents from Bigelow - Hartford, a large carpeting Mill located in Connecticut with stores in Madison Avenue, New York.

11. "Foreword," in *The heritage of 3000 years of art in modern Rugs and carpets*. (Newark: L Bamberguer & Co).

12. A plan for a new Museum: the kind of Museum it will profit a city to maintain. It is remarkable how Dana's ideas resonated years later in the MOMA Exhibition Design for Use, in 1944 which highlight the exhibited objects as a result of practical experience dictating modifications to shape, improved by economic and production methods. "Design for use, Master checklist". MoMA, accessed June 20, 2024, https://assets.moma.org/documents/moma_master-checklist_332972.pdf

13. Barry Shifman recalls the first international exhibition to show German industrial art was at the St Louis Fair in 1904. Barry Shifman "Design for Industry: The German applied arts Exhibition in the United States, 1912-13". *The Decorative Arts Society Journal* (volume 22, 1998), 19.

14. Barry Shifman "Design for Industry: The German applied arts Exhibition in the United States, 1912-13". 21. Newark Archives



Figure 1. Image of man in Jaquard Loom. *Floor Covering* exhibition, 1930. The Newark Museum of Art Archives

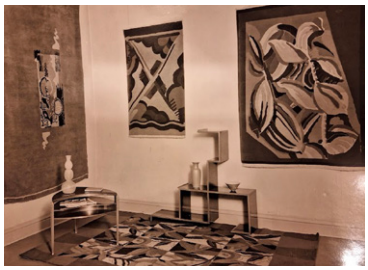


Figure 2. Interior displayed with abstract rugs and chair. *Floor Covering* exhibition, 1930. Newark Museum Archives



Figure 3. Interior displayed with Desks rugs and chairs. Floor Covering exhibition, 1930. Newark Museum Archives

industrial museums, owes its early acquired, modern trend to the circumstance that without its cooperation new chamber decorations were impossible."[15] Textiles will be the main theme and subject of debate on two more occasions.

2.1 MODERN RUGS AND CARPETS

Department stores, textiles, exhibition, display and utility all came together and culminated in two consecutive exhibitions: *The Heritage of 3000 Years of Art in Modern Rugs and Carpets* in 1929, and *Floor Coverings* in 1930. Despite Dana´s death in 1929, his ideas persisted and were present in both exhibitions. Modern machine processes, such as modern looms were put on display alongside ancient textile techniques and primitive weaving processes[16].

Dana was determined to reveal contemporary art in his art shows, influenced by history and traditions. Based on the idea that "all art is but the recreation and reinterpretations of tradition"[17] and his modern tapestries creatively reflected this idea while being rooted in the enduring nature of humankind and technique.

The 1929 exhibition showcased four inspirational sources: Near East, Peasant Arts of Europe, Households of Colonial Times and Primitive Arts of the World. This first exhibition, titled *The Heritage of 3000 Years of Art in Modern Rugs and Carpets*, was held at the Bamberger & Co. department store, and also featured a lecture programme led by distinguished academics, museum directors, and magazine directors. Although the programme was organised chronologically, the main focus was placed on homes, textiles, and how to understand modern spaces and times. The next exhibition, held only a few months after the Modern Rugs exhibition, was the *Floor Covering* exhibition inside the Newark Museum.

The images from this exhibition, held in the archive, illustrate the concept of modern art, modern rugs and the setting of modern objects in an ideal interior. The exhibition pictures show a model of a Jacquard-type machine loom with a man operating the machine. Another exhibition picture displays what is called the African alcove, featuring a rug from Banga Mayotte, an unfinished mat and a Luvituku mat. These objects convey a message on geometry, the loom and the idea of a single line as the original use of material, creating space through repetition. This imagery is fundamental for understanding the shift towards modern interior design. What is relevant is the composition of the complete object through the artist's mind and, based on technique and material, both of which could be universally found and understood.

The combination of creativity and technique led to a technical abstract language, as there was no need for the obvious figurative elements. Instead,

15. *The German Applied Arts. Touring exhibition of the Deutches Museum für Kunst in Handel. 1912*. Catalogue. (n.d, F. Will. Ruhfus Dortmund) ,53. Newark Archives.

16. John Cotton Dana, "The experiment of the Newark Museum", 176.

17. John Cotton Dana, "The experiment of the Newark Museum", p.181.

it was necessary to understand the logic behind its fabrication as a universal value. By removing figurative elements, only technique remained. Another museum display picture shows a complete interior, whose significance lies not only in the carpets displayed but also in the furniture selected to complete the setting. The table and the chair are recognisable Mies van der Rohe and Lilly Reich designs, including the MR armchair from 1927, along with a chair that bears a striking resemblance to the Cantilever chair, also designed by Mies. Despite their iconic status today, both chairs are labelled as Designed by Donald Deskey, as are the other chair and table placed in the interior display.

The possible mislabelling is likely due to the timing of the exhibition. The selection of furniture defining the modern interior in the display predates the important Modern Architecture Exhibition of 1932 at MOMA, where the main concepts of the Modern Movement were coined in the United States. The cubist abstraction and Art Deco elements of the rug on the floor bear strong similarities to the work of Eileen Gray, who developed her own carpets in the 1920s. Although Dana was focused on his local industries and the educating role museums played in guiding other designers and artisans, the selection of pieces, and the arrangement of interiors and furniture at Newark Museum exhibitions integrated exhibited objects into the productive system of domestic consumption. This achieved the objective of bringing art into everyday life, inside every home, by educating taste in a manner similar to magazines or department stores.

3. OBJECTS AND THE VALUE OF PROCESS.

Cotton Dana´s approach to museum objects can be understood as a dialogue between the production system and the real exchange value. Objects represent the process of industrial labour and human education through experience. Objects can be understood in relation to the industrial process, as well as in regard to the other objects in history and the society that produces them. They function as a symbiotic and prolific community that benefits from education and production. His museography builds history with traditional arts not by symbolism or iconographic interpretations but rather through the value of universal craft knowledge and respect for the materials and communities that sustain them. It is for the overall benefit of the community that artistic objects obtain commercial value, and thus abstract expression allows technique and material to be the protagonist, reinforcing the anonymity of the author in opposition to the unique and exceptional dualities of renowned artists. Industry and department stores profit from the abstraction and reproduction of modern objects, unifying communes in an economic system of cohesive development through art in the everyday. ■

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BIOGRAPHY

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THE MODERN INTERIOR: ESSENTIAL QUALITIES THAT REMAIN

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DOCOMOMO ISC-ID, DOCOMOMO BELGIUM, FREE UNIVERSITY OF AMSTERDAM FACULTY OF ARTS & CULTURE, KU LEUVEN FACULTY OF ARCHITECTURE, UANTWERPEN FACULTY OF DESIGN SCIENCES

ABSTRACT

At the beginning of the 20th century, modern architects wanted to create better living conditions for all layers of society, often working toward a total concept of architecture and interior. The modernist architect sought a functionally organized floor plan, opened it up to daylight and fresh air, replaced ornaments and tapestries with smooth, uncluttered surfaces, freed walls from their structural function, introduced fluidity and spatial adaptability. Throughout the avant-garde period of «heroic» modernism and long after, these qualities attracted only the progressive clientele. The frugal, abstracted appearance of modernist housing, for instance, contrasted with the enduring bourgeois idea of the home as a personal refuge. Despite this, in the middle of the last century, the MoMo legacy spread worldwide, overlapping local customs and materials, and resulting in excellent and resilient architectural solutions. In the early 2000s, after the late-20th-century criticisms had cooled down, modern architecture returned and continues to underlie architectural discourse.

After a century of modernist legacy, it is an excellent time to reflect on some of its essentials. What are the modernist interior's timeless spatial qualities for living, working, leisure, health, or worship? What are the factors determining its adaptability? How can modernist heritage be adapted to meet current requirements regarding material use, energy flow, respect for nature, and social equity? How can it once more help generalizing improved living conditions? Can new technological advances inspire a modernism for the 21st century?

This session welcomed abstracts focusing on examples of MoMo interiors in a comparative and interdisciplinary way. Papers that connect material issues with the social context earned our particular interest, illustrating the enduring merits of original designs, either restored or adaptively reused. Contextualization and embedding in a theoretical and critical framework from extended fields of knowledge were encouraged.

1. INTRODUCTION

At the beginning of the 20th century, modern architects wanted to create better living conditions for all layers of society, thereby often working towards a total concept in which architecture and the interior were designed as a unit. The modernist architect did not only seek a functionally organized floor plan, he also opened up the home to daylight and fresh air; he replaced the dust-gathering tapestries and ornaments with smooth, uncluttered surfaces; he turned dark corridors into exciting architectural walks; he freed the walls from their structural function, introducing fluidity and spatial adaptability. All this to accommodate a new lifestyle. Throughout the avant-garde period of "heroic" modernism and for a long time after, these qualities attracted only a progressive clientele. The frugal appearance of modernist housing, with its abstract interpretation of interior qualities, contrasted with the enduring bourgeois idea of the house as a refuge for the intimate and the nostalgic. Despite this, in the middle of the last century, the MoMo legacy spread out across the world, overlapping with local customs and materials, and resulting in excellent and resilient architectural solutions. In the early 2000s, after the criticisms that had grown during the second half of the 20th century had cooled down, modern architecture returned and continues to underlie much of architectural discourse.

Now, after a century of modernism, it is a good time to reflect (again) on its essentials / fundamentals. Straight off, it is important to note that, while the essentials of modernism are all rooted in (a certain interpretation of) functionality, functionality itself – which surely must be considered a 'constant quality' of modernism - is multifaceted. And moreover, it should be clear that the criteria and parameters which constitute functionality, they are not constant, they change over time, as does society and its expectations, customs, aspirations. With some degree of confidence, we can propose this to be true especially when we turn our attention to the interior. However, undeterred by the challenge, we will be looking in this session for the timeless qualities of the modernist interior. We will try to probe into its essentials, while trying avoiding the pitfalls of considering 'timeless qualities' under rapidly changing conditions. One essential attribute typically ascribed to modernist architecture is the Gesamtkunst approach, in which the structural shell, the interior furnishing and decoration and even the loose furniture are developed and realized in one integral concept. Clearly, this inextricable bond is bound to pose specific challenges after a while, when not only new ways of living and thinking, but also climatological conditions are crying for adaptation.

2. FROM FUNCTIONALISM TO 'ACCIDENTISM'

The characteristics and attributes of the modern interior go beyond the drawing up of checklists, especially in a global perspective. A 'unified approach' of modernism was already attacked in its early period by the Austrian-born architect Josef Frank (1885-1967), designer of the iconic Villa Beer in Vienna (1929-1930)[1], representative of the Neues Bauen. In his

1. In collaboration with Oskar Wlach (1881-1963).

critical notes, which were not widely noticed at the time, yet opposed by influential modernist like Sigfried Giedion (1888-1968) during the CIAM meetings of 1928 in La Sarraz, Frank sounded the alarm on the codification of modernism, and especially on the link between standardization and aesthetic objectives. In his eyes, the aim of modernism had to be a response to contemporary challenges, primarily by the design of a field for everyday life as 'a continuation of the whole search of freedom'.[2] Though for many, the road to this so called 'freedom' was paved with standardization and universal design, Frank contested this assumption, especially in the realm of the domestic space. In his eyes, establishing a new canon was not the answer. It was not the historical form as such that had devaluated and needed to be replaced by a 'better' solution. Instead, architectural forms and ideas had been changing in reaction to the evolution of their context. Therefore, he proposed that modernism should seek answers to the continuously emerging challenges of life.[3] Modernism needed to be first and foremost a methodology (rather than a style). From this explanation, Frank deduced that not 'functionalism' was the foremost characteristic / principle of modernism, but what he coined 'accidentism'. The term 'accidentism', which refers to the specific design response in each project to the particular set of accidental conditions and their subsequent evolution. With this response, which, incidentally, did not deny the role of functionality, Frank hoped to open up the modernist ideal to great diversity, even complete freedom and pluralism.[4] The notion of modernism should, at its heart, be evolutionary rather than revolutionary[5], he stated, which inherently contradicts Le Corbusier's axiom that to love purity should be a moral act, leading to joy through pursuing perfection.[6] It was, in many ways, precisely this imperative of purist functionalism that postmodernism attacked in modernism: the belief in the unique, absolute and contextless solution, (a belief that Le Corbusier himself had later left behind).

3. ADAPTABILITY TO CHANGING REQUIREMENTS

Today, due to various changing conditions such as comfort and energy requirements, much of modernist architectural heritage is in danger of disappearing. Projects by lesser or unknown architects are most at risk as their cultural value has not yet been fully assessed. Typical cases include modernist single-family houses, which are considered banal; high-rise apartment blocks, which are considered inhuman or ugly; abandoned parish churches in Western Europe, which as Gesamtkunstwerk are difficult to adaptively reuse. These and many other cases are being demolished or radically altered. Even when the structure is preserved, the interior furnishing is removed without a second thought. A simplistic real-estate rationale is almost always the decisive factor. Needless to say, the outcome of these operations rarely constitutes an improvement.

What could halt this unbridled destruction? At the most fundamental level, we need a mind shift across society that preserving and working with existing buildings and materials is in most cases more sustainable

2. Christopher Long, "Josef Frank. CIAM and the Assault on the Unified Ideal," *OASE 97. Action and Reaction in Architecture* (2017): 58; Josef Frank, "Was ist modern?," *Die Form*, no. 15 (1930), included in: Tano Bojankin, Christopher Long, and Iris Meder (eds.), *Josef Frank: Schriften/Writings* (Vienna: Metroverlag, 2012), 413.

3. Frank, "Was ist modern?," 413; Josef Frank, *Architektur als Symbol: Elemente deutschen neuen Bauens* (Vienna: Schroll, 1931), in Tano Bojankin, Christopher Long, and Iris Meder (eds.), *Josef Frank: Schriften/ Writings* (Vienna: Metroverlag, 2012), 9-191; Long, "Josef Frank. CIAM and the Assault on the Unified Ideal", 58-60.

4. Christoph Thun-Hohenstein, Hermann Czech, and Sebastian Hackenschmidt, eds., "Josef Frank: Against Design," in *Architekten / The Architect's Anti-Formalist Oeuvre*, exhibition catalog (Basel: Birkhäuser/ MAK, 2016): 14-27; Josef Frank, "Apostle and Apostate: Josef Frank's Modernist Vision," Introduction by Christopher Long, *Places Journal* (February 2018): 2-13, accessed June 06, 2024, https://doi.org/10.22269/180206.

5. Josef Frank, "Apostle and Apostate: Josef Frank's Modernist Vision," introduction by Christopher Long, *Places Journal* (February 2018): 4/13, accessed June 06, 2024, https://doi.org/10.22269/180206.

6. Le Corbusier, *L'art décoratif d'Aujourd'hui* (Paris: Crès, 1925); Paul Overy, *Light, Air and Openness. Modern Architecture between the Wars* (London: Thames & Hudson, 2007), 68.

and advantageous than demolition and new build. Embodied carbon emissions should always be taken into account, but also the possibility that an existing material may be superior to its replacement. This makes the underrepresentation of lesser architecture in heritage inventories even more problematic. It would help if heritage assessments were by default made of all heritage, regardless of architectural or cultural value. In cases where these values are limited, context value, material value or enduring use value may provide arguments for preservation and reuse. Though the heritage professional may be able to identify reasons for preserving modest modernist buildings, it often remains hard for the general public to accept these. This is even more true for modern interiors. It is crucial, therefore, to emphasize all existing qualities, especially those that would be hard to equal today.

We can now return to Jozef Frank's coinage of 'accidentism' as the core principle of modernism. As we have seen, Frank reacted against the idea that functionalism was to be achieved through standardization and universality, and instead emphasized the need for adaptability to changing (functional) requirements. In Frank's conception of the living room, for instance, it is, even in the lifetime of one generation, the product of consecutive coincidences or momentary correspondences. It is never finished and can accommodate the changing needs of its occupants'.[7] This implies that, we are not infringing on the core quality of modern architecture, when we adapt it to changing needs, but rather that we are making use of it in doing so. This puts the challenge of adaptive preservation of modernist heritage in a slightly different light and raises new questions. How can modernist domesticity be adapted to contemporary living standards while preserving the (heritage) values of the original concept? Can a functionalist design possess an 'accidentist' quality, even if it was not consciously designed for that quality?

4. THE (MODERNIST) HOME AS A LIVING ORGANISM

In their article "This is not a (bed)room", Marta Peixoto and Angelica Ponzio deal with two well documented examples of (rather luxurious) modernist flats, zooming in on spatial fluidity and transparency from the perspective of the use value for past and present.[8] The authors touch upon the notion of flexibility by investigating privacy issues which are linked to ideological questions on interactions between family members but also to a conscious sacrifice in exchange for a superb spatial experience. By comparing Gio Ponti's (1891-1979) Via Dezza apartment (1957, Milan, Italy)[9] and Paulo Mendes da Rocha's (1928-2021) Butantã house (1964-1966, São Paulo, Brazil)[10] they raise issues on (new) normative criteria for modern architecture[11], while questioning pure formal conceptions.

Gio Ponti designed a home as a living organism, whose functionality didn't only serve basic needs but was conceived to offer joy when experiencing it. For this, a total concept was needed that surpassed formalism. He argued that the total concept needed to be flexible, so that, when moving or changing furniture, the space "[…] should not look in

7. Josef Frank, "Apostle and Apostate: Josef Frank's Modernist Vision," introduction by Christopher Long, *Places Journal* (February 2018): 8/13. accessed June 06, 2024, https://doi.org/10.22269/180206.

8. Silveira Marta Peixoto and Paiva Angelica Ponzio, "This is not a [bed]room," *Interiors: design, architecture, culture* 11, no. 2-3 (2021): 253-281, accessed May 15, 2024, https://doi.org/10.1080/20419112.2021.1962620. where 3 pages 1-3.

9. See "House in Via Dezza," *Gio Pontti official website*, accessed June 16, 2024, https://www.gioponti.org/en/archives/work-detail/dd_32990_6107/house-in-via-dezza.

10. See Nikolai Mina, "Real-time walk-through – Casa Butantã - Paulo Mendes da Rocha - Unreal Engine 4," Youtube video, accessed June 16, 2024, https://www.youtube.com/watch?v=Ebgg8HL6iQ4.

11. Maurizio Vitta, *Dell'abitare - Corpi spazi oggetti immagini* (Trento: Einaudi, 2008): 66; Peixoto and Ponzio, "This is not a [bed]room," 2/3.

disarray. A room is richer in its resources, it has 'all of its resources', only if it easily allows all the transformations that please us."[12] In his penthouse on the Via Dezza, Ponti designed an integrated sequence of rooms by distancing the separation walls from the façade, thus creating a passage along it. It created various visual and spatial connections and far-reaching transformability. Adjusting to 'modern living' was not achievable by prototyping nor by repetition. The rooms should not even be 'labeled'[13], but designed as adaptable spaces, a backstage for life: enjoyable, delightful and opposed to a static existence. This was realized in his adaptable Casa Adatta in 1972, which was designed for the quickly changing world.[14]

In his Butantã family house, the Brazilian architect Paulo Mendes da Rocha had a similar aspiration of organizing the domestic domain in a fluid circulation plan, providing access between the veranda and the living room through a part of the childrens' bedrooms. Thus, the design made the children's rooms subordinate to a collective spatial ideal for the family house, with the result that their skylit bedrooms in the central area of the plan did not enjoy any privacy, at least as we understand it today.[15]

In both cases, the bedroom plays a key role. Bedrooms as intimate areas have long been a feature of well-to-do houses, but only became a standard in western societies in the 20th century. Even then, the position and definition of a bedroom, remains fluid. The modernist interior did not promise a bedroom for each member of the family, stating to prioritize the quality of life of the house as a whole, closely identified with its spatial quality and in reaction to the 19th-century model of the bourgeois home.

5. MINIMUM SIZE, MAXIMUM TRANSFORMABILITY

The two cases above are high-value examples. Let us now look at a more modest example, representative of lesser heritage from the modern era. Again from another country, with a different social and political background in the post-war period, namely a 86 m² flat in a small apartment block of six flats, two on each floor, in the lower hills of Hungary's capital, Budapest, built in 1960. A private initiative of befriended couples with small children, the project was designed by an engineer, Jenő Zajovics.[16] An independent concrete post and beam structure allows the residents of each apartment to choose the circulation and organization of spaces, which indeed they do. The ground-floor flat overlooking the garden offers an interesting case. It interprets the 19th-century lower-middleclass dwellings of Central-Europe, which lack separate bedrooms. During the day, the bedlinen were stored in special cupboards, the beds transformed into chaise longue's and the doors left open to create larger spaces.

The entrance hall contains a garderobe, a toilet and doors to the north-facing kitchen and to the living area. Here, the dining room functions as the central circulation space. It gives access to the bathroom (adjacent to the kitchen), to the west-facing (bed)room and to the south-facing living room. In its turn, the living room opens on the left to a small adjoining bedroom (the former maid's room, previously accessible from the entrance

12. Gio Ponti, "Una Abitazione Dimostrativa alla VI Triennale," *Domus*, no. 103 (July 1936): 14, 18–19; Peixoto and Ponzio, "This is not a [bed]room," 2/3.

13. Gio Ponti, "La Casa Ideale," TV interview by RAI Italia, video, 2:08, 1976, accessed June 08, 2024, https://youtu.be/lhRyri5ac8g; Peixoto and Ponzio, "This is not a [bed]room," 2-3.

14. Peixoto and Ponzio, "This is not a [bed]room," 2/3.

15. Peixoto and Ponzio, "This is not a [bed]room," 3/3.

16. "Collaborator of the Architect György Jánossy (1923-1998)," *Akadémikusok. Építőművészet Jánossy György*, accessed June 16, 2024, https://mmakademia.hu/alkoto/-/record/MMA14515.

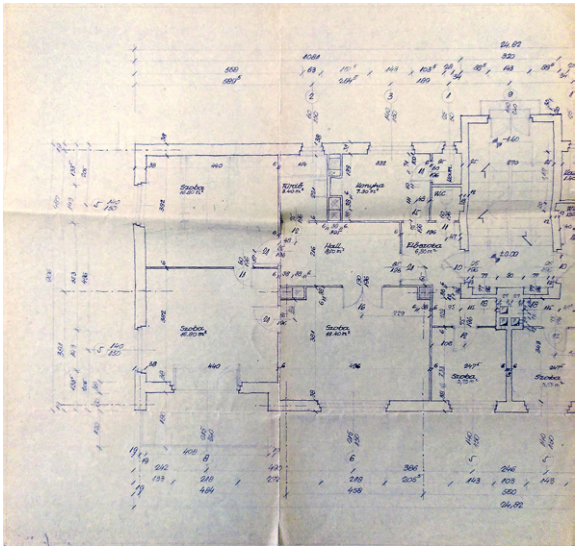






Figure 1. Jenő Zajovics, Plan of the appartment building, Budapest Tigris utca 21, Hungary, 1960 © private collection

Figure 2. Jenő Zajovics, Appartment building, Budapest Tigris utca 21, Hungary, View from the corner room to the living room, 1960 © Tibor Inkey photographer, ca. 1975

Figure 3. Jenő Zajovics, Appartment building, Budapest Tigris utca 21, Hungary, View from the living room to the small bedroom, 1960 © Tibor Inkey photographer, ca. 197

hall) and on the right to the room in the southwest corner, which opens onto a terrace as well as to the west room mentioned before. The corner room with terrace acts as the flat's focal point, the more because it has the typical central-European tiled stove. The heat from this single high-efficiency low-temperature heating element is distributed through the whole flat through openings above the doors to adjacent rooms.

In all its modesty, this flat offers a degree of openness and adaptability that rivals the famous examples above. Its effectiveness derives from two factors: the renouncement of monofunctional rooms and the circular circulation (around the stove), offering each room two points of access. In line with the modernist idea of contact between kitchen and dining room, a pass-through hatch and cupboard assists in serving the table, a modest variation on Ponti's display-window.

The flat was designed for a family with two children, a resident grandmother and a maid. Later the maid's room was integrated in the apartment. It offered another opportunity for spatial continuity, emphasized by placing an open cabinet in the passageway.

Over the years, only the function of the central dining room has remained the same. Ponti's motto "minimum size and maximum transformability"[17] perfectly describes the flat. The family with four children installed shared bedrooms in endless configurations, using room dividers and solutions from modern living publications. The parents, two doctors, embraced the modern way of life without throwing away the furniture of previous generations, exactly as Josef Frank had suggested: it is not an outdated style that requires change but the context. As long as the old functions well in the new context, there is no reason to change it. So they used (and repaired) what they had and added new items as needed.

As modernism linked hygiene to openness, the rooms in the three cases bathe in daylight: in the case of Ponti and Mendes da Rocha through the front and back side, in Budapest literally walking around the flat, from the small bedroom in the southeast, across the living room filtered by fir trees, to the terrace in the afternoon and the sunset behind the hills in the west rooms. If the flat had had closed-off bedrooms, this wealth of daylight would not have felt the same. On the other hand, the apartment does have issues of privacy, as do the other cases.

6. CONCLUSION

We set out to tackle the challenges in preserving and (re)using modernist architecture and interiors, resulting from the inevitable change of functionality over time. If the essence of a project is to survive, this change requires adaptation or better still, adaptability. This quality seems at odds with other ambitions of modernism such as the Gesamtkunstwerk, standardization and universality. For this reason, Jozef Frank put forward the principle of 'accidentism', which prioritizes the bond between the design and the changeability of context. The notion implies that a well-considered adaptation of modernist heritage is nothing else than the application of a core quality. Moreover, it creates an opening to a more varied value assessment, centered on the evolving connection between design and program. This alternative interpretation of 'essential qualities' allows to attribute value to a wider range of modernist heritage, and more opportunities for preservation and reuse. ■

17. Ponti, "Una Abitazione Dimostrativa alla VI Triennale," 14–22.

BIOGRAPHY

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WOMEN'S ADVISORY COMMITTEE-VAC AND JOHANNA KROEP-DE JONGE: THE LEGACY OF DUTCH WOMEN'S AGENCIES IN MODERN INTERIORS

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ABSTRACT

Pioneering women interior designers such as Johanna (Annie) Kroep-de Jonge (1923-2016) made significant contributions as part of the Rotterdam Women's Advisory Committee VAC (*Vrouwen Advise Commissie*), a precursor voluntary women's organisation that advised the municipality on housing and the environment, developed quality standards and introduced innovative participatory methodologies - workshops, surveys, excursions - to integrate women's voices.

Annie Kroep-de Jonge graduated from the Rotterdam Academy of Art and had an active interior architecture office alongside her husband, Willem Kroep. Between 1954 and 1957, she joined the VAC team, made up of women housewives, politicians, architects, dancers, pharmacists, and doctors. This was the most intense period advising on the newly built neighbourhoods that solved the housing problem after the bombing of Rotterdam: Pendrecht, Schiebroek, Zuidwijk, Hoogvliet, and IJselmonde. As a result of her spatial knowledge, Kroep-de Jonge led the VAC exhibitions, which were ¨modelflat¨ or furnished apartments. Model homes were commonly used in the Netherlands to promote furniture produced by well-known companies, as well as the ideas of renowned architects or, to display functional homes. In contrast, VAC's ¨modelflat¨ was resident-based and aimed to help women design their own modern spaces. They were organised both in the new housing complexes as well as in buildings found in deprived urban areas affected by severe problems of habitability. This paper aims to explore what the modern values of this unknown practice were, as well as examine its scope, permanence and future capacities. It is based on intensive archival research. Deconstructing modernity from a feminist perspective not only repairs the absences of the past but also recovers experiences that can trigger more democratic and inclusive approaches to modern heritage conservation.

1. INTRODUCTION

Women have played a fundamental role in the Modern Movement, creating concepts and spaces for a better life, but their contributions are absent or hidden in literature and archives. Modernity was narrated on the basis of a canon that created an intentionally selective version of the past around male figures or 'great master architects'. It is necessary to place women at the centre of history by documenting distorted and forgotten events in order to restore their lost voices and build a more solid and representative basis of historical knowledge.[1]

From this perspective, the main aim of this paper is to make the unknown legacy of Annie Kroep-de Jonge and VAC Rotterdam visible, as well as its distinctive values and potential, focusing on her modelflat proposals. It is based on my research that began in 2009 on the architect Wilhelmina Jansen, founder of VAC, and was later further developed by the donation of her personal archive in 2018.[2] VAC documents are composed of the committee's 20 years of notes, limited to few drawings, which involved classification and research in other archives.

2. VAC'S (HER)ITAGE

Johanna (Annie) Kroep-de Jonge (1923-2016) was a member of the VAC between 1954 and 1957. The Women's Advisory Committee VAC (*Vrouwen Advise Commissie*)[3] was a precursor voluntary women's organization that advised the Rotterdam Housing Department. Although it was formalised in 1946, the idea of the VAC began to take shape 10 years earlier, expanding the network of women's agencies that emerged in the first feminist wave such as the Dutch Housewives' Association (1912).

Born in Rotterdam, Annie was the fourth child and only daughter of Jaan Oranje, a manager in the linen room of a hospital, and Jos de Jonge, an architect. Although her vocation was science, she attended the Academy of Visual Arts and Technical Sciences in Rotterdam where she met her husband Willem Kroep (1923-1992), a carpenter and furniture maker. Following the end of the Second World War, they worked as draftsmen in an architectural firm and then opened their own interior architecture office.[4]

Until 1988, the office carried out residential, commercial and educational projects. Highlights included the interior design of the St. Lucia School for Teachers (Jos and Leo de Jonge, 1955-58) and the Anthony Veder and Co. office in the Amstleven building (Harry Nefkens, 1956), both of which have been declared national and municipal monuments respectively. From the 1970s onwards, Annie dedicated herself to art - tapestries, watercolours, paintings, collages - travelling to the Mediterranean and North Africa, where she participated in exhibitions with her works.

Annie's work at the VAC had the distinctive value of developing and applying modern design criteria for better living based on a woman's perspective. VAC's aim was to interpret the voice of women with regard to housing, furnishings, and home maintenance, as well as to strengthen contact between residents, architects and the government.[5] The committee reviewed

1. Gerda Lerner, "Placing Women in History: Definitions and Challenges," *Feminist Studies* 3, no. 1 (1975): 5-14.

2. Carolina Quiroga's PhD thesis at the University of Buenos Aires.

3. For an overview see the articles by Cora Nicolaï-Chaillet.

4. Information extracted from the biography by her son Aart Kroep to contribute to this paper, February 3, 2024.

5. VAC Rotterdam, Note, 26 February 1953.

housing department projects and produced reports and research. To get women's opinions, it organised activities - surveys, excursions, exhibitions - the results of which were its knowledge base for consultancies.

A noteworthy aspect was the collaborative and transdisciplinary approach of the committee. Annie articulated her interior design expertise with women of diverse backgrounds including housewives, pharmacists, politicians, dance professors, doctors of medicine, and members of feminist associations such as the Dutch Female Electricity Association and the Dutch Housewives' Association. In related disciplines, she associated with Wilhelmina Jansen, the pioneer architect and author of the working women's building RVS Flat, and also had connections to Ada Kuiper-Struyk, a politician and housing expert.[6]

The VAC was a critique of the ambivalent responses of the Dutch Modern Movement (*Het Nieuwe Bouwen*) to domesticity because of its historical association with the feminine. The new architecture was the liberation of society and women. For example, Peter Oud[7], the architect in charge of the city of Rotterdam promoted female participation in housing design. However, public housing was the domain of male architects.[8]

Kroep-de Jonge's period as a member of the VAC was the most intense as she advised on the newly built neighbourhoods that solved the housing problem after the bombing of Rotterdam: Pendrecht, Schiebroek, Zuidwijk, Hoogvliet and IJselmonde. In addition to the advice provided, she also took part in several excursions to conduct surveys after the buildings were occupied to obtain the residents' opinions. Additionally, she took part in VAC commissions producing reports on home technology.

The women's committee was undoubtedly fundamental in the recognised quality of post-war housing in Rotterdam, which was one of the most studied cases worldwide. Thousands of dwellings integrated VAC's minimum standards of quality in terms of hygiene, functionality and technology, which were developed by systematizing women's opinions (through surveys, and excursions) on the home and focused on room measurements, window size, wardrobe width, number of heating appliances, etc. These criteria formed the basis for the current housing regulations. VAC's knowledge spread throughout the Netherlands, reaching 45 committees in different cities in 1960 and 285 in the 1990s.[9]

3. MODELFLAT AS DEMOCRATIZATION

As a result of her spatial knowledge, Kroep-de Jonge led the VAC exhibitions, which were ¨modelflat¨ or furnished apartments. Model homes were commonly used in the Netherlands to promote furniture produced by well-known companies, as well as the ideas of renowned architects or, to display functional homes. Model homes furnished in the 1950s and 1960s by the Dutch Association for Correct Living (*Stichting Goed Wonen*) are the most widely recognised. Their aim was to promote specific pieces of furniture for the bourgeois class.

In contrast to this commercial profile, one of the modern values of the VAC modelflat was the democratization of interior design by making it

6. Carolina Quiroga, 2023.

7. Jacobus Johannes Pieter Oud, 1927

8. See: Mineke, 2010; Bijker and Bijsterveld, 2010.

9. Carolina Quiroga, 2021.

accessible to all citizens. The post-war reconstruction of Rotterdam allowed the working classes to experience modern urbanism and architecture and the VAC integrated women's perspective into the entire process. However, the flats in the social housing projects were handed over empty of furnishings and lacking in guidelines in terms of how to organise them.

VAC's exhibitions were based on residents collecting opinions from housewives and informing them on how to live at home.[10] The idea was very different from Correct Living's model homes, which were conceived as a tool to liberate the Dutch interior from the bad taste of the population, especially women who were in charge of the household.[11] The VAC modelflat was hosted in the new districts of Overschie, Hoogvliet and Zuidwijk in 1952 and Schiebroek in 1953.

In 1954 Annie Kroep-de Jonge made her first modelflat in the new district of Zuidwijk. Over a period of 8 days, from 2 to 9 October, four furnished units were visited by 1400 people in a building designed by Jos and Leo de Jonge.[12]

Annie conceived modern space as a right for everyone and believed that "¨Comfort is not bought, it is created¨. Therefore, each room was designed by combining used furniture, donated by women from the committee, and made use of avant-garde objects, which were not always affordable to the working class. Through these 1:1 arrangements, women acquired the knowledge and tools to design modern interiors through spatial experience, focusing on flexibility, efficiency, and the use of natural light. The programme included lectures and, on the last day, a discussion forum where all stakeholders involved in housing production -government, politicians, architects - came together to listen to the voice of the housewives. With a didactic mission in mind, Annie included a series of posters hung on the walls with slogans to read during the visit, a true manifesto:

Can You think, work and play quietly at home? Then you can live there too.
Lighting is not decoration.
Are you walking into the light?
Do you also think the lookout is more important than the view?
Your interior is not a hindrance, is it?
The furniture should serve you, not you the furniture.
Don't be a slave to your furniture.
Comfort is not bought, it is created.
One needs space to live, not furniture.
If you want your children to play, you have to share space with them.[13]

Pendrecht's exhibition (19-27 October, 1956) was the most influential, and was visited by 3000 people including residents, government officials, politicians and students of technical disciplines.[14] In 1948 Lotte Stam-Beese, head of the Department of Urban Development and Reconstruction, was commissioned to design Pendrecht (1949-53), the westernmost development of the Zuid plan that expanded Rotterdam to the south.

10. VAC Rotterdam, Exhibition report 1952.

11. Irene Cieraad, 2005

12. VAC Rotterdam, Exhibition report 1954.

13. VAC Rotterdam, Minutes, 23 October 1954.

14. Johanna Kroep-de Jonge, 1956.

Stam-Beese proposed the 'housing unit' (*wooneenheid*) as the basis for thinking in terms of an ascending series of spatial units: dwelling, group, neighbourhood, district, city. The VAC took part in the decision-making on all levels, including urban densification, development of the residential buildings, the interior of the units through the exhibitions and the monitoring of the results of the project through resident surveys.[15] Four apartments were furnished in the Pendrecht III complex by architect Harry Nefkens. Annie's layout included furnishing almost all the rooms with a mixture of old and new pieces that were not very expensive. (**Fig. 1**)

According to the VAC report, not all furniture (drawers under beds, children's bins) was already mass-produced, however, it was intended to be reproduced by the residents. This reinforced the non-commercial character of the modelflat as well as the role of housewives as designers and not simply consumers. Activities included a lecture on the history of housing and the future development of Pendrecht, as well as film screenings and a discussion forum. Additionally, the VAC brochure, '*Finally a house',* was distributed and included drawings and practical advice on how to organise the interior of the home. [16]

Crowswijk´s innovative exhibition, *How to make space in my house?,* was the clearest example of the democratic sense of the modelflat. It was located in a social housing complex affected by severe affordability problems in a marginal urban area of the Crowswijk neighbourhood (12-15 March 1955). The initiative was taken by the local Working Committee of the Protestant Church to help a large number of poor families to make better use of the space in their small dwellings with only one or two rooms. [17]

Annie furnished four four-by-five-metre rooms with the kitchen and the door as fixed elements. The first room had the existing residents' layout (symmetry, centrality). In the second, the same furniture was used to show how the modern asymmetrical organisation provided more space and better-differentiated uses. The third room included only modern or simpler furniture, exploring a new aesthetic. The fourth room had the same furniture as the third, but accentuated the spatial effect.[18] (**Fig. 2**) Modelflat was visited by 600 people, most of whom were interested in the second proposal as they could use their own furniture.

VAC's modelfat helped residents to create their own interiors by achieving one of the most important principles of modernity: total design. VAC archives and newspapers reported on the popularity and impact of the exhibitions. Extensive photographic records from the Department of Housing showed the influence of the modelflat on everyday life. Residents set the interiors using space, light, visuals and connections to the gardens. They used the same modern furniture and lamps designed by Wim Rietveld or Willem Gispe, alongside objects from their own history and identity, such as plants, picture frames and antique furniture. (**Fig. 3**)

Until the mid-1960s, Annie's ideas were integrated into several modelflats, spreading modernity to thousands of homes. By 1956, the VAC took the decision to stop organising its own exhibitions due to the work

15. Carolina Quiroga, 2021.

16. VAC Rotterdam, Exhbition report 1956.

17. Johanna Kroep-de Jonge, 1955.

18. VAC Rotterdam, Minutes, 3 March 1955.

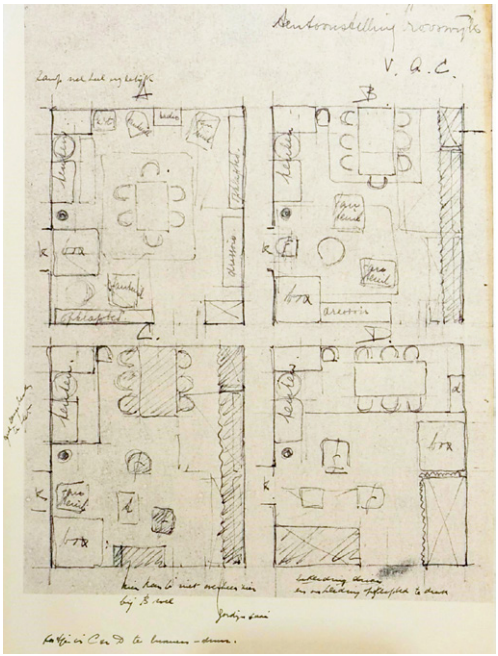
Figure 1. Pendrecht district and modelflat by Johanna Kroep-de Jonge, 1956 © Stadsarchief Rotterdam, Fototechnische Dienst Rotterdam, L 3010/ THO-1790



Figure 2. VAC's modelflat in Croswijk, plan by Johanna Kroep-de Jonge, 1955 © Gemeentearchief Schiedam, Archive number 608 ir. W.C.M. Jansen



Figure 3. VAC's modelflat in Zuidwijk (1954) and resident designed-home (1957) © Stadsarchief Rotterdam, Fototechnische Dienst Rotterdam, L 896/ L 3004







involved and avoid cooperating with other initiatives (Correct Living, Bouwcentrum, Men and House Foundation) that were not based on the residents.[19] The committee continued to advise on model homes in private initiatives, such as the furniture companies De Klerk (Barendrecht, 1957 and Lombardijen, 1960) and Martens (Hoogvliet-Westpunt, 1960), and Housing Corporations (Zuidwijk, 1960). In 1964, working with De Klerk, they advised on 4 modelflat in buildings for the elderly in Tuinenhoven, Alexanderpolder and Tuynenburg.

19. VAC Rotterdam, Report, 8 August 1956.

4. PERMANENCE AND CHALLENGES

The modern values of the VAC remain in the configuration of the post-war stock building. The concepts of light, air and space are still considered valid in providing a better life and defining the social identity. From the 1980s onwards, when the state covered the housing deficit, the housing corporations began to renovate the complexes distorting their characteristics or, in fact, demolishing them to build new ones. In recent years, this constructed heritage has been revalued and protected, but its conservation is difficult due to its large scale and population.

Bringing the significance of the VAC as a spatial practice to the present has great potential in the rehabilitation of mass housing. One of the fundamental learnings to be taken from the VAC was that the modern interior is an indivisible dimension of the urban and architectural aspects and that it was the residents who could design them themselves. Understanding this historical condition of mass housing can shed light on what is considered Dutch best practice. It focuses only on architectural values (historical, expressive, typological) and intervention guidelines (restoration of façades, adaptation of facilities, remodelling of ground floors). However, projects rarely address interiors, let alone involve the inhabitants.

Modelflat, designed by Kroep-de Jonge, has the capacity to reverse this situation by activating rehabilitation processes that once again achieve spatial democratisation. Its didactic and participatory essence is a trigger for residents to learn from and appreciate the merits of modern interior design, as well as to elaborate new meanings about these concepts in accordance with contemporary culture, their own history and subjectivity.

Another not-insignificant issue is the pioneering social value of integrating an intersectional feminist perspective by reversing gender hierarchies and stereotypes in spatial design in socially vulnerable sectors. This is a priority matter in the agenda of sustainable development and urban public policies. The challenge is to integrate it into heritage conservation in the context of new social dynamics: coexistence groups, diverse identities, multiculturalism, among others.

Revisiting modernity from a feminist perspective has provided insight into a completely unknown aspect of the past and present. In the same spirit of the VAC, reclaiming the voice of the women on the committee and their experience can trigger more inclusive and democratic approaches to modern heritage conservation. ■

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BIOGRAPHY

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RECLAIMING THE OUTDOORS: CHALLENGES IN RETROFIT, DESIGN FOR AGEING AND WELL-BEING IN MODERN MOVEMENT ACCESS GALLERIES AND WALKWAYS

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ABSTRACT

Transitional spaces, such as galleries as access systems in residential buildings, were widely explored architectural devices in Modern Movement architecture. These devices were also frequently linked to the idea of communal spaces. The purpose of this article is to confront the design solutions advocated at that time with ageing in place and well-being challenges, incorporating accessibility, independent living, health, and comfort issues as unquestionable needs in the contemporary age. Despite the distinguishable qualities of the original design, the demands for comfort and well-being have evolved exponentially over recent decades, as well as the need to deal with inclusive design and the urges of climate change.

Three examples built in the 1950s in Porto, Portugal, commonly recognised as references with architectural value have been selected. The buildings incorporate galleries or raised walkways, providing access to apartments with distinguishable features regarding spatial organisation, and which have mostly been kept in their original condition. These galleries vary in size, materials, and openness to the dwellings, revealing wide-ranging appropriation possibilities.

Despite the challenges in times of crisis, these circulation spaces offer great potential to increase the inhabitants' living conditions and the interior qualities of the apartments as extensions to the outdoors (sun, fresh air, views). Hence, this article will address the following questions: what former design and spatial features can be retrieved in contemporary housing design solutions? How can raised walkways and galleries contribute to enhancing well-being and inclusiveness? Are these spatial devices fully adaptable to current demands without a loss of the building's identity and the apartment's inner qualities?

While scoping the richness of the Modern Movement housing legacy, the purpose of this discussion proposal is two-fold: to evaluate conscientious retrofit actions of culturally valuable housing stock and to advance yet-to-be-learned design solutions that may enlighten contemporary visions and best practices.

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1. INTRODUCTION

This article outlines the role of transitional spaces in the Modern Movement housing design and their potential to accommodate current needs and enhance health and well-being.

The built environment has profound implications for quality of life, affecting health and well-being[1]. Improving living standards implies a broad understanding of several factors (among which, psychological and emotional aspects play a fundamental role). Healthier ways of living can be achieved through architectural design, considering tackling not only the building's physical elements, such as improved ventilation, adequate temperature, or light, but also how the inhabitants appropriate space. Therefore, housing design strategies should increase diversity and adaptability[2] promoting holistic visions that connect societal challenges, such as the ageing population, the urgency of climate change, energy efficiency, and the rising involvement of the inhabitants in co-creation processes and project decisions. The ageing population issue is a complex, multi-factor phenomenon, posing challenges to housing design beyond mobility, accessibility or barrier-free environments. Homes should be readily adapted for people as they grow old or face a disability, enabling inhabitants to live independently in varied housing typologies suited to personal choices or support levels, mostly within their communities. Furthermore, the challenges in design for ageing include regaining outdoor spaces as key devices to improve health and well-being as people grow old.

The retrofitting of Modern architecture is a historical and social imperative undertaking, stemming from the need to adjust to the abovementioned contemporary challenges and the required protection of its cultural and architectural heritage legacy. Effectively managing the preservation of this heritage alongside energy-efficient solutions is mandatory to ensure the longevity and significance of these housing complexes and the comfort of their inhabitants.

The access gallery is a shared distribution system that enables entry to several apartments with a single vertical communication hub, granting an economy of resources. In addition to a transitional space character, the galleries have a liminal identity anchored in a sequential passage ritual.[3]

Although often seen as controversial spaces due to their widespread implementation in state-funded housing in low-income-level neighbourhoods (highly ideologically driven in the 1960s, e.g., the 'streets-in-the-sky', namely Park Hill, Robin Hood Gardens, Golden Lane housing estates) in previous decades, these "in-between" (outdoor-indoor) spatial devices were noteworthy for their design details and spatial qualification, being part of widely accepted architectural solutions for the middle classes.[4] [5]

Several contemporary proposals are recovering the potential of the raised walkways/access galleries as critical architectural devices to promote and improve well-being, leading to increasingly generous spatial areas. Positive behaviour, intergenerational encounters, social connections, and physical activity, for instance, are among the most recognisable benefits of these shared spaces, as recent studies have highlighted in similar contexts to those

1. WHO, *Who Housing and Health Guidelines* (Geneva: World Health Organization, 2018).

2. Peter A. Dunn, "The Impact of the Housing Environment Upon the Ability of Disabled People to Live Independently," *Disability, Handicap & Society* 5, no. 1 (1990): 37-52.

3. Arnold Van Gennep, *Les Rites de Passage: Étude Systématique Des Rites* (Paris: A. & J. Picard, 1981).

4. João Cunha Borges and Teresa Marat-Mendes, "Walking on Streets-in-the-Sky: Structures for Democratic Cities," *Journal of Aesthetics & Culture* 11, no. 1 (January 01, 2019): 1596520, https://doi.org/10.1080/20004214.2019.1596520.

5. Esperanza M. Campaña Barquero, and Daniel Movilla Veja, "Liminalidad y Comunidad. La Disolución de Lo Urbano En La Unidad Vecinal de El Taray," *ZARCH*, no. 14 (November 3, 2020): 86–99. https://doi.org/10.26754/ojs_zarch/zarch.2020144299.

of Portugal[6] and can be seen in recent projects such as La Balma (Lacol 2021) or Alí Bei (Pau Vidal 2020). This model continues to be a recurrent choice, as evidenced in ongoing projects, for example, Carrer Veneçuela (Peris + Toral, under construction).

The first section of this article reviews the buildings' characteristics and establishes the analysis of the access systems as the interplay between formal principles and modern inhabiting. The second section draws on research on solutions and best practices, confronting the retrofit challenges in the case studies with contemporary paradigms in other contexts and built solutions. Finally, the last section (Conclusions) establishes the obstacles and potential involved in reclaiming the outdoors to improve health and well-being in existing modern housing buildings.

2. RECLAIMING THE OUTDOORS AT OURO, AFONSO V AND PARNASO BUILDINGS

2.1. MATERIALS AND METHODS

Targeting the design characteristics of the raised walkways/ access galleries, the methodological approach to the selected case studies foresaw onsite inquiries pursuing the identification of accessibility obstacles and comfort deficiencies, identifying alterations made by the inhabitants and the solutions implemented to achieve higher standards of comfort. Passive design strategies from the construction period were analysed to empirically evaluate the buildings' adequacy to contemporary sustainability and energy efficiency challenges. An assessment of the ageing population's needs was also conducted, targeting not only accessibility problems identified in the outdoor circulation areas but also the potential of the transitional spaces to improve the well-being of the inhabitants, particularly the older adults.

Challenges to retrofit were identified and confronted with solutions and best practices found in other national and international intervention solutions.

2.2. THE INTERPLAY BETWEEN CONSTRUCTION, LANGUAGE, ACCESS SYSTEM AND DWELLING

Constructed in the 1950s, the three case studies – Ouro (Arch. Mario Bonito, 1952-1955), Afonso V (Arch. Pereira da Costa,1953-1955), and Parnaso (Arch. José Carlos Loureiro, 1955-1959) – were designed by architects who were extremely active and influential during this period, having introduced conceptual innovations in national architectural production: in urban framing (posing alternatives to the traditional city block and introducing common green spaces), in access systems (articulating vertical systems with access galleries), in the functional programme (combining housing with commerce and/or services), in the typology design (through the rationalisation of space standards), in construction systems (introducing reinforced concrete structures), and in materiality (experimenting through materials and textures). However, despite recognising this common and identity-defining language, these buildings exhibit great diversity in terms of their formal options and spatial organisation[7].

6. Sergio Martín Blas, Guiomar Martín Domínguez, and Maria Cristina D'Oria, "Shifting domesticities: recent social housing practices and policies in Spain," City, Territory and Architecture 11, no. 1 (2024): 4-6, 8, https://doi.org/10.1186/s40410-024-00226-8.

7. Luciana Rocha, "The Preservation of Authenticity and the Awareness of the Necessary," *DOCOMOMO Journal. Modern Housing. Patrimonio Vivo*, no. 51 (2014): 80-84.

Although the Ouro, Afonso V, and Parnaso buildings exhibit significant experimentation in using gallery access systems, they partly differ due to these background circumstances and formal decisions.

As architectural devices connecting the collective exterior and individual interior, the access galleries motivate the distribution of apartments with service areas facing the access and the main rooms on the opposite façade for privacy protection. However, the case studies also allocate bedrooms or living rooms directly facing the galleries. In these cases, the privacy of the apartments is ensured by differences in levels between the exterior and the interior and by the design of elevated windows in these compartments, as seen in the Parnaso and Ouro buildings. Moreover, in the Afonso V building, a solution with horizontal grilles in service areas (laundry) optimises the ventilation and lighting of these spaces.

The galleries also play an essential role in promoting social encounters. Although these spaces are mainly designed as circulation areas in the cases under analysis, given their narrow width and limited relationship with the apartments' indoor areas, there are also some larger adjacent social spaces. For example, the first-floor gallery in the Ouro building is a covered exterior space delimited by a pillar structure supporting the upper floors. This area extends to a private but collective-use exterior terrace above the ground floor (**Fig. 1**). The difference in levels (with the terrace being slightly lower) and flooring materials (terrazzo in the gallery and mosaic on the terrace) stands out in the relationship between these two spaces. On the top floor of this building, there is another intermediate, exterior, and collective space, located on the sides of the setback volume of the housing units. The Afonso V building also incorporates a private terrace for collective use situated slightly below the gallery on the first floor (**Fig. 2**). The absence of these areas in the Parnaso building is compensated by generous private individual balconies facing south and a collective central area inside the plot for everyday use (**Fig. 3**).

Thus, these architectural devices take on particular relevance in the design of the elevations and the architectural language of the ensemble. This feature is particularly significant in the Parnaso building, where the galleries configure the North façade of the larger volume. In this case, they also serve as a protective barrier against wind and noise from the adjacent street, exhibiting elevated high walls with opaque planes and occasional glass areas (**Fig. 3**).

In the Afonso V building, the design of the access galleries is associated with the construction system of the ensemble, notably through the integration of the pillars of the East façade. Furthermore, this case is also noteworthy for the use of colour in specific elements, such as the balcony guards and the occasional connection to a volume of staircases of a sculptural nature (**Fig. 2**). The main galleries of the Ouro building, facing south, present two distinct materialities: perforated brick balconies on the intermediate floors and opaque balconies on the upper floor. This floor also incorporates vertical grilles in front of the entrance doors to the dwellings (**Fig. 1**).





3. RETROFIT. SOLUTIONS AND BEST PRACTICES

Despite their architectural and spatial qualities, these buildings face challenges regarding the needs and well-being of the ageing population. One of the main problems lies in the physical barriers, such as the absence of a lift in the Afonso V building or the level differences between the galleries and the interior of the apartments, as in the Ouro or Parnaso buildings. These barriers hinder the circulation of people with reduced mobility and complicate the future adaptation of the buildings. Additionally, design options such as placing service areas (e.g. kitchens, laundries) facing the galleries or elevated windows affect the relationship of the apartments with these indoor-outdoor intermediate spaces. With other features (e.g. broader width), they could perform as living areas and as an extension of the interior spaces, such as in La Balma. In this regard, the narrow width configuration of the galleries gives them a predominant circulation character. However, the Ouro building shows

Figure 1. Arch. Mário Bonito, Ouro building, Porto, Portugal, 1952-1955. © Credits: Carlos Albuquerque Castro (top, 2016), Luciana Rocha (centre and down, 2011-2012).

Figure 2. Arch. Pereira da Costa, Afonso V building, Porto, Portugal, 1953-1955. © Credits: Carlos Albuquerque Castro (top, 2016), Luciana Rocha (down, 2011-2012).

Figure 3. Arch. José Carlos Loureiro, Parnaso building, Porto, Portugal, 1955-1959. © Credits: Carlos Albuquerque Castro (top, down left, 2016), Luciana Rocha (down right, 2011-2012).

Figure 4. Arch. Pau Vidal, Alí Bei building, Barcelona, Spain, 2012-2020. © Credits: Gisela Lameira (top, down right, 2024), Arquitectura Viva (down left)

signs of appropriation of these spaces by the inhabitants. Nevertheless, this is limited to placing plants near the entrance of the apartments and clotheslines on the balconies. The absence of shading systems, especially in the south-facing galleries, is also a problem in terms of ensuring space comfort, given the need for more control over sun exposure.

These intermediate, transitional spaces reveal great potential to improve the living conditions of the inhabitants and promote community relationships.

The terraces next to the galleries represent valuable and frequently underutilised spatial assets. A significant endeavour towards transforming these areas would be to install communal facilities, such as benches and tables, thus fostering interaction among residents and boosting the sense of community. The incorporation of greenery and the establishment of communal gardens should also be considered. These elements can enhance spatial comfort and promote the adoption of healthy practices, including homegrown organic products. Illustrative examples of such initiatives can be found in the residential ensemble for older adults, social housing, and temporary housing on Carrer Veneçuela (Barcelona, under construction) and the mixed-use complex featuring accommodation for the elderly and public amenities in Glòries (Barcelona, 2017), both designed by Peris + Toral architects or in Alí Bei social housing ensemble in Barcelona by the Paulo Vidal architectural practice (**Fig. 4**). In Ouro and Afonso V, these areas take on even greater importance to mitigate the lack of space in the predominantly narrow galleries.

The installation of shading systems to regulate and offer protection against sun exposure, especially in south-facing galleries, would also represent a significant means of improving comfort. Architectural cooperatives, such as Lacol, frequently employ these devices as part of passive strategies for bioclimatic construction. Housing cooperatives such as La Balma (Barcelona, 2021) and La Borda (Barcelona, 2017-2018) are exemplary for their incorporation of roller blinds on balconies.

The galleries may also function as spatial devices for thermal regulation, resembling Winter Gardens or Greenhouses, which have had a recognised historical impact[8 9]. Moreover, glazed balconies offer many advantages, especially in cold climates, regarding optimising the greenhouse effect to enhance thermal comfort and energy savings. However, these devices can jeopardise the overall indoor environmental quality, triggering overheating problems and reducing air flow and natural light in adjacent interior spaces. To mitigate these problems in warmer climates, this system must be combined with passive techniques to avoid overheating, such as solar shading and ventilation solutions[10]. Galleries should be regarded as dynamic elements to avoid disrupting the cross-ventilation of the surrounding spaces, especially the interior of the dwellings. This airflow could be maintained by installing ventilation grilles and mechanical sensors for automatic opening. This design approach is recognised in the works of Lacaton & Vassal such as the Grand Park (Bordeaux, 2017), offering a contemporary interpretation of

8. Edward Allen, *How buildings work: the natural order of architecture* (Nova Iorque: Oxford University Press, 2005). ISBN: 978-0-19-516198-4.

9. Nick Baker, and Koen Steemers, *Energy and Environment in Architecture: A Technical Design Guide* (London: E & FN Spon, 2005). ISBN: 0-203-22301-2.

10. Catarina Ribeiro, Nuno M. M. Ramos, and Inês Flores-Colen, "A Review of Balcony Impacts on the Indoor Environmental Quality of Dwellings," *Sustainability* 12, no. 16 (2020): 14, https://doi.org/10.3390/su12166453.

the Greenhouse concept. Another example is the renovation of House 1522 by H Arquitectes (Barcelona, 2015-2017), using a glazed enclosed space as part of a bioclimatic scheme.

The placement of a door with an air-permeable structure in the antechamber of the duplex housings in the Afonso V building may also improve the cross-ventilation of the dwellings. This solution of intermediate spaces between the access and the dwelling has been used in recent constructions such as the Alí Bei social housing ensemble. (**Fig. 4**). These alterations evidence the adaptability of these buildings to current demands.

4. CONCLUSIONS. OBSTACLES AND POTENTIAL FOR IMPLEMENTATION

Reclaiming the outdoors, the transition spaces between housing structures and the city, involves reframing the existing areas, often used solely for circulation or without an assigned use, to enhance the role of architecture as a promoter of improved health, well-being, and ultimate happiness. The formal and programmatic experimentation seen in some examples built in the 50s and 60s, in terms of access schemes, flat roofs and terraces, bring inherent qualities to the buildings, which nowadays enhance their appropriation as collective extensions of the dwellings.

However, when discussing Modern Movement Architectures, especially the paradigms with greater collective recognition, some obstacles to intervention may be identified.

1. The conflict of hypothetical alteration solutions with the preservation of the protected heritage: the Parnaso building has been classified as a Monument of Public Interest (MIP) since 2013; also, the Ouro building and the Afonso V building were identified as Properties of Heritage Interest in the Heritage Charter of the Municipal Master Plan of Porto, which might hinder changing the exterior envelope of the buildings or installing equipment without obtaining a prior permit, or without significantly altering their original architectural language and identity.
2. The condominium/inhabitants frequently pose barriers to the placement of mobility aids equipment (e.g., lift platforms), often for aesthetic reasons, and to the design of communal use facilities, mainly due to cultural resistance to shared spaces within the building (security, noise, management problems). At this point, in some cases, such as the Ouro building, some equipment has already been installed to reduce physical barriers. However, it is still very restricted and does not guarantee free movement in the entire building.

   Despite the need to address the issue of accessibility holistically through a plan from the entrance of the building to the apartments and common areas, some obstacles are, in fact, impossible to overcome. The significant experimentation found in these buildings (steps along the pathways linked to degrees of privacy and differentiation, for instance) brings overall spatial quality.

3. The inexistence of knowledge of building use among the residents leads to reduced levels of comfort and all kinds of construction pathologies. For example, cross-ventilation and shading should be ensured, especially when enclosing the access galleries, however these factors are frequently neglected when such interventions take place. An active pedagogy towards use of the building's elements and enhancing the overall energy performance of the building[11] could mitigate some of these problems through the development of user manuals, or training sessions.

Spaces frequently found in modern movement paradigms built during the 1950s, namely terraces and accessible roofs, can easily house equipment and activity areas. Also, recessed raised walkways could incorporate enclosed areas to promote winter gardens.

Access galleries can enhance well-being by promoting controlled appropriation areas, allowing for living spaces that complement those inside the home, and/or providing equipment for collective/ individual use (areas associated with leisure, namely physical activity, social gatherings, or productive activities: gardening, cultivation, domestic activities, among others). Furthermore, intervention solutions must be confronted with the inhabitants' perspective according to their cultural backgrounds, needs and habits.

These spatial devices carry considerable potential and can be adjusted and adapted differently to meet contemporary demands: the fact that recently concluded housing projects in Spain systematically recover these intermediate spaces supports this idea. ■

11. Gisela Lameira, Rui Jorge Garcia Ramos, Nuno Valentim, and Azar Mohammadpanah, "Good Architecture Matters: The Architect's Perspective on Design for Ageing and Energy Efficiency," *Buildings* 13, no. 4 (2023): 29, http://dx.doi.org/10.3390/buildings13041067.

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FROM PROVINCIAL TO INTERNATIONAL: MODERN INTERIORS OF A CURITIBA IN TRANSITION

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ABSTRACT

Fashion, decoration, and lifestyle magazines were primary vectors in the dissemination of the "precepts" of modern life in Curitiba, capital of the state of Paraná, Brazil since the 1920's. From the 1950s the city went through an economic and cultural expansion, supported by the wealth brought by agricultural expansion, which would culminate in its international notoriety, thanks to well-publicized transformative urban actions, where houses with an eclectic style, construction techniques and furniture arrangements that recalled references from the origins of European immigrants gradually its gave way to residential projects with less hierarchical plans and more functional, illuminated and fluid spaces, with more rationalized structural solutions and in tune with the modern architecture. Selected from among the modern Curitiba residences published at that time, two case studies are presented in the following article: one at the beginning and other at a more consolidated moment in this "modernization" process; both for clients with the same desire: to be modern: the Cleuza and Ayrton Cornelsen residence (1949) designed by the resident and architect Ayrton Cornelsen himself; and the unbuilt project of the Hellio Setti residence, by the then engineer and architecture student Jaime Lerner (~1963), future urban planner and mayor of the city. The focus of the analysis sets on the study of architectural interiors, and the verification of how they are presented graphically and textually as part of the catechization effort to disseminate the values of modernity in a city yet to be modernized.

1. INTRODUCTION

Fashion, decoration, and lifestyle magazines were primary vectors in the dissemination of the "precepts" of modern life. Curitiba, the capital of Paraná State, Brazil – still a provincial city by the middle of the 20th century – experienced great growth after the 1950s. The city experienced an economic and cultural expansion supported by agricultural wealth, and in the 1960s-70s Curitiba gained international notoriety thanks to well-publicized transformative urban actions. At that moment its upper-class former rural shyness gave way to the longing of public show-off and intellectual pursuit. Publicity articles focusing on house interiors aimed at the bourgeois class were written in the manner of "domestic manuals" with informative subjects on architecture and interior design trends, highlighting houses considered as "modern and functional", closely followed by readers from the intellectual and upper classes aiming to live with the updated technological, social and artistic innovations of metropolitan Brazil and the modern world. Illustrated magazines, from Rio de Janeiro and São Paulo, and others locally produced increased their circulation in Curitiba. Their articles opened up space to aesthetic judgments, which valued the modern atmosphere of residential interiors and inspired the Paraná elite. Eclectic houses made with outdated construction techniques and cosy furniture arrangements, reminiscent of the immigrant's European origins gradually gave way to residential projects with less hierarchical plans, more functional, illuminated and fluid spaces, and more rational structural solutions in tune with the modern architecture.

The written press, both technical and lifestyle-oriented, was an important vehicle for cultural dissemination and opinion formation on the aesthetic tastes of life, interior design and domestic living in Curitiba. Our current research is looking at a broad amount of these documentary sources; they provide the collecting of a considerable volume of information. Among the modern Curitiba residences published at that time, two case studies have been selected to be discussed in this article. One was created in the beginning and the other at a more consolidated moment in this "modernization" process; both for clients with the same social desire and economic means. The Cleuza and Ayrton Cornelsen residence (1949) was designed for his family's personal use by architect Ayrton Cornelsen. The unbuilt project of the Hellio Setti (1963) residence was designed by the engineer Jaime Lerner, who was studying architecture and would gain notoriety in the next decade as an urban planner and city's mayor. The focus of the analysis is on the architectural interiors and how they are graphically and textually presented as part of the catechization effort to disseminate modern interior values, such as open plan floor concept, modern and functional furniture, adaptive spaces and the impression of the client's characteristics in the overall design of the house.

2. AYRTON & CLEUZA CORNELSEN RESIDENCE

An isolated figure in the dissemination not only of modern residential architecture in Curitiba in the 1940s and 1950s but also of its modern interiors, Lolô Cornelsen was a contemporary of Curitiba-born architect Vilanova

Artigas, who early moved to the metropolis of São Paulo leaving Lolô alone to face the conservative Curitiba class, with almost no pairs until the arrival of a group of Paulista architects that came to the city in the early 1960s.

From a troubled upbringing, Lolô adopted as a surrogate father the French master Le Corbusier, with whom he got acquainted by reading his books, received as a gift from the urban planner Alfred Agache séjour in Curitiba, in 1943. His residence gives testimony and witnesses his discipleship commitment, demonstrated by the treatment of natural light in the internal spaces, and the Corbusian pilotis and free plan. Not to mention the maestro's inspired curves – unheard up to then in Curitiba's architectural panorama and hardly seen again in the following decades in single-family homes.

The Ayrton and Cleuza Cornelsen house design was published in the magazine "A divulgação" (1953), under the title "An example of functional architecture"[1]; the main interest of the article was on the "most beautiful interiors in the capital". The article focuses on the house's interiors, with three images and just one photo of its exterior, highlighting the detail of the curved railing designed and the abstract ceramic panel on the facade. The magazine aimed to emphasize the new features of a modern routine, crowned by a project that did its justice, to draw people's attention to the new times that were announced and had finally arrived.

The project designed by the architect for himself and his family was unlike anything previously seen in Curitiba at the time. It was located at the back of the plot, and the vegetation, or the "bush" – an inconvenience for the local elite – was given extreme importance in the draft of the plans and for the internal temperature control (DUDEQUE, 2001). It is worth mentioning that during the 1940s, the temperature range in the capital of Paraná used to reach negative temperatures in the winters and exceed 35°C in the hottest months. Lolô's solution was to design and build the house following the incidence of the sun, defining a point where all the walls of the house converge from the parallel movement of the sun near the winter solstice (25°C S), creating a fan-shaped floor plan.

Thanks to this approach he was able to create a sunlight incidence balance, whereas in the morning the bedrooms, with their north-facing façade, received more light during the winter and were shaded during the summer, and the same happened with the other areas of the house, social and service, as the day went on. The north face, punished by the sun during the summer, on the other hand, was protected by native vegetation, carefully crafted by the architect.

In addition to its unconventional location at the back of the property, the main access from street level and a curved path that led to the car garage on the lower level, which was set into the ground, the main floor plan featured a balcony with large glazed openings, giving access to a ballroom with a bar, where the family entertained their friends.

Highlights of the house include the smooth ceiling, modern furniture with comfortable armchairs and the biomorphic table (1947) signed by Isamu Noguchi, as well as the woodwork designed by the architect himself to meet his needs: a counter attached to the wall without a base.

1. A DIVULGAÇÃO, "Um exemplo da Arquitetura Funcional," *Graficart* (Curitiba), November 1953, 34-35.

This minute care is also found in the house's other rooms. In the dining room, there were Riga pine chairs and a blackwood folding screen used as a divider between the dining and living areas. The premise of the furniture design was to obtain clean lines and utility above all, as well as comfort, which is emphasized in the living room with comfortable, hand-stitched armchairs.

Another innovation proposed by the architect demonstrates his pioneering spirit, not only in the state of Paraná, but also in comparison with the interior housing decoration in the metropolis of São Paulo, which at the time was still taking its first steps towards more comfortable furniture. The English style of the living room was chosen at great cost, as the vast majority of society remained faithful to traditional French furniture, which was bound by the rules of luxury and the tradition of living rooms[2].

From the documentation studied, it is possible to confirm the use of various pastel colours in the living areas, such as pink, blue, green and yellow. In the architect's studio, there is a combination of modern furniture and curtains printed with Picasso drawings, expressing his tastes and personality. It should be noted that Cornelsen founded his own furniture and carpentry factory to produce modern pieces for his home and his clients, after not finding any local producers able to attend to his needs. In that workshop, he developed gates, windows, doors and all the wooden profiles that were used in his projects.

3. HELLIO SETTI RESIDENCE

The Setti residence, designed by Jaime Lerner, was featured in the most prestigious Acrópole architectural magazine, published in São Paulo, in issue no. 306, of May 1964 – but it was never built. The publication states that it was a house for a small family, with an intense social life (ACROPOLE, 1964).

The publication opens up with an image of the house's facade; there are also floor plans in a simplified drawing and some perspectives illustrating the internal spatiality and interior design. From the street, the house appears to be organized in three volumes: a wall that extends to the alignment, forming a fenced-in patio, a set-back horizontal stripe which culminates in the first floor of the house, and a smaller overlapping volume on the second floor, extending towards the facade. On the first floor are the social areas – arranged as an open space - part of the intimate area, located in the back of the plot, and part of the service facilities in the front façade - inverting the traditional house plan which was then familiar to the elite. The upper volume includes another part of the intimate area and the rest of the service facilities: another innovation, in terms of hierarchical spaces. What matters to the author is the functionality of the spaces according to the sunlight and natural ventilation, blurring the fixed definitions of what should be the "noble façades" of the residence.

The magazine draws attention to the internal arrangements of the house and emphasizes the room's interiors, by including the publication of several sketches showing the furniture designed by the author and its arrangement, featuring the library, the main bedroom and the living room.

In the library, there are sliding doors to isolate it from the living area if necessary; wooden furniture and stools were designed to fit into the gaps as

2. The author describes the transition from French to English furniture that gradually began to appear in the interiors of São Paulo homes as the combination of "two needs, physical and spiritual rest, being the objective of domestic decoration, which will concretely result in the combination of visual effect with physical comfort [...]". Vânia Carneiro Carvalho, *Gênero e Artefato: O Sistema doméstico na perspectiva da cultura material – São Paulo*, 1870-1920 (São Paulo: Edusp; Fapesp, 2020), 171.

bookshelves, when not in use. The living area occupies a lowered floor space so that the upholstered seating would be level with the rest of the home's floor. A water mirror on the side of the windowpanes extends outside the construction. This architectural and decorative solution is like one adopted at a "Case Study Houses" published by the American magazine "Arts & Architecture": the Miller Couple House (1957) in Indiana, United States, by architect Eero Saarinen.

The dining room was proposed with a fixed stone table, which would be covered by the same tiles as the floor, suggesting integration, simplification and continuity of material finishings. The chairs would have a straight design, with no ergonomic concessions, to be made from iron profiles, with a simple leather seat and backrest, and appear to be the architect's design. The bedroom features a bed made of rosewood (a wood still widely used in the 1960s), a Japanese lamp and exposed brick walls (ACROPOLE, 1964).

The proposed solutions were quite innovative, considering the panorama of Curitiba's residential architecture at the time, which was changing, but still were quite conservative. Another point of interest in the interior proposals is the partitions – one between the double bedroom and the dressing room and another, more subtle, between the living room and the dining room; both would be made up of furniture (cupboards). This solution was atypical until then in the houses of the capital of Paraná, although it was already present in other examples in Northern America, Europe and São Paulo homes, where the use of furniture as a room divider, designed by the architects themselves, also became common at this time (late 1950s and 1960s). It can be seen in the floor plans that the interior spaces are designed mainly for the social spaces, and in particular for the areas facing the patios and outdoor areas. In terms of layout, the furniture is placed in the room without obstructing circulation, with generous dimensions.

4. PARALLELS OF A CURITIBA IN TRANSITION

Both projects stand out for their interiors with functional lines, few adornments and modern furniture, a fact that emphasizes their publication in magazines in their respective periods.

However, Lolô Cornelsen's pioneering spirit and irreverence are clear. With a project dated 1949, if we put it side by side with Lerner's Setti residence from 1963, we could say that the projects are practically contemporary. Cornelsen implemented pilotis in a city where residential construction was mainly focused on eclectic facades and rococo furniture, so much so that he resorted to creating his own modern furniture and woodwork factory. Another point that stands out is his progressive design thinking when it came to electrical installations - locating several power sockets (for the forthcoming electrical boom) in the service areas, a trait that was still uncommon in the 1940s and 1950s.

Almost 15 years later, Jaime Lerner designed the Hellio Setti residence, paying attention to its interior details and furniture arrangement, allowing functionality to flourish in line with the personality of its residents. The then

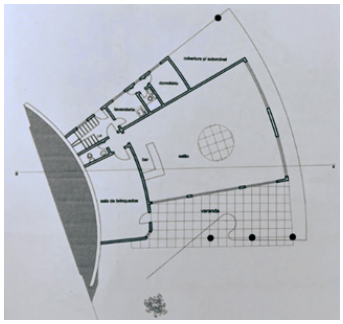
Figure 1. Ayrton "Lolô Cornelsen, Ayrton&Cleuza Cornelsen Residence, Curitiba, Brazil, 1949, lower lever floor plan. © Dudeque, 2001, p.151.

Figure 2. Ayrton "Lolô Cornelsen, Ayrton&Cleuza Cornelsen Residence, Curitiba, Brazil, 1949, ground level floor plan. © Dudeque, 2001, p.152.

Figure 3. Ayrton "Lolô Cornelsen, Ayrton&Cleuza Cornelsen Residence, Curitiba, Brazil, 1949, Ballroom. © Dudeque, 2001, p.153.

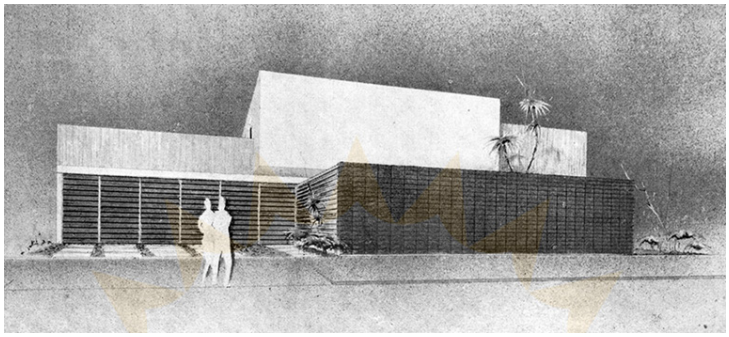
Figure 4. Jaime Lerner, Hellio Setti Residence, Curitiba, Brazil, 1963, Facade. © Acropole, N° 306, p. 42, 1964.

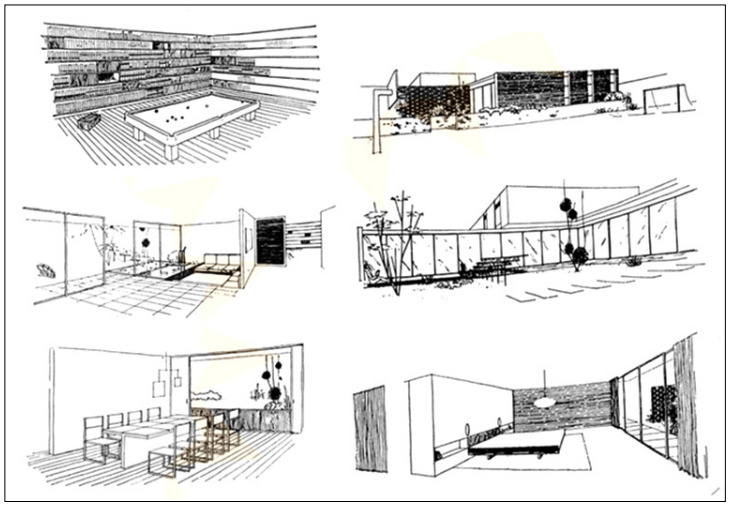
Figure 5. Jaime Lerner, Hellio Setti Residence, Curitiba, Brazil, 1963, Interior croquis. © Acropole, N° 306, p. 42, 1964.











architecture student's concern with the design of the furniture is notable in the project, an unusual characteristic of his contemporaries and last seen in Cornelsen's residences in previous decades. However, he differs from Lolô in the materials used, in which he uses brick and iron in his furniture. Lerner's architectural and interior design innovations, nevertheless, culminated in the project being published in a magazine with the widest national circulation.

The interior design qualities adopted by Lolô Cornelsen and Jaime Lerner coupled with the quality of the architectural project created the backdrop for the interior environments, when innovation was poorly understood by the conservative upper-class élite. Few were those who were willing to embrace change. But once the time for change came, the qualities of Curitiba's modern interiors began to be seen in the following years, carrying the legacy of the modern architect's daring interior design skills with a pioneering spirit. ■

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RATIONALIST ARCHITECTURE IN SEVILLE: JOSÉ GALNARES AND THE PROJECT FOR THE TOMÁS ALEHOUSE

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ABSTRACT

In 1934, José Galnares (1904-1977) completed the project for the refurbishment of the premises of the Cerveceria Tomás, or Tomás Alehouse as it is known in English, in the historic centre of Seville. Having studied architecture in Barcelona, he returned to his native city and carried out rationalist interventions in the alehouse, alongside other refurbishments of commercial premises. Through these designs, he demonstrated his skill as an architect, as well as his knowledge of the European avant-garde and his ability to design in detail.

The research we present here aims to highlight the exceptional nature of these avant-garde designs - brilliant examples of rationalism - in the context of 20th-century Seville in order to reclaim the relevance of the documentary collections as a source of knowledge of this ephemeral architecture that formulated an innovative image in the city. In highlighting José Galnares as a key architect of the modern movement in Seville, this work confirms his influences and commitment to the New Architecture. The study method is based on in-depth research and consultation of the unpublished documentation in the archives of José Galnares, with the aim of identifying all the planimetry referring to this project and the architectural typology to which it is linked. The bulk of the work is based on describing, analysing and contextualising all the planimetric production of these interior designs.

Through the detailed study of all this unpublished graphic production, we highlight the architect's skill and sensitivity at the earliest stages of his career. We show how, with these commissions, José Galnares demonstrates his expertise in renovation and his profound knowledge of the principles of modern academicism. In short, taking the refurbishment of this alehouse as a reference, we highlight the value of the recently recovered documentary collection and consolidate a historic moment, rationalism in Seville, by showing unknown projects that have unfortunately disappeared nowadays.

1. INTRODUCTION

In Seville, interventions in commercial premises were a professional field in which the modern style was to experience a notable acceptance - despite the conditioning factors of the Seville context - with José Galnares Sagastizábal (1904-1977) as one of its greatest architects. In 1934, in the heart of the historic centre of Seville, in the popular Calle Sierpes (or Sierpes Street as it would be known in English), José Galnares completed the project to refurbish the premises of the Tomás Alehouse. This young architect studied architecture at the Barcelona School of Architecture, where he was trained in the principles of the modern movement and the avant-garde. On completing his studies, he returned to his native city of Seville, which was going through a complex period of crisis at the time. The design of the aforementioned alehouse was to form part of a coherent group of refurbishments of rationalist premises in the historic centre of Seville, small commissions that the young architect shrewdly took advantage of in order to break ground in the professional market in Seville. With these designs, he demonstrated his skill as an architect, his knowledge of the European avant-garde and his ability to design in detail. These works served to inject the rationalist aesthetic into the Sevillian landscape with great mastery and to establish Galnares as a local reference in the field of new architecture.

2. GALNARES'S SOCIAL CONTEXT AND BIOGRAPHICAL NOTE

The modern movement in Seville began with figures such as Secundino Zuazo, Fernando García Mercadal and José Lluis Sert at the beginning of the 20th century. But it was not until the Second Republic that this movement experienced its greatest application with the contributions of Gabriel Lupiáñez, José Diaz Langa and José Galnares Sagastizábal, among others, who, despite the circumstances of the context of the time, were able to apply the foundations of rationalist architecture in the Andalusian city.

During the 1930s, Seville was conditioned by the economic depression and social conflict resulting from the complex period of the Second Spanish Republic (1931-1939). The Sevillian construction sector, like many other sectors of the economy, experienced an acute economic crisis caused by the international economic situation - derived from the 1929 Crash - and the Spanish political context. Sevillian architecture was in crisis, especially considering the previous period of splendour during the Ibero-American Exposition of 1929. For this event, the Andalusian city underwent a major urban renewal with architects playing a leading role. This explains how the city's architectural production went from a significant rise around 1928 followed by a sharp decline in the subsequent years, reaching its lowest point in 1933 with minimal output[1]. Such a situation remained complex with the political events in Spain and the distrust of capital during the Second Republic. Specifically, between 1933 and 1936 there were ups and downs in terms of architectural production because, depending on the political group that governed Spain, the financial sector either provided or failed to provide investment, interfering in productive activity.[2] At the same time, as

1. Alberto Villar Movellán, *Introducción a la arquitectura del regionalismo. El modelo sevillano* (Córdoba: Universidad de Córdoba, 1978).

2. José Manuel Macarro Vera, *La utopía revolucionaria: Sevilla en la Segunda República* (Sevilla: Monte de Piedad y Caja de Ahorros de Sevilla, 1985).

a consequence of the depression in the construction sector, unemployment levels increased and the problem of decent housing worsened.

Seville's particular situation was influenced by the dominance of historicist solutions during the first decades of the 20th century, which pushed new modern forms into the background. Although many of the local architects were trained in the Schools of Architecture of Madrid or Barcelona, architectural renovation in the Andalusian capital was not feasible due to the rise and expansion of historicism. Likewise, Sevillian architecture was conditioned by the lack, even in the 1930s, of a reasoned urban plan for the city, making it difficult both to expand the city and to apply new ideas to the urban environment.[3]

Our architect, José Galnares Sagastizábal (1904-1977), was born in Seville into a wealthy family of bourgeois descent. Of an ingenious character, the young Galnares moved to Barcelona to study architecture, immersing himself throughout that formative stage in modern knowledge and approaches. In particular, he was directly influenced by the European and international avant-garde, through masters such as Le Corbusier and Josep Lluis Sert. On completion of his studies in 1932, he returned to his native Seville with the fervent idea of conquering a city in depression; a place where Regionalism had established itself as the city's architectural style. Although Galnares's return coincided with the context of social upheaval and economic depression, the circumstances did not prevent our architect from embarking on his extensive professional career with unwavering dedication, fortitude, and tenacity.[4] His facet as a designer of modern interiors is noteworthy, as he contributed numerous notable projects in the rationalist style in Seville.[5]

3. RATIONALIST PROJECTS FOR COMMERCIAL PREMISES IN THE AREA AROUND CALLE SIERPES

In the popular Calle Sierpes in the heart of Seville - one of the city's historic arteries - the young José Galnares carried out a series of precise architectural interventions in the manner of small surgical operations in the centre of Seville in order to transmit the values and concepts of the new modern aesthetic to the bulk of the lay population.[6] And it was precisely in this period of crisis, which particularly affected the architecture and construction sector, that this type of minor renovation work served as one of the professional fields through which the modern style was able to establish itself more easily on the Sevillian architectural scene.[7]

The commercial environment of the aforementioned Calle Sierpes was to become an outstanding showcase for the new modern aesthetic, thanks to the various commercial premises of rationalist design that were built. In particular, Galnares became the professional who carried out the most projects in this architectural field in his time, a fact that is clearly demonstrated by his private archive. The study of Galnares' projects has allowed us to learn about a good number of interventions of this type, which were designed and executed in the mid-1930s on various ground floors of buildings intended for commercial use. For this study, we will focus on examples of interventions from 1934,

3. María del Valle Gómez de Terreos Guardiola, *Arquitectura y Segunda República en Sevilla* (Sevilla: Ayuntamiento de Sevilla / Patronato del Real Alcázar de Sevilla 2006). ISBN 849667214X.

4. Martín Losada and María del Valle, *Vida y obra de un arquitecto sevillano: Don José Galnares Sagastizábal (1904-1977)* (Sevilla: Ediciones de Andalucía, 2004).

5. Germán Reyes Mota and Antonio Huertas Berro, "Reanimando nuestra memoria: El legado de José Galnares Sagastizábal", *NEUTRA* no.18 (2023): 44-51, accesed March 2024, https://www.revistaneutra.org/RN/article/view/775/631

6. Francisco Javier López Rivera, "El proyecto de construcción de la imagen de la arquitectura moderna 1925-1939 Andalucía, Margaret Michaelis," Tesis Doctoral, Universidad de Sevilla, http://hdl.handle.net/11441/24109.

7. José María Jimenez Ramón, "Los locales comerciales, una de las vías de introducción de la arquitectura moderna en nuestra ciudad", *Catálogo de la exposición con motivo de la celebración de la II Semana de la Arquitectura de Sevilla* (2003): 74-96.

the first of which was the unique Tomás Alehouse on Calle Sierpes no. 102 and Calle José Rizal no. 19. This project was followed in the same year by the interventions of Calzados Segarra on Calle Sierpes no. 25, Lechería SAM on Calle Martín Villa no. 9, Banco de Los Previsores del Porvenir on Calle Rioja no. 9, Philips Ultra Radio shop on Calle Sierpes no. 34 and Salón de Té Gayango on Calle Tetuán. All of these proposals for rationalist-designed premises were executed thanks to the detailed development of each design.

4. THE PROJECT FOR THE TOMÁS ALEHOUSE

The refurbishment of the Tomás Alehouse was the first published work by José Galnares. This project was commissioned by the hotel businessman Tomás Galiana in 1932 for the adaptation of the premises as a bar located in the aforementioned Calle Sierpes in Seville. Executed a year later, it was a project for the interior reform of premises on a narrow, elongated plot with a facade at both ends leading onto both Calle Sierpes no. 102 and Calle José Rizal no. 19. With a very specific use and programme, the proposal executed by Galnares is extremely interesting, incorporating a modern aesthetic strategy and response never before seen in the centre of Seville.

The premises, situated on the ground floor of a building between party walls, presented itself as a complicated intervention in advance owing to the very geometry of the space both in plan -an excessively narrow and elongated plot- and in the irregularity of the longitudinal section -which was cut by the hanging beams and structural buttresses of the existing building- resulting in an uneven space with different heights in each bay.

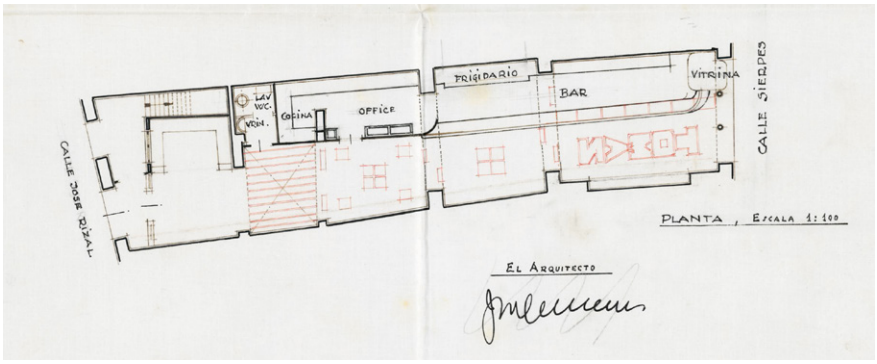
After carefully observing the project's original planimetry and the photographs of the finished intervention, we analyse and demonstrate the strategies that the modern architect José Galnares devised to execute such a unique piece of work.

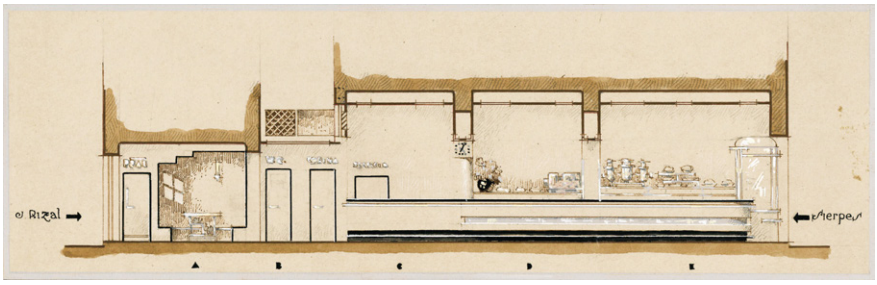
If we consider the floor plan, the scheme that organises the space is clear, a functional programme in which the plot is segregated into two longitudinal strips: the service area and the public area. The first strip, in which the service spaces are articulated, contains the interior space of the bar, the catering equipment, the office, the kitchen and the toilet; the second strip, which is a little wider, is the leisure space for the customers (Fig. 1).

Having reviewed the remaining drawings made by Galnares, it is clear that the great interest of the proposal lies in the study of the sections of the project. As José María Jiménez Ramón mentions in his article, it is evident that the architect in this project understands the machinery as a fundamental element in his modern intention; in fact, the solution of the section responds primarily to the distributive and functional conjunction of the machines in relation to the workers and clients.[8]

This is why, focusing on the longitudinal section, we point out how, when faced with the problem of the excessive depth of the site and the different heights it presented, the architect took this condition as an opportunity to articulate the total volume into smaller spatial units, thus dynamising the total spatiality and establishing a unitary strategy in the intervention. To achieve this,

8. Jimenez, "Los locales comerciales, una de las vías de introducción de la arquitectura moderna en nuestra ciudad," 74-96.





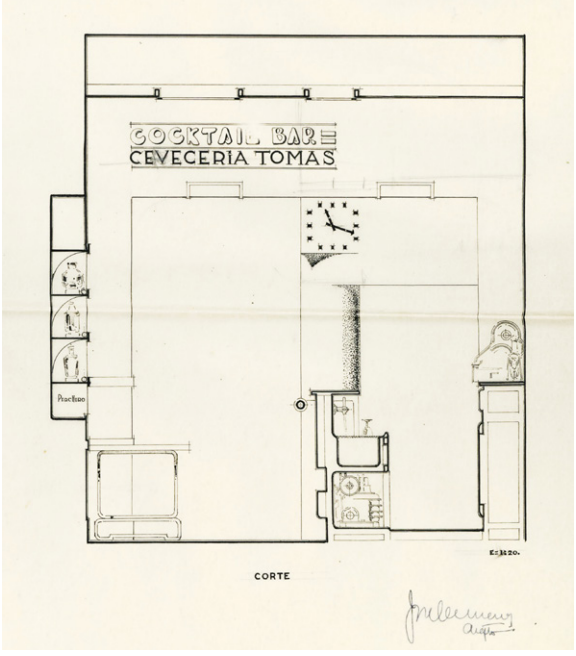


Figure 1. Plan of the project for the Tomás Alehouse at 102 Sierpes Street, commissioned by Tomás Galiana (1934). e 1:100. FIDAS Archive, JGS Fund, udo.JGS_IN0448.

Figure 2. Longitudinal section of the project for the Tomás Alehouse at 102 Calle Sierpes, commissioned by Tomás Galiana (1934). FIDAS Archive, JGS Fund, udo.JGS_IN0448.

Figure 3. Cross section of the project for the Tomás Alehouse at 102 Calle Sierpes commissioned by Tomás Galiana (1934). e 1:20. FIDAS Archive, JGS Fund, udo.JGS_IN0448.

the section is once again distributed into two zones: the bar area next to the main access from Calle Sierpes, and a smaller-scale area behind the impasse of the building's interior courtyard. With regard to the heights, the strategy is to align the height of the ceiling in the rear area, the patio window, the beams of the bar area and the lintel of the main entrance **(Fig. 2)**. And it is in these gestures that the mastery of the young Galnares becomes all the more evident, as he takes

advantage of the existing structural elements as details to integrate the design of his proposal. He strategically inserts curved walls, and design elements such as the clock or the placement of recessed luminaires under the hollow of the beams, which poetically reference the building's load-bearing structure.[9]

The rhythmic articulation of these spaces by means of the accentuated overhangs creates a surface in relief on the ceiling that the architect takes as if it were a new façade. Once again there is a canvas on which to incorporate elements that qualify and make the space attractive. Thus highlighting the expressionist nuance of his proposals, which is evident in the image of the detail on the ceiling in which the graphics of the name of the premises 'TOMÁS' take on a clear protagonism[10]; making it the icon of the intervention.

Returning to the floor plan drawing, we can see how Galnares pays particular attention to the configuration of the ceiling plan, not only by drawing its projection on the floor plan - thus corroborating how each element of the ceiling fits in with the design of the floor plan - but also by the graphics through the use of red lines, which in contrast with the black projection, refer to and accentuate the vital importance that the author gives to these elements in order to understand the interior design strategy in its entirety **(Fig. 1)**.

In this plan, the care taken in the graphic documentation is once again evident, with a surprising drawing of the cross-section at a scale of 1:20, unusual in the planimetry of Sevillian rationalism.[11] A magnificent drawing not only because of the careful design of the entire perimeter of the section and the functional study of the furniture it contains, but also because it was a graphically exquisite drawing in the hierarchical representation of lines, the catering equipment, the modern furniture, the curved walls, the signs and the clock **(Fig. 3).**

In short, on analysis of this refurbishment, we can appreciate how the Sevillian José Galnares - a decidedly modern architect - was able to take this renovation as an opportunity to skilfully express his knowledge of rationalist design. And it is these rationalist foundations that establish a common intervention strategy to functionally resolve the programme. In its brilliant execution, the special attention and, indeed, the design of the details stand out, whose purely modern imprint makes the intervention an exceptional example of a rationalist refurbishment of premises. The incorporation into the design of a certain expressionist nuance to these elements gives the intervention an attractive and suggestive aesthetic never before seen in Seville for this type of leisure space.

5. CONCLUSIONS

In this type of interior design renovation, due to its ephemeral natu re, it is extremely important to preserve the original project documentation. For this case study, the preservation of José Galnares's archive has been an effective tool for learning about rationalist interventions in the heart of Seville's historic centre.

9. Jimenez, "Los locales comerciales, una de las vías de introducción de la arquitectura moderna en nuestra ciudad," 74-96.

10. López, "El proyecto de construcción de la imagen de la arquitectura moderna 1925-1939 Andalucía, Margaret Michaelis."

11. Jimenez, "Los locales comerciales, una de las vías de introducción de la arquitectura moderna en nuestra ciudad," 74-96.

As we have been able to verify, the strategies of the solutions provided by José Galnares are of a high expressionist, plastic and aesthetic value. For this reason, his exterior and interior designs for commercial projects stood out in a Sevillian context of clear regionalist pre-eminence. Even more so, this interior and façade design proposal included graphics where European avant-garde influences can be appreciated.

Likewise, after analysing the work, we can note the outstanding role of our author as a professional architect, demonstrating his expertise in the suggestive design of his proposals. In addition to his extensive expertise in construction and modern materials, he adeptly executes intricate construction details that align with the concept of a rationalist project.

We note, in turn, the pioneering methodological proposal that Galnares used when it came to tackling the architectural project in its entirety at the beginning of the twentieth century, which remains valid today. Once the work has been executed, the aim is to find a good photographer in tune with modern aesthetics, capable of transmitting the values and concepts of this new architecture to the rest of the population through the subsequent publication of the work in magazines and specialised media.

The graphic production is of a high quality, not only because of the way in which the morphology of the project is represented, but also as a result of the graphic techniques used, where all the details of the modern furniture and machinery are drawn with particular skill and charisma.

In short, the Tomás Alehouse executed by José Galnares is a notable example of his professionalism and bold commitment to incorporating the new aesthetic in the city of Seville, a latent modern testimony of great quality that has disappeared from the urban scene today. ■

BIOGRAPHIES

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TIMELESS QUALITY IN A SOCIAL HOUSING ESTATE FOR ALL: THE TRANSFORMATION OF DOMESTIC SPACE AND LIFESTYLES IN OLIVAIS NORTE (1960S-2020S)

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ABSTRACT

This work focuses on the architecture of domestic spaces in the Olivais Norte neighborhood (1959-1962), serving as a paradigmatic case in Lisbon's municipal response to housing shortages prevalent in the Portuguese capital during the latter half of the 20th century.

With the aim of fostering integration and mitigating the development of social ghettos, the neighbourhood's housing buildings were designed to accommodate four distinct socio-economic categories, bringing together individuals from different social backgrounds. This collaborative effort engaged economists, architects, engineers, sociologists, and anthropologists, leading to a series of projects that reveal significant experimentation by modern architects in responding to the challenges of "housing for the greatest number". This included a deliberate focus on designing domestic spaces to lifestyles of different social classes.

This paper seeks to identify the principal housing models within the Olivais Norte buildings, in their correlation with the socio-economic categories for which they were designed, and to map changes that have occurred after 60 years of use. The comparative analysis between the original design and current occupancy aims to assess the adaptability of the case studies to the evolving comfort needs over the past five decades.

This examination will be based on a comparative analysis of two surveys conducted on the case studies: one focusing on the original project, using primary source collection (architectural drawings, project descriptions and publications of the time) from archives and libraries, and another on the current occupancy, involving visits to selected residences, metric surveys, photographic documentation, redrawing of changes, and resident interviews.

The goal is to assess resilient and obsolete features to inform potential rehabilitation projects or providing insights for contemporary residential architectural endeavours.

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1. OLIVAIS NORTE: "THE FIRST TRULY MODERN LARGE-SCALE HOUSING PLAN IN LISBON"[1]

The severe housing shortage in Lisbon around the 1950s led the municipality to create offices dedicated to housing (GEU - Urban Studies Office in 1954, and GTH - Technical Department of Housing in 1960) and new housing programs, such as the one defined by decree-law no. 42454 (1959). This established that social housing should be distributed within four socioeconomic categories: 40% for the poorest families (category 1), 30% for category 2, 20% for category 3, and 10% for the wealthiest families (category 4).

Olivais Norte, designed by Guimarães Lobato, Sommer Ribeiro and Pedro Falcão e Cunha, between 1955 and 1959, was the first neighbourhood constructed within this new framework. Covering an area of 40 ha, it was planned to house 10.000 inhabitants in 2.500 dwellings.

Olivais Norte has been considered the first realisation in Lisbon of a large-scale housing plan designed in a truly modern way, because it broke with the traditional urban planning embodied by the street-block system, inaugurating the adoption of the Athens Charter in Lisbon: the urban structure was based on a rational occupation of the site marked by the isolated insertion of residential buildings, subject to the criteria of solar exposure and ventilation, in an open landscaped space. The circulation spaces formed a hierarchical system with differentiation between vehicular and pedestrian circulation networks, with a road layout independent of the buildings' orientation. Conceived as a neighbourhood unit, the facilities supporting the housing constituted a nucleus in a civic-commercial centre, in the middle of the cell. The school is located no more than 250 meters from the housing. The open space, treated as landscaped areas, represented a very generous portion, 62% of the total area.

Each team of architects designed building types for specific socioeconomic categories, with each type constructed multiple times throughout the plan: Abel Manta (b. 1928), Artur Pires Martins (1914-2000) with Cândido Palma de Melo (1922-2003), Nuno Teotónio Pereira (1922-2006) with António Pinto de Freitas (1925-2014) and Nuno Portas (b. 1934); Pedro Cid (1925-1983) with Fernando Torres (1922-2010); Braula Reis (1927-1989) with João Matoso; João Vasconcelos Esteves (1924-2014). The construction lots were sold to entities of social interest. This process allowed the neighbourhood to be defined by distinct social universes: a building for army officers could be next to one occupied by families relocated from shantytowns. This system contributed to the intended social mix for the neighbourhood, aiming to avoid the creation of social ghettos.

This endeavour produced several architectural solutions that addressed the modern concept of "housing for the greatest number", emphasizing the adaptation of domestic space to the varied needs and aspirations of different social groups. To address these concerns, interdisciplinary teams, including sociologists, anthropologists, historians, economists, architects, engineers, and landscape architects, collaborated to study different population

1. Leopoldo de Almeida, "Olivais-Norte, nota crítica," *Arquitectura*, n. 81 (1964): 12.

segments, employing scientific methods from the emerging social sciences of the 1960s to inform the design of domestic interiors.

2. MODERN INTERIORS FOR THE WEALTHIEST: RESISTANCE AND PERMANENCE

For the higher-income families, five parallel buildings were designed: four identical blocks designed by Pires Martins and Palma de Melo for category 3, and a single block designed by Abel Manta for category 4.

With a highly hierarchical occupation of the territory based on socioeconomic categories, these five blocks are situated near the civic-commercial centre and the school in the highest and most central area, oriented along Cartesian axes, reminiscent of an acropolis. Measuring approximately 70-80 meters in length, and with 8-11 floors, they have the most imposing presence in the neighbourhood. They epitomize the typical modern housing block, embodying rationalist principles: the plastic exaltation of vertical communications, wall-to-wall balconies, large windows, pilotis on a broad platform articulating access, the expressed modulation of the structure in the façades, and shared terraced roofs.

During the *Estado Novo* dictatorship (1933-1974), Portuguese society was divided between two extremes: a high-income social group that held power and a working-class, labor-intensive, or rural population that was extremely poor. These two realities are evident in the architectural design of the different socioeconomic strata for whom the Olivais residences were intended. Buildings for the higher-income categories included a clear differentiation between residents and service staff, as they were designed to include live-in maids, featuring two distinct access systems, from the building entrances leading to separate elevators, to the apartment entries. Interestingly, while the residents' access spaces are small, dimly lit halls designed for quick access and emphasizing home privacy over public encounters, the service doors and elevators are in spacious, well-lit, and ventilated areas. In the case of the buildings by Artur Pires Martins and Cândido Palma de Melo, these service accesses are aligned with horizontal exterior galleries facing the interior service areas. This setup aims to foster close relationships and mutual support among workers, while demonstrating the architects' concern for their wellbeing conditions.

This dichotomy extends into the interior of the dwelling, following the classification of housing into zones – privacy, reception, and service – that emerges throughout the progression of socioeconomic strata, influenced by the architectural conception of bourgeois housing of the nineteenth century. The main entrance aligns with a long corridor leading to the living room, dining room, and bedrooms, following a Babylonian logic of sequential spaces inherited from the past. The service entrance is connected to the kitchen, which is aligned with a laundry area, a room and bathroom for live-in maids, and the family bathrooms.

These apartments feature generous sizes (115 m^2 for 4-bedroom units and 145-130 m^2 for 5-bedroom units).All living rooms and bedrooms have

independent balconies (10-12 m²) equipped with sliding wooden shutters. They include built-in furniture integrated into the space design, and well-designed details that enhance the quality of the interior space, such as light and ventilation slits near the ceiling in the living room. Everything is orthogonal and functional, following a hierarchical logic of organization.

One of the few customizable elements in Abel Manta's residences is a sliding wooden door that connects the living room to the dining room, offering the flexibility to expand or enclose the social space. The structural modules, governed by room widths, could also allow some flexibility through the removal of partition walls. However, these dwellings have undergone minimal changes over the years, except for the enclosure of balconies, a widespread practice across all social classes in Portugal. Many of these apartments are still occupied by their original residents, typically elderly matriarchs, often over 90 years old, living alone in spacious homes with the assistance of maids and nurses. In this regard, common alterations include bathroom renovations, involving the replacement of bathtubs with showers for mobility reasons. The large service areas allowed for easy adaptation to the introduction of appliances not originally envisioned when the buildings were designed, such as washing machines. It is common to find decor reminiscent of the wealthier families of the 1960s, alongside modifications that have darkened their originally bright interiors: the closure of open spaces, covering surfaces with wallpaper and carpets, and heavy furniture from earlier eras.

In these prominent urban buildings, it's easy to understand how ownership significantly affects maintenance and transformation.. The Abel Manta building, appearing as a single volume, consists of two independent lots. One lot remains owned by the Social Services of the Armed Forces, restricting alterations by residents, but is mostly unoccupied. The same happens with two blocks of Artur Pires Martins and Palma de Melo. On the other lot, originally public property, the apartments were sold to the families that now manage the building through a condominium. There, while high occupancy is evident, each resident customized their home freely to the point of making the urban image of the building quite unrecognizable.

3. MODERN INTERIORS FOR THE POOREST: FLEXIBILITY AND TRANSFORMATION

Lower-income families were provided with nine building types designed by four architectural teams. Vasconcelos' housing complex includes two types of Y-shaped blocks for category 1, comprising nineteen buildings. Braula Reis and Matoso designed seven canal-like buildings along the streets, featuring three similar building types for category 1, differing in circulation with either a left-right system or a gallery. Cid and Torres designed two building types for category 2: one comprising four long buildings formed by the superposition of duplexes, with upper access via a gallery; the other consisting of five shorter row buildings formed by grouping three lots each. Teotónio Pereira, Pinto de Freitas and Portas' complex, intended for category 2, consists of six row buildings formed by aggregating four lots and five eight-floor towers.

These buildings feature a greater repetition of types and more varied orientations, dispersed around the periphery of the cell, integrated with the terrain's topography and vegetation. Except for the towers, all other buildings have four to five floors, avoiding the cost of elevators and fostering a closer-knit community. Due to low-income conditions, sedentary lifestyles, and cultural habits, it was thought that providing communal meeting spaces – both outdoor and indoor – as extensions of their homes would be valued by low-income residents. These spaces aimed to encourage social gatherings, interactions, and foster strong neighbourhood relations, seen as vital for their well-being.[2]

The towers designed by Teotónio Pereira, Freitas, and Portas exemplify this effort. Each tower is designed with a central access space on every floor, featuring a spacious, well-lit and airy living area. The floors are adorned with "Portuguese pavement," giving the sensation of being outdoors. Open balconies facing the garden allow residents to decorate with their own plants, while fixed benches on every level provide resting spots. A generously sized area ensures children can play safely, countering the isolation typical of tower buildings. In row buildings, the common space is located outdoors in a covered area at the back of a storage building, where it is common for residents to have barbecues. Combining art and architecture, each building received interventions from different artists in their common space, enhance the daily lives of residents and dignifying social housing.

Except for the towers, all buildings for categories 1 and 2 had fully open access points, at both entrances and mid-height windows along the circulation spaces. The aim was to create strong permeability between public and common areas, promote a healthy contact with nature, and foster encounters and mutual support among neighbours. The row buildings, like those by Braula Reis and Cid, extend this approach with aerial streets – horizontal circulation galleries –linking various volumes. Today, only one building in the neighbourhood retains its original openness. Due to the insecurity caused by the drug addiction epidemic in the 1980s and the common shift to condominium ownership, most buildings have closed all openings with doors and windows. There was also widespread city apprehension among rural migrants, and privacy and seclusion are valued across Portuguese society. This significantly altered communal living, aligning it with a broader contemporary desire for individualized lifestyles.

Indoors, different teams of architects prioritized different aspects to meet the reduced budget, with most of them opting either for the areas or the quality of finishes. Most of the dwellings are two-bedroom, ranging from 40-56m^2, and three-bedroom, ranging from 47-72m^2.

Affordable housing of the time focused on minimal areas, making living rooms multifunctional and often integrating kitchens. i Homemakers frequently rejected this open-space layout, preferring spacious and separate kitchens.[3] This preference was reflected in most Olivais Norte low-income dwellings. The kitchen and the living room, often of similar size, were separated by practical wood pass-through cabinets that provided storage and offered flexibility. The quality of interiors was a priority for most architects, not only through functional and minimalist layouts but also by introducing

2. Ana Tostões, *Arquitectura e Cidadania: atelier Nuno Teotónio Pereira* (Lisboa: Quimera, 2004).

3. Maria da Luz Valente Pereira and Maria Amélia B. Correia Gago, *Inquérito a habitação urbana: análise e interpretação das actividades na habitação e a sua relação com os espaços da casa* (Lisboa: LNEC, 1974).







Figure 1. Olivais Norte. © Zara Ferreira, 2022.

Figure 2. Abel Manta, block housing for category 4, Olivais Norte, 1959. Plan with identification of alterations. Connection between the dining and the living rooms. © Zara Ferreira, 2022.

Figure 3. Teotónio Pereira and António Freitas, row housing building for category 2, 1959. Plan with identification of alterations. Connection between the kitchen and the living room. © Zara Ferreira, 2022.

exceptional wood details that remain in perfect condition today, including furniture, frames, handles, and finishes designed to promote good thermal and acoustic conditions. Architects also aimed to establish a connection with the outdoors and maximize natural light to enhance residents' well-being, evident in the placement of windows in almost every bathroom and in front of kitchen sinks. Contrary to apartments for wealthier families, the design of these apartments prioritized organic layouts, allowing residents the freedom to interpret their dwellings while fostering spatial fluidity and strong family communication. Balconies were often conceived as living spaces or connectors between different areas.

The original residents are now aging, and there is widespread turnover in occupancy. Since the neighbourhoods were established, illiteracy has

significantly declined from 33% in 1960 to 3% today. Following the democratization of higher education after the end of dictatorship in 1975, Portugal now boasts a higher percentage of young people with tertiary education than the European Union average. Social disparities have narrowed over recent decades, resulting in the emergence of a middle class. Nowadays, those who occupy homes originally designed for the lower categories are graduates in their 40s. Today, both men and women work, large families are rare, and there is a lack of neighbourhood, family, and social support. These dynamics are reflected in the use of domestic spaces: the main transformation documented in these houses is precisely the quest for the hyper-functionality in the living area, achieved through the opening of the kitchen and often converting one of the adjacent rooms into a remote workspace. The younger generations' preference for the "open space" concept represents a physical and symbolic support for a more open family sociability, domestic collaboration, and simultaneity of functions and needs, and a preference for forms that offer interactive conditions for viewing, listening and expression between household members. Thus, the functions of living, cooking, eating, cleaning, working and playing coexist in the same large room, shared between parents and children.

The need to update service spaces with new appliances in small homes reinforced the choice to combine spaces flexibly and enclose balconies. Despite today's more individualistic and hectic lifestyles, the importance of communal spaces, particularly post-Covid-19, is gaining prominence. These spaces meet increasingly valued needs for well-being, serving as extensions of home interiors for moments of solitude with morning coffee, virtual meetings, or for celebrating birthday parties.

4. ADAPTIVE REUSE FOR ALL

Today, Olivais Norte is highly esteemed for its accessibility to essential daily services and for its robust integration with healthy natural surroundings. The visited flats reveal a strong capacity for adaptation, and many of the original and recent residents show pride in the place they live and recognize its qualities.

Over the last three decades, the reuse and adaptation of interiors have been accessible to most of the original residents, who have transformed their homes to suit their tastes and needs. While some have improved, others have deteriorated due to the absence of collaboration with specialized professionals and the lack of regulations regarding interior alterations. Nevertheless, the neighbourhood is at a crucial moment that presents both risks and opportunities. The original residents are reaching the end of their lives, and the neighbourhood is starting to be occupied by younger generations. While some bring reinforced and updated knowledge about the history and quality of these buildings and strive to restore original solutions, acknowledging their functionality, aesthetic appeal, and heritage value, many other flats are purchased by real estate agencies that turn them into IKEA-style homes to sell at low costs, often destroying functional features and significantly degrading the comfort of these dwellings. A neighbourhood that was designed in a global and integrated

manner, serving the community, is being weakened by neoliberalism that allows for autonomous and individualistic action in "collective" housing.

There has never been an integrated renovation project within the neighbourhood, even if it is possible to find good renovation projects within some flats.[4] It's important to draw the attention of stakeholders to the quality of this collective project and housing buildings and provide qualified renovation proposals. On this matter, greater attention should be given to the buildings still owned by public entities and almost entirely unoccupied, which have a unique opportunity to develop a good global requalification project. This could serve as an example of public investment in solving the housing problems that are currently so complex in Portugal, while preserving heritage and adapting high-quality interiors to contemporary comfort. ■

4. Some interventions: Célula Arquitetura (Filipa Teles Correia, Patrícia Chorão Ramalho), Hábito (Gustavo Takata e Manuel Leal Ramos, 2021-2022), José Neves (2021-2023).

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OUT OF THE CENTER: MEMORY AND ROLES OF OTHER MODERN HERITAGES

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ABSTRACT

Acknowledging the diversity of architectural and urban modernity's legacy implies examining, among other aspects, the particularities of migratory flows, educational processes, political situations, economic conditions, social characteristics, cultural encounters, or available resources that have defined its development in different latitudes.

Outside the conventional understanding of what constitutes modern architecture, there have been conditions that determine particular developments and outcomes, which not only form part of the most significant proportion of the built environment but also materialize processes of social adaptation and cultural hybridization, as defined by Néstor García Canclini, and that eventually lead to a critical interculturality, as Catherine Walsh has coined it, which recognizes the value of diversity.

Following Sébastien Marot's approaches to memory in architecture, in this session, rather than discussing outstanding examples of architecture, we are interested in analyses of projects, which at different scales, are a reference for alternative collective memories, especially in the Global South. With this in mind, we expect to exchange ideas about the heritage constituted by different forms of memory that materialize in modern projects and constitute references to identity, selected memories associated with events that might be conflictive and have impacted upon disciplinary production, such as migration flows, dictatorships, natural disasters, economic crises, processes en masse, drastic changes, dominant ideologies, gender perspectives, and hegemonic currents, among others. Due to the rejection of what they symbolize, some of these examples may need to be revised at their time or now.

The session is interested in comparing perspectives that allow for the evaluation of the conditions in which this 20th-century heritage is valued and preserved as an example of other Modernities. In this way, it is proposed that the session will be a critical discussion regarding works and projects that embody a polemic memory in architecture, the city, and the territory that might shed new light on the idea of identity and otherness in a global context.

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1. INTRODUCTION

The conception of modernity as a unitarian block has been amply discussed within academia and, in DoCoMoMo's context in the last decades. Most recent discussions about the content, role, and impact of the canon highlight that these issues are not exhausted. Debates on how to approach the tension between the conventional mainstream and the blind spots are at the core of what is considered otherness.

This session aims to contribute not only with new objects of study, but other references, perspectives, agendas, and interpretations, amongst others. Singularities of the alternative enable a range of possibilities for reflecting on the sameness and the otherness, for instance, discussing modern cultural assets as a conflictive heritage created in different contexts of the Global South. Therefore, we will join ongoing dialogues on the valuation of active memory, identity construction, cultural hybridity, interculturality, otherness, and diversity. We expect to consider documentation, identification, valuation, preservation, and social appropriation issues.

2. OTHER MODERNITIES

Other modernities have been part of the scholarly discussion. Once a validation criterion is set, it defines what is included as much as what is excluded. The canon of historiography reflects it, but we argue that it has simply been reduced to a mutual aesthetic, temporary, geographic or temporal understanding of what constitutes modern architecture.

As evidenced by Ana Esteban Maluenda's review of texts and images from multiple editions of the canonical historiography of modern architecture,[1] including Hitchcock and Johnson, Sartoris, Pevsner, Giedion, Benevolent, Curtis, and Frampton, this indicates a modernity that is homogeneous and predominantly of European origin. In contrast, Curtis's initial recognition of the understanding of works produced in different latitudes and with different temporalities and resources, incorporating elements of connection between the universal and the singular, stands out. A case in point might be the salient examples of modernity in what can be considered an unconventional context, such as in the National School of Arts in the outskirts of Havana, Cuba. **(Fig 1)**

Indeed, Latin America, Africa, and Asia have traditionally been outside the canon. We have considered encouraging a discussion based on interpretations by various authors who report on those conditions that enable us to appreciate other Modernities.

Shmuel Noah Eisenstadt, in Multiple Modernities[2], is perhaps one that highlights how classical sociological studies of Marx, Durkheim, and Weber define a canonical argument reflected in Anthony Giddens' statement in 1990: "Modernity refers to the modes of life or social organization that emerged in Europe from the seventeenth century, and that later spread worldwide from its influence."[3] This interpretation implies reducing the Global South to a helpless vessel passively receiving European influences. Understanding cultural processes is absurd, so the author questions the

1. Ana Esteban Maluenda, *La arquitectura moderna en Latinoamérica: Antología de autores, obras y textos* (Barcelona, 2016).

2. Shmuel Eisenstadt, "Multiple Modernities," *Daedalus* 129, no. 1 (2000): 1–29.

3. Carlota Solé Puig, 'Acerca de La Modernización, La Modernidad y El Riesgo', *Reis*, no. 80 (1997): 111–31, https://doi.org/10.2307/40183919.

homogenizing and hegemonic condition of a unique and authentic modernity. For this reason, it resorts to identifying multiple conditions and procedures of modernity that can even be discordant.

On the other hand, Göran Therborn, in Entangled Modernities,[4] calls for recognition of the contrasts between past and future in modernity as that point of articulation. However, it emphasizes the implication of understanding the different tensions that do not coincide and that, in practice, have clearly failed, so again, a plural and intersecting denomination is resorted to. In the same sense, Arturo Escobar[5] points out the disillusionment of some principles proposed in modernity that, although laudable, have not been fully fulfilled, and so he proposes the notion of transmodernity based on interculturality.

Under the title *Other modernisms*, the introduction to DoCoMoMo journal's identifies the 9th DoCoMoMo conference (2006) as a "cycle of thinking on the content and coherence of the modern movements architecture".[6] The publication also compiles a selection of registers of mainly European countries, some of the traditional American ones, a few from Asian and Oceania, and no African examples of otherness as discussed. Perhaps the openness to a diverse and deeper understanding of the sense of modernity apart from canonical art history allows for a wider comprehension of alternative approaches to the sameness and otherness of modernity.

Thus, this theoretical framework enriches former discussions by endorsing diverse references and perspectives of modernity as a multiple and entangled phenomenon that conditions the sense of otherness.

3. ARCHITECTURE AS A CULTURAL FACT

Studies that expressly mention processes that acknowledge the influence of other modern architectural currents are still anticipated. Here, we propose two routes. On the one hand, through critical interculturality, following what Catherine Walsh proposed,

> *It makes visible different ways of being, living, and knowing and seeks the development and creation of understandings and conditions that not only articulate and make differences in dialogue within a framework of legitimacy, dignity, equality, equity, and respect but also – at the same time – encourage the creation of "other" ways of thinking, being, learning, teaching, teaching, and others. Dreaming and living that cross-border*[7]

In other words, through the construction of parallels and dialogues between different people, it recognizes the value of the other in their diversity as a peer, affirming the possibility of coexistence. On the other hand, the processes of cultural hybridization, as initially proposed by Néstor García Canclini,[8] makes visible mutual influences that create new forms and authentic cultural expressions. In relation to the discussion of other modernities, which are out of the centre due to the diversity and complexity

4. Göran Therborn, 'Entangled Modernities', *European Journal of Social Theory* 6, no. 3 (2003), https://journals.sagepub.com/doi/abs/10.1177/1368431003006 3002?journalCode=esta

5. Arturo Escobar, 'Power and Visibility: Development and the Invention and Management of the Third World', *Cultural Anthropology* 3, no. 4 (1988): 428–43.

6. Panayotis Tournikiotis, 'Modernism and the Issue of Otherness', *Docomomo Journal*, Other modernisms a selection from the docomomo registers, no. 36 (March 2007): 5–8.

7. Catherine Walsh, 'Interculturalidad Crítica y Educación Intercultural.', *Construyendo Interculturalidad Crítica*, 2010, 75–96.

8. Néstor García Canclini et al., *Hybrid Cultures: Strategies for Entering and Leaving Modernity* (Minneapolis; London: University of Minnesota Press, 2005).

of their context, there is a pivotal understanding of the condition of the built environment regarding its possibilities of making an imprint and generating the condition of legacy. From this point of view, the otherness of modernity could be determined by migration flows, educational processes, gender roles and cultural encounters. Within diverse contexts, the outcome might not fit under global logic or could contradict common knowledge about what constitutes a valuable legacy. A common image that comes to mind in this sense, is the Central Library of the UNAM, Mexico. **(Fig 2)**

Accordingly, Sébastien Marot advocated for a richer understanding of how architecture conditions and recalls its context: "architecture as an instrument of memory, memory as a material, or as a dimension of architecture".[9] In some cases, agendas and interpretations of what materialized through architecture under political situations, economic conditions, social characteristics, or available resources could condition how the memory and identity implied in the architecture is produced and historically understood. In this case, otherness can be taken from what has been left outside or discarded, what has been resignified, or what is examined with all its own complexity and contradiction.

4. HOMOGENIZATION VERSUS CULTURAL DIVERSITY

As has been argued, it is from the very core of architectural modernity that the idea of describing what was happening as a unitary movement, exportable to other latitudes, was born. For example, Hitchcock and Johnson, when holding the exhibition of modern architecture in 1932 at the MOMA, entitled it *The International Style* and asserted that: "a single modern style has already been born... This contemporary style that exists throughout the world is unitary and inclusive, not fragmented or contradictory".[10] At present, there is agreement that this exhibition brought together a wide range of works that were not necessarily governed by the set precepts. On the contrary, what was presented there, and we can extend it to modernity itself, was rather a dissimilar set of projects, which confirmed the cultural diversity existing in architectural production: "the security and even arrogance with which the existence of an international style was then affirmed, was accompanied by an inability to enclose... an architectural production that far exceeded the narrow molds of such a style".[11]

Thus, the historiography of modern architecture has constantly had the challenge of overcoming the limitation posed by modernity itself when trying to describe architectural production as a unitary formal system. Part of the historiography has faced this challenge through specific interpretations that delve into certain conditions of the countries located, preferably in the Global South.

The Other Modernities that this session proposes to highlight are those that have been influenced by problems of cultural conflict and political violence, which responded from a formal and spatial diversity. The precarious conditions of the societies of the South have led to the existence of multiple cultural and political conflicts in these states, some

9. Sébastien Marot, 'L'art de La Mémoire, Le Territoire et l'architecture.', in *Le Visiteur 4 - Velle, Territoire, Paysage, Architecture*, Société françoise des architectes / Éditions de l'Imprimeur (Paris, 1999), 114–76.

10. María Teresa Muñoz Jiménez, 'Prólogo', in *El Estilo Internacional: Arquitectura Desde 1992*, Colección Arquitectura 11 (Valencia: Artes Gráficas Soler, 1984), 32.

11. Muñoz Jiménez, 9.



Figure 1. Escuela Nacional de las Artes, Havana, Cuba. Designed by Ricardo Porro, Vittorio Garatti and Roberto Gottardi, 1961-65. © Pilar Sánchez-Beltrán.

Figure 2. Central Library of the Universidad Nacional Autónoma de México, DF, Mexico. Designed by Juan O'Gorman, Gustavo Saavedra and Juan Martínez de Velasco, 1948. © Pilar Sánchez-Beltrán.

Figure 3. Venceremos Popular Resort, Puchuncaví, Chile. Designed by Renato Enríquez, 1971-73. © Macarena Cortés.





derived from the condition of colonies (Africa) or from weak democracies that have seen dictatorships position themselves with the brutality of their violent practices (Latin America and Eastern European countries). In both cases, architectural modernity has had to adapt to or modify the supposed official canon.

This change has led to diverse, speculative practices carrying a sense of memory directly associated with the political and social conditions in

which they are framed. Thus, the identity of these works is defined by their capacity for cultural adaptation, achieved through the development of their spatiality, the generation of climate control devices, and the integration of the arts, to name just a few.

Modern architectures have evolved in these latitudes with greater freedom and design speculation, as they could work with the inclusion of local cultural variables for their adaptation and relevance for their population. The case of African colonies is of particular interest in this context. However, it can also be observed in Latin American countries where local artistic manifestations were inserted in works of architecture, for example, through murals that represented activities typical of their towns. On the other hand, vernacular structural systems and constructive materials were included, such as mud, handmade brick, native woods, and local stones.

5. MEMORY, POLITICS AND CONFLICT

As has already been anticipated, many cases of the legacy of modern architecture are related to countries where political conflicts spread due to the instability and weakness of governments and the emergence of state violence. In these contexts, modern architecture was the scene of conflict. Indeed, these spaces were originally created with certain aspirations but were later contradictorily transformed into places where acts of violence and traumatic experiences occurred.

The conditions in which architecture has resisted uses so dissimilar, even contradictory to their origins, question the capacity of spaces and structures to submit to these uses and represent them, transforming themselves into sites of memory that recognize and commemorate them. These questions are intended to be addressed broadly by the discipline, as Schindel and Colombo have stated: "Geographers, space theorists, and architects are for their part becoming more and more concerned with the study of contemporary cartographies and topographies of exclusion, exception and state violence, and are at the same time paying more attention to the spatial manifestations of trauma and memory".[12]

In their initial expression, modern architectures aimed to address the prevailing conditions, responding to the cultural, social, and functional requirements for a society concerned with human beings, their well-being, and their physical and moral development. Contradictory to the assumption of dictatorial governments, these same spaces, given their size, were used as centres for the exercise of state violence, many of them becoming detention and torture centres, scenes of atrocities. Thus, public buildings, stadiums, schools, and hospitals were occupied for purposes opposed to their original vocation: "Space is assumed here not to be a static and fixed support of the historical events, nor a naturally given, neutral dimension but a social product and a productive force. Therefore, the process by which violence reconfigures space cannot be considered unidirectional".[13]

An example of this is the Venceremos Popular Resort, which was created as a vacation retreat for workers and used for such purposes

12. Estela Schindel and Pamela Colombo, *Space and the Memories of Violence* (London: Palgrave Macmillan UK, 2014), 2, https://doi.org/10.1057/9781137380913.

13. Schindel and Colombo, 4.

between 1971 and 1973. Subsequently, between 1973-1976, it was used as a political prison camp during the military coup in Chile, where detainees were not subject to a judicial process and remained under the supervision of the Navy. It is currently a site of memory, declared by the Chilean state as a national heritage site **(Fig 3)**.[14]

6. CONCLUSIONS

As a point of coincidence, in a similar time frame, some of these diverse manifestations and geographical heterogeneity have their origins in conflicting events. These have led to an adaptation and variation of the canon established, apparently by modernity, introducing local cultural variables that enriched the proposals of the Global South. Thus, modernity as a unitary system was crossed by innovative proposals encompassing the project's different conditions in its spatiality, materiality, structure, and program. The local culture assumed these architectures to represent the specific aspirations of the places where they were produced.

Thus, seeing these Other Modernities implies openness to new perspectives, cultural sensitivity, and consideration of inclusive and sustainable solutions. Interculturality fosters the creation of spaces that reflect each community's identity and cultural heritage, promoting social cohesion and intercultural understanding. Historical revisions allow for a necessary perspective to resignify, include and validate more references, resources and interpretations. In this way, a new heritage is produced, embodied in memory. It is no longer the monumental or historical heritage that is established in a society commemorating heroic deeds. It also involves acknowledging traumatic events, digesting and transforming spaces of violence, torture, or conflict into a part of our cultural heritage through these architectures.

On the other hand, memorialization processes give way to a new field of critical discussion: "Space contains and accumulates several layers of memories proceeding from different historical times".[15]

Thus, heritage is understood in its dynamic condition, where various actions allow conflicting experiences to be valued, representing a society in constant search of its history. The contribution from the changes that occurred in cultural creation, social practices, and material production, as well as in the representation of the state, among others, leads us precisely to consider the particularities of each territory, landscape, city, and society, where the Global South provides us with a source of valuable examples of adaptation and appropriation through these Other Modernities. ■

14. 'Cronología', *Melinka Puchuncaví* (blog), accessed 25 July 2024, https://melinkapuchuncavi.cl/cronologia/.

15. Schindel and Colombo, *Space and the Memories of Violence*, 7.

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MULTI-STOREY BUILDINGS IN LIMA (1939-1970) A PERUVIAN GENEALOGY OF A MODERN TYPE

JAVIER ATOCHE INTILI
PHD ARCHITECT

ABSTRACT

This paper aims to highlight significant multi-storey buildings in Lima's historic centre, designed by either European or local architects during the last century. Following the 1930s, multi-storey construction in Lima was driven by earthquake reconstruction (1940) and urban planning regulations (1946) that promoted densification in the historic area. European architects played a key role in the introduction of vertical architecture. Foreign involvement in Lima's modernisation was influenced by the Good Neighbour Policy (1933-1945), which took advantage of the historical links between Europe and Latin America. This facilitated exchanges between the International Congresses of Modern Architecture (or CIAM, as it is otherwise known) members exiled during the Second World War and Peruvian intellectuals educated in Western countries, thus strengthening inter-American relations (Atoche Intili, 2023). In the last century, US-Latin American relations went through three phases that influenced architectural trends (Liernur, 2002). Lima's multi-storey buildings embody a hybridisation of local Peruvian culture and European modernist influences, shaped by the government's economic and political strategies for the capital. This historical fusion remains a compelling but little-known narrative that deserves to be preserved as a testament to Lima's architectural evolution and cultural exchange.

1. INTRODUCTION

Since the beginning of the modern era, the history of Latin America has been marked by close cultural ties with the Western world. According to the Peruvian sociologist Aníbal Quijano, in Peru the European cultural hegemony established at that time favoured the continuity of privileged relations with certain countries throughout the 20th century. Such relations included economic exchanges with European countries in the first third of the century and political influence from the United States after the Second World War. These exchanges were strengthened by the presence of European intellectuals in the Andean country throughout the 20th century, who influenced the urban and architectural development of Lima and facilitated the spread of new types of buildings, such as multi-storey buildings.

2. FOREIGN REFERENCES AND THE IMPORTATION OF A TYPE

The Argentine historian Ramón Gutiérrez identifies the European cultural transfers of the first third of the century and the growing North American presence since the Second World War as the main external influences on Latin American architecture in the last century[1].

It is of particular interest that this shift in the hegemonic centre from Europe to the USA involved European intellectuals who emigrated to North and South America. This was the case for several European architects, such as the German Paul Lester Wiener, the Spanish Josep Lluís Sert and the Austrian Richard Neutra. Wiener and Sert, who were the founders of Town Planning Associates, offered their professional services to the Corporación Nacional del Santa for the Plan Piloto de Chimbote (1947-1948), a planned settlement for 40,000 inhabitants on the north coast of Peru. Sert became a consultant to the Oficina Nacional de Planeamiento y Urbanismo (The National Office of Planning and Urbanism, as it is known in English) during the development of the Plan Piloto de Lima (1947-1949), an application of the first phase of the Regulatory Plan for the Peruvian capital[2]. In a lecture entitled Metropolitan Future of a City with a Great Historical Heritage (Lima, 1945), Neutra developed the urbanist ideas expressed by the CIAM members and applied them to the historical context of Lima[3]. The reception of these designers in Lima society was influenced by the foreign policy of the United States of America (Good Neighbour Policy, 1933-1945).

The spread of multi-storey buildings in Peru was facilitated by a series of articles published by Fernando Belaúnde Terry in the early years of *El Arquitecto Peruano* magazine[4], which also highlighted prominent European and American precedents. Among these influential models, notable for their vertical development and contextual dialogue, is the Ministerio da Educação e Saúde Pública (Affonso Reidy et al, advised by Le Corbusier, Rio de Janeiro, 1937-1943), widely publicised in the Peruvian media. In this Brazilian project, the main south elevations were characterised by a full-height curtain wall and the north façade was protected by fibre cement sunshades.

El Arquitecto Peruano was also active in the modernisation and expansion of the Peruvian capital through urban planning and public housing,

1. Ramón Gutiérrez, Graciela M. Viñuales, "Grandi Voci", *Architettura e società / l'America Latina nel XX secolo*, Milano, Jaca Book, 1996, 118–19.

2. Josep M. Rovira, *Josep Lluís Sert (1901-1983)*, (Milano: Electa, 2000), 127-137.

3. "La visita di Richard J. Neutra", *El Arquitecto Peruano*, Lima, September 1945.

4. Fernando Isaac Sergio Marcelo Marcos Belaúnde Terry (Lima 1912- 2012). A key figure in the development of political and professional relations between Peru, the United States of America and Europe in the 20th century. He founded and directed until 1933 *El Arquitecto Peruano*, a Peruvian magazine specialising in urban planning, architecture, construction and interior design, published from 1937 to 1969 and 1977.

especially after the Peruvian census and the Lima earthquake of 1940: on 24 May, a seismic movement measuring 8.2 on the Richter scale was recorded under the Peruvian central coast, the strongest in the twentieth century. The epicentre was 120 kilometres north-east of Lima, affecting the city and other smaller towns along the coast, such as Callao, Miraflores and Chorrillos.

The spread of multi-storey buildings in Lima was not only driven by foreign projects highlighted in specialist publications or supported by CIAM members throughout the Americas. The contributions of European architects working in Peru during the 20th century - such as the Germans Werner Benno Lang and Paul Linder, the Italians Gianfelice Fogliani and Mario Bianco, the Swiss Theodor Cron and Paolo Mariotta - were crucial in introducing this architectural type to Lima. Following on from these influential examples, both foreign and local, Lima's buildings gradually freed themselves not only from historical references but also from viceregal influences[5].

To gain a deeper insight into the introduction of multi-storey buildings, it is important to mention projects by European architects in Lima. Casa Gildemeister (Werner Benno Lange, 1928-1930) is an early example of a Peruvian multi-storey building in the Art Deco style, designed as the headquarters of a trading company founded by a German family. Its unprecedented height of six storeys anticipated the surge in new construction in Lima by approximately a decade. The Edificio Irma (Gianfelice Fogliani, 1946-1948) was one of the first multi-storey buildings to be built for residential purposes in accordance with the 1946 urban planning regulations. Meanwhile, Edificio Arnodi (Paul Linder, 1950) exemplifies the coexistence of traditional elements within a vertical structure, featuring apartments in a then-new horizontal ownership format.

3. FROM THE EXALTATION OF LOCAL CULTURE AND TRADITIONS TO THE SEARCH FOR A NEW SYNTHESIS

According to the Argentine historian Jorge Francisco Liernur, relations between the United States and Latin American countries in the 20th century were characterised by three phases: first, the rejection of the American model by exalting local culture and traditions; then, imitation as a means of competing and overcoming foreign influences; and finally, the search for a new synthesis[6]. These three phases are evident in the significant number of multi-storey buildings constructed in Lima between the late 1930s and the 1960s and regulated since 1949 by the Plan Piloto de Lima[7].

The exaltation of local culture and traditions in architecture, the first phase in the relationship between North and South America, is apparent in numerous Peruvian buildings such as the Edificio Rizo Patrón (Enrique Seoane, Luis Solimano, Lima, 1939-1940). The tension between culture and civilisation is reflected in its architectural language, which is rich in traditional references. Enrique Seoane, Peru's most prolific architect of multi-storey buildings, contributed to this eclectic neo-colonial style eight-storey building. It features a symmetrical composition of base, body and crown elements, with a prominent triple-height neo-baroque doorway accentuating access to the

5. Javier Atoche Intili, *Lima la Moderna / European migration and twentieth century Peruvian architecture / 1937-1969*, (Berlin: DOM Publishers, 2023), 165-166.

6. Jorge Francisco Liernur, *Escritos de arquitectura del siglo XX en América Latina*, (Madrid-Sevilla: Tanais, 2002), 69.

7. The construction of these buildings was part of a process of urban regeneration based on increasing the scale of buildings in the centre of Lima. ONPU, "La Hoja de Urbanismo", *El Arquitecto Peruano*, a. XIII, 1949, n. 144.

commercial spaces. The reinforced concrete frame is concealed by a compact volumetric design characterised by vertically oriented windows, revealing the construction system mainly through the floor plan.

Imitation as a competitive strategy to overcome foreign influences, characteristic of the second phase of US-Latin American relations, was facilitated in Peru by efforts to promote modern culture. These initiatives, led by architecture students from the Escuela Nacional de Ingenieros (The National School of Architects, as it is known in English) (1945-1946) and members of the Agrupación Espacio (a group comprised of architects, artists and intellectuals in the period of cultural renewal) (1947-1955), culminated in significant achievements such as the recognition of the Edificio Guzmán Blanco (Manuel Villarán, 1952) with the Chavín Prize from the Peruvian Ministry of Public Education[8]. This building, supported on pilotis, had a reinforced concrete structure, balcony frames, and full-height glazing and was a departure from the classical tripartite elevations that influenced subsequent buildings in Lima, as documented in the New York Museum of Modern Art's catalogue of Latin American Architecture Since 1945[9].

The section of the MoMA catalogue entitled 'Urban Façades' highlighted two important Peruvian multi-storey buildings that were the forerunners of many future projects. The first, Edificio Ostolaza (Enrique Seoane, 1951-1953), for which Seoane received the Chavín Prize in 1953, is a corner solution with a two-storey base and blocks of apartments and offices integrated into the street pattern. Elements such as volumetric division, asymmetry and moucharabies were repeated in later buildings such as the Edificio de la Compañía de Seguros Atlas (José Alvarez Calderón, Walter Weberhofer, 1953-1955) and the Galerías Comerciales Mogollón (Raúl Morey, 1958).

The Edificio Radio El Sol (Luis Miró Quesada, 1953 - 1954) is the second Peruvian example cited in the MoMA catalogue. Like Ostolaza, Radio El Sol won its architect the Chavín Prize in 1954. The building's corner solution, a reinforced concrete frame with projecting elements on both streets, is one of the earliest examples of a fully curtain-walled façade in Lima. This technological innovation gives the building the appearance of a glazed parallelepiped supported on pilotis. This architectural line, characterised by the extensive use of glass in its facades, also includes the Edificio Nyci (Enrique Seoane, 1956), a composition of base, tower and opaque prism with vertical circulation, and the Edificio Seguros El Sol (Enrique Seoane, 1956 - 1958), a tower on a base covered with a mixture of traditional (brick) and modern materials, such as glass, plastic, and aluminium.

The spread of new construction technologies and materials in the 1950s was led by multi-storey buildings of European design. Examples include Compañía de Seguros Peruano-Suiza (Theodor Cron, 1952-1956), which pioneered open-plan layouts and aluminium frames; Hotel Savoy (Mario Bianco, 1954-1957), which integrated parking between the basement and the tower; and Compañía de Seguros La Colmena (Paolo Mariotta, 1958-1961), notable for its steel structure and aluminium cladding. These innovations became the hallmarks of later multi-storey buildings.

8. The Peruvian laws of 1942 and 1947 recognised the diverse scientific and humanistic disciplines as contributors to the country's development, and consequently began to promote their production, especially with the creation of an architectural prize, called the Chavín Prize, which awarded the winning authors monetarily. See Congreso de la República del Perú, 'Ley N° 9614', Archivo Digital de la Legislación Peruana (30 September 1942); 'Ley N° 10869', Ibid. (31 March 1947); 'Premio de Arquitectura Chavín: espíritu y realidad', Dimensión Arquitectónica (1958).

9. Catalogue of the homonymous exhibition at the Museum of Modern Art, curated by Henry-Russell Hitchcock, organized in New York between 23 November 1955 and 19 February 1956. Henry-Russell Hitchcock, *Latin American Architecture since 1945,* New York, Museum of Modern Art, 1955.

A synthesis between internal culture and external civilisation, which characterised the third phase of American relations, found its first examples in two high-rise buildings in Lima. The aesthetic experimentation of this phase, as seen in the structural integration of facades such as the Edificio Ostolaza and the extensive use of curtain walls such as the Edificio Radio El Sol, culminated in proposals such as the Banco Comercial and the Centro Cívico y Comercial de Lima.

Banco Comercial (Enrique Seoane, 1962-1963) was a private investment initiative for the administrative headquarters of a local bank. The base, clad in ceramics reminiscent of pre-Hispanic textile patterns, consisted of two volumes of different heights, in harmony with the surrounding buildings. Above, a fully glazed monolith asserted the bank's presence on the Lima skyline. The interplay between different materials, the progression of the volumes, the solidity of the base and the transparency of the tower all work together to blend the internal cultural heritage and the external technological influences. Described in *El Arquitecto Peruano* as 'the new expression of an old language', the Banco Comercial symbolises this synthesis.

The Centro Cívico y Comercial de Lima (Adolfo Córdova et al, Lima, 1966-1970), built on the site of a former penitentiary, was the result of a design competition launched during the administration of President Fernando Belaúnde Terry (1963-1968). Envisioned in the 1949 Plan Piloto de Lima by the Oficina Nacional de Planeamiento y Urbanismo, the complex was intended to link the established urban centre with the expansion areas of the 20th century. Selected from several Brutalist designs, the proposal maximised the structural and expressive potential of reinforced concrete, evident in exposed materials, expansive spans and cantilevered structures. The monumental complex, which resembles a contemporary archaeological site like Puruchuco, included a 33-storey tower - the tallest in the city at the time - housing offices, an auditorium and ancillary services.

4. MULTI-STOREY BUILDINGS: LIMA'S MODERN VOCATION

Multi-storey buildings became prominent in Lima from the 1930s until the late 1960s. In the 1940s, the need to rebuild after the earthquake and to comply with Peruvian urban planning regulations encouraged their proliferation in Lima's historic centre. European architects who immigrated to Peru played a crucial role in the introduction of these structures, as evidenced by early examples such as the Edificio Gildemesiter, Edificio Irma and Edificio Arnodi. The reception of these designers and their proposals for the urban development of the city by Lima society was influenced by the foreign policy of the United States of America and the activities of CIAM members in Peru. The dissemination of multi-storey buildings in Peru was facilitated by a series of articles published in the magazine *El Arquitecto Peruano*.

Their architectural merit was recognised by institutions such as the Peruvian Ministry of Public Education, with multi-storey buildings dominating the early editions of the Chavín Prize. Notable winners included the aforementioned Edificio Ostolaza and the Edificio Radio El Sol. These



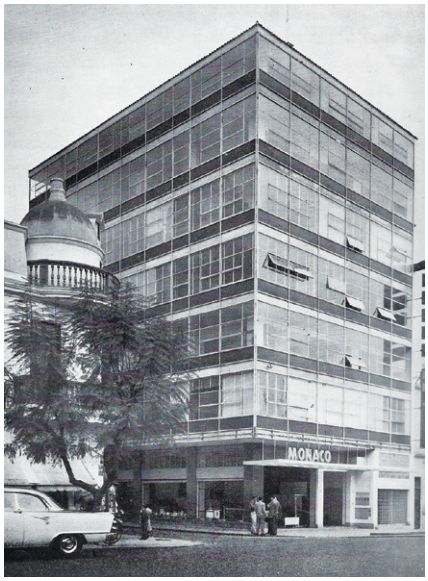


Figure 1. Enrique Seoane, Luis Solimano, Edificio Rizo Patrón, Lima, Perú, 1939-1940. Avenida Wilson, formerly known as Avenida El Sol, with the Edificio Rizo Patrón (left).
© Plaza Francia Antiques, 1944.

Figure 2. Luis Miró Quesada Garland, Edificio Radio El Sol, Lima, Perú, 1953-1954. © *El Arquitecto Peruano*, May-June 1955.



Figure 3. Enrique Seoane Ros, Banco Comercial, Lima, Perú, 1962-1963. © *El Arquitecto Peruano*, September-October 1965.

Peruvian examples received international recognition and were included in exhibitions at MoMA, highlighting the quality and diversity of Latin American architecture between 1945 and 1955. After a period in which such buildings were considered to be in fashion and received widespread recognition of their architectural qualities, these buildings were guiltily forgotten, often subject to shoddy renovation or, worse still, demolition or abandonment.

The uniqueness of Lima's multi-storey buildings lies in the fact that they are the result of a new language or identity that the architects, sensitive to the contexts in which they worked, have created. They symbolise the Peruvian government's economic and political ambitions for its capital. They stand as significant architectural statements, advocating for their preservation as cultural heritage for future generations[10]. ■

10. Atoche Intili, *Lima la Moderna / European migration and twentieth century Peruvian architecture / 1937-1969*, 196.

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BIOGRAPHY

Javier Atoche Intili (Lima, 1977) is a registered architect in Peru (2003) and Italy (2008), with an office in Brescia. He is a specialist in both monument restoration (2008) and architectural composition (2014), having received his Doctorate in History of Architecture at the Sapienza Università di Roma in cotutelle de thèse with the Università della Svizzera italiana (2021). His research was awarded the Premio Enrico Guidoni fourth edition, the Premio Letterario "La Calcina - John Ruskin" Scrivere di architettura second edition (2021) and was published as Lima la Moderna (DOM Publishers, Steinhäuser Verlag, 2023).

MEMORY, LEGACY AND IDENTITY: MODERN HERITAGE IN ANGOLA AND MOZAMBIQUE

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ABSTRACT

The geo-political context following the WWII was marked by the decolonization of African and Asian territories that had historically been dominated by European states. On the eve of the independence of the new countries, the actions of the colonizing states also changed. It's important to highlight the relationship between the aesthetic project of the Modern Movement, and the modernization of these overseas territories. If, on the one hand, these territories functioned as laboratories for the modern project, on the other, we must consider that the very idea of otherness, of a cultural, geographical or social nature, allowed the integration of other identity parameters. During the two decades following the end of the WWII, two movements of absorption and transformation took place simultaneously: on the one hand, the spectrum of the Modern Movement as a doctrine is broadened on a large scale and, on the other hand, the dogmatism of the modern vocabulary allows itself to be *orientalized* by the different cultures.

In Angola and Mozambique, former Portuguese colonies, architectural production can be understood under the sign of flow and exchange. This production manifests itself above all in the adoption of a formal vocabulary whose dominant references are its affiliation with Corbusian grammar, Brazilian plasticity and, in a broader sense, the modern response to the tropical climate. This article aims to analyze two exemplary works of architectural heritage from the Modern Movement in these two African countries that allow us to question the boundary between memory and identity. In 2008, the controversy surrounding the demolition of the Kinaxixe Market in the center of Luanda, highlighted the need to reflect on the value and identity of the modern heritage built in the former Portuguese colonies. Almost fifty years after the independence of Angola and Mozambique, identity and heritage are still sensitive issues.

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1. INTRODUCTION

The geo-political context following the World War II determined a new social and economic order. The period was marked by the successive decolonization of African and Asian territories that had historically been dominated by several European states. During the second half of the 1940s and throughout the 1950s, on the eve of the independence of the new countries, the actions of the colonizing states also changed. In this context, it is important to highlight the relationship between the aesthetic project of the Modern Movement, understood in the Western sense, and the modernization of these overseas territories, whether African or Asian. If, on the one hand, these territories functioned as laboratories for the modern project, on the other, we must consider that the very idea of otherness, of a cultural, geographical or social nature, allowed the integration of other identity parameters. As Tom Avermaete emphasised "architects attempted to engage in their projects on colonial ground with the local conditions by synthesising the way of living of the colonised (...) and the project of modernisation into a new and 'other' modernism. The experiments of modern architects in the so-called colonial 'laboratories' therefore played an important role in the critical revision of the modernism and the emergence of post-modernism within architectural discourse.[1]

Following the end of the WWII, two movements of transmission, absorption and transformation took place simultaneously. On the one hand, associated with the growing modernization of the new states, the spectrum of the Modern Movement as a doctrine, or more significantly as imagery, is broadened on a large scale and, on the other hand, the dogmatism of the modern vocabulary becomes more flexible and allows itself to be *orientalized* by the different cultures in which it operates. Interest in architectural culture outside the "Western" circle takes on new contours. The magazine *Architecture d'Aujourd'hui*, for example, has a number of thematic publications that report on the miscegenation of the modern model in other geographical contexts, of which we can highlight the issues entitled "Constructions en Pays Chauds"[2] with works designed across the broad spectrum of tropical geography or "Afrique Noire"[3], especially dedicated to French-speaking African countries.

The question, as William Curtis (1999) explains, is to understand what should be kept from the original prototypes and what can be transformed according to other climates, new cultures, beliefs, construction techniques and architectural traditions: "(...) the two decades after the Second World War were characterized by a far greater diversity within the modern movement in its originating centers, and by a higher valuation of the indigenous, the variable and the regional. The planarity of the International Style gave way to a more sculptural and robust form of expression in which bare brick and concrete, texture façades and the density of walls played a greater role. The broadening of the aesthetic spectrum permitted new alignments with the vernacular and the arcaic and helped to simulate fresh readings and interpretation of local identities."[4]

As the modernization of developing countries takes place during the post-war period, the vocabularies they receive are no longer those based

1. Tom Avermaete, Serhat Karakayali, and Marion Von Osten, *Colonial modern: aesthetics of the past rebellion for the future*. (London : Black Dog, 2010.), 10.

2. *L'Architecture d'Aujourd'hui*, no.67-68 (August-September 1956).

3. *L'Architecture d'Aujourd'hui*, no.70 (February 1957).

4. William Curtis, *Modern Architecture since 1900*. (London: Phaidon, 1999), 492.

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on the founding models of the Modern Movement, but models in which the absorption of other cultures is already evident. One of the paradigmatic cases is Le Corbusier's work in India, where, while the architect remains faithful to his doctrine and lexicon, but, at the same time, he clearly seeks to get closer to Indian culture and identity. The influence of these works thus reaches not only the Indian territories but also the centers of origin. What we witness is a large-scale dissemination in two directions: the model that migrates and the migrated model that returns.

2. MODERN ARCHITECTURE IN THE TROPICS

Most former African or Asian colonies are located in tropical climate zones. The concept of tropical architecture may be read in various ways. In its usual definition, it means an architecture that is fit for the tropical climate, where the building is designed by observing the climate's and the site's specific conditions. Therefore, it takes into account objective criteria, such as location, space and programme organisation in accordance with the best exposure to the sunlight or the winds, using fixed or mobile devices for shade or soil and roof sealants in accordance with the rainfall.

As a general rule, the formal language of the Modern Movement's architecture, particularly through the Corbusian work, as well as the Latin-American architecture disseminated during the second post-war, has easily and enthusiastically incorporated this new vocabulary applied to the specific conditions of the response to the tropical climate. In addition to the nature of a construction based on scientific parameters, tropical architecture acquires an aesthetic meaning.

What we see, quite often, is a phenomenon of "tropicalization" of the architectural language in and outside the tropics, where the built work sometimes obeys rather aesthetic criteria than strict science. But, while this "tropicalization" effect may fall within the framework of the global mass influence and homogenization of modern architecture during this period, one may see, at the same time, a convergence on local cultures and identities through a reinterpretation of native elements and traditional techniques, the outcome of which is, in its turn, also disseminated on a large scale.

At the same time, the meaning of tropical architecture also observes readings of an ideological, or even political, nature. The Indian Prime Minister Jawaharlal Nehru, for instance, who had invited a large international team led by Le Corbusier to design Chandigarh, the future capital of the Punjab, more than upholding modern architecture, would rather use the term tropical architecture, aiming at the specific conditions of the place, the society and the climate, and defined it as the antithesis of colonial architecture[5].

As a general rule, immediately after the Second World War, the agendas of the largest colonising powers placed their wagers, through their overseas urban planning offices, on public infrastructures investment policies, and at the same time, on a specific architecture for the tropics (of which the studies carried out by Maxwell Fry (1899-1978) and J. Drew (1911-1996)[6] or the Architectural Association's pioneering course on Tropical Architecture

5. Vandana Baweja, "A Pre-history of Green Architecture: Otto Kenigsberger and the tropical architecture. From princely Mysore to post-colonial London." (PhD diss., University of Michigan, 2008), 119-120.

6. Maxwell Fry, and Jane Drew, *Tropical Architecture in Dry and Humid Zones*. (London: William Clowes and Sons, 1964).

are good examples). It is interesting to see that, in spite of the substantial ideological differences between the European States, their investment programmes had a similar template, were it under a neo-colonial viewpoint, as in the case of democratic states such as France or England, but also in the framework of a colonial incentive, as in the case of Portugal.[7]

3. ARCHITECTURE IN ANGOLA AND MOZAMBIQUE AS A MODERN LABORATORY

After World War II, when Portugal was still living under a dictatorship, anachronistically valuing its empire and its colonies, a number of young architects went to Angola and Mozambique, former Portuguese colonies, and affirmed a modernity that was far from the State-sanctioned architectural models. Such modernity was translated into freedom in a firmer appropriation of the modern movement codes in an international meaning.

Regardless of the specific circumstances of those two African territories and the individual interpretations of the authors, it is possible to observe a common denominator in the developed works and assert an identity belonging to the various genealogies of the models conveyed by the Modern Movement. Such identity is clearly shown in the adoption of a formal and spatial vocabulary composed of a combination of invariable features, especially in a remarkable absorption of the models conveyed by Le Corbusier's work and doctrine seasoned with the lexicon and plasticity of Brazilian modern architecture.

For these architects the chance to build in the African territory was the ideal laboratory, not only as to the more orthodox or more hybrid interpretation of the modern vocabulary, but also as to the construction techniques and adaptation to geography and climate. The specific nature of this architectural production was possible due to a strong mastering of the technical and structural capabilities of reinforced concrete as a standard, industrial production constituent, as well as due to its expressive qualities as regards plasticity or texture.

4. MODERN MOVEMENT HERITAGE IN ANGOLA AND MOZAMBIQUE: TWO LANDMARK BUILDINGS

Today, in a post-colonial context, it is important to reflect on the value and identity of modern architectural heritage in these African countries. The two case studies we present, were built in a colonial context by architects trained in Portugal, although located in very different territories - Angola and Mozambique, they have the common denominator of being urban landmarks infrastructures designed in the 1960s, which structure the city's design and keep their original function.

Following a competition for the "Angola Broadcasting Plan", the project of the Broadcasting Center of Angola building was commissioned to Fernão Simões de Carvalho (born in 1929), who would develop it in collaboration with José Pinto da Cunha and Fernando Alfredo Pereira. Simões de Carvalho, a graduate of the School of Fine Arts in Lisbon, completed an internship at Le Corbusier's studio under the guidance of André

7. It is important to stress that unlike the majority of these former colonies that were decolonised since the beginning of the 1950's until the mid 1960's, the African lusophone colonies only became independent in 1975, as one of the fundamental consequences of the 1974's Portuguese Revolution that put an end to the previous dictatorial regime.

Woscenscky between 1956 and 1959. Simões de Carvalho's training was deeply influenced by the significant projects taking place at Le Corbusier's studio during this period – including experiments with the construction and plasticity of "*béton brut*" and the application of the "*Modulor*" system.

Only the first phase of the complex plan would be built, with the construction of the Studio Block, located next to the main boulevard and situated in the centre of the plot, and a Workshop building, located to the northeast of the site.

The studio block is a large rectangular-based parallelepiped volume, positioned in the centre of the plot and set back from the extremes, creating surrounding landscaped spaces. The building functions as a dense box contained within a grid of exposed concrete, resting on a partially submerged base floor, with functional spaces only at the periphery of the building.

The building's design is based on the harmonious measurements of Le Corbusier's *Modulor* system. In addition to the application of the *Modulor*, references to Le Corbusier are very prominent in this work. The design of the broadcasting centre clearly harkens back to Le Corbusier's research on the expression of *béton brut* in his later works.. In addition to the alternating grid geometry, Simões de Carvalho incorporates Corbusian formal elements, as it can be observed in the expressiveness of the concrete gargoyles or in the interplay of materials: the dominant exposed concrete combined with tile surfaces or glazed surfaces.

The effectiveness in responding to the tropical climate was one of the concerns that guided the design of the building. In addition to its favourable orientation with respect to the prevailing winds in the Luanda region, the layout of circulation spaces promotes efficient cross-ventilation. The design and placement of sunshades were carefully considered based on solar exposure, although compositional choices prevailed. Thus, the façades are designed in pairs: a grid pattern on the northeast and southwest façades, and vertical sunshades oriented at 45 degrees on the upper façades, which are more exposed to harsh sunlight. The semi-external entrance atrium and the array of interior landscaped courtyards are elements that promote natural ventilation and airflow.

The Luanda Broadcasting Centre, a facility of great programmatic and technological complexity, was, during this period, a pioneering equipment within the framework of Portuguese architecture.

Today, the National Radio of Angola remains fully operational and, despite being in good condition, its service area has expanded beyond the limits of the building. On the periphery of the plot, a series of makeshift constructions have been added, which do not allow for a comprehensive reading of the building and diminish its quality. The Radio is an exemplary work of the legacy of the Modern Movement, seen in the context of Luanda's society as an urban and architectural landmark. Its study and conservation would enhance Angola's architectural heritage.

The history of Beira, the second-largest city in Mozambique, is intrinsically linked to the history of the railway in Africa. The Beira Central Railway Station would become the largest public work in the city, addressing the need to



Figure 1. João Garizo do Carmo, Paulo Melo Sampaio, Francisco José de Castro, Beira Railway Station, Mozambique, 1958-1966, Mural Jorge Garizo do Carmo, 1927-1997. ©Ana Magalhães, 2008.

Figure 2. Simões de Carvalho; Pinto da Cunha, Alfredo Pereira, Radio Nacional de Angola, Luanda, Angola, 1963-1967. © Ana Maglhães, 2008.

Figure 3. João Garizo do Carmo, Paulo Melo Sampaio, Francisco José de Castro, Beira Railway Station, Beira, Mozambique, 1958-1966. ©Ana Magalhães, 2008.





accommodate the existing movement of passengers and goods which served as a connection to the interior of Africa. Its location was defined in the functional zoning proposal of the Urbanization Plan for the city in 1951. Situated at the northern end of the city, near the port, this significant infrastructure served as a focal point in the city plan. The railway complex was developed by a team that included the leading architects residing in Beira. The plan of the complex delineated three functional areas, each with distinct volumes. Consequently, the project was divided into three parts, with each architect on the team responsible for one: the grand station to Francisco Castro, the terminals and service area to João Garizo do Carmo and the office block for administrative purposes and coordination of the project to Paulo Melo Sampaio.

The Station, the most remarkable building in the complex, is a vaulted nave, asymmetrically and off-centre juxtaposed to the office block, creating a grand welcoming space for the station. The expansive area of the Station is conceived as an architectural promenade with a sequence of events that guide us from the atrium entrance to the terminals. The office block is a large, seven-story rectangular volume, partially raised on pilotis and characterized by an exposed structure made up of overlapping "boxes" that create long openings between the floors. Despite the different authors and the volumetric variation among the three buildings, the work maintains a sense of coherence and unity. Compositional balance is achieved through the distinct expression of form and scale of each part and the clarity of the articulation of the spatial and functional sequence.

The project for the Beira Railway Station exemplifies the principles of the international architectural language of the post-war period. In addition to the fundamentals of Corbusian grammar, the extensive formal lexicon of Brazilian modern architecture, a common characteristic in the language of its authors, is abundantly applied here. This includes the plasticity of curved

forms evident in the large vault or the sequence of Catalan vaults, grids and brise-soleil, material textures, polychromy, and the integration of artworks.

The Beira Railway Station is a mature work in the application of this modern lexicon with international standards and demonstrates the consolidation of the authors' trajectory. It can be regarded as an exemplary building of the heritage of the Modern Movement, within the context of a new concept of monumentality.

The Beira Station, in addition to being an exemplary case of modern architectural heritage built in Africa, maintains an iconic and popular dimension in the city (an example of which is the prominence of the building's image on the flag of the municipality of Beira),. The government of Mozambique is currently seeking to enhance the value of its ports and railway infrastructure. In the context of new strategies for economic and tourist revitalization of the city of Beira, this building will undoubtedly play a key role in responding to its urban and architectural redevelopment. In 2019, the Beira Railway Station received a 'Keeping it Modern' grant from the Getty Foundation to study the conservation and rehabilitation of the building[8], thus reaffirming not only its economic and symbolic dimension in the city, but also the importance of its legacy in enhancing the architectural heritage of the Modern Movement in Beira. The application proposed the enhancement of the building "as an element of the city's identity and thus contribute to the public recognition of Beira's wide architectural heritage', also emphasising that 'the Beira Railway Station can be achieved as an urban catalyst in Beira's urban development, contributing to the ethic planning of our future cityscape, while preserving the legacy of the MoMo."[9]

Almost fifty years after the independences of Angola and Mozambique, identity and heritage issues are still a sensible topic. Far beyond the difficulty of dealing with the memory of this Modern Movement heritage, we are confronted with the History of these countries in transformation in the search for a new course and a new identity. Only an in-depth knowledge of the cultural and scientific value of this heritage may overcome other priorities, whether of a political or a social nature. ■

8. Elisiário Miranda, *Estação Central da Beira, Moçambique (1957-1966)* (Guimarães: Lab2PT, Escola de Arquitetura, Arte e Design, Universidade do Minho, 2023).

9. M.M. Oliveira, "Beira Railway Station: Modern Architecture as an urban catalyst." In *The 16th International Docomomo Conference Tokyo Japan 2020+1 Proceedings: Inheritable Resilence: Sharing Values of Clobal Modernities*, eds. Ana Tostões, and Yoshiyuki Yamana, (Tokyo: Echelle-1, 2021), 114-119.

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THE ETHICS OF PRESERVATION OR REPURPOSING OF YUGOSLAV WWII MONUMENTS

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ABSTRACT

This presentation is concerned with the general neglect, vandalization, and widespread destruction of some of the most representative Yugoslav *spomeniks*, as they are now collectively known, from a south Slavic word for "monument," or "memorial," that were designed by prominent Yugoslav modernist architects and sculptors between the 1960s and 1980s. They collectively shot into *anonymous fame* in 2015, after the appearance of the photo book by the photographer Jan Kempenaers, which presents them without authorship, purpose, or any kind of commentary, as odd, forlorn, numbered structures. This photo book created considerable interest in using the *spomeniks* as props for musical spots, advertisements, sci-fi movies, or even as surfaces for skateboarding or parkouring gigs. Many of the individuals who decided to use the *spomeniks* for whatever purpose quote this catalogue as inspiration, and none of them shows any more curiosity in finding what these structures actually represent than the photographer who presented them in such a problematic way. In a review of the photo book for the British *Guardian*, Joshua Surtees insists, in a condescending manner, typical of much writing on communist topics, that the photographed structures were commissioned by nobody other than the Yugoslav dictator Josip Broz Tito himself. The *Guardian's* author sails precisely on the patronising post-communist European narrative, which has focused on the revisionist cancellation of distinctions between fascism and communism, and which is important for my subsequent discussion.

It is a truism that monuments have always been contentious sites of memory politics, and that they expire once they no longer speak to the people who live with them. Perhaps, however, we could agree that monuments glorifying prominent individuals - leaders, kings, revolutionaries - are the first logical targets of such replacement impulses that have happened at many historical turning points. In recent history such a massive monumenticide took place all over the former Eastern Bloc during the decade of the 1990s, when a lot of Lenins and other communist ideologies or revolutionaries were downed, usually to be replaced by national ideologues and conquerors[1]. Nowadays we are witnessing a global phenomenon of removing monuments with contentious histories (confederate, colonizing), and their occasional substitution with those that more appropriately reflect the political sentiment of our time. However, my question is whether memorial sites that commemorate victims of mass attrocities likewise expire in the way of the Lenins, the Louises, or the Caesars? Because most of the Yugoslav *spomeniks* were erected at a site of a Nazi massacre of civilians, or a big WWII battle in which the Yugoslav people suffered tremendous losses. Because thousands of their unclaimed bodies still lie underneath[2].

The *spomenik*s' abstract form is a result of both the stylistic choices of their makers and of the planning committees' determination to promote a universal, optimistic message for the future, believing that public monuments should not be considered as sites of mourning, but instead as symbols of stability, reconciliation, and progress.[3] Originating in grassroots initiatives by the local communities of victims and survivors of WWII,[4] the *spomeniks* defy platitudes about being "communist," or "totalitarian," impositions on collective memory, with which they have frequently been described since the demise of Yugoslavia. Even a superficial comparison with monumental architecture in other formerly socialist countries would be enough to testify to the overall absence of socialist realist or ideological motifs in the *spomeniks*. Imagined as symbols of the common Yugoslav antifascist liberation struggle, the *spomeniks* were instrumental in the Yugoslav post-WWII regime's cosmetic memory engineering, which was allegedly directed at obliterating the evidence of deadly ethnonationalist fighting among various Yugoslav ethnicities and religious groups that caused almost as many war victims as did the fascist massacres and offensives. Such abstraction is not itself without controversy. On the one hand, it carried quite a significant political message, as the *spomeniks*' construction and dedication to unspecified "victims" of equally unspecified "fascists and their domestic collaborators" tiptoed around the fact that both victims and perpetrators of civilian massacres and concentration camps were ethnoreligiously marked, and that they died precisely, and solely because of their perceived ethnoreligious affiliations. It was especially visible in the almost total absence of any memorials specifically dedicated to the Jewish Holocaust victims, despite the fact that some territories of Yugoslavia were the first to be declared *judenfrei* in the occupied Europe. In fact, Bogdan Bogdanović, the author of the majority of *spomeniks* created

1. Jan Kempenaers. *Spomenik*. (Amsterdam: Roma Publications, 2015).

2. Joshua Surtees. "Spomeniks: The second world war memorials that look like alien art." *Guardian*, June 18, 2013. https://www.theguardian.com/artanddesign/photography-blog/2013/jun/18/spomeniks-war-monuments-former-yugoslavia-photography-

3. Todor Kuljić. "Novi javni spomenici u regionu: oružje u građanskom ratu sećanja" [New public monuments in the region: weapons in the civil war of memory]. *Peščanik*, Sept. 10, 2019.

4. Heike Karge. *Sećanja u kamenu - okamenjeno sećanje?* [Memories in stone - petrified memory?]. (Beograd: Čigoja štampa, 2014).

the only such monument dedicated to the specifically Jewish victims, located in Belgrade. On the other hand, this abstraction led to the translation of the many victims killed in massacres of civilians as acts of "patriotic deaths" for socialist Yugoslavia. The latter reason directly interfered with planning for some memorials, most notably for the Jasenovac Memorial to the victims of the Ustaša concentration camp, given that the authors struggled to integrate the prisoners' victimhood into the victorious narrative of the Yugoslav antifascist struggle.[5]

Aesthetically, some *spomeniks* were inspired by medieval sarcofagi found in Bosnia, while others were largely abstract in their expression. From the very planning stages, they were envisioned as public spaces that would be integrated into the landscape and invite visitors to interact with the natural spaces and their constructed extensions (Fig 1). It may be of interest to note that practical details of the *spomeniks*' future use by the public, such as their proximity to the road infrastructure, visibility from the roads, and potential for public interest, were as significant in the planning stages for memorial complexes as was their symbolism.[6] And indeed, during their heyday, Yugoslav memorial complexes were frequently used for televised commemorative events and educational trips, but were much more popular as recreational grounds for family picnics and weekend breaks.

At the time when the last ones among them were finished, in the late 1980s, the common memory of the Yugoslav antifastict struggle was already being manipulated by tendentiously revived, exaggerated, and even fabricated memories of inter-ethnic trauma caused during WWII, precisely the kind that the regime was sweeping under the carpet for decades. Divisive claims to ethnoreligious victimhood, but also the aggressive revival of fascist collaborators symbolism that caused this victimhood, swept Yugoslavia, and led to extensive historical revisionisms, one dimension of which was, expectedly, the altering of both the narrative and material memoryscapes in the Yugoslav successor states. In the worst of cases, post-Yugoslav regimes have adopted the fashion - perhaps most controversially extant in the Spanish Valley of the Fallen - of erecting monuments to collective national victims, which disregard whether they died as victims or perpetrators of war crimes.[7] This ethnocentric *ressentiment* was profoundly influenced by the contemporaneous pan-European anti-communist reckoning, which has worked hard on the consolidation of its common historical narrative, blending communism and fascism into a nowadays ubiquitously invoked "totalitarianism." Some authors define these developments as part of a "Transition ideology" with clearly right-wing revisionist roots based in "ethno-methodologism and the superiority of Western civilisation",[8] wherewith the EU "has embraced an anti-totalitarian ideology that contributes to [... the] relativisation and rehabilitation of the fascist past"[9]. The entire twentieth century in Europe thus seems to have been lived in indistinctly "totalitarian" ideologies, and the reasons for the victimization of groups of people under either of the two ideological systems, are effectively obliterated. New generations are furthermore denied the knowledge about

5. Karge, *Sećanja u kamenu - okamenjeno sećanje?,* 135.

6. Karge, *Sećanja u kamenu - okamenjeno sećanje?,* 135.

7. A very recent initiative in the north Serbian city of Novi Sad may soon put side to side victims and their very killers, if the construction of the monument to "all innocent victims of WWII" goes ahead. However confusing the term "innocent victim" may be in itself, this initiative was revealed for a complete sham when the list of those "innocent victims" was submitted to the municipal committee, as it contained the names of the organizers of the notorious Novi Sad raid, when during January 1942 the Hungarian fascist authorities executed, and then drowned in the Danube more than 5500 Serbs, Jews and Roma. Cf. Norbert Šinković and Dušan Komarčević. "U Novom Sadu otpor kontroverznom spomeniku 'nevinim žrtvama'" [In Novi Sad resistance to the controversial monument to 'innocent victims']. *Radio Slobodna Evropa*, 26. (December 2022). https://www.slobodnaevropa.org/a/srbija-novi-sad-spomenik-nevinim-zrtvama-1944-1945/32194340.html.

8. Gal Kirn. "Dissonance of Yugoslav Partisan Past in the Recent Revisionist Methodologies." In *B. Radeljić and C. González-Villa (eds.), Researching Yugoslavia and its Aftermath, Societies and Political Orders in Transition*. (Basel: Springer Nature AG, 2020), 4.

9. Kirn, "Dissonance of Yugoslav Partisan Past in the Recent Revisionist Methodologies.", 18-19.

the deeply racist, homophobic, and xenophobic ideology of fascism, whose main propellent and ultimate goal were the destruction of otherness.

Besides ideology, another important reason for the socialist *spomeniks*' abandonment in the post-socialist period seems to be precisely their abstract aesthetics, the trait for which they were so appreciated by art historians, but that the new nationalist sentiment could not interpret for its purposes. In the realm of material history, a wave of vengeful memoricide during the Yugoslav dissolution wars left the symbolically emptied public space, which was subsequently filled up with religious and other examples of traditionalist monumental architecture - precisely of the kind that the modern *spomeniks* were intended to counter-weigh.[10] In contrast to socialist monuments' depictions of courageous defiance oriented toward the future, post-socialist sentiments focused on the suffering, expressing a "defensive semantics of ethnonationalist ideologies, turned towards the past".[11] Post-Yugoslav ethno-states rapidly constructed their new collective memoryscapes through the most commonly used symbols: horsemen signifying the creation, eternity and invincibility of the nation, or funerary monuments exuding pathos for victims of, frequently, communist violence. On the other hand, memorial sites that could be reclaimed for national ambitions were left alone, frequently with the addition of religious elements, as was done at the Sutjeska Battle National Park spomenik in Bosnia, or the Memorial Complex Bubanj in the Serbian city of Niš. In both these examples, the addition of a Serbian Orthodox chapel next to the memorial claims the victory, or the suffering, for the Serbian nation only, eradicating the multiconfessional and multiethnic composition of both the combatants in the Sutjeska battle, and the prisoners of the concentration camp who were massacred at the Bubanj hill, respectively. However, an unusual memorial site in eastern Serbia, where Bogdanović had created a memorial for the fallen fighters of events that span centuries, and range from the uprising against the Ottoman occupation in 1804 to the victory over fascism in 1945, remains an interesting, albeit rare, example of a *spomenik* that has been well maintained even after the breakup of Yugoslavia. I ascribe its survival precisely to its local, if transhistorical, character, which is deeply rooted in the soil and lives of the population on a small territory.

1. POLITICALLY (IN)CORRECT HERITAGE

By now there is a whole genre of photography, performance, and video art that revels in ignorant fascination of the *spomeniks*. And while we do not have to necessarily subscribe to the rather essentializing claim that any non-commemorative use of monuments automatically qualifies as disrespect to the victims, it could be worthwhile thinking about why Yugoslav monuments, and in extension Yugoslav victims, do not deserve the same kind of reverence shown to memorials to some other victims. Would it be considered unnaceptable to create an unrelated performance at some better known places of authentic human suffering and death? There will inescapably be a lot of differing opinions about this, and one of the most radical may

10. For example, in Croatia alone, over 3000 *spomeniks* and other memorials to the victims of fascism were destroyed - in some cases these were small local initiatives, although some took serious efforts to accomplish, as will become clear further in this presentation.

11. Kuljić, "Novi javni spomenici u regionu: oružje u građanskom ratu sećanja"

be that of the Isreali artist Shahak Shapira, the creator of the controversial website Yolocaust, and the related social media campaign "undouch me," both of which, the activist claims, served the intended purpose of educating many people about proper behavior at sites of commemoration. In my use of this website in an undergraduate course on the Holocaust in Yugoslavia, I watched how unthinking posters apologetically removed their photos after being publicly shamed by Shapira.[12] It begs the question of why a selfie at the Berlin Holocaust Memorial, which is technically not an authentic site of death, would be considered more unacceptable than parkouring over Yugoslav monuments where thousands of unclaimed bodies still lie underneath. Nor why such egregious disregard of Yugoslav socialist heritage could not create the media outrage similar to that caused by the carving of initials into the Roman Colosseum by a tourist. Because, essentially, both are acts of willful and ignorant defacing of built heritage.

We could raise multiple questions about both outright dismissal, or problematic cooptation of historical legacies in general, but particularly of societies and historical periods, like Yugoslav socialism, that are considered "totalitarian," "failed," defeated, or otherwise insignificant. Inappropriate uses of the *spomeniks* therefore, are rooted in positions of dismissive hegemony that sees these socialist/communist/Eastern European structures as meaningless repositories of discredited political practices, and therefore fit to be used as a prop for any artistic, or even recreational purpose. In the mix of a casual disregard for their meaning and simultaneous fascination with the monuments' allegedly otherworldly form, Kulić denudes the colonial mentality that appropriates anonymized structures for self-promotion, or financial gain.[13] Raino Isto describes the stages through which Yugoslav socialist historical heritage is transformed into empty signifiers, ripe for an alien landing.[14] With the devaluation of the ideology that held Yugoslavia together, the monuments to/by that system of values likewise lose their significance and original function. They become genuine "time capsules" whose content can be filled by any other ideology, or system of values, but not before they become a "universal heritage of humankind".[15] It is precisely the monuments' "universality," the quality extolled by art historians as their most valuable attribute, that facilitated the specific disaffection that subsequent generations cultivate for the *spomeniks*, allowing their cooptation for any and all purposes, including dystopian or alien spectacles. Paradoxically enough, in this *alien-nation* Isto recognizes the seed of a new life for the monuments, a utopian future potential which may create new meanings to the future generations.

Despite their physical destruction, many of the Yugoslav monuments have gained an immaterial presence in digital archives, a good example of which is the Monument Database, curated by Donald Niebyl.[16] A yet new leap has been made in the virtual recreation of Vojin Bakić's massive Monument to the Victory of the People of Slavonija, dynamited by the Croatian army in 1991, whose project of virtual recreation recently won the award of the Europa Nostra initiative.[17] Namely, a group of artists and

12. Shahak Shapira. "Yolocaust." https://yolocaust.de/.

13. Vladimir Kulić. "Post-Socialist Orientalism: Yugoslav Monuments and Their Reception in the Media." In *Shaping Revolutionary Memory: The Production of Revolutionary Memory in Socialist Yugoslavia*. Ljubljana: Igor Zabel Association for Culture and Theory, 2023, 358-373.

14. Raino Isto. "'I Will Speak in Their Own Language': Yugoslav Socialist Monuments and Science Fiction." *Extrapolation* 60/3 (2019): 299-324.

15. Isto, "'I Will Speak in Their Own Language': Yugoslav Socialist Monuments and Science Fiction.", 312.

16. Donald *Niebyl. Spomenik Monument Database. Fuel, 2018*. Also online: https://www.spomenikdatabase.org/.

17. L. Parežanin. "Europska nagrada SNV-ovom projektu posvećenom Vojinu Bakiću" [European award to the SNV project dedicated to Vojin Bakić]. *Portal Novosti*, (June 7), 2024. https://www.portalnovosti.com/europska-nagrada-snv-ovom-projektu-posvecenom-vojinu-bakicu.

activits have recreated it in its original site as a hologram,[18] while plans are in the works for it to be stored in an app, and be available to visitors (Fig 2). This and similar actions indicate that the struggle for memory is still ongoing, and that we can feel free to reinterpret Lefebvre's "end of space,"[19] not as the ultimate destruction of memory the *spomeniks* symbolized, but as their recreation in the virtual sphere, from which they will continue to speak to future generations, hopefully in a language they will be able to understand.

2. CONCLUSION

I raise the issue of an ethical approach to the preservation of monumental legacy created in a state and under a political system that no longer exist. Furthermore, this paper cautions against the emergence of a colonial attitude to the history and sacrifices of non-Western subjects. During the process of post-socialist transition, the specificities of Yugoslav WWII resistance to fascism were neglected in the rush to fit the self-serving common EU narrative of anti-communism, which conveniently glazes over European overwhelming complicitness with the fascist project.[20] Accompanied by a specific "hierarch[isation] of victimhood",[21] post-communist historical revisionism allows for Eastern European victims of genocidal massacres to be ignored. While some authors do not find such appropriation particularly problematic, others deplore the kind of content that is created at these sites, given that the "inadequate presentation of memorial legacy obliterates the significance of the unique historical heritage within Europe," which greatly surpases the structures themselves.[22] ■

18. "Tišina koja je srušila spomenik." [Silence that downed a monument]. https://silence-monument.com/hr/naslovnica/.

19. Henri Lefebvre. *The Production of Space*. Trans. Donald Nicholson-Smith. (Oxford and Cambridge: Blackwell, 1991).

20. Kirn, "Dissonance of Yugoslav Partisan Past in the Recent Revisionist Methodologies," 4.

21. Nadine Blumer. "Disentangling the Hierarchy of Victimhood: Commemorating Sinti and Roma and Jews in Germany's National Narrative." In *The nazi genocide of the Roma : Reassessment and commemoration*, ed. Anton Weiss-Wendt. (New York, Oxford: Berghan Books, 2013), 205-228.

22. Igor Lasić. "Očišćeni Bakić" [Bakić cleansed]. Portal Novosti, August 23, 2019. https://www.portalnovosti.com/ocisceni-bakic.

BIOGRAPHY

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"UN PUEBLO SIN MEMORIA, ES UN PUEBLO SIN FUTURO:" MEMORIES OF MODERNISM AND VIOLENCE AT THE NATIONAL STADIUM OF CHILE

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ABSTRACT

This paper examines the dictatorial transformations of one of Chile's most iconic modernist buildings, the National Stadium in Santiago. First, it reveals how the military neoliberal project, armed with strategies of terror, amnesia, and deregulation, has shaped local memory culture. Second, it looks at the long history of the National Stadium's 86 years of existence, to illuminate how gender stereotypes, material obsolescence, and subversive memories have transformed both the meaning and the uses of the modernist stadium. Still standing today, the National Stadium bares traces of institutionalized forgetfulness, as well as the oppositional tactics of memorialization organizations protesting menaces of demolition and privatization.

1. INTRODUCTION

The creation of the National Stadium in 1938 was entangled with two fundamental dimensions of Chilean modernity: modern style and modern planning. As the centerpiece of a public urban development project, it followed the stylistic and humanistic premises of local architectural modernism, on the one hand, and on the other, was in tune with socio-political endeavors to modernize Chile (Fig 2.). Once the biggest building in Santiago, the stadium was imagined as a stage for modern mass-culture, a trophy that would prove Chile's commitment to modernization to the rest of Latin America. At the same time the stadium was conceived as a laboratory for the 'modern man,' and thus contained reformist aspects that were envisioned to stimulate the body and mind of those who entered it (Fig 3). Breaking with these utopian ideals, in 1973 the stadium became a space of horror, when the military dictatorship transformed this temple of modern sports into a detention, torture and extermination camp. During the first 58 days of the regime, the National Stadium stopped being a sports field and received the 10.000[1] victims and the perpetrators of a dictatorship that would be in power for 17 years.[2] To dismantle the modern ideals of the National Stadium, the military used the venue both in its functional and symbolic dimensions.

The public visibility of the prison camp installed within the National Stadium gradually attracted more and more detainees' relatives, who gathered in front of the compound's gates in search for news from their loved ones. This is how the stadium's built perimeter became a landscape of resistance for the victims' relatives. These groups of relatives, constituted predominantly by women, originated the memorial rite of the velatón[3] [candle-lighting], commemorated until today every September 11th –the day of the military coup– in front of the northern entrance of the National Stadium. Precisely because it became a site of memory, under the dictatorial Pinochet regime the National Stadium's materiality was allowed to deteriorate. While the National Stadium has been analyzed from multiple perspectives, the erasure of the stadium's humanistic ideals and its relationship to the deregulation of urban development and its attendant suppression of the modern planning practices has not been closely studied. This paper examines the National Stadium's dictatorial transformations to reveal how the military neoliberal project, armed with strategies of terror, amnesia, and deregulation, has shaped local memory culture. Likewise, it looks at the long history of the National Stadium's 86 years of existence, to illuminate how gender stereotypes, material obsolescence, and subversive memories have transformed both the meaning and the uses of one of Santiago's most iconic modernist buildings. Still standing today, the National Stadium bares traces of institutionalized forgetfulness as well as the oppositional tactics of memorialization organizations protesting menaces of demolition and privatization **(Fig 1)**.

2. THE MODERN STADIUM

In 1938, at the time it was inaugurated by president Arturo Alessandri Palma (1932-1938), the Stadium was the largest building in the capital, and

1. There are different calculations for the number of prisioners who were held at the National Stadium. The exact number is still uncertain. Based on oficial prisioner's entry lists published by the former head of the National Intelligence Directorate (DINA) Manuel Contreras at least 10.000 people were imprisioned at the stadium during the first 58 days of the military regime. Nevertheless other authors estimate 12.000 or even 14.000 prisioners for the same period of time. (Manuel Contreras Sepúlveda, *La verdad histórica: el ejército guerrillero : primer periódo de la guerra subversiva, abril de 1967 al 10 de setiembre de 1973* (Ediciones Encina Ltda., 2000).)

2. Adolfo Cozzi, Estadio Nacional (Santiago de Chile: Editorial Sudamericana, 2000); Jorge Montealegre, Frazadas del Estadio Nacional, Colección septiembre (LOM Ediciones (Santiago, Chile)) (Santiago, Chile: LOM Eds, 2003).

3. During the *velatones* the relatives of the victims of the dictatorship, survivors and activists organize an activity in memory of the victims of the National Stadium and the dictatorship in general. At the centre of the commemoration, which takes place on the night of September 11th, is the lighting of candles in honor of the deceased, which are placed along the perimeter wall of the stadium. In addition, the rite is accompanied by poetry readings, speeches, music and artistic exhibitions.

as such, the role it played for the city surpassed its use as a sports venue **(Figures 2 and 3)**. The National Stadium was a symbol and an instrument for the modernization of the state as well as the city. Originally, the building was the centrepiece of a national project of physical and moral regeneration. As such, the Stadium was part of an educational program that promoted sports to champion an ideal 'Chilean race'. As the largest monument in Santiago, the National Stadium was envisioned as a stage for modern mass culture, and a trophy that would demonstrate Chile's commitment to modernization vis-à-vis the rest of Latin America. Simultaneously, it was conceived as a laboratory for the modern citizen, and therefore contained reformist aspects that were thought to stimulate the mind and body of its visitors.[4] Besides addressing a national debt in sports infrastructure and functioning as an educational space, the Stadium was conceived as an urbanization agent. Consequently, the construction of the stadium had major repercussions in the neighbourhood in which it was implanted. Designed as part of an urban complex that comprised modern housing, a bacteriological institute, a university campus, a school and a new tree-lined avenue, the National Stadium would conform a modern model neighbourhood for the rising middle class.

3. THE POPULAR STADIUM

Although the neighbourhood that developed around the National Stadium was oriented towards the middle classes, the site was, since its creation, a place of encounter with the other, an urban space that by density and appeal presented a characteristic social melting pot of Santiago. In addition, the Stadium was a sought-after place for mass politics: since the inauguration of the building to the breakdown of democracy in 1973, all of the republic's presidents–with the sole exception of Juan Antonio Ríos (1942-1946)–used the National Stadium to address the country. The *Unidad Popular* (UP) [Popular Unity], Allende's government coalition, exacerbated this model and politicized the National Stadium with greater intensity than any of the preceding governments, organizing political congresses, celebrations and acts within the site. The panorama during the four years of the UP government presented a stadium reddened and conquered by the popular masses. Its large seating capacity and symbolism turned the building into a microphone to address Chile, and in Allende's case; the world as well. For these reasons, during Allende's government the National Stadium was transformed into the most public and influential tribune of the country.

4. THE MILITARIZED STADIUM

The dictatorship not only used the National Stadium as a detention, torture and extermination camp during the first two months of its regime, but made it into one of its main stages of political promotion. The close-knit relation of the venue with the nation's presidentialism and in particular its political conversion during Allende's government, made the building an irresistible stage to be conquered by the military dictatorship. During the first 58 days of the regime, the Stadium stopped being a sports field and received the 10.000[5] victims and the

4. "Revista Crack," Editorial Zig-Zag II, no. 61 (December 9, 1938).

5. There are different calculations for the number of prisioners who were held at the National Stadium. The exact number is still uncertain. Based on oficial prisioner's entry lists published by the former head of the National Intelligence Directorate (DINA) Manuel Contreras at least 10.000 people were imprisioned at the stadium during the first 58 days of the military regime. Nevertheless other authors estimate 12.000 or even 14.000 prisioners for the same period of time. (Sepúlveda, *La verdad histórica*.)

perpetrators of a dictatorship that would be in power for 17 years.[6] To dismantle the modern ideals of the National Stadium, the military used the venue both in its functional and symbolic dimensions. The spatial layout of the building was functional for its conversion into a prison camp: the dark hatches and multiple compartmentalized dressing rooms, the panoptical control that could be exerted from the marquee across the whole venue, together with the segregation of the movement of people, contributed to the transformation of the Stadium into a military camp.[7] Nevertheless, it was the Stadium's visibility, its preeminent role within the city and its recognition as a place for recreation, entertainment and spectacle, which comprised the symbolic reasons to transform the sports venue into a concentration camp in order to intimidate the opposition. Functionalism and symbolism were combined to form the largest prison camp operated by the military regime. As a visual example of military authority, the building's transgression was largely amplified through speeches, images and films within the country and abroad.[8] The public visibility of the prison camp installed within the National Stadium gradually attracted more and more detainees' relatives, who gathered in front of the compound's gates in search for news from their loved ones. This is how the stadium's built perimeter, especially the ticket booths located at the main access towards Avenida Grecia, became a landscape of resistance for the victims' relatives. These groups of relatives, constituted predominantly by women, originated the memorial rite of the *velatón*[9] [candle-lighting], observed until today every September 11th –the day of the military coup– in front of the northern entrance of the National Stadium.

5. THE NEOLIBERAL STADIUM

Even though the military occupation of the National Stadium lasted only 58 days, it was a disruption that set off a long period of urban deterioration and obsolescence of the entire lot, as well as its main building. The neoliberal economic model deployed by the military dictatorship brought with it a deep discredit for urban planning that materialized in the opening of the urban limits of the city of Santiago, the de-territorialization of subsidies that disarticulated the link between communities and their territories, and the exemption of land taxes, among other measures. The National Stadium became a mirror image of the new urban model[10]. It follows that, during the 1980s, the 64 hectares of the compound began to be fragmented into smaller independent lots, divided by fences and walls. For the first time in the history of the National Stadium, the building and its premises were no longer planned as an whole urban complex, and instead, it was subdivided into various publicly and privately managed sub-lots. Simultaneously, an unprecedented growth transformed the Stadium between 1990 and 2000, more than ten projects were carried out to improve existing infrastructure as well as to create new buildings. Nevertheless, most of these projects were not inscribed within a plan for the totality of the sports complex.[11]

6. THE MEMORIAL STADIUM

The restoration of democracy had no immediate effect on the National Stadium. Although the uses of the compound were democratized, the

6. Adolfo Cozzi, Estadio Nacional (Santiago de Chile: Editorial Sudamericana, 2000); Jorge Montealegre, Frazadas del Estadio Nacional, Colección septiembre (Santiago, Chile: LOM Eds, 2003).

7. For more information on the use of the National Stadium as a prison, torture and extermination camp, see: Pascale Bonnefoy, Terrorismo de estadio: prisioneros de guerra en un campo de deportes (Santiago, Chile: Eds. Chile América, 2005).

8. Costa Gavras, *Missing* (Universal Pictures, 1982), http://catalog.stanford.edu/view/5736386; Marcelo Montecino, Con Sangre En El Ojo, Primera edición. (México, D.F. : Editorial Nueva Imagen, 1981); Koen Wessing, Koen Wessing : Fotografía : El Arte de Visibilizar La Pregunta /, 1. ed. (Santiago: LOM Ediciones, 2011).

9. During the *velatones* the relatives of the victims of the dictatorship, survivors and activists organize an activity in memory of the victims of the National Stadium and the dictatorship in general. At the centre of the commemoration, which takes place on the night of September 11th, is the lighting of candles in honor of the deceased, which are placed along the perimeter wall of the stadium. In addition, the rite is accompanied by poetry readings, speeches, music and artistic exhibitions.

10. Pablo Trivelli, "Reflexiones en torno a la política nacional de desarrollo urbano," Revista *EURE* - Revista de Estudios Urbano Regionales, [publicación original 1981], 8, no. 22 (January 8, 2014), http://www.eure.cl/index.php/eure/article/view/921.

11. Valentina Rozas-Krause, *Ni Tan Elefante, Ni Tan Blanco: Arquitectura, Urbanismo y Política En La Trayectoria Del Estadio Nacional* (Santiago, Chile: RIL editores, 2014). Op. Cit. pp. 87-180



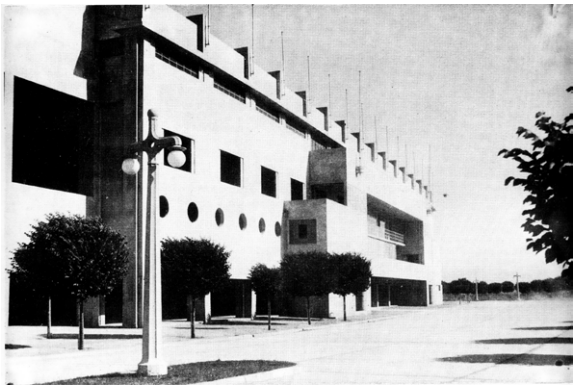




Figure 1: Ricardo Müller, Aníbal Fuentealba and Alberto Comatches, National Stadium, Santiago, Chile, Visit August 2023. © Photograph Courtesy of Felipe Poga.

Figure 2: Ricardo Müller, Aníbal Fuentealba and Alberto Comatches, National Stadium, Santiago, Chile, 1938. © Photograph Courtesy of SALFA Archive

Figure 3: Ricardo Müller, Aníbal Fuentealba and Alberto Comatches, National Stadium, Santiago, Chile, 1942. © Photograph Courtesy of Revista Estadio.

Figure 4: Memorial Escotilla 8, Ricardo Müller, Aníbal Fuentealba and Alberto Comatches, National Stadium, Santiago, Chile, Visit August 2023. © Photograph Courtesy of Felipe Poga.



venue continued its path of material obsolescence initiated during the military dictatorship. Democracy was installed in the building by the 1989 referendum that marked the end of the dictatorship. That same year, Amnesty International organized a mega-concert at the Stadium, with the presence of groups of relatives of the *Detenidos Desaparecidos* [Disappeared Detainees]. The following year, the newly elected president Patricio Aylwin (1990-1994) celebrated his commencement with a massive purifying event at the National Stadium, during which a Chilean flag of monumental proportions was unfolded over the field. Despite these symbolic events, the National Stadium and its past were institutionally forgotten. For almost a decade it remained in a dormant state with almost no visible traces of its history, until the year 2003, in which a series of community initiatives, public policies and urban projects aligned to rediscover the building.[12] That same year the Council of National Monuments declared the National Stadium to be a 'National Historical Monument,' which triggered a series of commemoration and renovation projects, both public and private, that were debated across the country in newspapers and magazines.[13] The contradiction between making the building a piece of national heritage and its profound physical decay finally led, in 2010, to the remodelling of the building and the development of *Memorial 'Escotila' 8* [Memorial 'Hatch' 8] **(Figure 4).** Since that day, the national soccer team never plays at the stadium's full capacity for, because a remembrance of those who lost their lives at the National Stadium, an area of 185 m^2 of old wooden stands always remains empty (Figure 1). ■

12. Valentina Rozas-Krause, "Tres Maneras de Explicar La Presencia de Graderías Antiguas En Un Estadio Remodelado," Revista Bifurcaciones, no. 14 (2013), http://www.bifurcaciones.cl/2013/10/graderias-antiguas-en-un-estadio-remodelado/.

13. Consejo de Monumentos Nacionales, "Decreto 00710, Santiago 11 Septiembre 2003. Declara Monumento Histórico El Estadio Nacional, Ubicado En La Comuna de Ñuñoa, Provincia de Santiago, Región Metropolitana. Departamento Jurídico. Ministerio de Educación. Gobierno de Chile." (Consejo de Monumentos Nacionales, September 2003); Consejo de Monumentos Nacionales, Tres miradas al Estadio Nacional de Chile : historia, deporte, arquitectura (Santiago, Chile: Ministerio de Educación, 2004).

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THE RECOURSE TO THE AUTHENTICITY IN THE MODERN ARCHITECTURE OF MOBUTU'S ZAIRE

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ABSTRACT

In 1960, the Belgian Congo became an independent nation, gaining independence from the colonial power. The later constitution of the Republic of Zaire sparked the rediscovery of so-called authenticity, which also influenced the architectural language that shaped the colony for decades, the so-called tropical modernism. However, the hybridisation characterising the country's vast territory carries its new identity. A particular form of eclecticism was already shaping the nation established from the ground up at the Berlin Conference of 1885: a country with nine climatic zones and more than four hundred tribes. Since then, the term "hybrid" is no longer used in opposition to "authentic," but has become synonymous with it. This paper delves into the unique and intriguing legacy left by the research of a Congolese identity in architecture during Mobutu's reign through the lens of two intriguing case studies: the INSS (National Institute of Social Security) building designed by Marcel Lambrichs (1966) and the Saint Anthony II Church (1982) designed by Paul Dequeker. These selected artefacts, located in the capital city of Kinshasa, were respectively created at the beginning and close to the end of the recourse to authenticity. To make the constructions local, architects designed them in accordance with the climatic characteristics of a specific climate, place, and culture while using elements of decoration inspired by traditional art. Therefore, modernism is adapted to the context and updated according to the ongoing political orientation. The analysis of the case studies is conducted using a qualitative method, in which the historical and recent literature support the thesis of the hybridisation of an international architectural language by injecting local traditional decorative artworks into the design process.

1. INTRODUCTION

Following independence in 1960, the Belgian Congo underwent a process of remaking its past to shape the future of a new nation. The constitution of the Republic of Zaire sparked the rediscovery of so-called authenticity, which also influenced the architectural language imposed by the colonial authorities, the so-called tropical modernism. Admitting the impossibility of maintaining pure cultural identity, Zairian politics accepted all influences as authentic, which would likely allow for a distinction between the local and the global. Nevertheless, the hybridisation characterising the country's vast territory carries its new identity. A particular form of eclecticism was already shaping the nation established from the ground up at the Berlin Conference of 1885: a country with nine climatic zones and more than four hundred tribes. Since then, the term hybrid is no longer used in opposition to authentic but has become synonymous with it. This understanding is that of architects who described their architecture as African or Congolese, provided there is a distinction between what could be described as international architecture. The paper analyses the legacy left by the research of a Congolese identity in architecture during Mobutu's reign. The investigation is led by taking into consideration two significant case studies: the INSS (National Institute of Social Security) building designed by Marcel Lambrichs (1966) and the Saint Anthony II Church (1982) designed by Paul Dequeker. These selected artefacts, located in the capital city of Kinshasa, were respectively created at the beginning and near the end of the process of pursuing authenticity. These case studies, the first and last significant architectural projects of the authenticity era, hold immense importance in understanding the evolution of the Congolese architectural language. To make the constructions local, architects, in their commendable effort, designed them in accordance with the climatic characteristics of a specific climate, place, and culture while using elements of decoration inspired by traditional art. Therefore, modernism is adapted to the context and updated according to political orientation. The analysis of the case studies is conducted using a qualitative method, in which the historical and recent literature support the hybridisation of an international architectural language by injecting local traditional decorative artworks into the design process. Initially, there was confusion about the "return" and not the "recourse" to authenticity, which did not necessarily imply living once again in the huts for dwelling. Instead, it is a successful symbiosis between tradition and modernity, between the local and the global, the native and the imported culture. The INSS building is the first to correspond to the architecture of authenticity. The sunshades are combined on the main elevation with the integration of a giant mosaic. Integrating works of art, particularly frescoes, in public buildings also appeared in the Saint Anthony Church II in the 1980s.

2. METHODS

Beginning with the assumption that tropical architecture originated in Africa from the colonial experience before the Independence movement, it still constitutes a valid reference for designing a more sustainable future. It must

also be considered an architectural language characterised by adapting to and drawing inspiration from the context, deriving its purpose from the context itself. Authenticity was introduced in the 1970s in Congo, representing an upgrade for tropical architecture related to the tangible environment and intangible memory. The method approach adopted for the research is based on historical data from literature about tropical architecture and authenticity, initially describing and contextualising the two topics in Congo. Once the historical background is laid out, two adequate case studies will be introduced and analysed in the capital city of Kinshasa. The discussion takes a quantitative approach to understanding the relationship between the selected artefacts and the epiphany of authenticity. The aim is to demonstrate that the iconographic depiction of Congolese art obtained by adding a mosaic on the main façade of the INSS building and interior traditional decoration motifs on the Saint Anthony II church can be epitomised as two built architectural synecdoches. The conventional art style is recognisable in most public and private buildings in the Republic of Zaire.

3. FINDINGS AND DISCUSSION

Tropical architecture in Africa and authenticity in Congo are presented here to provide the necessary background to contextualise the case studies, the INSS building and the Saint Anthony II church. Two public construction projects, the National Social Security Institute headquarters located in Gombe, the European quarter of Kinshasa, and a new church constructed in Bumbu, a suburb of the capital city, mark the ongoing uncontrolled urban growth.

3.1. TROPICAL ARCHITECTURE IN AFRICA

In the 1950s, the architecture of many African countries was characterised by so-called tropical modernism. The spread of this architectural rediscovered language was credited to the achievements of Maxwell Fry and Jane Drew in West Africa: "to draw reasonable deductions from the past habits and styles of construction of tropical regions, to solve our current problems"[1]. A conference on tropical architecture was held in London in 1953[2], and a publication on the topic appeared for the first time in 1956, *Tropical Architecture in the humid zones*. The Architectural Association (AA) London, where the two British architects, Fry and Dry, studied and worked, established a specialised Department of Tropical Architecture at the AA School of Architecture. In Belgian magazines on architecture and urban design like *Rythme*, there have also been recommendations for tropical design since the end of the 1950s, as well as examples that illustrate the applications in buildings like that of Antonin Raymond in India[3].

The transformation of tropical architecture knowledge led to a shift from a purely functionalist approach, typical of the hygienist era, to a more philosophical strategy for designing a new aesthetic. Maurice Houyoux is among the pioneers in Congo and Africa who attempted to translate tropical modernism into an architectural language. Nevertheless, when he designed the headquarters of the Belgian Congo Bank in Léopoldville in

1. Edmin Maxwell Fry and Jane Drew, *Tropical Architecture in the dry and humid zones* (London: Batsford Press, 1964), 45.

2. Hannah Le Roux and Ola Uduku, "The media and the modern movement in Nigeria and the Gold Coast", *Nka: Journal of contemporary African Art* 3, no. 1 (2004), 46-49.

3. Carle Loo, "Protections contre les rayons solaires", *Rythme 3*, no. 6 (Juin 1949), 18.

1949, there were already articles discussing the climate, such as "Living conditions and physical factors to which homes in the Belgian Congo must respond"[4], "Protection against solar rays"[5], or "Building in the tropics"[6], which appeared in magazines. Victor Olgyay, who published *Designing with Climate: a Bioclimatic Approach to Architectural Regionalism*, concluded that whether we draw inspiration from or reinterpret ancient vernacular architecture or whether we examine climatic, topographical and biological data, we arrive, superstitious exceptions aside, at the same conclusions about buildings expressing a regional character[7].

TROPICAL ARCHITECTURE PRINCIPLES

The hot and humid climate is characterised by average temperatures ranging between 20 and 35°C, with relative humidity above 55%. It is the combination of humidity and heat that makes this climate uncomfortable. Without neglecting the attention given to each culture and the construction techniques that this may involve, and regardless of the regions or microclimates, the primary and minimal principles for building in a tropical environment are the same:

- Protection from direct solar heating.
- Constant cross ventilation.
- Natural internal lighting.
- Sustainable, low inertia construction materials.

These requirements are linked to thermal, health, and lighting comfort. Indeed, the main challenge of building in tropical regions is to avoid overheating buildings under the sun. The correct and rational application of the aforementioned principles makes limiting or eliminating the need for air conditioners or any high-energy-consuming machine possible.

3.2. AUTHENTICITY IN ARCHITECTURE

What exactly does authenticity mean? In President Mobutu's speeches, authenticity generally refers to a policy of cultural independence. By extension, authenticity became synonymous with culture, tradition, and civilisation. The foundation of the concept was laid in 1966, even if the term authenticity did not become a political keyword until 1971, marking the beginning of the so-called Zairianization of Congo. In 1966, the government decided first to change the names of cities, and at the end of the same year, President Mobutu invited the people to be proud of their identity. The following year, the creation of the Popular Movement of the Revolution (MPR) marked a shift towards achieving genuine Congolese nationalism in its doctrine. Initially, it was still a question of "return" and not of "recourse to authenticity"[8]. Read in a very orthodox manner, the "return" to authenticity could mean, in the field of architecture, living in huts. Although comfortable and adapted to the tropical climate and its wooded landscape, most city dwellers had already abandoned the huts in 1965, some of whom considered themselves modern citizens living in modern cities. The word "return" had a backwards-looking, conservative

4. Jean Devroey (1949), "Conditions de vie et facteurs physiques auxquels doivent répondre les habitations au Congo belge", *Rythme 3*, no. 6 (Juin 1949), 13-14.

5. Carle Loo, "Protections contre les rayons solaires", *Rythme 3*, no. 6 (Juin 1949), 20.

6. Gabriel Atkinson. (1950), "Construire sous les tropiques", *Rythme* 4, no. 8 (August 1949), 33-45.

7. Victor Olgyay, *Design with Climate Bioclimatic Approach to Architectural Regionalism* (Princeton: University Press), 47.

8. Mussia Kakama, "Authenticité, un système lexical dans le discours politique au Zaïre", *Mots*, no. 6 (Mars 1983), 31-58.

connotation, which could give an image contrary to the progress the new Zaire aimed for.

"Recourse" should not mean taking everything from our ancestors' tradition, but only what is beneficial to modernity. However, what could "authenticity" mean in the arts? Authenticity in Zaïre is more than a slogan. Far from opposing progress, it would promote a mix of local and global traditions and modernity. Acknowledging the progress made, the approach would include inserting the relevant traditional elements into the modern. In Kinshasa, especially in the city centre, the buildings were all white and retrieved their tradition of tropical modernism, a contextualised architectural language. Inserting relevant traditional elements into the design process means rediscovering the typical decorative *apparatus* conceived in interior and exterior spaces. The art decoration expressing Zairian authenticity was portrayed in the INSS building through a mosaic on the main elevation and in the Saint Anthony II church through the repetition of traditional patterns on the indoor walls.

3.3. THE INSS BUILDING BY MARCEL LAMBRICHS

The Belgian architect Marcel Lambrichs started working in the colonial Congo in the early 1950s. He designed the *Caisse d'Epargne* between 1953 and 1957, located on the current avenue CADECO. In 1956, he won the competition to construct the Belgian Embassy, celebrating the fiftieth anniversary of the colony's constitution. Like most architects who arrived in Congo before independence, Marcel Lambrichs proposed a suitable architecture for the local environment, referring to the usual tropical toolbox: vertical sun breakers, perforated walls, and loggias.

THE PROJECT

The INSS building is on Boulevard du 30 Juin, the main road in the city centre of Kinshasa (Leopoldville), where most public buildings are still located. Lambrichs takes full advantage of the site's location by aligning the long elevations to the Boulevard, which are oriented north-south, thus facilitating and enhancing ventilation. The sunshades that had made tropical modernism successful are preserved but reduced to yellow glass panels, giving the bulky building an impression of lightness (**Fig. 1**). He offers a double façade or skin to achieve optimal conditions of thermal comfort. The void between the two layers results in a ventilation chamber and serves as insulation against wind and sound. Glass-coloured panels are a new material in the Congolese construction market, and the architect remains modernist by using new technological materials to reinterpret the "tradition" of tropical architecture.

THE AUTHENTICITY

The need for authenticity is materialised in a nearly 50-square-metre mosaic plaque in the Boulevard elevation (**Fig. 2**). What does the INSS mosaic represent? The painted characters are not Europeans but rather indigenous



Figure 1. Marcel Lambrichs, INSS Building, Kinshasa, Democratic Republic of the Congo, 1956, Photo taken from the Boulevard 30th June. ©Alexis Tshiunza, 2022.



Figure 2. Marcel Lambrichs, INSS Building, Kinshasa, Democratic Republic of the Congo, 1956, Photo of the mosaic places on the north elevation. ©Alexis Tshiunza, 2022.



Figure 3. Paul Dequeker, Saint Anthony II Church, Kinshasa, Democratic Republic of the Congo, 1982. ©Victor Bay, 2023.



Figure 4. Paul Dequeker, Saint Anthony II Church, Kinshasa, Democratic Republic of the Congo, 1982, Photo of the interior decoration. ©Victor Bay, 2023.

people depicted while doing their traditional occupations. It recalls the trades and activities of the ancestors set in the typical environment: a river in front of a forest completed by adding vases in traditional shapes. There is a clear distinction between the woman who fishes and the man who makes and sells pottery, and there is another figure surrounded by plants who works the field. Instead, the upper part of the mosaic illustrates the INSS services. First, the benefits served during old age are represented by an older man holding a stick in his hand, which might also remind us of benefits in the event of disability and occupational disease. The woman with the child on her back, facing the man between two plants, reminds us of the benefits for the subscribers' families. Therefore, Marcel Lambrichs's integration of a different art form into his architecture was a strong gesture toward representing a culture rejected during colonisation by the authorities.

3. 4. SAINT ANTHONY II CHURCH

When Paul Dequeker designed the Saint Antoine II church in 1982, he completed several religious projects, including the original Saint Antoine I church in Congo. For the Belgian missionary, architecture must modernise itself and return to ancestral sources, recognising traditional African features balanced with technoscientific acquisitions—a mix between tradition and modernity[9].

THE PROJECT

The original Saint Antoine church was designed in 1961 with a simple plan—a circular gathering space with a podium on the east side. Due to the relatively small size of the Bumbu suburb community, a 320 m² room was constructed to accommodate around 300 worshipers. The subsequent version is not so different in the programme. It is designed for 800 worshipers, accommodating almost 500 more, and has a surface area of 745 m² (**Fig. 3**). Saint Antoine II's church came at a time of reliance on authenticity, and the reforms introduced by the Vatican allowed for progress in integrating local characteristics into the liturgical celebration. The shapes of both buildings remained simple[10], and the features and details of tropical modernism corroborated this. Moreover, the gradually dimmed lighting provides a perceptual tension that gently animates the interior atmosphere and makes it sacred.

THE AUTHENTICITY

A congregation member added frescoes to the interior walls after discussions with parishioners on the themes to comply with the integration of artists' work specific to the era of authenticity. Dequeker suggested reproducing the designs of Kasai velvets, which were far from being merely decorative, and indeed, these precisely woven wall rugs extend over the chief's hut, as seen in Kuba culture (**Fig. 4**). This wall decoration is a symbol and a "signage of places", a "qualification of spaces", and a "transformation of wall surfaces"[11].

4. CONCLUSION

The recourse to authenticity suddenly ended with the collapse of Mobutu's long rule. The country's name moved back from Zaire to Congo, a switch that *a posteriori* sounds more authentic. The colonial authorities gathered under a unique flag the existing Realms and Tribes that stretched in the equatorial forest, and the Kongo one, close to Angola, had a long historical heritage. In architecture, the wave of authenticity has led to the inclusion of decorative elements inspired by traditional art forms, such as mosaics and frescoes in the design process. The INSS building and the Saint Anthony II church are analysed for their quintessential value, depicting the merging process between tropical modernism and the recourse to memory. The mosaic installed in Lambrich's project, and the frescoes painted on the interior walls of the Dequeker's religious space are fragments of the past embedded in the tangible and intangible

9. Henry Mathissen, "Zur Architektur, Paul Dequekers", in *Architectuur en missie in Afrika: het werk van broeder-architect Paul Dequeker scheutist*., ed. Luc Dequeker (Leuven: KADOC, 2014).

10. Paul Dequeker and Mudiji Malamba Gilombe, Églises *tropicales* (Kinshasa: Éditions C.E.P.), 10.

11. Paul Dequeker, Kanene Mudimubade, and A De Herde, *L'architecture tropicale : théorie et mise en pratique en Afrique tropicale humide* (Kinshasa : Centre de recherches pédagogiques), 271.

construction of a community that, despite the technological progress, has to recognise itself and embrace its culture.

Today, no achievements accomplished by architecture during the recourse to authenticity are visible in the colonial urban fabric of Kinshasa or even in the vast sprawl of the city towards the east and south. The pathetic recourse to such blunt modernity involves imposing models that are ill-suited to the physical context or local culture. ■

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INTERSECTIONS OF ETHNICITY, NATIONAL IDENTITY, AND MODERN ARCHITECTURE: A VIEW FROM LATIN AMERICA

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ABSTRACT
This paper problematises the construction of national identities through historical narratives and the role played by architecture in this process, addressing the artificial nature of these narratives, which respond to the need for social cohesion in the context of the nation-state. It focuses on the cases of Mexico and Brazil, exploring how race and ethnicity were part of the construction of national identities -especially through the concept of miscegenation- and how modern architecture draws on these identities. It concludes that these ambiguous and contradictory bases should be critically examined, making use of transdisciplinary perspectives.

1. INTRODUCTION[1]

As observed by Irene Cheng, Charles L. Davis II, and Mabel O. Wilson[2], to understand the imbrication of race in modern architectural history, we must not only incorporate previously excluded building practices, but we must also look to the heart of the canon, deconstructing that which appears to be universal, modern, and transparent. In this sense, we need to recognise that architectural history should examine transdisciplinary, transnational, and transcontinental dialogues and exchanges between political agents, artists, writers, and architects both inside and outside the places that have been traditionally interpreted as centreers.

An analysis of the period of the initial development of modern architecture reveals an apparent operation in opposite directions. While in the northern hemisphere, the unrealistic and historically problematic notion of a universal, historically uprooted architecture was being built, in much of the southern portion of the globe ethnic and historical roots underpinned the construction of modern national identities, thus embracing the role of architectural works as subjects in cultural pedagogy. Jorge Francisco Liernur has already explained[3] how the paradoxical movement of modernity, through imposing the laws of universalisation and expansion, ends up stirring up the forces of the singular and the national. The same author also analysed the relationship between miscegenation and modernisation in Latin American architecture at the beginning of the last century[4], in a pioneering text from which this paper intends to build on through further questions.

For Latin American nations, as well as many Asian and African ones, constructing the past and the future simultaneously was a necessity for the social stability of ethnically and culturally heterogeneous countries, many of which had gained their independence not long ago. Of course, this phenomenon is not limited to the regions mentioned, taking into account that since the middle of the 19th century, the construction of national identities based on fictitious ethnicities[5], invented traditions[6], and imagined communities[7] supported the consolidation of modern nation-states. As explained by Gellner[8], narratives about national foundations construct the original myth and were necessary in convincingly underpinning, or creating, common roots in a society.

No nation naturally has an ethnic base, but as social formations become nationalised, the different populations become "ethnified". In other words, they are represented in the past or the future as if they formed a natural community[9]. To consolidate the idea of a shared entity of origin, language, and race would be central elements.

The racial diversity of Latin America is the result of the confrontations of diverse Indigenous populations, colonialism and slave trade, and other complex exchanges that occurred after the region gained independence in the early 19th century. Such diversity is particularly relevant when addressing discussions on national identities, and architecture both reflects and forges these identities. This paper argues that modern architectural

1. The authors acknowledge the support of Fundação de Amparo à Pesquisa do Estado de São Paulo - FAPESP (2021/11782-6).

2. Irene Cheng,Charles L. Davis II, and Mabel O. Wilson, *Race and Modern Architecture. A Critical History from the Enlightenment to the Present* (Pittsburgh: University of Pittsburgh Press, 2020).

3. Jorge Francisco Liernur, "¡Es el punto de vista, estúpido!" In: *Arquitectura, en teoría. Escritos 1986-2010*. (Buenos Aires: Nobuko, 2010).

4. Jorge Francisco Liernur, "A máscara sob a máscara: mestiçagem e modernização na arquitetura latino-americana do início do século". In: Cardoso, Luis A. F. *(Re)Discutindo o Modernismo: universalidade e diversidade do movimento moderno em arquitetura e urbanismo no Brasil*. (Salvador: Mestrado em Arquitetura e Urbanismo UFBA, 1997).

5. Étienne Balibar, and Immanuel Wallerstein, *Race, nation, classe: Les identites ambigues*. (Paris: Editions La Decouverte, 1988).

6. Eric Hobsbawm, Terence Ranger, (Eds.). *The invention of tradition*. (Cambridge and New York: Cambridge University Press, 1983).

7. Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. (London: Verso, 1983).

8. Ernest Gellner, *Nations and nationalism*. (Ithaca, Cornell University Press, 2008).

9. Balibar and Wallerstein, *Race, nation, classe: Les identites ambigues*.

narratives should not be seen as separate from efforts of nation-building, and therefore, relevant to discussions on ethnicity. It takes Latin America, and the cases of Brazil and Mexico within it, as an opportunity to provide a more nuanced understanding of the intersections of race, national identities, and modern architecture.

2. UNIVERSAL RACE: REGIONAL ARCHITECTURE?

In the case of Latin America, from the second half of the 19th century until at least the middle of the last century, a project was put into practice to build less ethnically heterogeneous and more culturally unified populations. This text aims to observe how, in multiracial countries with a high degree of miscegenation, *mestizaje* emerged as both a problem and a solution, as a lack of and a source of identity. Within this context, the cases of Brazil and Mexico present a privileged interpretative panorama based on their common attributes, their specificities, and the dialogues between them that contributed to the foundation of hegemonic ideologies on miscegenation, and which, in turn, underpinned the premises of their modern architectures.

Under the biological determinism of the late 19th century, pseudo-scientifically based on the inferiority of non-white races, miscegenation was seen as both negative and necessary. During this period and into the first decades of the 20th century, intellectuals from various fields of knowledge sought to establish a single ethnic identity for these countries at the centre. In the visual arts and literature of the second half of the 19th century, the Romantic movement tried to build a model of a national Being, establishing the figure of the indigenous person as an immaculate ancestor - Rousseau's good savage, in the case of Brazil - or as a symbol of greatness and bravery - the great pre-Hispanic civilisations, in the case of Mexico.

More than honouring the "Indian" and his legacy, it was a question of creating an allegory of the birth of the nation from the crossroads with the European conqueror, the moment from which the Brazilian and Mexican nations were founded.

In Europe, this principle of nationality triumphed after the First World War[10], due to the collapse of the multinational empires and the need to reorganise the continent's nation-states. In Latin America, the rise of nationalism during the same period seemed to address other demands. While Brazil was undergoing major economic and social transformations as a result of the late abolition of slavery in 1888, the influx of large masses of immigrants, and the onset of the industrialisation process, Mexico was grappling with efforts to stabilise and establish a new political and social order following the 1910 revolution.

The theory developed by the anthropologist Manuel Gamio[11], that only the homogenisation of race, culture, language, and economic conditions would forge the foundations of the Mexican homeland, would be further taken up by the philosopher José Vasconcelos, Secretary of Public Education under President Álvaro Obregón (1920-1924). In his 1925 book-thesis *La raza cósmica* (The Cosmic Race)[12], he predicted the

10. E. Hobsbawm, *Nações e nacionalismo desde 1780: programa, mito e realidade*. (São Paulo: Paz e Terra, 2013), 183-184.

11. Manuel Gamio, *Forjando Patria (Pro nacionalismo)*. (México: Editorial Porrúa, 1982), 183.

12. José Vasconcelos, *La raza cósmica: misión de la raza iberoamericana*. (París: Agencia Mundial de Librerías, 1925).

emergence of a "fifth race" in Latin America that would encompass the other four races in the world and, more importantly, surpass them. More than a tendential analysis, Vasconcelos declared a project to forge a new *mestizo* and homogeneous race, favouring the idea of synthesis over that of racial and cultural plurality. In his book *Indología*, from 1926, the issue is further explored under the argument of the abolition of existing races through *mestizaje*, whose varied matrix and synthetic result would put an end to existing racial hierarchies. Establishing Latin America as the site of this new synthesis and the birth of a culturally and biologically superior global race, Vasconcelos moves it from the periphery to the centre of the planet's future[13].

It is possible to draw parallels between Vasconcelos' thinking and that of the Brazilian polymath Gilberto Freyre, who, like Gamio, was a student of the US-based German anthropologist Franz Boas at Columbia University in the early 1920s. In his 1933 classic *Casa Grande e Senzala* (The Masters and the Slaves)[14], Freyre shifts the concept of race from a purely biological sense to its relationship with culture, representing Brazilian society as having its origins in a triangle whose vertices are the white, Indian and black races. Similarly to Vasconcelos, Freyre created a perspective of the future based on messianism and utopia, which in the Brazilian case was decisive in consolidating the idea of racial democracy, which had a lot of penetration in the narrative construction of the nation in subsequent decades[15].

Both Freyre and Vasconcelos repositioned the problem of nationality based on *mestizaje*, transforming what was ambiguity into uniqueness, and what was negative into positive. Both consolidated an ideological operation that had been under construction for decades: the past no longer represented backwardness, but the source of originality for projecting the future. Although hiding or flattering histories of (racial) violence., they also recognised, each in their own way, the fundamental actions and contributions of the people subjected by the invaders.

Perhaps the most significant contradiction was the search for distinctive identities in the dynamics of *mestizaje* since the dynamics of hybridisation tend to relativise the concept of identity, rather than increase racial and cultural differentiation between nations.

Similarly, the nationalist tendencies that marked the architectural production of the early decades of the twentieth century were permeated by ambiguities. The search for the genuinely national intensified in the years close to the commemorations of the first centenary of the independence of Latin American countries (1908-1926 approx.). Expressions flourished that tried to produce the national based on the rescue of colonial architectures.

In Mexico, architects such as Jesús Acevedo and Federico Mariscal claimed that the Mexican citizen was "the result of a material, moral and intellectual mixture of the Spanish race and the aboriginal races that populated the Mexican soil. Therefore, Mexican architecture has to be the one that emerged and developed during the three virreinal centuries in

13. Jorge Schwartz, *Vanguardas latino-americanas: polêmicas, manifestos e textos críticos*. (São Paulo: Editora da Universidade de São Paulo, 2008), 606.

14. Gilberto Freyre, *Casa Grande & Senzala: formação da família brasileira sob o regime da economia patriarcal*. 51 ed. (São Paulo: Global, 2006).

15. Kabengele Munanga, *Rediscutindo a mestiçagem no Brasil. Identidade nacional versus identidade negra*. 5 ed. (Belo Horizonte: Autêntica, 1999), 78-80.

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which "the Mexican" was constituted"[16]; defending the same architecture, but rejecting miscegenation, the Portuguese engineer Ricardo Severo argued that traditional Brazilian art was not based on the "elementary arts of the primitive Indigenous", but only emerged after the establishment of "the peoples who left Western Europe in the 16th century to discover the rest of the world".[17]

The heart of the discourse that supports modern Brazilian and Mexican architecture was laid during neo-colonial experimentation and, in turn, was heir to the ethnic-racial theories of the 19th century. Such influence is evident in the works of key figures of modernity in these countries, such as Luis Barragán, Carlos Obregón Santacilia, and Lucio Costa, who began their careers with revivalist works.

Costa, the great creator of the synthesis between modernity and tradition that characterised the first Brazilian architectural modernity, later dismissed his early works as a "neo-colonial misconception". He also distanced himself from discourses that flirted with scientific racism and in the early 1930s he incorporated Gilberto Freyre's culturalist vision, marking a shift towards a positive perspective of miscegenation.

Noting that colonial architecture was an adaptation of Portuguese vernacular architecture to the tropical environment, like a "ready-made garment that has to adapt to the body of the new land", Costa argued that it had undergone a process of simplification, taking on an "unpretentious and pure" character. He uses Gilberto Freyre's concept of "softening" to convey the idea that Brazilian culture is the result of European civilisation becoming tropicalised and softened by nature and the influence of indigenous and African people.

Costa establishes a reasoning based on social, technical, and aesthetic approximations between modern and colonial times, for example when he states that the natives' forms of sociability and climate suitability would have had repercussions on the large covered spaces of the colonial ranchos, which moved away from the metropolitan tradition and leaned towards the monumental indigenous shelters. "So, in a way, everything intertwined - the Indigenous oca, the Trás-os-Montes house, the so-called 'Bandeirante' house, the farmhouse, the suburban house, the urban neighborhood house."[18] In 1926, Carlos Obregón Santacilia, like Costa, was already advocating for the adoption of a "line of world architecture" and stated that working within the Mexican tradition did not mean imitating it but rather, making it evolve. As the author of the most emblematic works of the Vasconcelista neo-colonial period, such as the Mexican Pavilion at the Exhibition of the Centenary of Brazilian Independence in 1922 and the Benito Juarez Primary School in 1924, for Obregón Santacilia, in the 20th century "the spirit and character of the race of each people"[19] would become more evident from a common base provided by mechanical means, modern procedures and programmes.

There is no denying the success that theories on *mestizaje* have had in many Latin American countries, offering a practical response to the

16. Federico Mariscal, *La Patria y la Arquitectura Nacional*. (México: Imprenta Stephan y Torres, 1915), 389.

17. Ricardo Severo, "A arte tradicional no Brasil". In: Sociedade de cultura artística. *Conferências 1914-1915*. (São Paulo: Typographia Levy, 1916), 46.

18. Lúcio Costa, "Tradição local". In: *Registro de uma vivência*. (São Paulo: Editora 34/ Edições Sesc São Paulo, 2020), 453.

19. Carlos Obregón Santacilia, *México como eje de las antiguas arquitecturas de América*. (Ciudad de México: Atlante, 1947), 93.

impasse between national unity and population fragmentation. However, it is important to note that the *mestizo* solution does not fully resolve the identity crisis and can in fact in many cases, exacerbate it. Take, for instance, the work of an architect like Juan O'Gorman, whose career seems to chronicle an incessant and insatiable search - perhaps because it is unattainable - for true "Mexicanness".

From the introduction of rationalist architecture in Mexico combined with some local colour, such as in the case of Casa Estudio Diego Rivera y Frida Kahlo (1929-31), O'Gorman went on to invest in the radicalisation of the modern synthesis of the arts, masterfully developed by Mexican muralism. His subsequent works displayed varied and even conflicting experiments, including for instance, the monumental murals that cover the regular volumes of the UNAM Central Library (1949-1951) and the hybrid and organic aspect of his Casa Cueva (1948-53). These pieces reflect the search for a genuine Mexican identity, which seems to reach paroxysm and a dead end, and are a protest against civilisation and the order of modern architecture itself.

3. CONCLUSION

Rather than a harmonious blend, the dynamics of *mestizaje* reveal an existential crisis reflected in the incessant and "painful construction of ourselves", developed in the rarefied dialectic between "not being and being other"[20].

This may have something to do with the adoption of a contradictory discourse by birth, conceived by Latin Americans themselves concerned with building a place in the international community. Ricardo Piglia, in discussing the history of Argentine literature, refers to this as a cross-eyed gaze, marked by a split, a double temporality, and two autonomies[21]. This is the only way to understand the opposing forces at play, the simultaneous pursuit of a global race and a local architecture.

In the same sense, it is impossible to ignore the obvious contradiction underlying the notion of an autonomous modern architecture based on colonial references. However, one cannot fail to recognise that this operation effectively created very strong sense of national conscience, expressed in a curious reversal of meaning that turned the colonial into an effective tool for decolonisation. The dissemination of the "Brazilian style" - with Oscar Niemeyer as a shining star - offered new references to modern architecture worldwide, inspiring architects in the various countries worldwide, including those in the North Atlantic region. A similar phenomenon occurred with Barragán's architecture, whose characteristics were widely replicated both within and outside Mexico.

To address this process, it is necessary to deconstruct the historiographical narratives based on interpretations of central and "deviant" peripheries. For Liernur, the issue with this type of approach is that it ignores, or conceals, the multiplicity of alliances and points of contact that intersect in opposite directions across the seemingly solid boundary between the "outside" and the

20. Paulo E. S. Gomes, *Cinema: trajetória no subdesenvolvimento*. (São Paulo: Paz e Terra, 1996), 90.

21. Ricardo Piglia, "Sarmiento escritor". In: Sarmiento, Domingo. F. *Facundo ou civilização e barbárie*. (São Paulo: Cosac Naify, 2010), 15.

"inside", the pure and the contaminated, the national and the local, within the framework of modernisation processes.[22]

However, as in the case of *mestizaje*, the contradictions arise more from the result of complexity and richness than of simplifying binarisms. The shifts between positive and negative poles do not define a fixed position, but a pendulum movement characterised by a dynamic that sometimes constructs, destroys, and reconstructs social - and architectural - meanings according to the interests of those who mobilise them.

Finally, it is important to stress that the influence of racial perspectives is constitutive of modern architecture as a whole, and not a theorisation only limited to nonwhite and subaltern spaces. As Irene Cheng, Charles L. Davis II, and Mabel O. Wilson note, racial thought was present in architectural modernism through concepts such as evolution, progress, climatic determination, and regionalism, even when it was concealed in the broader ideology of internationalism and colour-blindness embodied by modernism's white walls.[23]

To gain a deeper understanding of architectural history, the full complexity of architectural works should therefore be studied in a manner that takes into account the identity paradigms of its era, and the particular stances architects take regarding these paradigms, positioning themselves intentionally or unintentionally, and often realigning their points of view as their careers advance. ■

22. Jorge Francisco Liernur, "¡Es el punto de vista, estúpido!" In: *Arquitectura, en teoría. Escritos 1986-2010,* 274.

23. Cheng, Davis and Wilson, *Race and Modern Architecture. A Critical History from the Enlightenment to the Present,* 6.

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LÚCIO COSTA ON ALEIJADINHO: RACE AND THE BUILDING OF THE NATIONAL ARCHITECTURE

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ABSTRACT

Lúcio Costa is the leading theorist of the first generation of Brazilian modern architects. This cycle can be delimited by two critical moments in his production: when he became director of the Escola Nacional de Belas Artes (National School of Fine Arts) in 1930 and the inauguration of Brasilia in 1960. During this period, and primarily through his writings (1924-1951), the definitions of race and national identity went through significant changes, shifting from eugenic processes of whitening the race and erasing Indigenous and black architectures in the 1920s to Gilberto Freyre's theory of "racial democracy" later, from which the miscegenation of different ethnicities would constitute the Brazilian people. As a case study, we will analyse how Lúcio Costa manipulates and reconstructs his evaluation of the historical figure of Antônio Francisco Lisboa, - Aleijadinho (Little Cripple). We will see how, at first, Aleijadinho was harshly criticised and had his work downgraded by Costa and how, years later, this figure would be celebrated through a historiographical operation of constructing a "national genius" to establish a genealogy that would justify the work of Oscar Niemeyer. Special attention will be given to the historical process of erasing the corporeality of Aleijadinho – a black man ("dark brown," as reported by his daughter-in-law Joana) and with a disability – and his consubstantiation in the body of Oscar Niemeyer, a white man without a disability. We will analyse the racial discussion in the context of the formation of national modern architecture in the first decades of the 20th century, with particular attention paid to the body category and its social markers, and examine how Costa constructs a canon that influences our historiography to this day.

The discussion of race in modern architecture has emerged in recent years in both the United States and Latin America.[1] However, little has been said about Brazil's specific case, especially regarding how canonical modern historiography discusses race and nation in the first half of the 20th century[2].

This paper aims to bridge the gap by examining how notions of race and nation appear as central categories in Lucio Costa's writings (1924-1951). He can be considered the leading theorist of the first generation of modern architects in Brazil, having laid the foundations for what we still consider to be the modernist historiographical canon.[3] To this end, our analysis will pay particular attention to how Costa devalues/valorises the historical figure of Antônio Francisco Lisboa, or Aleijadinho (Little Cripple) (1738-1814), to construct a genealogy of Brazilian architecture through the lineage of a "national genius," understood herein as an intellectual embodying the highest aesthetic and moral ideals representative of the nation. Costa suggests that this idealised figure would galvanise the very construction of the not-yet-formed Brazilian nation. This genius would run from Aleijadinho to Oscar Niemeyer (1907-2012) through a subtle process of "whitening"[4] and "disembodiment" of the former.

1. LUCIO COSTA: FROM NEOCOLONIAL TO MODERNISM

Lucio Costa (1902 - 1998) was born in Toulon, France, and moved permanently to Brazil at age fifteen. He entered the "Escola Nacional de Belas Artes" [National School of Fine Arts], graduating as an architect in 1924. During his undergraduate years, he became the star student of Jose Marianno Filho, a leading proponent of the Neocolonial style. In his graduation year, he wrote a column in the influential Rio newspaper *A Noite* demonstrating his aspiration for national architecture.[5] Costa revealed that he did not expect to find a consolidated "national architecture" here since we still had "a cosmopolitan people, of a not yet definitively constituted race." He suggested that we should have established a guideline, a past, whether good or bad, to follow as a solution. Although, like Marianno, Costa wants to "rehabilitate the architecture of race as a relevant factor in nationalization"[6] by using the term "guideline" and relativising the moral value of the past from which to establish it, Costa demonstrates that even though eugenicist ideals influence him, he is not affiliated with pure race eugenics, as in the European Mendelian totalitarian experiments that would consider Latin-American racial mixing a racial degeneration.[7] The central racial thesis developed in Brazil at that time was that of the "myth of the three races": the white Portuguese, the black African, and the indigenous American. In both the negative view, which believed mixing races caused the degeneration of the Brazilian people, and the positive view, which exalted the benefits of this mixture, we see a prospective eugenicist project, not a retrospective one.

This eagerness to unravel the roots from which we can shape our future is central to Costa's thinking and is a defining feature of modernism in the Latin subcontinent. As Carlos Ferreira Martins states, one of the essential differences between the European and Latin American architectural avant-gardes is that while the first was a denial of the historical past and a

1. Cf. Irene Cheng, Charles L. Davis, and Mabel Wilson. *Race and Modern Architecture: A Critical History from the Enlightenment to the Present. Culture, politics, and the built environment*. Baltimore, Maryland: Project Muse, 2020.

2. In Brazil, the leading book to discuss this dimension of Lúcio Costa is Paulo Tavares' "Era Lucio Costa racista?" in which he states that "the racial question was Costa's 'constant concern.'" 11.

3. Cf. Marcelo Puppi, in his book Por uma história não moderna da arquitetura brasileira: questões de historiografia. Campinas, SP: Pontes Editores, 1998.

4. Following Jerry Davila's formula, we could even say that this association represents how "modernity equated with whiteness.". Davila, Jerry. *Diploma of Whiteness: Race and Social Policy in Brazil, 1917-1945*. Durham, NC: Duke University Press, 2003. 5.

5. Lúcio Costa. "A alma de nossos lares." *A Noite* (March 19, 1924).

6. José Marianno. *Antônio Francisco Lisboa*. Rio de Janeiro: Est. de artes gráficas C. Mendes Junior, 1945, 2.

7. Eugenics was created by the English anthropologist Francis Galton in 1883. Based on Charles Darwin's evolutionary theses, he proposed the existence of a hierarchy between races. In Brazil, this ideology was strongly present in the fascist-inspired political movement Ação Integralista Brasileira and in scientific institutions such as the Sociedade Eugênica de São Paulo (SESP).

universalist project of humanity, here, the past serves as an element of social cohesion in the process of building a non-cosmopolitan nationality.[8]

This bridging of the past and the future defined Costa's idea of national architecture. Tavares refers to this theoretical foundation as the "colonial-modern synthesis," structured mainly from the mid-1930s when Costa definitively adhered to the modernist aesthetic. This pursuit of an authentically Brazilian architecture that disregards the indigenous building tradition becomes the primary similarity between Neocolonial architecture and Modernism. However, unlike Neocolonial theories, Modernism did not seek a historical-stylistic recovery of colonial architecture. Instead, it operated from this past towards a tautological historical scheme that would result in Modernism. Brazilian modernism is, therefore, characterised by this fusion of tradition and modernity. It is a tradition, in the words of Otilia Arantes, "without traditionalism."[9]

Costa's shift from traditionalism to modernity follows a period of profound changes and overlaps, both in terms of aesthetics and politics. As the Week of Modern Art in 1922 took place in Sao Paulo, considered the inauguration of the artistic avant-garde in Brazil, the International Exhibition of the Centenary of Independence took place in Rio de Janeiro, the country's capital, featuring the construction of several Neocolonial pavilions. Years later, the "Estado Novo" [New State] (1930-1945) arose as a totalitarian government led by Getúlio Vargas. Under the aegis of industrialisation, its "conservative modernization" reproduced the eugenicist racism of previous decades and instigated the first wave of urbanisation aligned with an idea of national integration. Many modern artists and thinkers, such as Mário de Andrade, worked for his government and had a great interest in the Baroque art of Aleijadinho: "The modernists reinvented the figure of Aleijadinho as an alchemical hero who had come to bring about the impossible unity of Brazilian races."[10]

António Francisco Lisboa (1738-1814), better known as Aleijadinho due to his physical deformations in his later years, was born in Vila Rica, quite possibly the son of Manuel Francisco Lisboa and his slave Isabel. He was freed at his baptism and was born "dark without the right to a portrait."[11], in other words, poor and socially vulnerable.

In the Brazilian context, a "dark brown" person is usually referred to as a mulatto, even though we now use the term Afro-Brazilian.[12] Aleijadinho's race has always been the central theme of the works surrounding him, from the pioneering biography by Rodrigo José Ferreira Bretas, written in 1858, to more recent works, such as Celso Kelly's 1960 book, which relates the artist's *virtuoso* work to a supposed rebellion he had "against the dark pigments of his skin, an exasperation common to mestiços." [13] His originality was thought to stem from a process of denial of his black origin, thus producing a "whitened" art. After falling into oblivion for almost half a century, Aleijadinho "was recovered as a figure of national artist by the builders of Brazilian modernism in the 1920s, namely through the intervention of Mario de Andrade".[14] What is striking, therefore, is that while modern intellectuals exalt Aleijadinho as a representative of the mixture of the three races, Lucio Costa still resists this appreciation of the architect.

8. Carlos A. Ferreira Martins. "Identidade nacional e estado no projeto modernista: modernidade, estado e tradição." In *Textos fundamentais sobre história da arquitetura moderna brasileira - parte 1*. São Paulo: Romano Guerra, 2010.

9. Otilia Arantes. "Esquema de Lucio Costa." In Nobre, Ana Luiza (org). Um modo de ser moderno : Lúcio Costa e a crítica contemporânea. São Paulo, Cosac & Naify, 2004, 37.

10. Guiomar de Grammont. Aleijadinho e o aeroplano: o paraíso barroco e a construção do herói colonial. Rio de Janeiro: Civilização Brasileira, 2008, 40.

11. Domingos Tavares. Aleijadinho. *António Francisco Lisboa: classicismo no novo mundo*. *Porto*, Dafne, 2006, 33.

12. We are naming black and brown people "Afro-Brazilians," which in Portuguese would refer to "negros". The census has used this racial definition to acknowledge, at least partially, the African ancestry of brown people in Brazil.

13. Celso Kelly. *O profeta Aleijadinho*. Rio de Janeiro, Livraria São José, 1960, 39.

14. Domingos Tavares. *Aleijadinho. António Francisco Lisboa : classicismo no novo mundo*. Porto, Dafne, 2006, 34.

In the article "O Aleijadinho e a arquitetura traditional" [Aleijadinho and traditional architecture] (1929)[15], Costa criticises Aleijadinho's tendency to carry out detailed work, accusing him of being a "decorator, not an architect" once, instead of producing "robust, strong, massive" work, Aleijadinho would produce that which was "thin, delicate, fine, almost like a medal." This far-fetched, heterodox, and inventive architecture bothered Lucio Costa, for whom Aleijadinho's work was inseparable from himself: "It escapes, it slips, it is itself. - Himself."[16] Costa would not abandon this intimate association between author and work in the following years.

In 1930, he became the director of the National School of Fine Arts. Already critical of the Neocolonial style, he decided to implement a course with a modernist orientation and would delve deeper into Le Corbusier's work in the following years. In 1937, Costa wrote " Documentação necessária" [Necessary documentation] [17] for the Serviço do Patrimônio Histórico e Artístico Nacional (SPHAN) [National Historical and Artistic Heritage Service][18], where he started working, laying the foundations for the canonical historiography of Brazilian architecture.

In this text, we can already see the influence of sociologist Gilberto Freyre's concept of "racial democracy"[19] and its part in the "softening" process with the presence of blacks and indigenous people in the production of colonial architecture and its de-characterisation of the Portuguese-European matrix.[20] Although he acknowledges blacks and indigenous people's constructive culture, Costa favors the know-how of the white Portuguese, especially in terms of the the master builder figure, the "velho portuga" [Old Portuguese], who would have safeguarded the good colonial architectural tradition. In other words, "from the Luso-Brazilian experience, architecture would develop coherently for centuries, until the consolidation of rationalist conceptions in the 1930s - with only a lapse of time marked by the eclectic period."[21] If, in previous years, Costa disqualified Aleijadinho from being an architect because he made everything "thin, delicate, fine, almost like a medal," these qualities now define part of the technical vigour of the new modern architecture.

2. ALEIJADINHO AND OSCAR NIEMEYER

The reconciliation with Aleijadinho would allow Costa to associate modern construction techniques with colonial ones, as he did in 1937, and to the genius of Aleijadinho himself, which would be compared to Oscar Niemeyer's. In 1948, the artist and critic Geraldo Ferraz opposed the historiography of the Rio school (written and led by Costa), claiming that Gregori Warchavchik and Flavio de Carvalho were the true pioneers of modern architecture in Brazil due to their linguistic avant-gardism in early works in Sao Paulo. In response, Costa advocates Niemeyer as the great master of the period, one that "expressed itself through the chosen personality of this artist, just as it already expressed itself in the 18th century, under very similar circumstances, through the personality of Antônio Francisco Lisboa or Aleijadinho.[22]

Costa's unquestioning admiration of the figure of Niemeyer, through his affiliation with the genius of Aleijadinho, is a rhetorical device of *argumentum*

15. Lúcio Costa. "O Aleijadinho e a arquitetura traditional." In Xavier, Alberto. Canez, Anna Paula (coord). *Lúcio Costa : sôbre arquitetura*. Porto Alegre, Centro Universitario Ritter Dos Reis, 2007.

16. Costa, *O Aleijadinho e a arquitetura traditional*, 15.

17. Lucío Costa. "Documentacao necessaria." In Xavier, Alberto. Canez, Anna Paula (coord). *Lúcio Costa : sôbre arquitetura*. Porto Alegre, Centro Universitario Ritter Dos Reis, 2007.

18. Rodrigo de Mello Franco created SPHAN in 1937. La Costa wrote some of his fundamental texts on the historiography of Brazilian architecture, including "Notas sobre o Mobiliário Luso-Brasileiro" (Notes on Luso-Brazilian Furniture) (1939) and "Arquitetura Jesuítica no Brasil" (Jesuit Architecture in Brazil) (1941).

19. Silvana Rubino. "Gilberto Freyre e Lúcio Costa, ou a 'boa tradição." In *Oculum Ensaios*, v. 2, 1993.It is essential to point out that this concept has suffered great criticism, notably from the anti-racist theory of authors such as Abdias de Nascimento.

20. Costa, *Documentacao necessaria*, 87.

21. Rodrigo Espinha Baeta. "Modernist criticism of colonial architecture and the Baroque in Brazil: Lucio Costa and Paulo Santos." *Cadernos de Arquitetura e Urbanismo*, v. 10, n. 11 (December 2003): 35-56.

22. Lúcio Costa. "Depoimento do arquiteto Lúcio Costa sobre a arquitetura moderna brasileira." *Diário de S. Paulo* (March 7, 1948).

ab auctoritate. In Baeta's words, "Niemeyer assumes the role of architectural genius for the "contemporary" context, in the same way that the mulatto absorbed this condition in the colonial period - Niemeyer is, finally, the modern Aleijadinho."[23] This exaltation reaches its apex in the 1951 text Muita construção, alguma arquitetura e um milagre [A lot of construction, some architecture, and a miracle], in which Costa speaks of a "key to the enigma"[24] to explain Niemeyer's exceptionality, while also acknowledging architecture's broader socioeconomic and political conditioning factors that contributed to a radical change in Brazilian society: the end of slavery and the Industrial Revolution. If, on the one hand, he considered slavery to be an obsolete system with "such vile foundations," on the other hand, he accused African-Brazilian youth of corrupting national culture through Americanisation and social degeneration due to their "vulgar ways." Finally, while he seemed sympathetic to the valorisation of work (in line with the labour rights won during the Estado Novo), he set a limit: asking for more money or behaving less docilely than during slavery would define "rebellion" on the part of domestic workers.

3. WAS LUCIO COSTA A RACIST?

Race never stopped being a fundamental category of social analysis for Costa.[25] His historical scheme of "colonial-modern synthesis," perfected from the end of the 1930s onwards, reverses a tendency from the 1920s to credit racial mixing with the impossibility of developing a genuinely national architecture. This inversion also affects Costa's appreciation of the figure of Aleijadinho, who becomes a national genius in canonical historiography and the genesis of Oscar Niemeyer's geniality.

By sublimating the discussion of body and race in Niemeyer and Aleijadinho, Aleijadinho's whitening is imbued into his progressive scheme of "body replacement." The fact that Niemeyer's white, non-disabled body does not appear in Costa's narrative does not equate to its silencing regarding Aleijadinho's disabled and Afro-Brazilian body. Post-racialising an individual, considering the discussion of a nation that is deeply racialised, has the same effect there as it does today: making it invisible. Costa's sense of disembodiment is not progressive but reactionary. In a way, it is possible to say that the whitening of Aleijadinho, by Lucio Costa, is an epistemological erasure. This symbolic killing is necessary to allow for the "healthier and purer" white, able-bodied modern architect to prevail. The process of producing a "genius" genealogy is, in this sense, a covert, and thus very effective, historiographical strategy of a hierarchisation of racialised bodies, culminating in the white, non-disabled body – Niemeyer - at the expense of African-Brazilian, disabled body – Aleijadinho. ■

23. Baeta, *Modernist criticism…*, 45.

24. Lúcio Costa. "Muita construcao, alguma arquitetura e um milagre." In Alberto Xavier. *Depoimento de uma geração: arquitetura moderna brasileira*. São Paulo: Cosac & Naify, 2003, 95.

25. Lúcio Costa. *Registro de uma vivência*. São Paulo: Empresa das Artes, 1995.

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MODERN WHITE: THE INTERSECTION OF RACIAL IDENTITY AND PENTELIC MARBLE ARCHITECTURES IN TWENTIETH CENTURY ATHENS

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ABSTRACT

This paper investigates the profound influence of white Pentelic marble on modernist architecture in Athens, Greece, and its broader implications for architectural and racial narratives worldwide. The historical context begins with a Eurocentric view of architectural evolution, tracing a lineage from ancient Egypt through Greece and Rome to Western Europe. Influential figures like Quatremère de Quincy, Winckelmann, Fergusson, and Viollet-le-Duc contributed to a racialised perception of Greek architecture, which Adolf Loos later expanded into racial historicism, linking modernity to Western Europeans.

Amidst these Eurocentric narratives, Greece's unique contribution to modernist architecture, particularly the use of Pentelic marble, stands out. This material, historically significant and symbolically potent, has been pivotal in Athenian architecture, expressing prestige, power, and cultural identity. The paper explores Pentelic marble's socio-political symbolism and its role in Athens' architectural landscape.

The study also delves into the evolution of the colour white across science, culture, and architecture from the 17th to the 20th centuries. Contributions from scientists like Newton, Goethe, Chevreul, and Helmholtz reshaped the understanding of white light, influencing its symbolic associations with purity, cleanliness, and social status. In Greece, white became a symbol of national identity and classical heritage, deeply intertwined with neoclassical architecture and the country's cultural revival.

Modernist architecture in Athens, characterised by minimalism and functionalism, embraced Pentelic marble to reconcile modern aspirations with classical heritage. Key landmarks, such as the Hilton Athens and the United States embassy, exemplify this integration, reflecting a blend of modernist principles and classical motifs.

The paper critiques the International Style's imposition of Western ideals, highlighting the complexities of cultural appropriation and the erasure of indigenous traditions. By examining the multifaceted significance of white Pentelic marble, the study underscores its role in shaping modernist aesthetics, racial identities, and the global architectural discourse.

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1. THE WHITE LEGACY OF MODERN ARCHITECTURE

Before the nineteenth century, architectural and civilisational histories were predominantly Eurocentric, centring on Europe and the Near East. They constructed a supposed lineage from ancient Egypt through Greece to Rome, culminating in Western Europe. This notion of linear progression positioned Greece as the cradle of modern architecture. Influential figures like Antoine-Chrysostome Quatremère de Quincy, Johann Joachim Winckelmann, James Fergusson, and Viollet-le-Duc shaped these perspectives with their interpretations and biases.

Quincy broadened architectural typology by incorporating ethnographic insights, linking Greek architecture to the humble hut typology.[1] Winckelmann attributed the brilliance of Greek art and architecture to the favourable conditions of Greek climate and culture.[2] Fergusson[3] and Viollet-le-Duc[4] asserted that Athenian architecture and the Parthenon arose from a racial blend of Aryans and Semites. These ideas laid the groundwork for Adolf Loos' racial historicism, associating modernity with northern or western Europeans.[5]

However, amidst these Eurocentric narratives, one cannot ignore Greece's unique contributions to architectural thought and practice.[6] Notably, modernist architecture in Greece stands out for its extensive use of Pentelic marble. This pure white to light grey material, with origins dating back millions of years, holds a central place in international architecture. Predominantly quarried on the southern slopes of Mount Pentelicus near Athens, it has significantly influenced the aesthetics and symbolism of Greek architecture. Beyond its practical applications, Pentelic marble symbolises prestige, power, and cultural identity. Its association with state-sponsored initiatives reflects socio-political ideologies. Whether used in the construction of governmental buildings, cultural institutions, or corporate headquarters, Pentelic marble serves as a visual manifestation of authority and cultural continuity.

This paper aims to unravel the multifaceted significance of Pentelic marble within the architectural modernist narrative in Athens, Greece. Additionally, it endeavours to explore parallels between the use of Pentelic marble in Athens and its deployment in architectural projects worldwide. Through the exploration of the evolution of colour white across science, culture, and architecture, this paper aims to investigate the origins of modern aesthetics through neoclassical architecture. By focussing on both Athenian and international case studies, it seeks to draw conclusions about the role of white Pentelic marble in the formation of modernity, whiteness, and racialised identities.

2. THE WHITE EVOLUTION ACROSS SCIENCE, CULTURE, ARCHITECTURE

COLOUR THEORY AND NATIONAL IDENTITY

Between the 17th and 19th centuries, advances in the study of optics and light reshaped our understanding of white light. Isaac Newton's prism experiments revealed that white light encompasses all visible colours, profoundly

1. Antoine Chrysostôme Quatremère de Quincy, "Encyclopédie Méthodique d'Architecture," (1788).

2. David Bindman, Ape to Apollo: Aesthetics and the Idea of Race in the 18th Century (Cornell University Press, 2002).

3. Bindman, Ape to Apollo: Aesthetics and the Idea of Race in the 18th Century.

4. Eugène-Emmanuel Viollet-le-Duc, *Entretiens Sur L'Architecture*, vol. 1 (Brussels: P. Mardaga, 1863).

5. Irene; Davis II Cheng, Charles L.; Wilson, Mabel O., Race and Modern Architecture: A Critical History from The Enlightenment to The Present (The United States of America: University of Pittsburgh Press, 2020).

6. Argyro Loukaki, "Assaulting the Archetypes: Urban Materiality and the Current Adulation and Hatred for Marble in Athens," in Urban Art and the City (Routledge, 2020).

impacting both science and art.[7] This insight led to deeper colour theory exploration in the 19th century, with Johann Wolfgang von Goethe, Michel Eugène Chevreul, and Hermann von Helmholtz contributing significantly. Goethe viewed white as a symbol of purity and completeness,[8] while Chevreul saw it as a neutral base affecting surrounding colors.[9] Helmholtz offered a scientific explanation of white as a blend of all visible wavelengths.[10]

In the 19th and early 20th centuries, white gained symbolic importance, expressing purity, innocence, and cleanliness, particularly in Western societies.[11] This symbolism found expression in Christian iconography, where white symbolised divine light and holiness.[12] Additionally, white clothing became a mark of wealth and social status due to its maintenance difficulty.[13]

White also played a crucial role in national symbolism. The Greek flag, designed during the Greek War of Independence, features alternating blue and white stripes with a white cross on a blue canton. The white stripes symbolise the purity and innocence of Greece's struggle for independence[14] and reflect the nation's values and aspirations. Greece's fight for independence was intertwined with a desire to reconnect with its ancient heritage. The new Greek state adopted symbols and narratives that emphasised continuity with classical antiquity.

Furthermore, Greece witnessed a cultural revival in the late 19th and early 20th centuries, reinforcing its national identity. The resurgence of classical themes in art, literature, and architecture often utilised white to symbolise the nation's modern reemergence with strong ties to its ancient roots. This revival was not just an aesthetic choice but also a deliberate effort to align modern Greek culture with the perceived glory and purity of its ancient past, fostering a sense of continuity and national pride.

CLASSICAL HERITAGE AND NEOCLASSICAL ASCENDANCE

Throughout the 19th and 20th centuries, the colour white became a profound symbol in Athens, Greece, deeply embedded with national and racial connotations.[15] This symbolism was linked to notions of purity, classical heritage, and Western colonialism. The 19th-century revival of classical antiquity significantly influenced national identities across Europe, with Greece at the forefront. Ancient Greece, idealised as the cradle of Western civilisation, positioned Athens as the epitome of this revered legacy. White, reminiscent of pristine marble statues and temples, came to express the purity and grandeur of this classical epoch.

The enduring imagery of white marble ruins and neoclassical facades in Athens shaped global perceptions of Greece as the cradle of Western civilisation. During this period, Athens saw a renaissance of neoclassical architecture and art, where the prominence of white symbolised the ideals of beauty, harmony, and rationality associated with ancient Greek culture.[16] This aesthetic preference reinforced the connection of white with cultural and racial purity.

The neoclassical movement, which flourished from the late 18th to the 19th centuries, greatly impacted the use of white in architecture. Inspired

7. Isaac Newton, Opticks, or, a Treatise of the Reflections, Refractions, Inflections & Colours of Light (Courier Corporation, 1952).

8. Johann Wolfgang Von Goethe and Charles Lock Eastlake, Goethe's Theory of Colours (Routledge, 2019).

9. Michel Chevreul, The Principles of Harmony and Contrast of Colours (BoD–Books on Demand, 2023).

10. Hermann Von Helmholtz, *Treatise on Physiological Optics, volume III*, vol. 3 (Courier Corporation, 2013).

11. Dana Berthold, "Tidy Whiteness: A Genealogy of Race, Purity, and Hygiene," *Ethics & the Environment* 15, no. 1 (2010).

12. Simon Howard and Samuel R Sommers, "Exposure to White Religious Iconography Influences Black Individuals' Intragroup and Intergroup Attitudes," Cultural Diversity and Ethnic Minority Psychology 23, no. 4 (2017).

13. Alyssa Quinn Johnson, "You Are What You Wear: Clothing and American Authors of the Early 20th Century," (2018).

14. Labros S Skartsis, "Origin and Evolution of the Greek Flag," (Athens, 2017).

15. Theodore G Zervas, The Making of a Modern Greek Identity: Education, Nationalism, and the Teaching of a Greek National Past (Columbia University Press New York, NY, 2012).

16. Neni Panourgiá, "Colonizing the Ideal: Neoclassical Articulations and European Modernities," Angelaki: Journal of the Theoretical Humanities 9, no. 2 (2004).

by the symmetrical lines and architectural finesse of ancient Greek and Roman structures, architects favoured white marble and white-painted surfaces to evoke the splendour and purity of classical antiquity. In 19th-century Athens, following Greek independence, neoclassical architecture reemerged. Public edifices such as courthouses, museums, and government structures used white marble or white-painted facades, paying homage to the city's classical heritage.[17] This further associated white with cultural purity, national pride, democratic ideals, justice, and civic virtue.

Pentelic marble, particularly esteemed for its use in classical monuments like the Parthenon, became the preferred material for expressing modernist ideals.[18] Its pristine quality was evident in notable neoclassical structures both in Athens — such as the University, Academy, and Vallianeion Library — and internationally, in buildings like the Carnegie Museum of Art's Hall of Sculpture and the Victoria Memorial in London. Institutions such as the British Museum and the United States Capitol also adopted similar white materials, extending the influence of classical inspiration into modernist contexts.

3. THE WHITE AESTHETICS OF MODERNISM

INDUSTRIAL ADVANCEMENTS AND MODERNIST IDEALS

The Industrial Revolution brought significant changes to architecture through new materials and methods, such as cast iron and steel, known for their durability and modernity. The introduction of Portland cement in the early 19th century transformed architectural potential, enabling the widespread use of white concrete.[19] This material's durability and versatility made white a key feature in modernist architecture, symbolising purity, simplicity, and neutrality. Modernist architects, including Le Corbusier, used white to emphasise the unadorned forms of their buildings, reflecting the movement's focus on cleanliness and modernity.[20]

The Bauhaus movement, central to modernist ideology, adopted white for its clean and minimalist aesthetic. White surfaces were used to foster a sense of openness and highlighted the importance of form and space.[21] This approach significantly influenced Athens, where the convergence of modernist principles with the widespread use of white surfaces became a significant motif indicative of the city's evolving aesthetic trajectory. During the interwar period and post-World War II reconstruction, the International Style, characterised by its minimalism and lack of ornamentation, gained popularity in Athenian architecture.[22]

Pentelic marble, known for its white color, was particularly suited to express modernist ideals. Greek architects used this material to reconcile modern aspirations with the enduring legacy of Athenian classical monuments. This integration allowed modern structures to blend seamlessly into the urban fabric of Athens while showcasing the sleek, functional aesthetics of modernism. The concept of white as a symbol of purity and the amalgamation of all colours, rooted in 19th-century colour theory, continued into the 20th century, bridging modernist principles with classical aesthetic

17. Dimitris Philippides, Νεοελληνική Αρχιτεκτονική: Αρχιτεκτονική Θεωρία και Πράξη (1830-1980) σαν Αντανάκλαση των Ιδεολογικών Επιλογών της Νεοελληνικής Κουλτούρας [Modern Greek Architecture: Architectural Theory and Practice (1830-1980) as a Reflection of the Ideological Choices of Modern Greek Culture] (Athens: Melissa, 1984).

18. Panayotis Tournikiotis, The Parthenon and Its Impact in Modern Times (Athens: Melissa, 1994).

19. Andrew Wright, "Early Portland Cement: Its Use and Influence on Architectural Design," Architectural Heritage 22, no. 1 (2011).

20. Le Corbusier, Towards a New Architecture (Courier Corporation, 2013).

21. László Moholy-Nagy, The New Vision: Fundamentals of Bauhaus Design, Painting, Sculpture, and Architecture (Courier Corporation, 2012).

22. László Moholy-Nagy, The New Vision: Fundamentals of Bauhaus Design, Painting, Sculpture, and Architecture.

values. This concept found expression through the widespread use of Pentelic marble in both residential and public constructions, bridging the gap between modernist ideals and the venerable aesthetic heritage of classical antiquity.

Though the International Style is primarily associated with American, French, and German architecture, its impact reached international contexts, including Athens, Greece. Athens, the cradle of classical architecture, saw a spread of modernist elements in its architecture, which had parallels with the International Style in the United States. Both movements looked back to classical ideals for inspiration.

ATHENIAN MODERNISM AND PENTELIC MARBLE

In the early 20th century, Greece saw a revival of its architectural heritage, spurred by increased tourism and international diplomacy. American architects and scholars, drawn to Greece, introduced the aesthetic preference for white structures, influencing the preservation and restoration of historical buildings with a white finish. This period marked a shared appreciation for a clean, white aesthetic between Greece and the United States, symbolising modernity, and the preservation of cultural heritage.[23]

A notable example of this architectural trend is the Hilton Athens. Built in the post-war era, it represents a shift towards tourism development and modernity. The hotel's use of Pentelic marble on its facade and in its atria blends modernist aesthetics with elements of classical Greek heritage. This integration of Pentelic marble serves as a visual connection to ancient Greece amidst rapid modernisation, aligning with broader trends in modernist architecture seen globally, such as in the United Nations Headquarters in New York.

The United States embassy in Athens, designed by Walter Gropius, attempts to blend Hellenism with the needs of post-war diplomacy. It combines American modernism with Greek architectural traditions, featuring a symmetrical layout, a colonnade, and extensive use of Pentelic marble, reminiscent of the Parthenon. This design reflects the United States' post-World War II efforts to assert cultural and political presence by incorporating local architectural styles. However, it also mirrors contemporary American trends, suggesting Gropius may have been influenced by his American colleague Edward Stone's design for the New Delhi chancery, rather than solely Greek antiquity. The embassy's use of Pentelic marble and symbolic landscaping elements like olive and cypress trees aim to connect with Greek traditions, though the intention behind these choices remains open to interpretation.

Both the Hilton Athens and the United States embassy exemplify the trajectory of Athenian architecture, with Pentelic marble serving as a unifying motif linking past and present. The pervasive use of white in Athenian architecture underscores a deep connection to classical heritage and national identity, reinforcing Athens' status as a symbol of Western civilisation, where the colour white assumes a powerful symbol of historical continuity and racial purity.

23. Stavros Alifragkis, "Branding the" White City": Touristic Films and the Portrayal of Modern Athens in the 1950s and 1960s" (paper presented at the 6th Conference of the International Forum on Urbanism (IFoU): TOURBANISM, Barcelona, 25-27 gener, 2012).

Figure 1. Subterranean Extraction of Pentelic Marble, Athens, Greece, 2023. ©Dionyssomarble.

Figure 2. Walter Gropius, United States embassy, Athens, Greece, 2024, Facade facing Vasilissis Sofias Avenue. ©DOMa institution, G. Gerolympos.

Figure 3. Edward Stone, United States embassy, New Delhi, India, 2024, Facade facing the entrance. ©Docomomo US.







4. THE WHITE ARCHITECTURE OF APPROPRIATION

In the 20th century, the International Style emphasised volume over mass, lightweight industrial materials, minimal ornamentation, and functionality. Architects like Le Corbusier, Ludwig Mies van der Rohe, and Walter Gropius championed this movement. Its rise paralleled high modernism and European colonial expansion, often imposing Western architectural ideals on colonies in Africa, Asia, but also Greece. This imposition was intended to symbolise modernity and progress but often suppressed local traditions.

In the early 19th century, white in architecture signified heritage, national identity, and purity. However, during European colonial expansion

and the transatlantic slave trade, white also came to symbolise racial supremacy. The era consolidated racial ideologies that used white to denote the supposed superiority of the "white race." Ethnographic studies and racial theories often referred to the "Aryan race" as the pinnacle of human development, influencing national identities and racial policies in various countries, including Greece. Thus, from the 17th to the early 20th century, white's conceptualisation evolved, shaped by scientific developments, cultural symbolism, and socio-political contexts. White transitioned from representing scientific phenomena to embodying purity and racial ideologies, delineating its multifaceted role in society.

Pentelic marble, historically significant in ancient Greek temples, gained prominence in modernist architecture, symbolising both national and international significance. Its use prompts questions about the need for monumental gestures in post-war contexts and the appropriation of cultural symbols. Although tied to Greek identity, Pentelic marble's adoption in international projects complicates claims of a universal Western identity and raises concerns about cultural exchange and potential erasure of indigenous heritage.

The juxtaposition of Pentelic marble with traditional architectural elements underscores the tension between preserving heritage and embracing modernity. Its application in modernist architecture reflects a redefinition of aesthetics and universal symbolism. In modernist architecture, Pentelic marble expresses a complex interplay of monumentality, national identity, universality, and heritage. Its application transcends geographical boundaries, prompting considerations of cultural appropriation and the erasure of indigenous architectural heritage, while exploring themes of cultural exchange and identity construction in a globalised era. ■

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A NETWORK FROM THE MIDDLE OF THE WORLD: MODERN ARCHITECTURE AND CULTURAL HYBRIDISATION IN QUITO

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ABSTRACT

During the 1940s, many European artists migrated to South America, due to WWII. Trained under Bauhaus pedagogies, these designers aimed to create a *Gesamtkunstwerk*. Many sought to settle in Latin American metropolises where economic dynamics and their market demands, including affordable housing and everyday objects, were on the rise. Some of these artists ended up in smaller Andean countries such as Ecuador, known for its cultural diversity stemming from geographical variety and the overlapping of pre-Hispanic cultures.

These actors connected with Quito's artistic elite, and were instrumental in initial efforts to develop a local architectural modernity. Their continuous interaction with Latin American and European artistic networks led to the shift in the architectural education at Universidad Central del Ecuador (UCE), the creation of the Ecuadorian Institute of Folklore (1961) and galleries which boosted the promotion of Ecuadorian design, both locally and overseas.

Based on primary sources from LIPADA, Casa de la Cultura Ecuatoriana, Blomberg Archives, among others, this work illustrates how informal dialogues and institutional actions taken by the aforementioned actors led to architectural experiments in Quito from the 1950s, including housing, institutional headquarters, educational, and leisure facilities. The narratives behind these works merged rational and eclectic elements, echoing indigenous and colonial styles, on the use of popular techniques from ancestral crafts, and on the intentional inclusion of local artists' works within the architecture as a way of accomplishing unique total works of art.

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1. INTRODUCTION

Beginning in the late 1930s, Ecuador hosted political, economic and cultural events[1], which contributed to a regional modernity. The Banana Boom (1945-1960), the Oil Export Boom (1970s), periods of right-wing rule and dictatorship (1934-1979), and Quito's designation as the venue for the XI Inter-Andean Conference of Foreign Ministers in 1954 (which ultimately did not take place), led to the execution of several projects in the city, including master plans such as Uruguayan Guillermo Jones-Odriozola's urban project for Quito (1942-1945)[2]; renewing curricula in art, local architecture and design schools, and founding the School of Architecture (1946) at Universidad Central del Ecuador (UCE), as well as new cultural and research institutions[3]. These developments also contributed to the transformation of urban and domestic spaces, designed by emerging building and furniture industries.

Despite these facts, Quito remains overlooked in regional architectural historiography. Our research aims to rectify this through the interpretation of local narratives based on hybrid features of Ecuadorian production, derived from complex relational networks among people and trades.

FROM GESAMTKUNSTWERK TO HYBRID ARCHITECTURES

Artistic creation in the early 20th-century was nurtured by Richard Wagner's concept of *Gesamtkunstwerk*, which aims to combine architecture, art and life through incorporating elements from various trades. However, it is crucial to understand modern architecture within its relational network, facilitating a dialogue between global disciplinary discussions and regional concerns. Therefore, we consider the total work of art as a device for creating and inhabiting architectural projects. We rely on García-Canclini's notion of hybridisation[4] for referring to architectural production as a particular system for introducing disciplinary research into global exchanges. This approach enables us to examine how works circulate within the professional community and are received by peers, clients and users, ultimately determining the works' success[5].

2. ACCLIMATISATION. "HEIMAT" AS HIBRIDISATION PILOT

The Freudian concept *Unheimlich*[6]. (uncanny or unhomely) describes "what is […] frightening precisely because it is not known and familiar". This relates to some individuals' experiences when they first arrived in Ecuador. Migrants from the German-speaking world experience a challenging uprooting when faced with an unknown (albeit European) language and the striking Andean topography, Ecuadorian light and tropical weather. Quito's Pichincha volcano symbolised both the city's vulnerability and its identity. Therefore, this meant that the cultural landscape did not match the romanticized depictions of foreign explorers in the 19th century.

Llorca[7] describes the Ecuadorian context[8] in which migrant architects had to assimilate notions like scarcity (which, does not necessarily relate to the lack of resources but to deliberate austerity[9]); immediate or instinctive response, stratification; territory, nature and systems of association and dispersion. Travelling architects in the Americas[10] responded to these qualities

1. Burbano Riofrío, Iván Patricio. "Diseño y artesanía en el contexto de la crisis del ideario moderno en Ecuador (1979-1985)." *Cuadernos del Centro de Estudios en Diseño y Comunicación*, no. 164 (july 2022): 175-300. Monard, Shayarina. *Arquitectura Moderna de Quito, 1954-1960*. Barcelona: Universitat Politécnica de Catalunya, 2019.

2. Erazo Bravo, Estefanía Yuliana. *Análisis del modelo industrialización por sustitución de importaciones (ISI) y su impacto en la economía ecuatoriana: período 1970-1980*. Machala: Universidad Técnica de Machala, 2018. Vanoni, Giuseppe and Rodriguez, Carlos. "Los conglomerados empresariales en Ecuador: un análisis histórico, económico y político." *Apuntes del Cenes* 36, no. 63 (2017): 247-278.

3. Burbano Riofrío, Iván Patricio. "Diseño y artesanía en el contexto de la crisis del ideario moderno en Ecuador (1979-1985)." *Cuadernos del Centro de Estudios en Diseño y Comunicación*, no. 164 (july 2022): 175-300.

4. "The self-referentiality of the architectural discourse has rendered it incapable of grasping the complexity of the term. [...] hybridization addresses a series of socio-cultural problems in relation to the economy and market structures that exist in Latin America [...]." Hernández, Felipe. "On the Notion of Architectural Hybridisation in Latin America". Journal of Architecture, vol. 7, no. 1 (2002): 77-86 <https://doi.org/10.1080/13602360110114722>

5. Follet, Danielle. *The aesthetics of the total artwork: on borders and fragments*. Baltimore: The Johns Hopkins University Press, 2011

6. Freud, Sigmund. "The Uncanny." In *The Complete Psychological Works*. 368-104. London: Hogarth press 1955 & Edns, 1919

7. Llorca, Néstor. *Arquitecturas híbridas de culturas híbridas,*

by creating a *Heim* ("home" in German) where local features negotiated with European aesthetics. The initial version of domestic local modernity was addressed to / produced by an elite that praised rational aesthetics.

The work of Czech architect Karl Kohn exemplifies this by combining his Modernist European training, and folk symbols and materials related to domestic practices. His own house, built in 1949, is a manifesto of rational aesthetics from the inside out, as well as a complex universe within its intimate spaces, overlapping memories from traditional domesticity in Prague (exemplified by the fact that the Kohn-Schiller family brought all their furniture from their hometown), lessons from Adolf Loos's *Raumplan,* the distant landscape and sculpted nature (with a garden that surrounds the house, concealing it from pedestrians and protecting it from solar radiation). Inside the house, Kohn incorporated niches and furniture displaying Ecuadorian pottery created by his students, including the renowned artist Oswaldo Guayasamín **(Fig. 1)**.

3. TRANSFERTS. GLOBAL ACTORS AND LOCAL NETWORKS

Kohn's haphazard arrival to Quito, as his ship had stopped in Guayaquil en route to Argentina. While in Guayaquil, he was offered a teaching position at Quito's Escuela de Bellas Artes.[11] This might explain why he seemed to act in isolation in Ecuador. However, his production connected with a network of exiles, including Dutch artist Jan Schreuder, who collaborated with local craftsmen. This network[12] included local architects such as Hugo Galarza, trained at Cranbrook Academy of Arts and UCE, giving him a transdisciplinary vision of architecture. Galarza, along with Schreduer and Austro-Hungarian Olga Fisch, joined the Instituto Ecuatoriano de Folklore, a research group attached to Casa de la Cultura Ecuatoriana, which was founded in 1961 by Brazilian anthropologist Paulo de Carvalho Neto. Its establishment was driven by new public laws aimed at developing crafts within industrialisation. This institute empowered strategic public programmes such as Programa Indigenista Andino, which has been operational since 1953[13].

Fisch's interest in local folk art was sparked during her time at Wiener Werkstätte in Austria and Düsseldorf Kunstakademie in Germany.[14] Such interest grew while teaching at Escuela de Bellas Artes de Quito, mentoring artists such as Jaime Andrade-Moscoso, Guayasamín and Leonardo Tejada. As a leading researcher at the Instituto Ecuatoriano de Folklore, Fisch's voice, informed by her exploration on Hungarian and local folk traditions, was crucial in promoting a hybrid approach in architecture, validating the actions of local residents in configuring domestic spaces and popular taste: "By blending them well with modern furniture, we can create an exquisite fragrance and charm. [...][15]."

Members of these institutions also undertook exploration trips, usually engaging artists and intellectuals keen to understand local traditions and craftsmanship. Fisch, Galarza and Guayasamín participated in those trips and documented indigenous lives through photography, writing and painting.

el caso de Quito en el siglo XX. Madrid: Universidad de Alcalá, 2022, p. 47.

8. This work acknowledged does not consider the architectural action of migrants of other Latin American countries in Ecuador during the decades of 1940 and 1920, due to our interest in the intersection between European practices and knowledge inscribed in Bauhaus' logics and local trades and folk.

9. Quintana-Guerrero, Ingrid. "Austeridad en la arquitectura latinoamericana: un camino por el siglo XX y una perspectiva finisecular." In *Arquitectura Latinoamericana Contemporánea: identidad, solidaridad y austeridad,* edited by Ines del Pino and Fernando Carrión, 72-83. Quito: Centro de Publicaciones Pontificia Universidad Católica del Ecuador PUCE, 2018, pp. 66-80

10. Cendales Paredes, Claudia. "Artistas migrantes alemanes y austriacos en Colombia: rutas, redes y recorridos." In *Bauhaus 100+1: Reverberaciones Latinoamericanas,* edited by Quintana-Guerrero, Ingrid, Peña, César and Gutiérrez, Virginia, 169-191. Bogotá: Ediciones Uniandes, 2024.

11. Llorca, Néstor. *Arquitecturas híbridas de culturas híbridas, el caso de Quito en el siglo XX*. Madrid: Universidad de Alcalá, 2022, pp. 115-116.

12. Link to the diagram of local networks around the production of Modern Architecture in Quito. Source: Stornaiolo, 2024. https://miro.com/app/board/uXjVKMQPT7o=/?share_link_id=946877925836

13. Stornaiolo, Chiara. *La obra de arte total como proceso: Las redes de producción de los hoteles modernos en Quito*. Bogotá: Universidad de los Andes Colombia, 2023.

14. Fisch, Olga. *El folklor que yo viví. Memorias de Olga Fisch*. Cuenca: CIDAP, 1985.

Within Instituto Ecuatoriano de Folklore, exploratory trips also included local artists like Tejada and his wife, Elvia, and Andrade-Moscoso, a pioneer within the Ecuadorian Indigenism movement which characterised his early career. Subsequently, he explored abstraction of the Ecuadorian folk — dancers, peasants, singers— through murals in public buildings and spaces[16].

Andrade-Moscoso's interest in indigenous themes and aesthetics is a stark contrast to his training at the Fine Arts School in Quito and the New School for Social Research in New York. Eventually he became dean of the UCE School of Architecture where his dual background informed a pedagogical proposal for architecture studies that incorporated art courses as the core of the curriculum. This exposed a future generation of modern Ecuadorian architects to hybrid creation ideas.

Lastly, architectural works operated as hubs for creation and exchange: one of which, the Hotel Colón (1964-1978), represents an ambitious attempt to create a monumental *Gesamtkunstwerk* in Quito. One of the owners was Betty Deller's father. She cofounded one of the most influential galleries of modern art in Quito, La Galería, which was a hub for cultural discussion among prominent Latin American artists. She also oversaw art purchases for the Hotel, fitting in with its architectural design. American interior designers Roland Jutras and Fisch curated the purchases, encouraged by Ecuadorian legislation[17]. Andrade-Moscoso exhibited at La Galería and first used its premises as a workshop[18].

The Hotel Colón's comprehensive work of art experience was preceded by the Hotel Quito (1958-1960), designed by American architect Charles McKirahan, who was internationally recognised as an expert in tourism facilities. Its interior design was undertaken by British designer Henry End, who was trained at the London Royal College of Arts and specialised in hotel decorations. He was also engaged in the study of Ecuadorian art history[19]. Its construction, predominantly in concrete, was directed by UCE-trained architects. The hotel was intended as a cultural exchange hub for foreign visitors, with its rooms serving as platforms for discussions between local and global artistic expressions, showcasing ideas for an Ecuadorian modernity.

4. HYBRIDISATION. THE SCALES OF DOMESTICITY

Creating a appropriate environment for modern life was not restricted to the scale of the house, as racial and spatial segregation in Quito was still influenced by the colonial fabric of the city. New districts and infrastructures had to bridge the gap between vernacular life and aspirational culture. The urban area between Quito and Colón hotels formed a cultural and leisure hub for the aspirational middle-high class, comprised of local intellectual elites, conscious of their pre-Hispanic legacy. Therefore, hotels and other modern buildings worked as landmarks mediating between urban and domestic scales.

The Hotel Quito, promoted by the Instituto Nacional de Previsión and situated in a new urban fabric, was designed to adhere to the formal codes of canonical modernity, reinforcing Odriozola's proposal of a monumental diagonal axis, which consisted of wide avenues across the territory. The hotel

15. Fisch, Olga. "Decoración Interior". *Revista de La Sociedad de ingenieros y Arquitectos de Pichincha*. (1955): 93-97

16. Andrade Heymann, Jaime. "Los murales en mosaico de piedra y las estrategias de un artista para expresarse en el espacio público." In *Jaime Andrade Moscoso: Esculturas, Murales y Obra Gráfica 1925-1989*. 159-163. Quito: Universidad Central del Ecuador, 2020

17. Stornaiolo, Chiara. *La obra de arte total como proceso: Las redes de producción de los hoteles modernos en Quito*. Bogotá: Universidad de los Andes Colombia, 2023.

18. Stornaiolo, Chiara. *La obra de arte total como proceso: Las redes de producción de los hoteles modernos en Quito*. Bogotá: Universidad de los Andes Colombia, 2023.

19. Docomomo. *Hotel Quito, documento técnico*. Quito: Colegio de Arquitectos del Ecuador, 2020. https://www.cae.org.ec/wp-content/uploads/2020/12/DOCUMENTO-CAE-P-DOCOMOMO-Ecuador.pdf







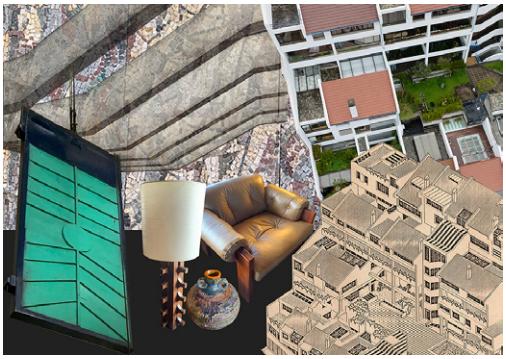


Figure 1. Karl Kohn, Kohn-Schiller's house, Quito, Ecuador, 1949, Illustration of the hybrid strategies at Kohn-Schiller's house. ©Chiara Stornaiolo, 2024.

Figure 2. Charles McKirahan, Hotel Quito, Quito, Ecuador, 1958-1960, Illustration of the hybrid strategies at Hotel Quito ©Chiara Stornaiolo, 2023.

Figure 3. Ovidio Wappenstein, Hotel Colón, Quito, Ecuador, 1964-1978, Illustration of the hybrid strategies at Hotel Colón © Chiara Stornaiolo, 2023.

Figure 4. Jaime Andrade-Heymann and Mauricio Moreno, Habitat Guápulo, Quito, 1983, Illustration of the hybrid strategies at Habitat Guápulo © Chiara Stornaiolo, 2024

offered panoramic views of the Guápulo district and the Eastern valleys bordering Quito. Its entrance portico on González Suárez Avenue is designed in the shape of a hyperbolic paraboloid, echoing iconic concrete architectures, such as Felix Candela's, while the arcade of the reception volume and the stone facade of the casino's reflect Guapulo's traditional architecture[20]. Furthermore, the dorms' volumes follow a sinuous pattern, matching the *carioca*-styled design of the gardens by local landscape architect Andrés Chiriboga, who had trained with Roberto Burle Marx in Brazil. The double-height wall, inside the northside of the reception's volume, features a bas-relief anonymous abstract mural inspired by a mythological indigenous figure: Patecte. The mural, along with the helical staircase, confers a domestic character to the volume serving as a viewpoint to the created and far landscapes. **(Fig. 2)**

Hotel Colón was built in front of El Ejido Park in the La Mariscal district, which is located at the northern boundary of the historic city. The hotel was constructed in phases on a block that was previously occupied by traditional

20. The second and third phases of Hotel Colón were conceived by Ovidio Wappenstein and his second partners, Ramiro Jácome and César Galvez.

1930s houses. It is situated within an urban grid that still retains the patterns of the colonial fabric, despite being surrounded by institutional and housing towers. The Hotel served as a testing ground in Ecuador for artistic and architectural modernities: while the plan-stepped tower, "La Santamaría", third phase of the project, features a striking sculptural facade over Patria Avenue, the original volumes, conceived by the Spanish-Ecuadorian architect Ovidio Wappestein (who was married to Betty Deller) and his first project partner, Alfredo León, "La Pinta", created two parallel bars, connected at ground level by a platform[21]. This strategy reimagined the concept of a hotel as a closed ensemble permeated by the city. Its circulations and facilities are opened up to the public, allowing them to experience the rough concrete texture of the building, which echoes pre-Hispanic stone's unevenness. There, local artworks —including the mosaic Mural *Danzantes II* (1967) by Andrade-Moscoso— also interact with the architectural space. The mural formed part of a larger collection of archeological pieces, paintings and local crafts purchased for the Hotel, including the tapestry *Estructura Rojo y Azul* by Colombian weaver Olga de Amaral (1971). The latter set of pieces recalls the relevance of textiles at the Bauhaus, striking a balance with brutalist architecture. **(Fig. 3)**

A younger generation of Ecuadorian architects including Andrade-Moscoso's son, Jaime Andrade-Heymann and Milton Barragán, continued the search for a total work of art embracing Quito's hybrid condition of cultural production. Both were trained at UCE and still practice sculpture and product design, and also incorporate these works into projects responding to collective housing programmes.

One of the notable projects is Atrium (Milton Barragán, 1981), a building located near the Guápulo area. It faced a paradoxical condition, derived from the need to consolidate the street frontage over González Suárez Avenue, which was occupied by ten-story high housing towers, while also dealing with the dramatic terrain slope towards the east. Atrium features a rational facade that extends the horizontal lines of the neighbouring buildings, and is only disrupted by two compositions. These include a mosaic mural playing with the typography of the word "Atrium" on the ground floor, and a vertical bas-relief above, illustrating modernist abstract figures. This strategy is repeated in a grand five-floor high interior atrium, reminiscent of techniques in pre-Columbian arts from Ecuador such as those of Valdivia. The other three facades reveal exposed brick walls, evidencing masons' skilled handiwork. The eastern facade displays apartment balconies that blend domestic interiors with the natural landscape through the views and the arrangement of potted plants.

Finally, we will discuss Hábitat Guápulo, a housing complex designed by Andrade-Heymann and Mauricio Moreno (1983). It may be considered as the climax of typological and aesthetical hybridisation in Quito's domestic architecture. It stands out not only for its reimagining of the housing block through terraced structures that house duplex and triplex units but also for its incorporation of elements from traditional Ecuadorian homes, such as carpentry, ceilings, etc. The ensemble establishes two dialectic situations. On the one hand, it provides a collective garden that functions as a sculptures

21. Monard, Shayarina and Lusardi, Giada. *Con vista al interior*. Quito: Pontificia Universidad Católica del Ecuador, 2023.

yard —Andrade-Heymann's workshop is located on the same level— enabling a direct dialogue between arts and the powerful landscape of the valleys. This space also features a stone-mosaic mural by Andrade-Moscoso. On the other hand, the architects incorporated mechanical devices such as an elevator of their own design, inspired by their appreciation of British technology. Furthermore, Andrade-Heymann's apartment operates as a global-local *Gesamtkunstwerk* by arranging an inner sculpture garden in the mezzanine with works by himself and his father. The apartment also exhibits household settings with furniture pieces by Artectum, a firm created by local architect Fernando Jaramillo, as well as Fisch's carpets and lamps, ceramics and paintings by Andrade-Heymann **(Fig. 4)**.

5. FINAL CONSIDERATIONS FROM THE MIDDLE OF THE WORLD

Due to the lack of primary sources revealing architectural discourses where hybridisation as strategy might be registered, we understand that our interpretation of the narratives behind modern architecture in Quito and its dialogue with other trades is largely speculative. Nevertheless, statements from prominent figures in both Ecuadorian cultural networks/institutions, as well as in the art scene –particularly Andrade-Moscoso's and Fisch's– have certainly been on the agenda of the new School of Architecture at UCE. In the same vein, it is likely that Galarza's action in public programmes for enhancing local folklore enriched their activities.

This analysis, based on the reading of the selected projects does not aim to be conclusive. However, it has allowed us to identify hotels and housing projects as suitable programmes for establishing dialogues between local and international materials and languages. It also communicates how a Modern domesticity "from the middle of the world'' should be shaped and lived, on different scales. In other words, the geo-referential (cosmic, according to indigenous beliefs) condition of Quito imposes not only physical demands on its architecture but a full engagement with universal debates. Finally, the entanglement of arts, crafts and buildings reveals the creator's hand as the main instrument for conceptualising and executing a local *Gesamtkunstwerk* through the involvement of a complex network of creators in vernacular aesthetics and techniques. ■

BIOGRAPHIES

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(RE)DISCUSSING MISCEGENATION IN THE HISTORIOGRAPHY OF MODERN ARCHITECTURE

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ABSTRACT

Between the mid-1990s and the end of that decade, two "(Re)discussions" were undertaken. One of them was presented by an Argentine architectural historian in 1995 within the scope of the 1st DOCOMOMO Brasil seminar - (Re)discussing modernism: Universality and diversity of the modern movement in Architecture and Urbanism in Brazil. This is the reflection developed by Francisco Jorge Liernur in *The mask under the mask: miscegenation and modernization in 20th century Latin American architecture*. The other "(re)discussion" was the one mobilized in 1999 by a Congolese-Brazilian anthropologist, Kabengele Munanga, in *(Re)discussing miscegenation in Brazil: national identity versus black identity*. The proximity between the two publications, both in time - the 1990s - and in theme - miscegenation - draws attention to a sharing of concerns between the field of architecture and anthropology that occurs when Liernur revisits the first experiments that rehearsed miscegenation in the architectural field and Munanga reexamines the issue of national identity. But, if on the one hand, miscegenation appears to be a possibility for thinking about "cross-fertilization,"[1] on the other, it presents itself as an "obstacle" in the construction of "a collective, politically mobilizing identity."[2] The present work crosses these two "(re)discussions" in order to examine the meanings that miscegenation takes on in relation to debates on transculturation, cultural anthropophagy and racial democracy, and in relation to those ongoing in the architectural field at that time. Through analyzes of the circumstances that inform the architectural historian and the anthropologist, light is shed on some aspects that emerge in the face of the racial issue included in the discussion on miscegenation, instigating the formulation not of answers, but of questions that need to be asked to the "point of view" of the architectural historian.

"Anthropologists call mestizos only the sons or daughters of Spanish men and indigenous women", postulates Argentine architectural historian Francisco Jorge Liernur in the first sentence of *The mask under the mask: mestizaje and modernization in 20th century Latin American architecture*, his text published in the proceedings of the 1st DOCOMOMO Brasil Seminar, an event held in Salvador between the 12th and 14th of June 1995 with the title "(Re)discussing modernism: Universality and diversity of the modern movement in Architecture and Urbanism in Brazil". On this occasion, to support his considerations on miscegenation, the author mobilizes a wide spectrum of authors and identifies the diffusion of the term as well the emergence of the first criticisms regarding the limits of its use:

> *[...] can architecture criticism and history appropriate the term in this strict sense? If so, which works would take the place of the 'Spanish men'? Herrera's or Churriguera's? And what about 'indigenous women'? the tents of the Araucanians or the monuments of Incanato?*[3]

The author presents the answer below:

> *the evident nonsense of these questions suggests the convenience of giving the word a broader and more ambiguous meaning, extending it to any hybridization between "white" and "indigenous" elements, as a particular case of the more general problem of mixture or transculturation.*[4]

A few years after these formulations, at the end of the 1990s, the Brazilian anthropologist of Congolese origin Kabengele Munanga also launched his criticisms of the concept, especially with regard to its ambiguity. In *Rediscutindo a mestiçagem no Brasil* (1999), a book published for the first time in Petrópolis, Munanga considers that "mestizaje, from a populationist point of view, is a universal phenomenon from which populations or groups of populations only escape for limited periods". From this angle, it is nothing more than "an exchange or flow of genes of varying intensity and duration between populations that are more or less biologically contrasted."[5] However, the anthropologist does not escape the fact that "the notion of miscegenation, whose use is both scientific and popular, is saturated with ideology."[6]

This is what we can infer when we follow the transformations of this notion between the end of the 19th century and the beginning of the 20th century, with the profusion of studies that sought to make sense of this process. Munanga draws attention to the impacts of the abolition of slavery in 1888, which confronted Brazilian elites with the emergence of a new category of citizens: the formerly enslaved. At this moment, not by chance, "the construction of a nation and a national identity became crucial for thinkers such as Silvo Romero, Euclides da Cunha, Alberto Torres, Manuel Bonfim, Nina Rodrigues, João Batista Lacerda, Edgar Roquete Pinto,

1. Jorge Liernur, "A máscara sob a máscara: mestiçagem e modernização na arquitetura latino-americana do início do século." In *I DOCOMOMO: (Re)Discutindo o Modernismo: universalidade e diversidade do movimento moderno em arquitetura e urbanismo no Brasil*, ed. by Luiz A. F. Cardoso and Olívia Fernandes, (Salvador,1995), 21-34.

2. Kabengele Munanga. *Rediscutindo a Mestiçagem no Brasil*, (Belo Horizonte: Autêntica, 2020).

3. Liernur, "A máscara sob a máscara: mestiçagem e modernização na arquitetura latino-americana do início do século," 9.

4. Liernur, "A máscara sob a máscara: mestiçagem e modernização na arquitetura latino-americana do início do século," 9.

5. Munanga, *Rediscutindo a Mestiçagem no Brasil*, 17.

6. Munanga, *Rediscutindo a Mestiçagem no Brasil*, 18.

Oliveira Viana, Gilberto Freyre: what was at stake, in this intellectual debate, was fundamentally the question of knowing "how to transform this plurality of races and mixtures, of such different cultures and civilizational values, of such diverse identities, into a single collective of citizens, in one nation and one people."[7] The answer to the problem, although it was informed by pseudoscientific notions of that moment, nevertheless gains an original formulation by inverting the sign of the meaning of miscegenation: if until then it was seen in a negative way, as a threat to the project of a nation that if white was wanted, many of these thinkers went on to demonstrate that miscegenation would make the black element disappear in a few generations, given the supposed genetic predominance of the white element, which could still count on the arrival of European immigrants. Thus, aiming to whiten the population, the Brazilian *intelligentsia* presented the country's dominant classes with a way out to guarantee the stability of the oligarchies, made up of white men in power, without resorting to the segregation policies adopted in the USA or the extermination policies adopted in Germany or, as we will see, in Argentina, approaching the stance adopted by colonial France, which began to promote the idea of "cultural miscegenation" under the anti-Nazi argument.[8]

The project of a whitened Brazilian nation failed, but the ideology of mestizaje had its successes with regard to the secularization of the expectation of whitening. Unlike the USA, where "racial ideology was conducted in such a way as to grant no place to an intermediate person in the biological scheme", that is, to no mestizo, in Latin American countries, like Brazil, where "mestizos consider themselves as true 'Americans' to the extent that blacks can be considered Africans and whites Europeans,"[9] the mixture, by accepting whitening, foresees a differentiated place for the most whitened, which would lead to "reducing discontent between races."[10] It is for this reason that Munanga considers that the miscegenation policy increases the difficulties for the emancipation of black people - thinking of black people here as black and brown -, since it poses as yet another obstacle to "building a collective, politically mobilizing identity."[11]

At the end of the 20th century, the Latin American historiography of architecture was also going through a crisis in relation to the theme of identity, or rather, *identities*, as people no longer believed in the convergence towards a "national identity", but in the proliferation of new identities of "place", of "context". Once the era of civil-military dictatorships in the region was over, the reopening of democratic horizons for the countryside took place with *critical regionalism* in the vacuum left by universalism and in dialogue with concerns from other disciplines, especially the human sciences, impacted by the thoughts of figures such as Michel Foucault and Edward Said.[12] The DOCOMOMO itself in which Liernur launched *The Mask Under the Mask* was an example of this, featuring in the subtitle of the event, alongside the term "universality", the word "diversity". In an assessment of the field's historiographical production between the end of the 1980s and the first decade of this millennium, Silva Arango notes the scarcity

7. Munanga, *Rediscutindo a Mestiçagem no Brasil*, 55.

8. Munanga, *Rediscutindo a Mestiçagem no Brasil*, 55.

9. Munanga, *Rediscutindo a Mestiçagem no Brasil*, 37.

10. Munanga, *Rediscutindo a Mestiçagem no Brasil*, 86.

11. Munanga, *Rediscutindo a Mestiçagem no Brasil*, 86.

12. Alex de Carvalho Matos, "*Crise do projeto moderno e ordem do discurso: o nascimento de uma historiografia da arquitetura*", In: Anais do 13º (Seminário DOCOMOMO Brasil – Salvador, 2019), https://docomomobrasil.com/course/13o-seminario-docomomo-brasil-salv

of "general histories" as a symptom of a "theoretical tendency to consider that Latin America is not a 'historiable' unit'", given the "diversity" of its "distinct regions" as an impediment to a "homogeneous" or "universalizing vision". Microhistory gains space, biographies are reborn.[13]

But in *The Mask Under the Mask*, the strategy adopted was neither "universality" nor "diversity": faced with the need for global syntheses, Liernur adopts the method of comparative history, through which he seeks to account for the heterogeneity of the continent and of their "mixtures" without resorting to microhistory and identities. Its refractory position to concerns about the identity is clear from the title: it evokes the idea of "mask", like that of *Black skin, white masks* (1952) - a work by the Martinican psychoanalyst and activist Frantz Fanon who is a reference in studies of subalternity -, as a game of "disguises", which points to the impossibility of distinguishing not only what is "black", but also what would be indigenous under the "white mask" when the subject is miscegenation, a condition in which all the difference would be dissolved by transculturation processes. The term does not go into depth, but a footnote informs that the reference is *Transculturación narrative en América Latina* (1982) by the Uruguayan Ángel Rama (1926-1983). In this book, in turn, Rama argues that the term was originally coined by Cuban Fernando Ortiz (1881-1969), for whom transculturation concerns the process that necessarily implies "the loss or uprooting of a previous culture, which could be considered a partial deculturation, and, furthermore, means the consequent creation of new cultural phenomena that could be called neoculturation".[14]

Rama relies on this understanding and comes to the conclusion that it is not simply a question of "giving in to the external modernizing impact in an example of extreme vulnerability". At the same time, he does not fail to consider that "modernity cannot be renounced and denying it is suicide". What is at stake, I concluded, is "renouncing oneself to accept it".[15] Although Liernur does not understand transculturation exactly as a "renunciation" of oneself, but as a "game of mirrors" that makes it impossible to distinguish origins, he shares with the Uruguayan the idea that this process founds "Latin American culture" and that the "mixture" emerges, "positively or negatively", as "a characteristic feature, articulating many of the responses to the recurring problem of identity".[16]

Unlike Liernur, Munanga re-discusses miscegenation to put the racial issue back into debate. The question, however, does not concern the acceptance or not of miscegenation which, as we also saw in Munanga, configures the very dynamics of every culture. The problem lies in the way it is read, starting from a point of view in which black people are *absent* in this process. In part, this is due to a previous absence, that of contributions from Brazilian neighbors in the construction of this conceptual framework, weighing in this selection a certain "Hispanism", a correlate of "Lusitanism", both insufficient to the ambition of interpreting processes that seek to encompass the entire Latin American continent.[17] On the other hand, the

13. Silvia Arango, *"Una historiografía latinoamericana reciente sobre arquitectura y ciudad"*. In: Diseño en síntesis, n. 40-41, p. 32-43, 2013. https://disenoensintesisojs.xoc.uam.mx/index.php/disenoensintesis/article/view/206. ador/

14. Ángel Rama *Transculturación narrativa en América Latina*, (Buenos Aires, México: Siglo XXI, 2004), 32.

15. Rama, *Transculturación narrativa en América Latina*, 68.

16. Liernur, "A máscara sob a máscara: mestiçagem e modernização na arquitetura latino-americana do início do século," 21.

17. Sanjay Subrahmanyam, O gosto pelo arquivo é poliglota (Entrevista), In: *Por uma história mundo*, ed. Patrick Baucheron, Nicolas Delande (Belo Horizonte: Autêntica, 2015). Barbara Weinstein, *Pensando a história fora da nação: a historiografia da América Latina e o viés transnacional*. In: Revista Eletrônica da ANPHLAC, n 14, 2013), 10-31. https://doi.org/10.46752/anphlac.14.2013.2331.

absence of black people in *The Mask Under the Mask* has links with the absence of black people in the Argentine imagination itself, not the result of a supposed rarefied presence of black people in Argentina - studies by Uruguayan Vicente Rossi (1871-1945) about the black matrices of tango and painting by Pedro Figari (1861-1938) about *cadombé* already prove the opposite in the 1920s - but from whitening policies.[18]

At the end of the 1980s, Ramón Gutiérrez, aligning himself with Cristián Fernández Cox, stated that "the persistence and persistent ubiquity, to this day, of manifestations of popular beliefs, of its sacred values, its essential ways of life, of its creativity" form a "complex", quoting Octavio Paz, of "unconscious attitudes and structures, which, far from being survivors of an extinct world, are constitutive experiences of our contemporary culture…". Next, he adds that this reality of "deep America", an expression he rescues from José Maria Arguedas, "is embedded in societies distinct from those formed by the transcultural fusion of the Iberian conquest"[19]

In another direction, *The Mask Under the Mask* shows *the recurrent difficulty for architectural historians to address the racial issue*. In the introduction to the anthology *Race and Modern Architecture* (2020), Chinese-American Irene Cheng and African-Americans Charles L. Davis II and Mabel O. Wilson argue scholars in the field generally "avoid the topic of race," and even "when they acknowledge the subject, they often quickly dismiss its significance, or they throw it outside the appropriate limits of the discipline"[20]. Such a stance, as the authors note, contrasts with what occurs in other disciplines such as history, law, anthropology, geography, political science, cultural studies and literature, from which emerge studies on coloniality, post-colonial theory, critical studies on race and about whiteness, also known as whiteness studies.

The contrast between the notion of miscegenation presented by Liernur in *The Mask Under the Mask* and that presented by Munanga is evident. This does not mean that the architectural historian's vision no longer has affinities with other Brazilian lineages of reading about miscegenation, such as racial democracy and cultural anthropophagy - the author assume that his thinking "is actually a little anthropophagic"[21]. While the first identifies miscegenation as the antidote to racial segregation, since the genetic and phenotypic mixture of blacks, whites, indigenous people and immigrants supposedly prevents differentiation between subjects based on their appearance or origin, the second exalts the incorporation of the "other" and not its annihilation or exclusion as the foundation of Brazilianness. However, Afro-Brazilian sociologist and economist Marcelo Paixão argues that these notions end up masking the violence of racism: while the ideology of racial democracy disguises the reasons for inequality between whites and blacks, justifying it, for example, by the "small space of time passed" since the end of slavery for the full integration of black people into Brazilian citizenship[22], cultural anthropophagy or assimilation "does not represent social integration of people of African descent": if it is different from what happened with the

18. Maria Claudia de Oliveira Martins, "*Escravidão negra na Região Platina*". *Revista Orbis Latina: Racionalidades, Desenvolvimento e Fronteiras* - v. 6 n. 2 (2016). Ramiro Barreiro. "Onde estão os negros da Argentina?", *EL PAÍS*: Corrientes - 08 JAN. 2017 - 16:28, https://brasil.elpais.com/brasil/2017/01/07/internacional/1483795840_886159.html

19. Ramón Gutiérrez, *Arquitetura latino-americana. Textos para reflexão e polêmica* (São Paulo: Nobel, 1989), 69.

20. Irene Cheng; Charles L. Davis II and Mabel O Wilson (Edit). *Race and Modern Architecture: A Critical History from the Enlightenment to the Present*. (Pittsburgh: University of Pittsburgh Press, 2020), 3.

21. Jorge Francisco Liernur, "*O cânone como construção*". In: *Arquitetura e escrita: relatos do ofício*. (Various orgs.). (Romano Guerra Editora, 2023) 270-291.

22. Marcelo Paixão, "*Antropofagia e racismo: uma crítica ao modelo brasileiro de relações raciais*." In: *Elemento suspeito: abordagem policial e discriminação na cidade do Rio de Janeiro*, ed. Silvia Ramos and Leonarda Musumeci (Rio de Janeiro: Civilização Brasileira, 2005) 283-322.

Indians in the North American Old West, because "it would not be done without leaving traces", the appropriation of "such a contribution from Afro-descendants" is made at the same time as it leads "to its end", functioning as a "consolation prize" for " fact of having their creativity transformed into the basis of the formation of nationality", even if "strategically excluded from it"[23]

The mask Under the Mask thus demarcates a critical orientation that will move away from the idea of dependence and cultural subalternity in search of "cross-fertilization", transatlantic circulations, the global system. If, on the one hand, there are surprising historiographical gains for the field of architecture with a strategy attentive to "identity traps"[24], on the other, some lessons learned from the singularities that persist in mixtures are abandoned and certain structural debates, such as the racial issue in architecture, are left aside from systemic analyses. In this sense, re-discussing mestizaje and modernism since Latin America, before offering answers, must provoke questions that interrogate the complexities that shape processes of mestizaje, transculturation and anthropophagy. Every "mixture" is made up of its ingredients and the work of architectural historiography is to identify and examine them to restore their multiple meanings. ■

23. Paixão, "*Antropofagia e racismo: uma crítica ao modelo brasileiro de relações raciais*." 29.

24. Asad Haider, "*Armadilha da identidade: raça, classe nos dias de hoje"* (São Paulo, Veneta, 2019).

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TRANSCONTINENTAL MODERNITY IN AHMEDABAD: CONTRIBUTIONS BY GEETA AND GIRA SARABHAI

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ABSTRACT

Ahmedabad, in the Indian state of Gujarat, is an example of a vibrant, chaotic city, where human life intertwines with animal life, featuring the circulation of polluting and noisy vehicles of various kinds. There is an image of communal movement linked to the importance of the Sabarmati River, whose bed and banks have been used extensively for dyeing textiles. Ahmedabad has become a city of cultural and educational advancement, thanks to its textile production and the impetus provided by generations of Jain weaver families. This progress led to its prosperity. During the colonial period, Ahmedabad was able to assert its pre-autonomy by escaping the British colonial burden. In this context, the Sarabhai family, a world of political activists, philanthropists, scientists, artists and cultural patrons with international influence, flourished and was one of the most well-known contributors to this prosperity. Geeta and Gira Sarabhai, two sisters born into the family in the early 1920s, will be instrumental in putting Ahmedabad on the map of modernist activities. Geeta, a musician with a background in Indian classical music, and Gira, an architect, designer and curator, through inter-continental travelling and the search to find points of encounter and balance between a secular cultural milieu and an avant-garde milieu outside their country, were to bring to their hometown many figures of distant and unlikely origins. These figures were artists, choreographers, musicians and architects, most of them from North America.

This paper explores the role of Geeta and Gira Sarabhai in the transcontinental and inter- and transdisciplinary modernity that emerged in Ahmedabad in the 20th century. A modernity that moved together within the fabric of a weaving city, Ahmedabad.

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1. MOTTO

There is something molten in me. I do not know how else to begin. To begin again, all over again, as if in each attempt something needs to be recast, rekindled, some bond, some compact between flesh, clothing and words. There is something incendiary in me and it has to do with being female.[1]

Bathed by the Sabarmati River, Ahmedabad is the most populous city in the Indian state of Gujarat. Due to its textile production and the impetus provided by generations of *filateur* families, it has become a city of cultural and educational advancement, which led to its prosperity. A sphere of political activists, philanthropists, scientists, artists and cultural patrons with international influence, the Sarabhai family was one of the most important contributors to this progress. Ambalal Sarabhai (1890-1967) and Saraladevi Sarabhai (1896-1975) had five daughters and three sons. Geeta Sarabhai (1922-2011) and Gira Sarabhai (1923-2021), two of these daughters, became key figures in defining Ahmedabad's identity rooted in transcontinental modernity. **(Fig. 1)**

2. AHMEDABAD, A WOVEN CITY

In their 2009 book *Living with Memories: Parsee Dwelling in Early Settlements of Gujarat*, Snehal Nagarsheth and Pallavi Chilleriga, state the following: "India is like an intricately woven carpet of untiring worlds, which are constantly engaged in a conversation, which is at once familiar and unfamiliar."[2]

The Indian state of Gujarat was formed throughout history through various conversations, resulting from a process of "percolation". Ahmedabad lies on the banks of the River Sabarmati. The waters of the river and the region's soil type combined to make the city a textile industry centre. The industry flourished in the 19th century under the control of the British Raj, leading Ahmedabad to become the second largest cotton-producing city in India. Thanks to its wealth, Ahmedabad was able to avoid the colonial British yoke and thus affirm its own pre-independence. Ranchhodlal Chhotalal (1823-1898) was the great driving force behind modern Ahmedabad. He founded the Ahmedabad Spinning and Weaving Company Ltd, in 1861, which was the first textile mill company in Ahmedabad and one of the first in India. Kasturbhai Lalbhai (1894-1980), Ahmedabad's richest industrialist, was the great driver of the cultural and educational progress of the city. He was the co-founder of the Ahmedabad Education Society, which was to result in Ahmedabad University and the Indian Institute of Management Ahmedabad (IIMA).

Ahmedabad became a cluster of powerful and wealthy families linked to the textile industry. The relationships between the members of the city's *filateur* families, who were of the Jainist faith, reveal a political resilience which found a parallel in the huge cultural and educational investment carried out in the city. Among these families, the Sarabhais stood out. The family rose to prominence in the early 20th century. Anasuya Sarabhai

1. Meena Alexander, "Alphabets of Flesh," in *Talking Visions: Multicultural Feminism in Transnational Age*, ed. Ella Habiba Shohat (Cambridge, MA: MIT Press, 2001), 143.

2. Snehal Nagarsheth and Pallavi Chilleriga, *Living with Memories: Parsee Dwelling in Early Settlements of Gujarat* (Ahmedabad: SID Research Cell, School of Interior Design, CEPT University, 2009), n.p.

(1885-1972), Ambalal Sarabhai's sister, left for England in 1912 of her own accord for an education. Back in India, she became involved with women's rights activists and worked with underprivileged communities. Ambalal Sarabhai was chairman of Calico Mills and founder of the Sarabhai Group of Companies. He was involved in the Indian independence movement and was an early supporter of Gandhi (1869-1948). Saraladevi Sarabhai, Ambalal's wife, was a women's rights activist. The couple had five daughters and three sons. Mridula Sarabhai (1911-1974), following in the footsteps of her aunt Anasuya, became a political activist. Gautam Sarabhai (1917-1995), a mathematician, and Gira Sarabhai played pivotal roles in the foundation of several institutions in the city. Vikram Ambalal Sarabhai (1919-1971) became a physicist and astronomer and was one of those responsible for the Indian space programme. He was chairman of the Indian National Committee for Space Research and the Indian Space Research Organisation. Together with Kasturbhai Lalbhai, Vikram was a co-founder of the IIMA. Geeta Sarabhai (1922-2011) was a musician and of the first women to play *Pakhavaj*. William Curtis describes the Sarabhais as "Modern Medicis."[3]

3. A WEB OF INTERCONTINENTAL RELATIONS: THE ROLE OF GEETABEN AND GIRABEN

Like their siblings, Geeta Sarabhai[4] – nicknamed Geetaben – and Gira Sarabhai – nicknamed Giraben – were homeschooled by teachers from Cambridge and Santiniketan. Their mother was influenced by teaching methods that used a humanistic and naturalistic approach and encouraged freedom of expression. In Lucknow, India, Geeta took a master's exam in Hindustani classical singing at the Bhatkhande Sanskriti Vishwavidyalaya.[5] She became a musicologist and a practising musician. In 1946, at the age of 25, she went to New York to study Western methods of composition. Her first choice was the Julliard School, although she never attended it. Isamu Noguchi (1904-1988), a friend of Geeta's brother Gautam, introduced her to John Cage (1912-1992), claiming that her studies would be more fruitful if she sought a less formal education. Geeta became friends with Cage and Merce Cunningham (1919-2009). With Geeta in mind, Cage wrote in 1954: "[a]n Indian musician told the traditional answer in India [to the question 'why do I make music'] was 'To sober the mind thus make it susceptible to divine influences.'"[6] When Geeta left New York, Cage and Cunningham found in the Sarabhai family, especially "Geetaben", a unique group of patrons who invited them to perform. Cage, Cunningham, David Tudor (1926-1996) and Robert Rauschenberg (1925-2008) all visited Ahmedabad in 1964, accompanying the Merce Cunningham Dance Company.[7] David Tudor became friends with Manorama Sarabhai, widow of Suhrid Sarabhai Sr, brother of Geeta and Gira. Robert Rauschenberg, for his part, maintained a friendship and several collaborations with Asha Sarabhai, who is married to Suhrid Sarabhai Jr, son of Manorama. Rauschenberg explored this "new world" in support of his work. In 2018, Paul Purgas, a musician and artist with a background in architecture and Indian ancestry, found several tapes of

3. William Curtis, *Le Corbusier: Ideas and Forms* (London: Phaidon Press, 1986), 202.

4. After marrying Satya Dev Mayor, Geeta became known as Geeta Sarabhai Mayor.

5. Rahila Haque, "Gita Sarabhai: A Partial Portrait," *CTM Festival*, January 2023, https://www.ctm-festival.de/magazine/gita-sarabhai-a-partial-portrait. The school was then known as the Marris College of Music.

6. John Cage, "45' for a Speaker," in *Silence: Lectures and Writing* (London: Marion Brothers, 1999), 158.

7. Alexander Keefe, "Subcontinental Synth: David Tudor and the First Moog in India," *East of Borneo*, April 30, 2013, https://eastofborneo.org/articles/subcontinental-synth-david-tudor-and-the-first-moog-in-india/

rehearsals, improvisations and small electronic compositions at the National Institute of Design (NID).[8] Some of the recordings belong to Geeta's experiments. The recordings were made from 1969 to 1973 in a studio at the NID, using a Moog synthesiser.

Gira Sarabhai, the youngest of eight siblings, travelled to Kashmir in her late teens. During this time, she was self-taught in history. Her interest in architecture led her to contact Frank Lloyd Wright (1867-1959) so that she could benefit from his teaching at Taliesin. He agreed to train her.[9] In the late 1940s, Gira travelled to the USA to study and work with him.[10] She was part of the team that developed the Guggenheim Museum in New York.[11] In a 2012 interview with Shilpa Das, Gira reportedly said: "After working in Wright's office all day, we were allowed to be present in the studio at night. Wright's students would work in the studio all night long. To our good fortune, we could look at the original drawings, plans, and masterpieces at night."[12] Like her sister Geeta, Gira was a friend of Cage's. Together with her brother Gautam, Gira was co-responsible for two of India's most important post-colonial design institutions: the Calico Museum of Textiles, which they founded in 1949, and "which is widely regarded as having housed the best collection of Indian textiles in the world,"[13] and the NID, which was founded in 1961. With Gautam's involvement, Gira suggested that Wright should develop a design project for the Calico Mills of the Ahmedabad India Store, an administrative building for the mill complex. Although Wright produced several drawings dating back to 1949, the project fell through due to "permission issues and construction restraints from the Ahmedabad Municipal Corporation."[14] On the site of Wright's project, the Calico Dome was built in 1962 to house the showroom and shop of the Calico Museum of Textiles. The dome was conceived by Gautam and designed and detailed by Gira, influenced by Richard Buckminster Fuller (1895-1983), one of the international figures who travelled to Ahmedabad at the siblings' invitation and with whom they formed a friendship. Gira curated all the museum's catalogues until her death.

4. *THE INDIAN REPORT*

The collection and the catalogues of the Calico Museum played an important role in the exhibition *Textiles and Ornamental Arts in India*, which was held at the Museum of Modern Art (MoMA) in New York in 1955. **(Fig. 2)** Edgar Kaufmann Jr (1910-1989) and Alexander Girard (1907-1993) were involved in the exhibition. In the exhibition catalogue, Gira Sarabhai's name appears in the 'Acknowledgements', and the Calico Museum is the first institution on the list of lenders to the exhibition, which also includes Manorama Sarabhai.[15] The reference to Charles Eames (1907-1978) in the catalogue – the name of Ray Eames (1912-1988) is omitted – is significant.

Alexander Girard, known for his contributions to textile design, worked on many occasions with the Eameses, who appreciated the craftsmanship of the many countries they visited. The Eameses' meeting with Pupul Jayakar (1915-1997) at the exhibition paved the way for the idea of "introducing

8. Paul Purgas, "Electronic India 1969-73 revisited," *The Wire*, May 2020, https://www.thewire.co.uk/in-writing/interviews/electronic-india-moog-interview-paul-purgas

9. Shalini Venugopal Bhagat, "Gira Sarabhai, Designer Who Helped Shape Modern India, Dies at 97," *The New York Times*, August 30, 2021. https://www.nytimes.com/2021/09/23/world/asia/gira-sarabhai-dead.html

10. Madhavi Desai, *Women architects and Modernism in India: Narratives and Contemporary Practices* (Routledge, 2016), 59.

11. Bhagat, "Gira Sarabhai."

12. Shilpa Das, ed., *50 Years of the National Institute of Design 1961-2011* (Ahmedabad: National Institute of Design, 2013), 8.

13. Bhagat, "Gira Sarabhai."

14. Urshita Gautam, "5 things you didn't know about Frank Lloyd Wright," *Architectural Digest*, June 8, 2017. https://www.architecturaldigest.in/content/5-things-didnt-know-frank-lloyd-wright/

15. Monroe Wheeler, ed., *Textiles and ornaments of India: a selection of designs. The Museum of Modern Art*, (New York, NY: MoMA, 1956), 6.

design as a modern profession in India."[16] Jayakar was an Indian activist and supporter of Indian handicraft traditions who founded the Indian Handlooms and Handicrafts Export Council (IHHEC). The Indian government formally requested the Ford Foundation invite the Eames couple to visit India in 1957.[17] In 1957 the Eameses visited India with the aim of writing a report on the establishment of a multidisciplinary school with design as its underlying theme. During their three-month stay in India, the couple travelled all over the country and contacted Gira and Gautam.[18] In April 1958 Charles and Ray Eames presented *The Indian Report*.

> *India stands to face the change with three great advantages – First: She has a tradition and a philosophy familiar with the meaning of creative destruction. Second: She need not make all the mistakes others have made in the transition. Third: Her immediate problems are well defined: Food, Shelter, Distribution, and Population*.[19]

Gira and Gautam Sarabhai were part of the committee formed to find a location for the new school that was in line with the recommendations of *The Indian Report*. The final choice was Ahmedabad, to which the efforts of the two siblings undoubtedly contributed. Founded in 1961, the NID was formally inaugurated in 1962. The NID's current premises opened in 1967. Gira didn't want to take credit for her designs – many of which were carried out in collaboration with Gautam – and rejected the title of architect, preferring to be called designer. However, the NID architectural design project was essentially her work, in collaboration with other architects and structural engineers. The result of the collaboration is a sober and elegant building, characterised by the use of patios that facilitate transition between the interior and exterior spaces, seeking to provide shade in the region's high temperatures. The vegetation is carefully deployed, maintaining the building in a small, secluded environment within a bustling, dynamic city. Although Gira collaborated with Wright, there are clear parallels to be drawn with Le Corbusier (1887-1965).[20] **(Fig. 3)**

Regarding the new NID premises, Balkrishna Doshi (1927-2023) has said:

> *Even though the Sarabhais travelled extensively and had been exposed to the world outside, their core Indian values and belief in Indian culture remained intact. Their identity drew its strength from this core. This is manifested not just in NID, but also in the Calico Museum for instance, in the way they both went about their work and in the way they lived their lives. To me, their inherent sensitivity towards the architecture of the institute is unparalleled. Non-architects [sic] doing architecture is rare and remarkable. This, I think, is the basis of NID in general – to rediscover India and to create an Indian identity.*[21]

16. Das, *50 Years*, 7.

17. Das, *50 Years*, 9.

18. Das, *50 Years*, 11.

19. Charles Eames & Ray Eames, *The Indian Report* (Ahmedabad: National Institute of Design, 1997), 7.

20. Gita Sarabhai was instrumental in inviting Le Corbusier to design the Villa Sarabhai in Ahmedabad.

21. Das, *50 Years*, 23.

Gira, Gautam and Geeta were responsible for most of the distinguished guests who taught at the NID – the Eameses, Cage, Tudor, Rauschenberg, Fuller, Khan, Stella Kramrisch (1896-1993), Maxwell Fry (1899-1987), Henri Cartier-Bresson (1908-2004), Claude Stoller (1921-2023), Frei Otto (1925-2015), Adrian Frutiger (1928-2015), Deborah Sussman (1931-2014), Trisha Brown (1936-2017) and Steve Paxton (1939-2024), among others.

NID became a school that valued learning by doing, adopting an inter- and transdisciplinary approach to design. Just as Gira and Gautam had envisioned, and the Eames had suggested.

5. BETWEEN FLESH, TEXTILES AND WORDS

Geeta Sarabhai's trip to New York and her meeting with John Cage may have been a starting point. Several contacts were established, and a group of New York artists put Ahmedabad on their map. Gira Sarabhai consolidated these contacts. In the words of Asha Sarabhai, Gira was "a very fine architect, but very much on her own terms"[22] and an advocate of a hands-on approach to all things. Her never-ending involvement with the collection of the Calico Museum of Textiles crossed borders and oceans. Together with her brother Gautam, they sought out international names who could consolidate the value of experimental teaching at the NID. However, Geeta and Gira's names and lives are referenced only in short articles. The privacy requested by the sisters didn't help to make them more recognised names. Possibly, the fact that they were women and Indian didn't help either. Gira died in 2021, the last of the eight siblings. Some in-memoriam articles have been written about her. Laila Tyabji wrote: "[a]ll of us in the design space in contemporary India owe Gira Sarabhai a huge debt of gratitude for her selfless, perfectionist, single-minded work."[23] Later, in 2024, Christopher Turner was to write that Gira Sarabhai's contribution to Indian modernism is not sufficiently recognised.[24]

Geeta and Gira Sarabahi helped bring modernity to Ahmedabad. Looking at the Sarabhai siblings as a whole, and following in the footsteps of their parents, this modernity extends to India and takes on a sense of progress, primarily political and social, which is also manifested in industry and science, as well as in music, architecture and design. But Geeta, and especially Gira, have always sought to root this modernity in the deep identity of Ahmedabad. The values of the world they have encountered, particularly in New York, and the experience they have gained from their extensive contacts with international personalities, have always been incorporated into the values of their ancestral culture, thus promoting the development and affirmation of that culture rather than its hybridisation. Geeta and Gira Sarabhai's cultural activism complements the political and social activism of many of their family members, especially the women. This cultural development has proved fundamental to the realisation of a polarised regional modernity in Ahmedabad. Geeta's and Gira's words come mainly through the testimony of third parties. Their legacy – in music, architecture, design education, interest in textiles and museology – is the

22. Asha Sarabhai, "The Reminiscences of Asha and Suhrid Sarabhai," interview by Cameron Vanderscoff and Gina Guy. In *Robert Rauschenberg Oral History Project, 2014-2018* (Columbia Center for Oral History Research, 2015), 4. https://www.rauschenbergfoundation.org/artist/oral-history/asha-and-suhrid-sarabhai

23. Gautam, "5 things," 2017.

24. Christopher Turner, "Building Indian modernism in Ahmedabad," *Apollo Magazine*, January 1, 2024. https://www.apollo-magazine.com/modernist-architecture-ahmedabad-sarabhai-family-gira-corbusier/



Figure 1. Group photo in Ahmedabad, 1951. Sitting: on the far left, Geeta Sarabhai, fourth from the left, Vikram Sarabhai, third from the right, Ambalal Sarabhai and on the far right, Gira Sarabhai. ©Nathan Hughes Hamilton, 1951 / https://www.flickr.com/photos/nat507/6137955457/.



Figure 2. Installation view of the exhibition 'Textiles and Ornamental Arts in India'. MoMA, NY, 1955. ©The Museum of Modern Art, New York/Scala, Florence, 2024.

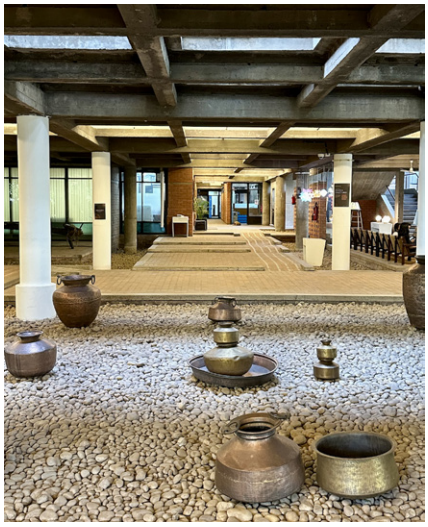


Figure 3. View of the patios at the National Institute of Design, Gira Sarabhai (1961-1966), Ahmedabad. ©Maria João Moreira Soares. 2024.

greatest evidence of their commitment to the realisation of this modernity, in the way it incorporates tradition in the affirmation of the contemporary.

The secretive Gira Sarabhai, direct and stern, and the more hesitant and insecure Geeta, who was perhaps more of a dreamer in her philosophical thoughts, offered themselves as go-betweens, running between other people, involving them and taking them to an unlikely place. The youngest two out of eight siblings, full of privileges from birth, gave their flesh, through textiles, words, encounters and disagreements, to the cause of modernity. ■

BIOGRAPHY

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REVISITING THE MODERN ARCHITECTURE CANON: PARALLELS AND DISTINCTIONS IN BRAZIL AND CZECH REPUBLIC THROUGH FEMINIST PERSPECTIVES

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ABSTRACT

This article engages in the debate on the Modern Architecture canon, focusing on the need to destabilise gender-biased narratives that marginalise women's contributions. It examines the systemic exclusion of women architects in Brazil and the Czech Republic, drawing from two key research projects linked to two of the authors: Merli's Brazilian doctoral research and the "Women in Architecture" project conducted by a team of Czech researchers: Brůhová (project co-leader), Hlaváčková, Huber-Doudová (project co-leader), Malošíková and Zahrádková. The study highlights how these works challenge the androcentric canon through biographical, decolonial and gender analysis, interviews, and both archival and secondary research. The Brazilian research identifies key female architects from 1930 to 1960, emphasising their overlooked contributions. The Czech project explores gender disparities and societal biases affecting women architects' visibility. These studies propose methodologies for integrating women's contributions into the mainstream architectural narrative. The findings suggest the necessity of reshaping the narrative to include collaborative and processual aspects of architectural work.

1. INTRODUCTION

This article contributes to the debate on the Modern Architecture canon which considers the matter of canonical protagonists and architectural objects. One of the central concerns is to question the predominant narratives perpetuated through texts and disseminated in architectural education, which, traditionally, have centred on male achievements, reinforcing gender bias and marginalising women's contributions. This androcentric narrative emphasises individual genius over collaborative efforts and isolated objects over other meaningful forms of architectural contributions. Feminist scholars like Kingsley[1], Ahrentzen[2], Willis[3], or Lima[4] have criticised this approach since the second wave of feminism. They argue for a more inclusive and contextual understanding of architectural history that accounts for the collective and processual nature of architectural production.

In recent years, academic research surrounding the contribution of women in modern architecture has experienced significant growth and development across both Latin America and Europe. Diverse perspectives have been adopted, including compiling inventories of women who graduated in architecture, identifying contributions overshadowed by male partners and recognising various forms of contributions beyond design and construction. However, the proportion of research and publications remains limited compared to the comprehensive nature of the current debate on modern architecture.

A considerable number of these works are destined to be published in special issues of academic journals dedicated to women in architecture or presented in thematic sessions at academic events. While this focus brings much-needed attention to women's contributions, it also risks marginalising these works by segregating them from mainstream architectural discourse. Such practices may inadvertently reinforce the perception that women's contributions are a niche topic rather than a fundamental part of architectural history.

In Brazil, for instance, among the 9,049 architectural master's and doctoral theses registered in the national theses database (Portal Capes), only 107 are dedicated to women in architecture[5]. Notably, 70 of these theses are dedicated to Lina Bo Bardi, an exceptional protagonist in this field. Excluding these, only 37 theses approach the contribution of women in architecture as the main theme, accounting for a mere 0.4% of the total. Similarly, the conclusions of the analysis, which focused on the teaching of architectural history at universities in the Czech Republic, show that the androcentric discourse significantly dominates the interpretation: in the teaching syllabi, women make up only 2.07 % of the named personalities from the history of 20th-century architecture.[6] Examples from both countries show that despite the increasing number of female graduates in architecture, their contributions remain under-recognised in mainstream architectural history.

Within this scenario, this text examines the similarities and differences between Brazilian and Czech research on the contributions of women architects, gender disparities within the architectural profession and canon, as well as systemic inequalities that women architects have faced. The study is built upon two key research projects developed by two of the authors:

1. Karen Kingsley, "Gender Issues in Teaching Architectural History," *Journal of Architectural Education* 41, no. 2 (1988): 21–25.

2. Sherry Ahrentzen, "The F Word in Architecture: Feminist Analyses in/of/for Architecture," in *Reconstructing Architecture: Critical Discourses and Social Practices*, ed. Thomas A. Dutton and Lian Hurst (Minneapolis – London: University of Minnesota Press, 1996), 71-118.

3. Julie Willis, "Invisible Contributions: The Problem of History and Women Architect,," *Architectural Theory Review* 3, no. 2 (1998): 57–68.

4. Ana Gabriela Godinho Lima, "Aspectos da pesquisa em gênero e processo de projeto," in *Pesquisa em projeto e extensão na pós-graduação em Arquitetura e Urbanismo*, ed. Angela Maria Gordilho-Souza, Marcio Cotrim, Naia Alban Suarez (Salvador: Edufba; Rio de Janeiro: Anparq, 2020), 143–159. Ana Gabriela Godinho Lima, *Arquitetas e Arquiteturas na América Latina do Século XX* (Masters Thesis, Universidade de São Paulo, 1999).

5. Giovanna Augusto Merli, *Arquitectura con firma femenina: aportes para una rescritura de la arquitectura moderna brasileña, 1930-1960* (PhD Thesis, Universidad del Bío-Bío, 2023).

6. Klára Brůhová, "Exclusive Histories, Unseen Narratives," *Architektúra & Urbanizmus*, no. 58 (2024): 6 – 19, doi 10.31577/archandurb.2024.58.1-2.1.

the Brazilian doctoral research "Architecture with a feminine signature: Contributions to a rewriting of modern Brazilian architecture, 1930–1960," by Merli (2023) and the "Women in Architecture" project (2021–2024), conducted by Brůhová together with the Czech team. Both works critique the modern architecture canon through a gender perspective, discussing how women have shaped the architectural landscape despite systemic exclusion.

2. THE GENDER BIAS FACTOR

2.1. BRAZIL: OVERCOMING CULTURAL BARRIERS

Despite the social, economic, and cultural difficulties faced by women in accessing higher education in Brazil by the late 19th and early 20th-century, there were no formal rules, legislation, or restrictions preventing women from attending architecture schools. However, between 1930 and 1960, only 182 women graduated as architects compared to 2,231 men.

In her 2023 study, Merli set out to review elements of the historiography of Brazilian architecture, focusing on the decades from 1930 to 1960, when Brazilian modern architecture achieved international recognition.[7] The study identified 182 female graduates highlighting 33 professional activities and six significant figures: Zélia Maia Nobre, Maria do Carmo Schwab, Francisca Franco da Rocha, Maria Laura Osser, Enilda Ribeiro, and Miranda Magnoli. These architects integrated modern techniques with local traditions, significantly contributing to Brazilian modern architecture's national and international relevance. Despite these findings, the main research challenge consisted of a significant lack of information about female architects from this period. This historiographical gap meant that only a few names and their contributions were mentioned in historical records, and even fewer academic studies explored their works and trajectories.

2.2. CZECH REPUBLIC: CHALLENGING ANDROCENTRIC DISCOURSE

The "Women in Architecture" project in the Czech Republic addressed gender disparities within the architectural profession and canon. Similarly to the Brazilian case, the Czech research team noted the absence of women in architectural history and investigated their contributions. The study focused on the second half of the 20th century when a significant proportion of architecture graduates were women, with over 30% in the 1960s and 50% in the 1990s. Despite these numbers, few women were included in the Czech architectural canon. Analysis shows that only two women architects have reached the position of established renowned creators in the Czech narrative: Alena Šrámková and Eva Jiřičná (who worked abroad until the 1990s). Věra Machoninová, alongside her husband, is also mentioned quite often. Thus, we come to number 3 of the canonised female architects from the second half of the 20th century[8]. It is also worth noting that the scissors were opened already in the context of achieving prestigious positions[9]. For example, we did not find any women architects serving as the head of any of the state project institutes, established during the socialist era as part of the centrally controlled construction industry, or their departments. It is also

7. As Zein demonstrates, this happened in good measure due to three publications derived from expositions at the Museum of Modern Art in New York, MoMA: "Brazil Builds" (1943); "Latin American Architecture Since 1945" (1955); "Latin America in Construction: Architecture 1955–1980" (2015). These catalogues featured only male Brazilian architects. See Ruth Verde Zein, *Revisões Historiográficas: arquitetura moderna no Brasil* (Rio de Janeiro: Rio Books, 2022).

8. Klára Brůhová, Petra Hlaváčková and Šárka Malošíková, "Kde jsou architektky?" *Sešit pro umění, teorii a příbuzné zóny*, no. 33 (2022): 38–83, https://vvp.avu.cz/sesit/sesit-33/.

9. Klára Brůhová, "Architecture and Emancipation. The Situation of Women in the Field of Architecture in Socialist Czechoslovakia," in *The Future is Hidden in the Present. Architecture and Czech Politics 1945–1989*, ed. Veronika Rollová and Karolina Jirkalová (Prague: AAAD, 2021), 282-330.

telling that only one woman in socialist Czechoslovakia managed to obtain a professorship in architecture.

These findings led to the main research question: Why did women in architecture remain less visible and have more difficulty reaching prestigious positions than their male colleagues? To answer this, the research team opened two lines of inquiry: First, they examined the experiences of women architects through in-depth, interviews, revealing systemic disadvantages and societal biases affecting women in the profession. Second, they deconstructed the principles of narrative formation in architectural history by analysing professional journals from the 1980s and 1990s , and selecting review publications and teaching materials. This analysis concluded that women's creative work was only marginally present in these materials, highlighting a double marginalisation of women in architecture: first through career barriers and later through neglect in the canonisation process.

3. METHODOLOGICAL APPROACHES

3.1. MERLI'S BIOGRAPHICAL AND DECOLONIAL ANALYSIS

By focusing on individual biographies, Merli aimed to bring visibility to female architects' achievements and challenge the male-dominated narrative. Her decolonial approach challenged colonial power dynamics represented by canonical male-centred narratives and brought protagonists to marginalised contributions of women architects, emphasising the context-specific knowledge produced by them[10].

The work of Argentine architect Marina Waisman[11] served as the main theoretical reference. Although the research objectives and hypotheses were understood as being within the "qualitative field," Waisman's support was combined with Vieytes' (2004) methodology, which employed quantitative instruments and techniques applied to social sciences research. The first quantitative phase of the research followed Vieytes' methodology, starting from a defined population and narrowing down the variables of interest until reaching a precise population aligned with the research objectives. The population included architects who graduated in Brazil between 1930 and 1960. Merli first identified the architecture schools[12] of this period and searched their archives for lists of graduates. The research identified 2,431 professionals who graduated in architecture in Brazil during the study period, including 182 women. This included practical, theoretical, and/or teaching professional performance, evidenced by magazine and newspaper articles, as well as publications in conferences, and school records.

3.2. CZECH SCENARIO: CONTEXTUAL AND INTERDISCIPLINARY APPROACH

After outlining the hypothesis of double discrimination, the Czech research team sought to include women architects and create a framework for changing the narrative. The theoretical basis of the Czech research drew from scholars like Kingsley (1988), Willis (1998), and Ahrentzen (1996). All three authors described very accurately the problems of conventional canonisation principles and, on the basis of this critique, also outlined a possible path to a more

10. Gabriela Bard Wigdor and Gabriela Artazo, "Pensamiento feminista Latinoamericano: reflexiones sobre la colonialidad del saber/poder y la sexualidad," *Cultura y Representaciones Sociales* 11, no. 22 (2017): 193–219.
Ochy Curiel, "Construyendo metodologías feministas desde el feminismo decolonial," in *Otras formas de (re)conocer. Reflexiones herramientas y aplicaciones desde la inves-tigación feminista* (2015), 45–60.
Yuderkys Espinosa-Miñoso, "Feminismos descoloniales de Abya Yala", in *Le Dictionnaire desfemmes créatrices* (Paris: Des Femmes, 2013).

11. Marina Waisman, *El interior de la historia. Historiografía arquitectónica para el uso de Latinoamerica* (Concepción: Editorial Universidad de Concepción, 2013).

12. School of Architecture of the Federal University of Rio Grande do Sul (FAU-UFRGS), the School of Architecture and Urban Planning of the Federal University of Rio de Janeiro (FAU-UFRJ) and School of Architecture of the Federal University of Minas Gerais (EAUFMG), Faculty of Architecture and Urban Planning of the University of São Paulo (FAU-USP), Faculty of Architecture of the School of Fine Arts of São Paulo, Faculty of Architecture from the Mackenzie Presbyterian University, Faculty of Architecture and Urban Planning of the Federal University of Bahia (FAU-UFBA) and the Department of Architecture and Urban Planning of the Federal University of Pernambuco.

inclusive history of architecture. In principle, they recommend taking into account the context and the processual and collective nature of architectural production and focusing on a broader variety of tasks that architecture brings. They also critiqued traditional historiographical methods that isolated designers, overlooked collaborative efforts, and ignored key social aspects of architectural practice, such as clients, users, as well as economic and power relations. An important theoretical basis for the project was also the texts by Rostislav Švácha, Czech architectural historian, who encourages a rethinking of what is considered architecture and urges to move beyond the conventional interpretation "[...] that only finished constructions can count as architecture". According to Švácha, architecture accounts for much more: the circumstances, thoughts, sketches, even the reception among the general public, criticism, reviews, theoretical interpretations etc.[13]

Based on these theoretical foundations, the "Women in Architecture" project created an online research database with detailed biographies and inventories of works by women in architecture.[14] The database includes not only creative architects but also preservationists, critics, activists, curators, and other "helping professions." This effort aimed to expand the field's scope. To reflect the processes of architectural work, the database also features interviews with female architects, highlighting their perspectives and experiences.

Despite being aware of feminist critiques of the biographical method, the project team followed examples of comparable foreign projects to highlight female figures effectively. By including diverse professional paths, it aims to broaden the architectural field and emphasise shared female experiences. This basic reference material supported further interdisciplinary analyses illuminating the socio-political context of Czech women architects and the canon's creation.

4. FINDINGS AND DISCUSSION

Both the Brazilian and Czech cases highlighted the systematic exclusion of women from the architectural canon and their significant yet under-recognised contributions. Women in both contexts faced cultural and institutional barriers but made substantial contributions to the field through various roles, including research, conservation, criticism, and community projects. While both projects aimed to revise the architectural canon, their methodological approaches differed. Merli's (2023) research focused on biographical narratives and decolonial perspectives, bringing individual achievements to light and challenging Eurocentric biases. In contrast, the Czech team adopted a broader contextual approach, integrating interdisciplinary insights to understand the collective nature of architectural production and the socio-political conditions affecting women's work.

4.1. BRAZIL: OVERCOMING CULTURAL AND SOCIETAL BARRIERS

In Brazil, female architects navigated significant cultural and societal barriers to gain recognition, often working collaboratively to shape Brazilian modern architecture. Merli's (2023) research highlighted how these women

13. Rostislav Švácha, "Architectural Media in Women's Hands," in *Profession: [Woman] Architect* (Prague: Kruh, 2003), 130.

14. *Women in Architecture. Architecture and Emancipation in the Czech Republic after 1945*, https://zenyvarchitekture.cz/homepage-en/ .

integrated modern techniques and local traditions, contributing to the national and international relevance of Brazilian modern architecture.

Merli (2023) identified key figures who were active participants in developing and disseminating Brazilian modern architecture. For example, Schwab's 1967 Catetinho effectively addressed climatic issues of sunlight and ventilation and Maia Nobre's 1957 Park Hotel in Maceió showcased innovative construction techniques combined with traditional Brazilian design elements such as patios and terraces.

In Brazil, women contributed significantly to education and institutional strengthening. Nobre played a pivotal role in creating the Faculty of Architecture at the Federal University of Alagoas, while Ribeiro was instrumental in forming the Brazilian Institute of Architects in the Rio Grande do Sul region (IAB-RS). Magnoli revitalised the landscaping area within the Faculty of Architecture and Urban Planning at the University of São Paulo, fostering teams and consolidating critical discussions on this topic. In the field of criticism, figures like Francisca Franco da Rocha published ideas on project functionality and quality. Ribeiro analysed architectural variables linked to social and economic realities, while Magnoli explored how human behaviour studies could influence urban design, engaging with contemporary architectural discourses.

Brazilian women architects also made significant advances in disseminating modern architecture both locally and internationally. Franco da Rocha and Osser promoted modern principles through national magazines, while Osser, as a correspondent for *L'architecture d'Aujourd'hui*, highlighted Brazilian modern architecture on an international stage.

4.2. CZECH REPUBLIC: ADDRESSING OBSTACLES AND EXCLUSIONARY PROCESSES

In the Czech Republic, the "Women in Architecture" project addressed both the obstacles that women had to overcome in their careers and the exclusionary canonisation processes that prevented them from entering the narrative of architectural history.

The research uncovered various barriers, such as the "second shift" and androcentric settings, which led to skepticism in entrusting women with larger contracts or leadership positions. Pierre Bourdieu's concept of the "masculine order" provided a theoretical framework for understanding these gender inequalities[15]. Interviews with Czech women architects illustrated these issues. For instance, one architect noted, "When my husband [also an architect] and I went to a construction site, it was 'Mr. Engineer, Mr. Architect,' with everything being addressed only to him". Another commented, "In our department, only men were given leadership roles. I didn't like the fact that I was being mentored and basically doing the same job."[16]

These barriers and stereotypes prevented women from obtaining prestigious and decision-making posts, thus excluding them from the conventional narrative of architectural history, which typically attributes authorship to only one leading creator. The research concluded that

15. Pierre Bourdieu, *Masculine Domination* (Stanford University Press, 2001).

16. Interviews with Czech women architects, conducted under "Women in Architecture" project. For the sociological interpretation see: Karina Hoření and Barbora Vacková, "Unfinished Emancipation" in *Women in Architecture. Critical Studies and Gender Analyses of the Czech Architectural Setting after 1945*, ed. Klára Brůhová and Helena Huber-Doudová (Prague: AAAD, 2024).

addressing these systemic issues requires transforming the narrative and dismantling the "masculine order" in society.

5. CONCLUSION

Reshaping the modern architecture narrative to recognise and acknowledge women's contributions is an ongoing endeavour gaining momentum worldwide. This article contributes by analysing two studies from Latin America and Europe, revealing common historiographical strategies that marginalise women's roles in modern architecture.

The Brazilian research, through a thorough review of university archives, identified key figures, highlighting their significant yet underrecognised contributions to Brazilian modern architecture. This approach challenges the male-dominated narrative by documenting the diverse roles women played in architectural practice.

In contrast, the Czech project used interviews and gender analysis of both archival and secondary materials to uncover systemic barriers and societal biases that limited women's visibility in the architectural canon. By documenting these obstacles, the research underscores the need for a more inclusive historiography that acknowledges collaborative and processual aspects of architectural work.

Ultimately, achieving a modern architectural narrative that integrates women's contributions seamlessly into the mainstream, rather than segregating them into special sections or journal issues, would signify substantial progress. These complementary strategies offer methodologies for future researchers, providing a broader understanding of modern architecture. By documenting diverse roles and systemic challenges, these studies contribute to laying the groundwork for more integrated and equitable histories of Modern Architecture worldwide. ■

BIOGRAPHY

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REMAPPING MODERN ARCHITECTURE: THREE MODERN BUILDINGS BY FEMALE ARCHITECTS IN MACEIÓ/AL

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ABSTRACT

The historiography of Modern Brazilian Architecture consecrated the works of male architects from Rio de Janeiro, São Paulo, Minas Gerais and Brasília, conforming to some well-known canonical narratives. Only a few female architects are recorded, as authors or collaborators, such as Lina Bo Bardi, Carmem Portinho, Lota de Macedo Soares, Rosa Kliass, Jô Vasconcelos, Janete Costa and Lygia Fernandes – the latter was recognised for her Maceió city project involving the design of the Dr João Paulo de Miranda Neto Residence (1955), mentioned in Henrique Mindlin's "Modern Architecture in Brazil" book (1956). This reference prompted recent research on Maceió's modern architectural history involving women architects. Although Lygia Fernandes is recognised as a pioneer, Zélia Maia Nobre was the most active of the city's professionals, and rediscovering the works of these two women was the driving force behind the archival research on the Licensing Department of Maceió City Hall. Two parameters defined the spatial and temporal cut-off of the research: the historical value and the importance of the remaining modern examples of the downtown Maceió area, in need of recognition and safeguarding. The archival research prioritised the 1950s to 1970s period, which is considered the most significant moment of modern architecture production in Maceió. This article has identified three modern architectural works in Maceió that stand out for their modern plastic expression appropriate to the city's social and geographical context, designed by pioneering female architects: the Sociedade de Medicina by Lygia Fernandes (1956), IPASEAL by Zélia Maia Nobre (1969) and SENAC by Simone Mendes Normande (1975). These structures are notable for their modern plastic expression, fitting for Maceió's reality.

1. INTRODUCTION

Historical consciousness implies awareness of change.[1] Historical research in architecture and urbanism has been marked by strong questioning of the canonicity of works, the need to decolonise Modern Architecture's Eurocentric and misogynistic history and the opening up of the field to previously marginal studies such as women's roles in architecture and urbanism theory and practice.

Researching and writing about the history of lesser-known places and subjects showcases the dual consciousness of the "perennial present": the idea that general concepts are reflected in specific cases, and specific cases are reflected in general concepts. These dual consciousnesses, as defined by Heller, are present and intertwined with the aims of this research, as they seek to collaborate with the construction of a history that is yet to be recognised and told. Reflected generality involves challenging the established norms through other interpretations and arguments. The aim here is not to dismiss or invalidate them but to expand, complement and rewrite them by the insertion through introducing unrecognised specificities. The reflected particularity comes from an aspect of our past that stands out as a cultural influence, capable of altering the generality. "It is through particularity that generality is constituted, not the other way around".[2]

This research is not meant to question the canons, but it does recognise their insufficiency. The particularity reflected in the generality, as a path to revise such incompleteness, is introduced in this research by the revealing and studying of architectural works produced by women, in this case, situated in the city of Maceió/Alagoas, in the Northeast region of Brazil. The focus is on gender and locality, effacing their marginal position that stemmed from patriarchal and peripheral displacement categories.

Lygia Fernandes designed Dr João Paulo de Miranda Neto Residence (1955), which was mentioned in Henrique Mindlin's *Modern Architecture in Brazil* (1956), and is the only work from Maceió to be mentioned in his book. In a way, that could be considered paradoxical: a woman occupying a marginal place (in both senses) in modern historiography – at least for a brief instance, as no other mention of her work in the city's repertoire is further mentioned in other canonical books.

Zélia Maia Nobre, a practising architect and professor, played a significant role in creating the Architecture and Urbanism faculty in 1974. Her work was instrumental in the development of Maceió's modern architecture.[3] Lima, quoting Hughes (1996), states that, for women, "the marginal, or even external, position (...) provides a better situation to cast a critical eye [and] propose a new vision, (...) to the changes taking place in our time".[4] This was indeed a relatively positive change in the 1950s and 1970s decades when society was still predominantly patriarchal and the role of women, when visible, was typically associated with a male figure.

The decades of the 1950s-1970s saw the peak of modern architecture production in Maceió.[5] To identify the women who were involved in architectural projects, a documentary investigation was carried out in the Maceió City Hall archives, focusing on the city's downtown area due

1. Agnes Heller. *A Theory of History* (Rio de Janeiro: Civilização Brasileira, 1993).

2. Agnes Heller. *A Theory of History* (Rio de Janeiro: Civilização Brasileira, 1993), 32.

3. Maria Angelica da Silva. *Modern Architecture The attitude of Alagoas*. Maceió: SERGASA, 1991; Letícia Brayner Ramalho. *The residential architecture of Zélia Maia Nobre: a trajectory in Alagoas*. PhD thesis. PPGAU, UFAL, 2023.

4. Ana Gabriela Godinho Lima. *Female Architects and Architectures in 20th Century Latin America* (Rio de Janeiro: Altamira, 2013), 24.

5. Ítalo Monteiro de Oliveira Ramalho. *Expanding the Historiographical Framework of Modern Architecture: An Examination of Archives from 1940 to 1980, Focusing on High-rise Buildings in Downtown Maceió/AL*. Master's thesis, PACPS, UFMG, 2023.

to its historical significance. Five women architects were found: Lygia Fernandes, Zélia Maia Nobre, Leila Pedrosa, Simone Mendes Normande and Edy Marreta, contributing a combined total of 14 projects. Although all these works were built, not all of them still exist and some that remain have been heavily altered. These numbers alone are insufficient to qualitatively recognise these women's works. This article will present a brief overview on three quality examples: the Sociedade de Medicina by Lygia Fernandes (1956), the IPASEAL by Zélia Maia Nobre (1969) and the SENAC by Simone Mendes Normande (1975).

The selected characterises what Veyne considers "non-factual" events, facts from a local history that have not yet been consecrated or were invisible to previous histories.[6] By exposing and interpreting an architectural fact, one starts to reveal what was an unrecognised history. That alone is not sufficient to reach completion but may, at least, subsidise episodic ignorance, as put by Waisman: "The short duration, the episodic history (...) could be compared to the duration of works and projects".[7]

The documentary investigation at the municipal archives helped create objective criteria that defined the selection of the three works.

These are: a) the printed project documentation should be well preserved so as to allow for the drawings' reading; b) the building's current existence, albeit with transformations; c) the non-repetition of authorship and the typology. These criteria align with Waisman's proposition of considering the dual character of a conjuncture reading, as it should consider the historical object – the original project documentation, which presents "the capacity to engender ideas, currents and trends"[8] – and the present object, which considers the work's duration and today's permanence.

In our field, there has been an increasing focus on studying the works of women architects as part of the growing historical awareness of modern heritage in Maceió, thanks to recent academic research. Women's recognition is frequently downplayed by statements on their practices as being "allowed" or "supported" by men, whether colleagues or family members. However, this controversy is not the focus of this article. The modern expressiveness of the works under analysis will only consider the project and its current existence, to assess whether their transformations respect their original characteristics or not. Modern architecture quality and its preservation should be considered from the work's attributes – not from genre or authorship.

2. THREE WORKS BY FEMALE ARCHITECTS IN MACEIÓ

The analysis is based on careful observation of the design projects, and examination of their attributes, to identify the relationships among their formal, functional, structural, locational, environmental and technical elements. The aim is to recognise and demonstrate their modern architecture expressiveness, while also considering possible associations with other historical exemples. Their modern attributes can be understood through their drawings allowing the visualisation of a variety of aspects, such as shapes, contours, lines, compositional elements and their relationships. Additionally,

6. Paul Veyne. *How to Write History and How Foucault Revolutionizes History* (Brasília: Editora UnB, 1998).

7. Marina Waisman. *The Interior of History* (São Paulo: Perspectiva, 2013), 71.

8. Marina Waisman. *The Interior of History* (São Paulo: Perspectiva, 2013), 72.

9. Carlos Alberto Maciel. Architecture as infrastructure. Thesis (Doctorate), NPGAU, UFMG, 2015, 79.

this process helps in understanding the functions and activities attributed to the spaces by the represented elements and symbols in the drawings.

2.1. MEDICAL SOCIETY BUILDING

The building shows a simple modern design, consisting of two rectangular/perpendicular prisms situated according to the configuration of the plot and the planned activities. The main access is signalled by a marquee on the smaller east façade prism. The original drawings of the licensed project show clear signs of some unexecuted works, as the façade was to receive a second "cobogó" perforated wall along the entire length of the upper floor. Instead, only a continuous glass curtain wall was built (**Fig. 1**).

The open pilotis columns on the lower floor create a rhythmic pattern on the building's exteriors and support the prism's free span, in addition to bringing a modern character to the pedestrian scale. The structural solution, the proposed activities, and their locations on the floor plans are functionally and qualitatively related to the spatiality of the exterior/interior relationship, balancing the necessities of attending to sociability and providing clinical care.

The entrance is marked by a striking marquee that elegantly protects the arrival with a solid trapezoidal slab and flagpoles. From there, visitors are then introduced to the double-height hall. The curved staircase on the right leads to the auditorium and library on the upper floor, adding a touch of grandeur to the ambience. The sloping floor of the auditorium requires a small external staircase on the mezzanine level, and the library has an external terrace that overlooks the open area, though the open area no longer exists.

The open floor plan on the first floor allows the social lounge to connect to the kitchen at the back, which is next to the outside bar along the north side of the building. On both sides, the lounge is opened to the exterior by large window frames with banners that allow for physical and visual permeability.

The building's structure, featuring double waffle slabs and grid-spaced pillars, allows for the open spaces in the auditorium and the social hall, while also preventing noise interference between adjoining rooms. The auditorium's ceiling slopes parallel to the floor in four parts aligned with the window frames, providing an elegant ceiling light. The round pillars on the first floor stand out from the fencing on the upper floor, puncturing the masonry while maintaining a consistent rhythm on the façades. The ground floor of the building is clad in stone on the south side, while the east front features characteristic ceramic or glass tiles from that period.

The building exists today, but it has been abandoned and remains unoccupied. Its original volume and modern expression, the round pillars detached from the masonry, the marquee and the simple internal staircase are preserved. The auditorium's spatiality is maintained, but not the original window frames. The library terrace has been lost. The spatiality of the lounge has had its visual permeability interrupted and its space subdivided. The outside bar no longer exists, and neither do the coverings. Its 1950s work's aura is now limited to its formal volume, but the modern values of its historical pre-existence are still preserved.

2.2. IPASEAL HEALTH HEADQUARTERS

The IPASEL is a vertical building with a tripartite volumetric division. The base has a raised first floor over a semi-sunken floor, the body has six standard floors and a roof. The volume follows the plot's trapezoidal shape, with the rear façade set back from its boundary, giving the building three distinct façades and a median façade. In a predominantly horizontal environment, the building's verticality is unmistakable, marking its presence and modern expression (**Fig. 2**).

On the ground floor, one access staircase leads to the bank branch on the left and the other leads to the building entrance. Three double-height rectangular structural columns, detached from the sidewalk alignment, emphasise the building's verticality. A ramp leads to the garage on the semi-sunken floor. On the second floor, a curved balcony railing wraps around the front and north side façades, subtly revealing the plasticity of the concrete, but horizontally marking the front façade, announcing the continuous plane of the vertical body.

The original project featured a vertical plane of the building body with a brise-soleil lattice protecting the west façade. The way it is incorporated into the internal division of each floor varies. From the second to the fifth floors, the boundaries of the rooms are set back from the lattice, providing a free space for circulation and ventilation with solar protection. On the sixth and seventh floors, the glass enclosure of the rooms is recessed, but entirely. This differentiation is due to the internal spatial arrangement of each floor as each floor has a different layout.

The rear vertical plane is marked by the structural grid of columns and slabs, sealed with glass frames, with an opaque vertical strip for the sanitary facilities in the centre. The south and north façades are opaque. In the original project, the brise-soleil lattice surrounded the building, not for functional purposes, but to create a plastic unity of modern expression, which is now absent.

The rationalisation of building installations and vertical circulation, located on the central transversal axis of the trapezoid, led to the structural column grid with varying modularity. On the left, there are four rows with four columns, while on the right, there are four rows with three pillars. The structure allows for some flexibility in the spatial partition distribution on each floor. On the seventh-floor right auditorium, the central pillars are removed, and the internal space is defined by concave and convex planes in the walls and ceiling to improve acoustic management. The IPASEAL roof deck is clearly defined as a garden terrace.

The building has undergone extensive and poorly-executed renovations. The original brise-soleil has been replaced with glass frames akin to those used on the original rear façade, losing its climate adaptability. However, the building still retains its overall unity. On the roof, new additions have been inserted and neither the bar nor the gardens exist. While the plastic expressiveness of the brise-soleil lattice was effaced, the expressiveness of the base remains and retains its modern authenticity, through its verticality and dialogue with the urban space.

2.3. SENAC VOCATIONAL TRAINING CENTRE

The Senac has a single floor, and its modern character can be appreciated through its pure geometry, as well as in the plastic and compositional expression of the elements that make up the form and in the structural modulation. The building houses administration offices, educational facilities and an auditorium. The horizontality is unmistakable, marked by the roof made of corrugated fibre cement tiles, with gutters and floor trapezoidal bases designed to channel the rainwater flow via a vertical duct, that does not touch the base. The elongated design of the wooden frames, separated by vertical brises, stands out at the main entrance, bringing together square doors and frames. All these elements depict the modern austerity of the building (**Fig. 3**).

The structural pillars that define the grid transversely align with the compositional elements – beam rail, tube and trapezoidal base. Planned spaces, such as the living rooms, keep the structure's modularity or are split in half for the wet areas.

This approach breaks up the rigidity and composes a new rhythm in the external configuration and internal layout, situating the educational and administrative spaces next to the courtyards and establishing the auditorium place. The compositional regularity in two rhythms is maintained on the west façade but altered on the east façade, internal to the plot, to better capture the rainwater.

The design makes excellent use of the flexibility in the configuration of the spaces around the small central courtyard with a garden. It differentiates between masonry at the ends and wet areas and partitions on the inside, which makes the building more visually appealing. The educational building also boasts an external garden, while the auditorium intersects the perpendicular single volume between the playroom and the classrooms, maintaining a cohesive design through the use of these same compositional elements.

The building has undergone significant modifications. The corrugated tiles have been replaced by a gable roof with clay tiles. The trapezoidal rails that delimit the modules have been kept. The entire façade facing Av. Assis Chateaubriand was irreversibly changed. However, the auditorium remains. Faced with this loss of its modern attributes, it must be acknowledged that ill-informed contemporaneity did not value the expressive plastic unity of the work, opting instead for a non-descript façade.

3. FINAL REMARKS

The three works presented helped bring modern expression to Maceió in their own unique ways and at their own pace. From simple geometric prisms to the verticality reinforced by the brises-soleil lattices, and to the expressiveness of the concrete in natura. These three female architects persisted and did not give up their professional careers. The works show a modernity that transcends gender distinctions. The modern significance lies in the modulation that allowed internal flexibility through the "open structural system, independent of functional and aesthetic articulation".[9]

The awareness of this system as a modern attribute demonstrates how the three women experienced modernity differently, even though they were





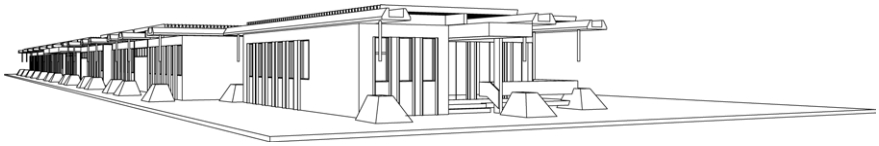


Figure 1: Lygia Fernandes, Medical Society Building, Maceió/AL, Brazil, 1955. © Credits: 3D Modelling, created by the authors.

Figure 2: Zélia Maia Nobre, IPASEAL Health Headquarters, Maceió/AL, Brazil, 1969. © Credits: 3D Modelling, created by the authors.

Figure 3: Simone Mendes Normande, SENAC Vocational Training Centre, Maceió/AL, Brazil, 1969. © Credits: 3D Modelling, created by the authors.

contemporaries. There is a typological difference, but there is also a strong modern stance not previously known. The original projects raise the hypothesis that Lygia and Zélia may have been aware of the possibility of alterations during execution. The absence of the cobogó or the brise-soleil does not detract from the modern purpose, but simply changes its characteristics. Simone carried out the original project and the changes came later.

These works were designed by three women, who undoubtedly shared an erudite knowledge of their architectural and cultural epoch, celebrated in the canonical historiography. The lazy discourse would be to say that Ligia would not have achieved recognition without the acknowledgement of Mindlin's book, or that Zélia and Simone would not have carried out their work without the support of their husbands, an engineer and an architect respectively. However, the better way to dismiss misogyny is to examine the buildings themselves. These are distinctly delicate, subtle and austere works, exemplifying modern expressiveness through their specific attributes. They particularly capture an appropriate quality that resonates with tropical Maceió's reality. It is a shame that we have yet to fully recognise their value as local modern architecture masterpieces. ■

BIOGRAPHY

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THE ARCHIVAL IS POLITICAL

FABIOLA SOLARI IRRIBARRA
PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE

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ABSTRACT

The examination of private collections and oral histories as new documentary sources sheds new light on the work of the first generations of women architects in Chile (1930-1949). These sources reveal various types of practice among pioneering women. Firstly, there were those who balanced roles within public institutions while pursuing private practices. Secondly, there were women who developed creative design work within public institutions. And thirdly, there were those who operated private practices while collaborating with other women.

The research draws upon private collections to later cross-references these with municipal archives and other secondary sources to corroborate findings. This approach critically evaluates the interplay between women's archives and research practices. Ultimately, it seeks to enhance our understanding of early women's contributions to modern architecture in Chile.

1. INTRODUCTION

Who were the women architects of the past and what did they do? These simple questions become all the more challenging when undertaking research on the first generations of women architects in Chile, especially on those who graduated before 1950. Their limited presence, not only in architectural history books but also in public archives, makes it difficult to find information about their progressive incorporation into the professional field.

Joan W. Scott stresses how the limited availability of documents relating to women has been problematic, as "archives provide the stuff of memory, the raw materials out of which collective identity and a place in history are fashioned"[1]. In response to this, special women collections and archives have been established in Western Europe and the United States since the 1900s[2]. However, similar efforts in Chile have only begun to emerge in recent decades[3], and there are no collections specifically dedicated to women architects.

In consequence, unconventional research sources, such as private family collections and oral histories, become meaningful in characterising the paths of pioneer women architects. As experienced by the authors and in accordance with Michelle Perrot's ideas: due to the historical place women have occupied in society, it is more likely to find their traces in private archives than in public records[4].

Recent studies have noted that in Chile at least 29 of the 46 women architects who finished their studies alongside 542 men between 1930 and 1949 worked in public institutions. Within those spaces, emphasis has been placed on the fact that they mainly carried out administrative tasks that differentiated their work from traditional design practices[5]. However, oral histories and first-hand historical documentation from private collections suggest that this understanding of the pioneering practices of women could be further expanded upon.

For the purpose of this research, the methodology implied uncovering private sources of information about the architects who completed their studies between 1930 and 1949[6], which was divided into two phases. The first stage involved tracing family lineages through genealogy websites (FamilySearch, Geni) and the National Civil Registry of Chile, and then reaching out to descendants and gathering information via email and interviews. The second phase required cross-referencing the "unofficial" information —such as addresses of buildings and authorships— with other sources. This involved data collection from municipal archives, Aguas Andinas[7], books and articles.

It is worth noting that the findings of this article are restricted by the responses gathered within the timeframe of the research and the possibility of cross-verification, which was limited to a fraction of the women architects of the period. Even though the findings cannot be extrapolated to the experience of others, they reflect the nuances that emerge when alternative private sources are consulted, as a way of compensating for the scarcity of evidence available in the public ones.

1. Joan Scott, "Women's Archives and Women's History. Comments on the Dedication of the Christine Dunlap Farnham Archives, October 10, 1986" (The Pembroke Centre for Teaching and Research on Women, Brown University, n.d.), 1.

2. Scott, "Women's Archives and Women's History. Comments on the Dedication of the Christine Dunlap Farnham Archives, October 10, 1986" 1.

3. The 'Women and Genders Archive' by the 'National Archive' of Chile started in 2011. https://www.archivonacional.gob.cl/archivos-mujeres-y-generos

4. Michelle Perrot, "Fuentes: mujeres en los archivos," in *Mi historia de las mujeres* (México: Fondo de Cultura Económica, 2008), 32–39.

5. Amarí Peliowski, Thiare León, and Valentina Saavedra, "Arquitectura y Cuidados: Función Pública e Identidad Asistencial En La Primera Generación de Arquitectas Chilenas," *ARQ*, no. 109 (December 2021): 26–37, https://doi.org/10.4067/S0717-69962021000300026.

6. The period selected for this study (1930-1949) aligns with what Peliowski et al. nominate as the 'first generation', as they identify a change in the professional participation of women graduated since 1950.

7. Aguas Andinas is the main sanitary company in Chile and holds a historical technical archive of sanitary projects in Santiago.

2. THE PRIVATE AND THE PUBLIC

The first main finding from a hybrid sourced approximation is that many of the pioneer women architects undertook private practice in parallel to their known work in public institutions. It was the case of Mariana Valverde Goñi (1936 UC[8]), Ester Durán Buendía (1936 UCh), Graciela Espinosa Moder (1937 UC), Graciela Marcos Mora (1941 UC), Esmeralda Rojas Cellier (1944 UC) and Violeta del Campo Moya (1944 UC).

Mariana Valverde, Ester Durán, Graciela Espinosa and Violeta del Campo used to work at the Municipality of Santiago[9] while engaged in private practices. Valverde developed a three-story building in Cousin 0364, Providencia built in 1952[10]. Durán won the competition for the new Spanish Club in 1946 with Raúl Delfau[11], Espinosa designed a church at Las Cruces, El Tabo in 1951[12]; and Violeta del Campo designed her own two-storey house[13] and remodelled a one-storey house in Arauco Street 535 (1950)[14].

The information provided by the descendants of Graciela Marcos and Esmeralda Rojas, in particular, has unveiled the diverse nature of their respective career paths. For instance, Esmeralda Rojas Cellier designed residential and industrial projects prior to and while working at the National Railway company (FFCC) and at the Housing Corporation (CORVI). Her work in private practice includes various houses and the factory for the Comandari family in San Joaquín, Santiago, 1950[15].

Similarly, Graciela Marcos had a very prolific practice prior to and alongside her work in the Caja de Empleados Particulares [National Fund for Private Workers] in Santiago. She designed the family house for her parents, where she used to live with her brother and sisters in Ricardo Lyon (**Fig. 1**)[16]. She got married in 1937 and moved to Cauquenes with her husband, the engineer Gastón Fermandois, and their three children after the Chillán earthquake of 1939, where they collaborated on various architectural works. The family grew in Cauquenes, and they returned with four children to Santiago in 1944[17].

Graciela worked for several decades at the Caja de Empleados Particulares[18]. Concurrently, she managed a private practice alongside her responsibilities of caring for her mother and raising her five children. She developed mostly residential projects which included alterations to their family home in Lota Street to earn an income from renting the ground floor and to accommodate an independent area for her mother[19]. Between 1964 and 1972, she subdivided land in Latadia[20] to design residential projects[21] and two "L"-shaped two storey houses in Padre Rafael Román[22] (**Fig. 2**).

Many of the works described previously were found via interviews with families, who kindly supplied information regarding the locations of the architects' projects. Even though the plans were held by public institutions, the testimonies from their families allowed for their discovery by providing either addresses or client details, as it is not possible to search for projects using the architect's name in municipal archives.

8. The date each architect's professional degree was granted and their university are indicated in parentheses: Universidad de Chile (UCh) and Universidad Católica (UC).

9. "La Mujer En La Arquitectura," *Eva* 589 (1956): 30.

10. Municipalidad de Santiago, Departamento de Obras, Sección Permisos, "Certificado de Recepción Definitiva Calle Cousin N°0364," January 7, 1952, Municipalidad de Providencia, Santiago, Chile.

11. "Concurso Estadio Español," *Boletín Del Colegio de Arquitectos de Chile* 10 (1946): 158–60.

12. Dirección de Arquitectura Ministerio de Obras Públicas Departamento de Patrimonio y Dirección de Arquitectura Región de Valparaíso, "Parroquia de Fátima," in *Inventario Nacional de Patrimonio Inmueble de Chile, Región de Valparaíso*, vol. 11, 13 vols., 2022, 352–53.

13. Municipalidad de Ñuñoa, Dirección de Obras Municipales, "Permiso de Edificación N°18864 Avenida Italia 1561," 1947, Municipalidad de Santiago, Santiago, Chile.

14. Municipalidad de Santiago, Departamento de Obras, Sección Permisos, "Revalidación Del Permiso N°1744 14 Mayo de 1946 Stgo Concha Esquina Arauco," February 13, 1950, Municipalidad de Santiago, Santiago, Chile.

15. Fabiola Solari, "Esmeralda Rojas Cellier," in *Entre Líneas. Relecturas de La Historia a Través de Las Arquitectas En Chile*, ed. Manola Ogalde et al. (Santiago: Ediciones UC, 2023), 66–71.

16. Carmen Luz Fermandois, interview by Fabiola Solari, April 25, 2024.

17. Fermandois, interview.

18. Felicitas Klimpel Alvarado, "Mujeres Arquitectos," in *La mujer chilena: (el aporte femenino al*

3. DESIGN WORK WITHIN PUBLIC INSTITUTIONS

The second key finding from cross-referencing diverse sources is that the work of these pioneering architects in public institutions was not only administrative, but also involved architectural design. Design work was not unfamiliar to public institutions as they held departments dedicated to the creation of affordable housing and infrastructure.

Two examples of this practice are the Conjunto San Pablo by María Rojas González (1943 UC) and the expansion of the Cerrillos Airport in 1957 by Iris Valenzuela (1949 UCh). Conjunto San Pablo was designed by María Rojas as part of the National Fund for Public Workers and Journalists (EEPP y P) as indicated in the Bulletin of Institute of Architects of Chile in 1945[23]. The two "U" shaped four-storey buildings still exist and in their original design comprised 16 commercial stores at the ground floor level (8 for each building) and 12 apartments per block on the first, second and third levels. The inscriptions on the buildings read "Propiedad de la Caja Nacional de Empleados Públicos y Periodistas" [Property of the National Fund for Public Workers and Journalists]. However, the Building Permit application[24] indicates Manuel Valenzuela Garrido —chief of the Architecture department— as the author of the plans, budget and specification and his signature is found on the plans alongside those of María Rojas González and Héctor Silva Baetzer. Hence, if it were not for the bulletin's publication and her washed-out signature in the original architectural plans, María Rojas' participation as an architect would be lost behind the authorship of the institution.

In the same way, the authorship of Iris Valenzuela was indicated in a footnote of a publication by Eliash & Moreno in 1989 as part of the Ministry of Public Works[25] and has since been cited by others. Revisiting the project's original public documentation seems necessary, which might help understand the nuances of Valenzuela's specific implication in the design process.

Pairing designers and works within public institutions is quite rare because the authorship of this type of work often lies under the institution's name. Nevertheless, more findings in this area might come from analysing private collections and interviews.

4. COLLABORATIONS

The third main finding of mixed-source research is that pioneer women architects collaborated with one another in the professional field. When descendants of the women architects were asked if their ancestors worked with others, the names of other women were often mentioned, mostly of the few who studied at the same time as the other women in question.

For instance, in oral interviews, Aída Rivera Méndez (1937 UC) was mentioned by the niece of Esmeralda Rojas[26]; Marta Martínez (1941 UC), María Sougarret (1939 UCh) and María Rojas by the daughters of Graciela Marcos[27]; and Graciela Marcos by the son of María Lasserre (1939 UC)[28]. Some of the names were later found in other documents; for example, the association of Esmeralda Rojas and Aída Rivera was found in the plans and documents for a house in Nancy 704, Ñuñoa for Juan Montenegro in

progreso de Chile) 1910-1960 (Santiago, Chile: Ed. Andrés Bello, 1962), 172–73.

19. Fermandois, interview.

20. See Subdivision plan, lot n°2 San Juan de Dios, property of Sra. Graciela Marcos de Fermandois, Municipalidad de Las Condes, 1965.

21. Municipalidad de Las Condes, Dirección de Obras, "Permiso de Edificación N°992/64 Latadia N°4305," 1964, Municipalidad de Las Condes, Santiago, Chile.

22. Municipalidad de Las Condes, Dirección de Obras, "Permiso de Edificación N°58 Padre Rafael Román N°4444," 1969, Municipalidad de Vitacura, Santiago, Chile; Municipalidad de Las Condes, Dirección de Obras, "Permiso de Edificación N°1062 Padre Rafael Román N°4428," 1970, Municipalidad de Vitacura, Santiago, Chile.

23. "Colectivo San Pablo," *Boletín Del Colegio de Arquitectos de Chile* 8 (December 1945): 6, 8–9, 155–59.

24. Municipalidad de Santiago, Dirección de Obras Municipales, "Solicitud de Edificación Nueva San Pablo Esquina Nororiente Con Maturana," 1944, Municipalidad de Santiago, Santiago, Chile.

25. Humberto Eliash and Manuel Moreno, *Arquitectura y modernidad en Chile / 1925-1965: una realidad múltiple* (Santiago, Chile: Universidad Católica de Chile, 1989), 132.

26. Meilin Gim Krumm, Minghai Gim Krumm, and Silvia Araya Rojas, interview by Fabiola Solari, March 24, 2023.

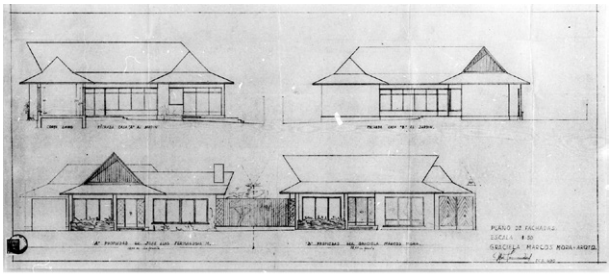
27. Fermandois, interview.

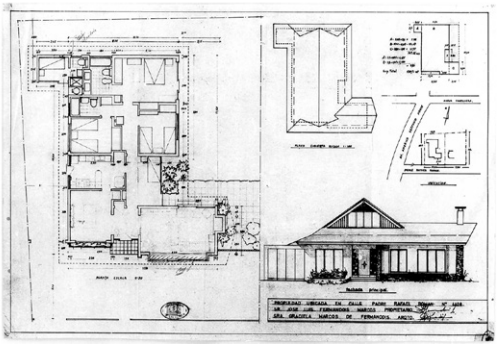
28. Jorge Simian Lasserre, Claudio Simian Lasserre, and Miguel Simian Lasserre, interview by Fabiola Solari, April 22, 2024.





Figure 1. Graciela Marcos Mora, House in Ricardo Lyon, Providencia, Santiago, Chile, n.d., Graciela Marcos Mora and her sisters on the balcony of the house she designed for her family. © Carmen Luz Fermandois Marcos.





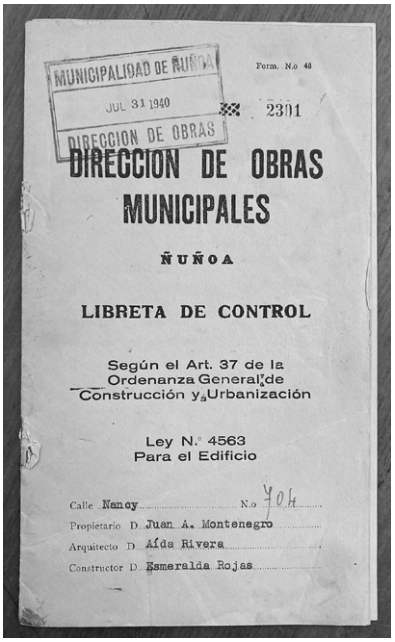


Figure 2. Graciela Marcos Mora, Plans for Houses in Padre Román no. 4444 and Padre Román no. 4428, Santiago, Chile, 1969-1971. © Municipalidad de Vitacura.

Figure 3. Inspection of works record. Aída Rivera Méndez (architect) and Esmeralda Rojas Cellier (builder), house in Nancy no. 704 for Juan Montenegro, Santiago, Chile, 1940. © Municipalidad de Ñuñoa.

1940[29], where the former is indicated as contractor and the latter as architect **(Fig. 3)**. Similarly, Graciela Marcos and María Lasserre won the competition directed by the renowned architect Juan Martínez Gutiérrez for the Spanish Home in 1939[30].

In addition, Esmeralda Rojas mentioned in a letter to her brother that she worked with Mariana Valverde in the same construction company before finishing their studies in 1933 for a man known as Salinas and carried out drawings for a girls' school for her classmate Aída Rivera[31]. Equally, María Elena Vergara Navarrete (1935, UC) collaborated with Violeta del Campo Moya in works related to the latter's house in 1937[32].

Other records have unveiled intertwined relationships among the architects. For instance, the book *Dedicatorias a Violeta del Campo M*.[33], which contains letters from Violeta's architecture classmates Graciela

Espinosa and María Vergara during their early years of study, offers valuable insights. Remarkably, this book was found among the possessions of Esmeralda Rojas's family.

The previous findings add depth to our understanding of the collaborative networks and friendships within the early cohorts of women architects. Although limited by the sources found to date, these insights indicate the support networks forged among these women helped them navigate their professional paths, in a field then dominated by male practitioners.

5. THE ARCHIVAL

Family archives and oral histories provide insights into the work of the first generations of women architects in Chile. These alternative sources suggest that it might have been common for women architects to maintain a creative private practice alongside their work in public institutions. Moreover, they show that their work within public institutions was, in fact, heterogeneous and comprised design work and construction management in some cases.

Exploring this intimate sphere brings a new, and often neglected dimension of their careers: the balance between domestic life, private practice, and institutional work. These collections provide information on professional paths that had to coexist with the demands of family and were, in most cases, multifaceted, with both stable and unstable jobs running simultaneously and characterised by female collaboration networks. Understanding these aspects of their careers deviates from the notion of the "heroic figure" of modern architecture discussed by Colomina[34] and delves into the subtleties of private life.

Nevertheless, a series of issues arise from these observations. What would happen if the women did not keep personal records? What would happen if their families did not preserve them? And what if they did not have descendants to do so?

Ultimately, the findings of this research stress that the archival is "political"[35]. This is because breaking down both the physical and theoretical barrier between the private and the public spheres constitutes a form of political action, given the intricate connection between history and archives. This assertion echoes the sentiment articulated by the French historian Fustel de Coulange: "No documents. No history"[36]. ■

29. Municipalidad de Ñuñoa, Dirección de Obras Municipales, "Permiso de Edificación N°9727 Nancy N°," 1940, Municipalidad de Ñuñoa, Santiago, Chile.

30. Juan Antonio García-Cuerdas, *El Hogar Español de Santiago de Chile: Cien Años de Historia (1916-2016)*, Hogar Español (Santiago, Chile, 2017).

31. Esmeralda Rojas Cellier to Carlos Rojas Cellier (Totó), May 22, 1933, Meilin Gim Krumm personal archive.

32. Fabiola Solari, "Violeta Del Campo Moya," in *Entre Líneas. Relecturas de La Historia a Través de Las Arquitectas En Chile*, ed. Manola Ogalde et al. (Santiago: Ediciones UC, 2023), 61.

33. Violeta del Campo Moya, ed., *Dedicatorias a Violeta Del Campo M*., 1991.

34. Beatriz Colomina, 'Collaborations: The Private Life of Modern Architecture', Journal of the Society of Architectural Historians 58, no. 3 (1999): 462–71, https://doi.org/10.2307/991540.

35. "Political" as defined in Carol Hanisch, "Introduction. The Personal Is Political," Writings by Carol Hanisch, 2006, https://www.carolhanisch.org/CHwritings/PIP.html.

36. Anke Voss-Hubbard, "'No Document—No History': Mary Ritter Beard and the Early History of Women's Archives," *The American Archivist* 58, no. 1 (1995): 20.

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URUGUAYAN FEMALE ARCHITECTS RESEARCH

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ABSTRACT

This paper summarises the research on the work carried out by female architects who graduated in Uruguay between the 1920s and 1950s. Our team, based at the History Institute of the School of Architecture, Design and Urbanism of the University of the Republic in Uruguay, conducted a study that analysed multiple archives, held interviews, and searched even in the most uncommon places, inquiring about a broad diversity of aspects of the life and work of these women. This presentation pursues two objectives. On the one hand, it aims to share some of the team's findings during the investigation: the production of high-quality modern architecture carried out by women individually or in teams, of various programmes and scales throughout the country. On the other hand, the discussion about the research itself gave way to the critical review of the path travelled both by the female architects and the research team and the existing challenges in the Uruguayan environment for the real and equal recognition of the contribution of female architects.

1. INTRODUCTION

The Uruguayan academic-architectural community was not immune to the processes by which research on the contribution of women in architecture has multiplied in recent years. The achievements of the Uruguayan architects who have been active in the country since 1923 —when the first woman architect, Julia Guarino[1], graduated— are only now being rediscovered. Their previously omitted works are beginning to be valued today. However, peer recognition is still far away.

In recent times, it has been necessary to review and investigate the contribution of women to various areas of modern society. In architecture, historiographic reviews with this perspective have shed light on some events in the history of architecture with errors and omissions recorded. Since the 1970s, the traditional history research model has received criticism. It was denounced, as explained by Bárbara Biglia and Núria Vergés Bosch, that "the androcentric and sexist nature of the research, the invisibility, and inattention to the experiences and interests of women, the devaluation of knowledge traditionally associated with the feminine, as well as the inequalities in gender that take place in the processes of knowledge production"[2] were indeed an issue.

Male bias in historiography is not confined to the history of architecture but permeates all disciplines. However, architecture was one of the branches that took longer to address this problem. The most renowned historians of the 20th century have omitted the role of female architects for various reasons. At times, people have wrongly assumed that there were no female professionals until the mid-century, while others ignored their contributions, guided by the biases in traditional historical research methods based on incomplete archive reviews[3]. Since records documenting female activity were disaggregated or difficult to access[4], professional women were often excluded from historical accounts. This also occurred in Uruguay.

2. RESEARCH METHODOLOGY AND EPISTEMOLOGICAL APPROACH

The project aimed to study the contribution and impact on architectural culture of female professionals in Uruguay between 1923, when the first female architect in Uruguay —Julia Guarino— graduated, and 1958, when professionals trained in the first architecture curriculum finished graduating. This chronological cut allowed for the delimitation of a group of 70 female architects. Although the graduation date defines the group of architects considered, the extent of their careers determines that works outside that period are included as objects of study as it enables a comprehensive understanding of them.

Within this framework, the main objective of the research was to identify the production and disciplinary activities carried out by these professionals and to critically analyse their works in relation to the context in which they belong. The main hypothesis of this work focused on demonstrating that there were indeed female architects in Uruguay who

1. Soledad Cebey, Laura Cesio, Daniela Fernández, Nadia Ostraujov, Tatiana Rimbaud & Elina Rodríguez. "A 100 años de Julia Guarino, primera arquitecta del Río de la Plata", *Cuadernos del Centro de Estudios en Diseño y Comunicación. Ensayos,* (175, 2022), 53-56.

2. Barbara Biglia y Núria Vergés-Bosch. "Cuestionando la perspectiva de género en la investigación", *REIRE: revista d'innovació i recerca en educació* (Vol 9, n.º 2, 2016), 12–29.

3. Among the authors that took on the subject: Meltem Ö. Gürel – Kathryn H. Anthony, "The Canon and the Void: Gender, Race, and Architectural History Texts", *Journal of Architectural Education* LIX, 2006, no. 3, 66-76; Julie Willis, "Invisible Contributions: The Problem of History and Women Architects", *Architectural Theory Review* III, 1998, no. 2, 57–68; Karen Kingsley, "Gender Issues in Teaching Architectural History", *Journal of Architectural Education* XLI, 1988, no. 2, 21–25; Florencia Fernandez Cardoso, "How Wide is the Gap? Evaluating Current Documentation of Women Architects in Modern Architecture History Books (2004–2014)", in: *MoMoWo: Women Designers, Craftswomen, Architects and Engineers between 1918 and 1945*, Ljubljana 2017, pp. 230-249).

4. It is worth noting that one of the difficulties identified by some historians such as Milka Bilznakov in the 1980s was the dispersion or non-existence of archives that included works by women. For this reason, the International Archive of Women in Architecture was created at Virginia Tech, which attempts to bring together the dispersed material on the work of women architects since the 19th century. See more in Despina Stratigakos. *Where Are the Women Architects?* (Nueva Jersey: Princeton University Press, 2016)

made significant contributions to architecture and urbanism. In fact, until now,[5] the historiography of architecture in Uruguay has had little record of activities or projects carried out by female architects.

The project's methodological approach began with reviewing disciplinary publications and then focused on archival research, particularly the Heritage Archive of the Ministry of Transport and Public Works (MTOP) **(Fig 1)**. Interviews played a crucial role in obtaining firsthand information from female architects and individuals associated with them. This approach enabled the verification of female authorship of numerous works and access to relevant private materials.

Primary sources revealed that female architects in Uruguay had opportunities to access technical positions in state architectural offices, contributing significantly in both quantity and quality, despite limited private sector commissions. These sources were crucial for understanding their careers, context, and contributions to the built environment and culture. The contrast between primary sources and the lack of recognition in historical research highlights the importance of document-based work and justifies the research methodology. The goal is to understand the context in which these women worked, their opportunities and challenges they came up against, and how they silently but irrevocably occupied various spaces within the discipline.

3. MODERN PRODUCTION OF FEMALE ARCHITECTS

The female architects have been protagonists in shaping the physical framework in which Uruguayan society has developed its life as a community (Fig 2). However, the historiography of Uruguayan architecture, until relatively recently and even with some diffidence[6], has failed to recognise their fundamental role, which is often made invisible under the umbrella of the state, and has marginalised women all the more-so, due to their gender. The material signs that the buildings represent show that professional quality is not a gender issue. This is how Nelly Grandal experienced it, as evidenced when she said: "You should act correctly so that they cannot tell you did it wrong only for being a woman."[7] It was a challenging journey, but she and many other female architects made it possible.

The research has uncovered a wealth of quality modern architecture produced by women, either individually or in teams, across various programmes and scales throughout the country. Notable examples include the School of Viticulture (Julia Guarino, 1937), the Trinidad High School (Sara Morialdo, 1954), the Liceo Bauzá (Elsa Maggi, 1953), the Industrial School of Pando (Nelly Grandal, 1964), and numerous homes in Montevideo (Otilia Muras), Tacuarembó (Elodina Balestra), Piriápolis (Emilia Alperovich), Minas (María Luz Morosoli), and Punta del Este (Susana Pascale). These works, previously overlooked by local historiography, are characterised by their delicate design, geometric precision, open spatialities, and carefully selected and executed materialities, all of which contribute to their unique and significant architectural value.

5. Laura Cesio, Soledad Cebey, Daniela Fernández, Nadia Ostraujov, Tatiana Rimbaud & Elina Rodríguez. *Arquitectas Uruguayas. Trayectorias de las primeras generaciones* (Montevideo: FADU, 2023).

6. Laura Cesio, Soledad Cebey, Daniela Fernández, Nadia Ostraujov, Tatiana Rimbaud & Elina Rodríguez. "Arquitectas Uruguayas: omisiones historiográficas", paper on the ICAG International Conference On Architecture And Gender, (Valencia, september 2023).

7. Architect Nelly Grandal in an interview by Laura Cesio and Christian Kutcher on June 26, 2015.

Over the course of five years, research has revealed that many female architects held positions in various national and departmental public offices in the country. Likewise, the interventions and projects they carried out while serving as public officials in different archival documents have been reviewed and systematised within the scope of this investigation. These records allow us to infer that the number of projects they were in charge of and the different scales and work programmes they tackled were similar to those of the male architects.

In the first half of the 20th century, the promotion of public infrastructure works by the state required increasingly more technicians capable of executing them[8]. In this context, it led to female architects carving out a niche for themselves in state technical offices while at the same time there was a significant increase of the number of women obtaining a degree in architecture. Among these confirmed cases, important groups worked continuously in the Departmental Council of Montevideo and in different autonomous entities. In particular, in the Architecture Division of the Ministry of Public Works, many female architects could practice the profession under conditions comparable to those of their male colleagues[9]. Some of the architects who worked in that office during that period included Julia Guarino, Adela Yanuzzi, Sara Morialdo, Zulma Roncagliolo, Elsa Maggi, Nelly Grandal, Ines Caprario, Claudina Vidal, Beatriz Sarthou, Nelly Bianchi, Maria Teresa Bruno, and Elvira Godel. Additionally, the office had positions of drafters and other technical officials, among whom there was also a significant female presence. Moreover, they were responsible for managing construction projects, both their own and those of other technicians. **(Fig 2).**

It is crucial to document the projects and work of female architects in order to understand their contributions. However, there is still a need for more research in the field of private professional practice. While access to work in the private sphere has historically depended on contacts and other relational factors, a widespread observation is that commissions for independent architects mainly came from family members and were linked to residential projects. This statement was formulated using the methodology adopted based on the review of archives, and conducting direct surveys, and interviews with the descendants of the architects carried out within the framework of this study. In many cases, female architects worked in the private sphere in partnership with their spouses. This situation of double association, family and work, has well-known examples internationally.[10] In Uruguay, duos such as Grandal-Scheps, Muras-Giraldi, Gilboa-Reverdito, Villar Marcos-Pascale, or Andreasen-Santamarina had a massive production. They won prizes in competitions[11] and developed intense work in quantity and quality. Nevertheless, the contributions of women were often hidden behind their partners or professional peers.

In both public and private domains, female architects were participants in the changes taking place in the discipline, and, from this record, they contributed to the installation and consolidation of modern architecture in Uruguay. Some architectural works display characteristics of early

8. Nicolás Duffau & Adela Pellegrino. "Población y sociedad", in *Uruguay, Reforma Social y democracia de partidos, Tomo II, 1880/1930*, Gerardo Caetano (Montevideo: Planeta-Fundación MAPFRE, 2016), 209.

9. Various public documentary repositories have been used in the research process. In particular, the Heritage Archive repository of the Ministry of Transportation and Public Works (MTOP) stands out. Based on the review and research work in this archive, female authorship in a significant number of works has been verified.

10. Beatriz Colomina. *Sexuality & Space*. (New York: Princeton Architectural Press, 1997).

11. Some competitions in which female architects were awarded prizes were the Municipal Palace of Maldonado in 1962, the Palace of Justice in Montevideo in 1963 and the Departmental Council of Montevideo; with participation by Susana Pascale along with Julio Villar Marcos. For their part, Nelly Grandal and José Scheps participated in the competition for the Social Security Bank in 1957 and in the NCI Synagogue where they obtained the first prize. Felicia Gilboa participated as a team in several competitions, obtaining the first prize in 1958 in the Competition for the Headquarters of the Drivers' Protection Centre.

modernity in their volumetric conformation, in the rationality of the functional approach, in the hygiene conditions, in the integration of new structural systems, in the formal purification, in the compositional systems where the openings are of average dimensions cut into the façade plane with a predominance of full planes. At the same time, other projects represent a second phase of modern Uruguayan architecture, characterised by volumes scattered across the landscape with extensive differentiated exterior spaces, and a prevalence of continuous glazed strips. These designs achieve a balance between horizontals and verticals, and spatial connections link the interior space with the exterior and the city. As a whole, they can be understood as different approaches to modernity in the country.

4. RESEARCHING URUGUAYAN FEMALE ARCHITECTS

The team of teachers from the History Institute responsible for this communication has contributed in multiple dimensions to the visualisation and valorisation of the work of these women architects. Among other things, the team has organised public exhibitions, presented their findings at conferences and in the media, collaborated in promotional exhibitions, and has recently published the book titled "Uruguayan Female Architects. Trajectory of the first generations", which includes a long-term investigation -not without difficulties- and opens doors for future and necessary complementary research. On the other hand, at the initiative of the same team, one of the main spaces of the School of Architecture, Design, and Urbanism of the University of the Republic (the only public architectural training centre in the country) has been dedicated in honor of Julia Guarino, on the centenary of her graduation.

In Uruguay, there is a modern architectural corpus with unique characteristics that have been contributed to by female architects. The protection and enhancement of these assets produced in the 20th century began very early in the history of the country and has even achieved international recognition. However, the corpus remains incomplete and continues to be biased. Although in a long-term historical perspective, it is possible to recognise an expansion of the concept of heritage that transcends the objective idea, that of the "big names", that of the "outstanding architects." Nevertheless, there are very few buildings designed by women which have been declared National Historical Monuments or have any protection at departmental level. Examples of recent exceptions include the home designed by Otilia Muras and Héctor Giraldi, declared a Departmental Asset of Montevideo **(Fig 3)**, and the Viticulture School designed by Julia Guarino, protected by the Municipal Administration of Canelones.

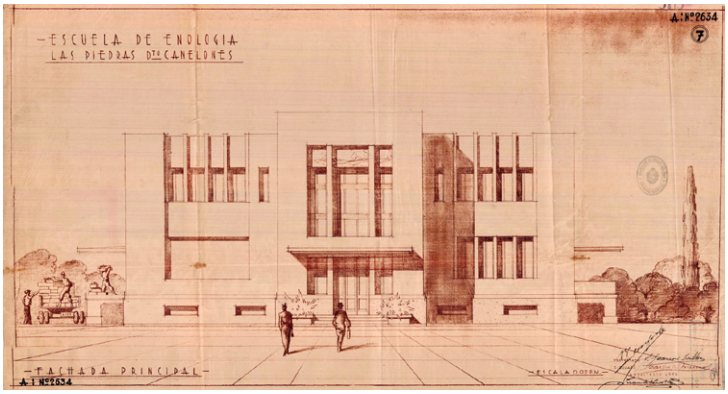
In the processes of heritage protection in Uruguay, particularly concerning modern architecture, the coincidence between the systematised generation of new knowledge and heritage protection has been vital, as has the relationship between the ideas of heritage and the architectural historiography of every moment[12]. The new historiographical developments that challenge certain perspectives and offer fresh approaches to the contribution of women to the

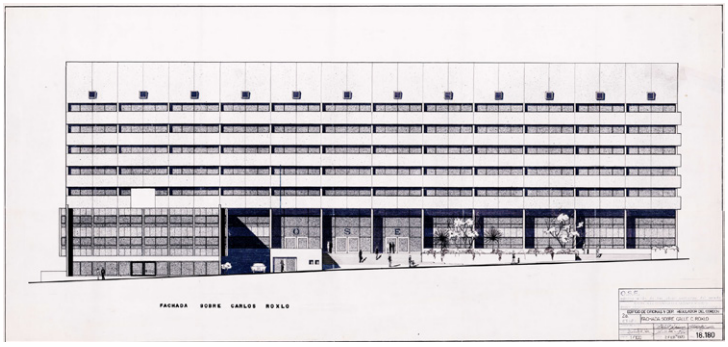
12. Cecilia Ponte y Laura Cesio. *Arquitectura y patrimonio en Uruguay: proceso de inserción de la arquitectura como disciplina en el patrimonio* (Montevideo: Udelar, FADU, 2008).

Fig. 1. Julia Guarino, School of Oenology, 1947.

Fig. 2. Susana Pascale, OSE offices, 1970.

Fig. 3. Otilia Muras and Héctor Giraldi, Muras-Giraldi House, 1960.







discipline will allow us to broaden our cultural perspective when it comes to valuing and protecting the architectural works they have produced.

As a final comment, the research allowed the team to critically review the journey taken. To this day, Uruguayan idiosyncrasy presents challenges in accurately and equally recognising male and female architects' contributions to the past, present, and future construction of our heritage and our built reality. For the feminist thinker Silvia Federici, this issue of labour inequality between men and women is caused by the emergence of

a new type of patriarchy. One in which, in effect, women are no longer just housewives; they are or can also be academics, but in which traditional values and social structures, such as those governing the life of university institutions, continue to be traditionally masculine[13].

The study discovered that most female professionals have limited opportunities for participation and leadership in the vast area of architectural practice. However, in the present, various groups within academic and social organisations are taking the lead in the process of recognising female architects as peers. In the same terms, While teaching has traditionally been a female-dominated profession, particularly at the elementary and high school levels, men dominate in higher education and management positions[14]. This minimal representation in decision-making spaces reflects uneven competition and indicates that the militant work of feminism is still necessary. Furthermore, if the research field of women in history is led only by female researchers, there can be no opportunity for change. We need to embrace the history of humanity as a whole if we intend to build a sustainable and equal society in the future. ■

13. Silvia Federici. "Devolvamos el feminismo al lugar que le corresponde" in *Revolución en punto cero: Trabajo doméstico, reproducción y luchas feministas*. (Madrid: Traficantes de Sueños, 2019).

14. According to reports from the FADU Institutional Evaluation Office from 2017 to 2024. Available in: https://www.fadu.edu.uy/oeia/sistema-de-evaluacion-academica/

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WOMEN IN MODERN ARCHITECTURE: REGIONALISM, OTHERNESS, AND GENDER IN THE BRAZILIAN NORTHEASTERN REGION

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ABSTRACT

In seeking to build a broader and diverse history of architecture in Latin America, Torre[1] pointed out the absence of women's contributions to cultural discourse, especially those who bring together indigenous, Ibero-American and African cultures. Lima[2] showed that the contribution of female architects in Latin America was until then eclipsed by male figures considered "geniuses", who displaced female participation to a marginal position in architecture. The trajectories of female architects who worked in the Brazilian Northeast and made this region and its field of research still remain absent from Latin American historiography. This text explores the contribution of these female architects from Haraway's perspective of localised knowledge (1995)[3], exploring how the practice of feminist objectivity can offer a more critical and interpretative vision. This perspective was used by women who shared similar situations of otherness, migration and gender, such as architects Minette da Silva, Denise Scott Brown and architectural historian and theorist Sibyl Moholy-Nagy[4,5,6]; as well as by the architects who worked in the Brazilian Northeast, a culturally privileged region. This Northeastern culture, the raw material for research, was catalogued, inventoried, contributed to the fields of urban research, landscaping, construction methods of the Brazilian Northeast, interior design, among others, used their partial perspective to obtain an "inside" view, such how, Lina Bo Bardi (1994)[7] perceived the popular culture of the Northeast as more Eastern than Western; Janete Costa, Neide Mota de Azevedo, Liana Mesquita were inspired by localised knowledge from the Brazilian Northeast to answer specific questions in different areas of the professional field of architecture as a strategy for professional affirmation, using this vernacular knowledge reinterpreted in the light of regionalist currents excluded from hegemonic narratives that follow the masculine, European or North American pattern).[8]

1. INTRODUCTION

The contribution of female architects who worked in the Brazilian Northeast between 1958-1979, with few exceptions, remains absent from the Brazilian modern architectural historiography[9]. One of the reasons for this exclusion is the notion of otherness constructed by intellectuals for the Brazilian Northeast, as a space of longing and territories of revolt and utopia, developed within Brazilian culture and used in opposition to the South (Southeast) to differentiate the North from the South[10].

In the historiography, the Northeast has constantly been labelled as the site of 'regionalism', a term that is ambiguous, since it can refer to positions that fluctuate between a local reinterpretation of international ideas and a reactionary conservatism of a folkloric or populist nature"[11]. Historiographical narratives favour a double invisibility: "*Due to the maintenance of a false homogeneity of architecture, works that diverge from the Eurocentric and hegemonic pattern of Western architecture still remain excluded from international collections of architecture, culminating in a double condition of otherness for women in the Brazilian Northeast, they are the 'others' of the 'other'*"[12].

The science applied in the context of feminism can be understood through the lens of Donna Haraway's situated knowledge (1995)[13]. Therefore, the knowledge and expertise of female architects about the popular culture of the Brazilian Northeast are examples as women's social position enables a partial perspective stemming from the standpoint of the subjugated, allowing for a more critical and interpretative view that is suitable to reality.

This scientific endeavour differs from the typical model of science, which reflects the social and historical context that produced it - predominantly Western, bourgeois and masculine - and which perceives the world from a "*ubiquitous*" and universalistic standpoint. Feminist objectivity aims for a "*localised territorial, social, and temporal*" perspective, and most importantly, a human one.

The adoption of a partial perspective as an alternative to the neo-positivist prevailing model of scientific research is rooted in the feminist epistemological approach known as: **standpoint**, wherein the researcher does not remove their subjectivity from the equation, and "*attaining objective knowledge requires a dialectical and critical analysis of subjectivity*." Within existing frameworks, confronted with the inability to eliminate oneself from the research, individuals conceal their subjectivity through neutrality: the dominant scientific objectivity would represent a singular subjectivity, characterised by white and Western men. [14]

The female architect, by merging gender and profession, embodies both an insider, owing to her education, and an outsider, owing to her divergence, capable of innovating her practice and subjecting it to critical scrutiny, thereby challenging certain aspects of architectural production.[15]

This symbolic subversion breaks with modern canons, whose ideals (in the world and in architecture) placed women in a position of negative

1. Susana Torre. "Teaching architectural history in Latin America: the effusive unifying architectural discourse". *Journal of the Society of Architectural Historians*, v.61, n. 4, (Dec. 2002): 549-558. Accessed Jul, 2015. http://www.jstor.org/stable/991875.

2. Ana Gabriela Godinho Lima. *Arquitetas e arquiteturas na América Latina do século XX*. (São Paulo :Altamira Editorial, 2014). https://femininoeplural.files.wordpress.com/2014/03/arquitetasalxx_final.pdf

3. Haraway, Donna. "Saberes localizados: a questão da ciência para o feminismo e o privilégio da perspectiva parcial". *Cadernos Pagu*, n. 5, (1995): 7-41.

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6. Siddiqi, Anooradha Iyer; Lee, Rachel, "On Margins: Feminist Architectural Histories of Migration", *ABE Journal* [En ligne], 16 | 2019, mis en ligne le 18 septembre 2019, consulté le 13 février 2024. URL : http://journals.openedition.org/abe/7126 ; DOI : https://doi.org/10.4000/abe.7126

7. Lina Bo Bardi. *Tempos de grossura: o design no impasse*. Lina Bo Bardi -São Paulo: Instituto Lina Bo e P.M. Bardi, 1994. p.77.

8. Hilde Heynen; Gwendolyn Wright. "Introduction: Shifting Paradigms and Concerns" In:.*The Sage Handbook of Architectural Theory*. Crysler, C. Greig; Cairns, Stephen; Heynen, Hilde (org.) .(Londres, Sage, 2012).

9. Naslavsky, Guilah. Tradição do Nordeste brasileiro na obra de três arquitetas: Lina Bo Bardi, Janete Costa e Neide Mota de Azevedo.

opposite: this implies that the very definition of Woman in modernity (although mistaken) is based on the masculine.

Thus, the integration of female architects into the labour market was consolidated with much struggle and was marked by the creation of innovation and differentiation strategies stemming from the attitude of exploring fields that were undervalued by men, such as landscaping, social housing, interior design, museography, scenography, among others.[16]

A striking point in the production of these professionals for which they gained international notoriety is their relationship with popular culture, the vernacular and their pioneering research of cultures still not corrupted by Western civilization in their respective regions, shared similar situations of otherness, migrations, and gender.[17] Thus, after this theoretical presentation and introduction of the epistemological background, we move on to a brief dive into the trajectory and work of the women architects who lead the discussion of the work stated here.

2. LINA BO BARDI: LOCALISED KNOWLEDGE OF NORTHEASTERN CRAFTSMANSHIP

Lina Bo Bardi (Rome, 1914 - São Paulo, 1992) made forays into the interior of Bahia and the Northeastern backlands inspired by the expeditions of Brazilian modernists, such as Mário de Andrade's folkloric mission[18], in search of the rich vernacular culture of the Brazilian Northeast: the raw material untouched by industrial civilization – mainly due to the isolated character of the Northeast – still present in the region at the time, especially in the backlands and hinterlands[19]. Lina Bo Bardi knew how to look at the hammock (...) at once a bed and an armchair, whose "*perfect adherence to the body, the undulating movement, making it one of the most perfect resting instruments*".[20]

She noted the richness of Northeastern craftsmanship: "*marvelous handicrafts, tools, the working tools of São Francisco's fishermen are of marvelous refinement*" and she "*recognized the aesthetic in trash - in objects exhibited at the Northeast Exhibition (Bahia,1963), made from burnt light bulbs, fabric scraps, cans of lubricants, old boxes, newspapers*.[21]

She mapped out Northeastern artisanal production - "*collecting clay animals, votive offerings made from umburana wood, natural or polychrome wooden boat figurehead, tissue paper lace, tin oil lamps - and proposed the installation of a Museum at Solar do Unhão, conceived as a center for popular art documentation and technical studies on the Northeast*"[22] - and where she designed the famous wooden staircase with joints inspired by ox carts.

She perceived the cultural abundance within reach, a unique anthropological richness: "*And it was possible to build from there a Brazilian design, from forks to bottles, from glasses to lamps*."[23] For Lina Bo Bardi, it was a question of *"searching for the roots of the country (whatever they may be: poor, popular), which does not mean preserving forms and materials, but rather evaluating original creative possibilities*."[24]. She sought in craftsmanship the basis for arriving at a Brazilian alternative

Anais do 7º Docomomo Norte/ Nordeste. Manaus, Docomomo, 2018, p. 1-19. Available in: https://7docomomomanaus.weebly.com/artigos.html

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industrial design and "*Brazil would have an industry based on the skills at the hands of the people, from the perspective of the people, with originality*". "*We could reinvent eating utensils, plates, shirts, shoes*."[25]

Lina Bo Bardi and Celso Furtado's initiative at Sudene created in 1961 *Artene* (an agency dedicated to assisting artisans). "*Its basis was the survey of the socioeconomic conditions of the rural and semi-rural people, craftspeople, lacemakers, potters, carpenters, weavers, etc"*. The first step was mapping the Northeastern artisanal production.[26]

3. FROM THE POT TO THE STREET: TRADITIONAL CONSTRUCTION METHODS OF THE BRAZILIAN NORTHEAST

Neide Mota de Azevedo (São Bento do Una, 1932 - Recife, 2015), an architect from the School of Fine Arts of Pernambuco (1953-1957), was the daughter of farmers. Neide dedicated herself to investigating traditional construction techniques of the Northeast at the Housing Center, created in 1963 and coordinated by her since 1964, and renamed the Center for Housing Studies and Planning (Cephab). She had a successful research career, combining two types of vocations: technical and researcher. She specialised at the Inter-American Housing and Planning Center - CINVA, Bogotá (1963) and in the Urban and Regional Planning Course of the OAS, in Lima (1972) .[27]

Vernacular architecture in the Brazilian Northeast was her main focus of work: "*In the Northeast of Brazil, there is an accumulated building experience that deserves to be recognized and understood from different angles, encompassing, aside from the use of materials and construction techniques, solutions for water supply, storage and cooking of food, as well as the treatment of internal and external spaces*."[28] She documented "*non-industrialized materials, frequently extracted from nature, such as; clay, wood, straw, etc. buildings commonly involve self-build practices on the part of the poorer population, either in urban or rural setting*".[29]

Architects Neide Mota de Azevedo, Liana Mesquita, and Ivone da Silva Salsa (also the group's photographer) explored the traditional construction methods of the Northeast by documenting its vernacular buildings. The Traditional Construction Methods research (1978) coordinated by Neide Mota, at the Housing Center (Cephab), UFPE, in collaboration with Sudene and CNPq, documented methods to build with simplicity in tropical regions, raising and inventorying solutions to the housing problem in three Northeastern states: Pernambuco, Paraíba, and Alagoas. Twenty-three locations were researched in the Backlands, eighteen in the Hinterlands, sixteen in the Coastal region and in the Forest. [30] (**Figure 1**)

They recorded doors and windows, made of wood or straw, frames, sealing elements (panels woven from coconut leaves), sinks for washing dishes and clothes, brick tables for stoves, hammock stands, forks, tables, coffee and meat grinders, solutions for storing food, seeking "*precious lessons of popular wisdom so full of simplicity and creativity*"[31]. In wattle and daub buildings, they recommended "*the introduction of improvements, build a cement grout or lime and sand base, serving as a foundation for*

18. Acervo de Pesquisas Folclóricas de Mário de Andrade 1935 – 1938 (Catálogo). São Paulo, Prefeitura do Município de São Paulo / CCSP, 2000.

19. Durval Muniz Albuquerque Júnior. A invenção do nordeste e outras artes; pref.Margareth Rago-4 ed.rev.-São Paulo:Cortez, 2009.

20. Antônio Risério. Avant-garde na Bahia. São Paulo: Instituto Lina e P. M. Bardi, 1995.p.113.

21. Risério, Avant-garde na Bahia,118.

22. Risério Avant-garde na Bahia,120.

23. Risério, Avant-garde na Bahia,119.

24. Bardi, Tempos de Grossura, 21.

25. Darcy Ribeiro, 1993, apud Risério. Avant-garde na Bahia, 121.

26. Bardi, Tempos de Grossura, 62.

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28. Mesquita, Liana; Mota, Neide. Cidades do Nordeste do Pote à Rua. Recife, Editora Cepe, 2017.p.21.

29. Mesquita: Mota. Cidades do Nordeste do Pote à Rua, 2017.

30. Mesquita: Mota,. Cidades do Nordeste do Pote à Rua, 83

31. Mesquita; Mota,. Cidades do Nordeste do Pote à Rua, 21.

the pillars and half-timbers [...] painting or whitewashing the walls and the use of vegetation, both for the exterior and interior of the houses, [...] construction with green fences replacing walls"[32] (Figure 2)

By exploring the traditional construction methods of the Northeast, they shifted their focus to a field of knowledge that remains largely unexplored a scientific endeavour different from the usual model of science - hegemonically Western, bourgeois, and masculine - which reflects the social and historical context that produced it, and points it towards the discovery and development of a new professional field: urban ecology and cultural landscape.

4. DECORATION AND THE TROPICS IN THE INTERIOR DESIGN OF JANETE COSTA

Northeastern craftsmanship was the source of inspiration for the Pernambuco architect Janete Costa (Garanhuns, 1932 - Recife, 2008). In the 1970s, she gained prominence by using locally crafted pieces still undervalued in interior design projects. She created the "*Interferences*" project, which envisioned:

> [...] *the identification of groups and communities of artisans working in the Northeast region of Brazil, classification by the raw material used and by the artisanal products or objects produced, the mapping and identification of groups and communities, and the identification of groups or communities that could work together to achieve the pilot project* [33].

Through the junction of art, technique, and local craftsmanship, Janete Costa forged a distinguished career in the field of interior design. It's noteworthy that this was an area often considered "feminine" within architecture, precisely due to its association with the domestic and private sphere. Particularly during modernity, it was perceived as the place where women could act .[34]

> At the conference Decoration and the Tropics (1973), she attested that *Decoration begins with the application of the indispensable utility material, the pot, the pitcher, and the hammock on the painted door, newspaper cutouts, pieces of paper lining the shelves, the plant tin covered with paper, the ruffle on the door, the holy picture. It is man projecting himself, his culture, his roots, his values, his problems. And everything that grows from the ground is the ground rising*.[35]

In the Olinda's houses, she observed "*vivid colors, mysticism, superstition, ornamentation; the composition always geometric, primary and rigid*!"[36] She suggests, "*at mid-height of the huts' walls, covered with straw and with cross ventilation, to allow for an environment in line with ecology."37* She attested that *"In the tropics, protection against heat and excessive brightness (...), white reflects heat and black absorbs it, (…) the landscape here acquires great intensity of color and is bright, transparent, and strong*. [38]

In a statement to Borges in 1991, she relates:

32. Mesquita; Mota. Cidades do Nordeste do Pote à Rua,196-199.

33. Costa, Janete. Feito com as mãos. [Anotação pessoal sobre o artesanato]. Recife, jun. 2003.s.p.

34. Gwendolyn Wright, "On the fringe of the profession. Women in American architecture".In: *The Architect. Chapters in the history of the profession*. ed. Kostof, Spiro (dir.), New York: Oxford University Press, 1977.

35. Janete Costa. "Decoração e trópico" (1973). In: *Conferências, Comentários e Debates do Seminário de Tropicologia da Universidade Federal de Pernambuco*, no decorrer de 1973. Freyre, Gilberto (coord.) e Mota, Roberto (org.) Recife. UFPE, 1979.p.28.

36. Janete Costa. "Decoração e trópico". p.28.

37. Janete Costa. "Decoração e trópico". p.28.

38. Janete Costa. Decoração e trópico .p.29.



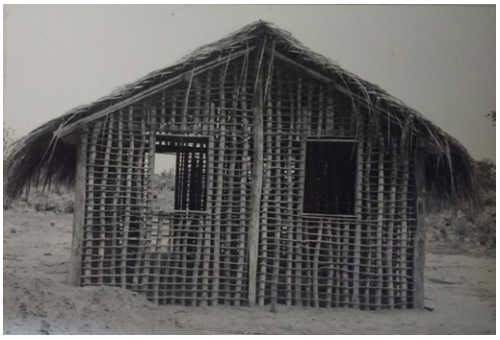




Figure. 1 Cover of "Traditional Construction Methods of the Northeast". Credits: Ivone Salsa, 1978.

Figure 2 Structure of three supports on the facade. Credits: Ivone Salsa, 2017

Figure 3: Lamps displayed in the Interferences project, Fenearte. Credits: Felipe Mendonça, 2007.

As a child, I used the pot, drank water from the pitcher, played with Vitalino's[39] *toys and cloth witches, cooked in clay pots. But as I grew up, all of this was associated within me with a state of poverty. (...) Only when I distanced myself did I realize that the pot and the pitcher had been a privilege for me, this happened in the early 1960s (...) I spent months traveling, researching furniture, toys, ludic art, sacred art with great passion, it was when I woke up and rediscovered my origins.* [40]

39. Vitalino Pereira dos Santos (Caruaru, Pernambuco, 1909-1963) was a notable popular ceramist known for his pieces inspired by rural and urban everyday life, rituals, and the imagination of the Brazilian Northeastern hinterlands population. See https://enciclopedia.itaucultural.org.br/pessoa9523/mestre-vitalino

40. Adélia Borges et al. *Janete Costa: arquitetura, design e arte popular*. Recife: CEPE, 2020. p.18

She reused objects, giving them new uses: a basket was adapted for a napkin holder, a blanket unfolded into placemats, the woven baskets for carrying supplies from the artisans of Riacho das Almas-Pernambuco were added to rice paper to compose lamps, and the ceramic tubes from the potters were transformed into umbrella stands. Like Lina Bo Bardi, she saw a path in craftsmanship, the theme of her exhibition with three to four thousand pieces at FIESP (1985)[41]. (**Figure 3**)

5. FINAL REMARKS

The knowledge and expertise of architects about popular culture is an example of the use of localised knowledge and a practice of feminist objectivity[42]. In the Brazilian Northeast, architects valued elements of local popular culture that lacked commercial value. They discovered in exploratory expeditions, inventories for cataloguing and documentation, answers to specific questions in various areas of the architectural professional field (architectural design, construction methods, landscaping, and interior design) and thus used the vernacular knowledge of the Northeast reinterpreted in light of regionalist currents excluded from hegemonic narratives of a male, European, or North American pattern. And in this way, they used their partial perspective to obtain a view "from within." ■

41. Borges, *Janete Costa: arquitetura, design e arte popula*r, .23.

42. Donna Haraway. "Saberes localizados: a questão da ciência para o feminismo e o privilégio da perspectiva parcial". Cadernos Pagu, n. 5, 1995: 7-41.

BIOGRAPHY

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ARCHITECTURAL HERITAGE DISCOURSES AND CONSERVATION STRATEGIES

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ABSTRACT

The field of architectural conservation is currently undergoing a profound transformation, driven by evolving discourses, changing perceptions of heritage, and advancements in technology. Contemporary conservation approaches consider heritage as a living entity that adapts to social, cultural, and environmental shifts, particularly within modern architecture. This article examines the intricate relationship between architectural discourses and conservation strategies, emphasising how historical concepts, such as those proposed by Alois Riegl and Françoise Choay, have shaped contemporary understandings of heritage as a social construct. The shift towards recognising culture as integral to sustainable urban development, as highlighted in the UNESCO report, underscores the need for a holistic approach to heritage management. The article advocates for an inclusive and collaborative conservation practice that engages diverse stakeholders and addresses contemporary challenges like globalisation and climate change. Ultimately, it calls for a dynamic dialogue that redefines heritage as a vital resource for social and economic development, rather than merely a relic of the past.

The field of architectural conservation is currently undergoing a significant transformation, spurred on by a dynamic interplay of evolving discourses, changing perceptions of heritage, and the emergence of new technologies. While the past has traditionally been viewed as a static entity to be preserved for future generations, contemporary approaches to conservation embrace the idea of heritage as a living entity, susceptible to transformation and adaptation in response to changing social, cultural, and environmental contexts. This shift is particularly evident in the realm of modern architecture, where debates surrounding its valuation and conservation have become increasingly complex.

An intricate relationship exists between architectural discourses and conservation strategies, drawing upon a critical examination of modern heritage in global contexts. This analysis underscores the importance of understanding how evolving discourses shape the ways in which we perceive, interpret, and manage modern buildings, highlighting the challenges and opportunities presented by this dynamic field.

The idea of heritage has evolved over time. Since its beginnings with the French Revolution, the concept has shifted from a narrow focus on monuments and works of art to a broader view encompassing culture, memory, and collective identity. Heritage is not merely a legacy of the past; it is also a tool for building the future. Heritage management should be a dynamic process that adapts to the needs and challenges of the present.

In 1903, the Austrian art historian and theorist Alois Riegl published *The Modern Cult of Monuments: Its Character and Origin*,[1] which discusses the changing perceptions and values associated with monuments over time. Riegl argues that the significance of monuments is not solely based on their historical or aesthetic value, but also on their ability to evoke a sense of continuity and cultural identity. He introduces the concepts of "age value" and "newness value." "Age value" refers to the appreciation of monuments for their historical significance and the memories they embody. In contrast, "newness value" highlights the desire for innovation and the contemporary relevance of buildings and structures. Riegl suggests that modern society has developed a cult around monuments, emphasising their preservation and reverence, not just as relics of the past but as meaningful symbols that connect individuals to their cultural heritage. This perspective shifts the focus from mere physical conservation to the emotional and social roles that monuments play in contemporary life. Overall, Riegl's work encourages a deeper understanding of how monuments serve as markers of collective memory and identity in a rapidly changing world.

At the end of the 20th century, the theorist and historian of urbanism and architecture Françoise Choay published *L'Allegorie du patrimoine* or *The Invention of the Historic Monument*.[2] In this work, she questions the notion of heritage, its historical construction, and its repercussions in the contemporary context. Choay argues that heritage, rather than being an inherently natural reality, is a modern concept that has undergone a process of evolution and transformation throughout history. She posits that heritage

1. Alois Riegl, *El culto moderno a los monumentos: caracteres y origen* (Madrid: Visor, 1987).

2. Francoise Choay, *Alegoría del patrimonio* (Barcelona: Gustavo Gili, 2007).

is a social construct; there is no "objective" or "natural" heritage. It is a concept that society defines and redefines based on its interests and values. Additionally, heritage serves as a tool of power, with the discourses and practices of heritage potentially used to legitimise authority, justify social inequalities, and promote specific political interests.

In the UNESCO report *Culture: Urban Future; Global Report on Culture for Sustainable Urban Development* (2016),[3] the shift in the concept of heritage to urban culture is emphasised. The report establishes that culture is fundamental to building more sustainable cities. Cities are not just physical structures but they are also complex ecosystems based on social interactions, cultural practices, and creativity. Culture can contribute to sustainable urban development by promoting social cohesion, inclusion, innovation, and economic growth. It is a powerful tool for building more sustainable and inclusive cities. To achieve this, a holistic approach to urban management is needed—one that incorporates culture at all stages of the planning and development process. In summary, culture is an essential component in creating more sustainable cities and highlights the role culture can play in promoting social cohesion, inclusion, innovation, and economic development.

A crucial first step in understanding the relationship between architectural discourses and conservation strategies lies in deconstructing Eurocentric perspectives on modernity. This discourse highlights the challenges and opportunities presented by a shift towards a more inclusive and collaborative approach to conservation. Such an approach recognises the need to engage a diverse range of stakeholders, including architects, historians, preservationists, community members, and policymakers, in the process of understanding and managing modern heritage.

We must understand heritage not only through a monumentalist lens but also through a broader vision encompassing culture, memory, and collective identity. The main contemporary challenges facing heritage include globalisation, urbanisation, technological development, mass tourism, and climate change, all of which have an impact on heritage, from public policy to restoration and museum practices. Comprehensive heritage management that considers the social, cultural, economic, and environmental dimensions of heritage is essential. Heritage is a strategic resource for sustainable development and the construction of a more just and inclusive society.[4]

The future of architectural conservation lies in embracing change and fostering a dynamic dialogue among various stakeholders. This requires moving beyond a static view of heritage and recognising the ongoing evolution of modern architecture in response to changing social, cultural, and environmental contexts.

Developing a contemporary perspective on heritage involves transforming our understanding of it beyond mere antiquity and historical values. Overcoming the traditional view of heritage requires a dynamic understanding of its meaning, the incorporation of new technologies,

3. UNESCO, *Culture: Urban Future; Global Report on Culture for Sustainable Urban Development*. 2016. https://unesdoc.unesco.org/ark:/48223/pf0000246291.

4. Fernando Pérez y Elvira Pérez "El Patrimonio y sus desafíos contemporáneos. Comprender, proteger, transformar" en Nordenflycht Concha, José de, ed. *Estudios Patrimoniales*. (Santiago: Ediciones UC, 2018).

and the active participation of communities in addressing contemporary challenges. In this way, heritage can be seen as a valuable resource for social and economic development, and not just as a vestige of the past.

In conclusion, the complex relationship between architectural discourses and conservation strategies necessitates a critical and nuanced approach. The future of architectural conservation depends on understanding the dynamic evolution of modern architecture and the changing ways in which we perceive, interpret, and manage modern buildings. There is a wealth of further research to be undertaken, new questions to be addressed, and innovative approaches to be developed in order to ensure the effective conservation of modern architectural heritage in all its forms. ■

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TOWARDS A CONSTRUCTION OF HERITAGE ASSESSMENT CRITERIA FOR MODERN ARCHITECTURE IN ECUADOR

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ABSTRACT

The School of Architecture of the University of Azuay (earq UDA, as it is known in Spanish) and the National Institute of Cultural Heritage of Ecuador - Zonal 6 (INPC Z6), organised an International Workshop in order to discuss historical cultural heritage and valuation heritage of modern architecture. The participants from all over the world offered perspectives from their fields of research through their most recent research or as compilations of their careers.

This article collects and critiques the main ideas through themes that group common threads among the actors: the dichotomy between the terms "modern" and "modernity" from a decolonisation perspective, visual intelligence as an agent in shaping criteria for visual value and its impact on architectural modernity, evaluation tools including cards, documentation, and legislation, and collective sensitivity as an inevitable regulator of heritage preservation.

Without intending to force coincidences or antagonisms, this text aims to establish possible criteria for modern heritage evaluation applicable to Ecuador and, by extension, Latin America. As such, the order in which the themes appear is not accidental.

The results offer insights into the relevance of modern heritage in Ecuador, emphasizing the importance of cultural decolonisation; a critical stance that aims to recover the potential to understand, think, and act socially, ultimately contributing to a more meaningful legacy of the Modern Movement.

1. INTRODUCTION

The debate surrounding the identification and valorisation of heritage in Ecuador remains, to this day, subject to citizen recognition and, certainly, governmental action to ensure its safeguarding. Every effort still falls short in achieving the prevailing value of heritage as the cultural capital of our nation, transcending the cliché of "identity." Therefore, considering those buildings designed and built in our nation that adhere to the formative criteria of the Modern Movement is a matter that provokes controversy and confusion. This is partly due to the lack of time elapsed since the construction of these buildings, or because assessments on value and their meanings are still in a very nascent stage of development. The latter is particularly concerning because, despite the fact there have been debates on defining criteria for identifying and protecting international modern heritage from the 20th century beginning in the 1980s, they are not entirely applicable to modernity in the Americas.

Regarding research on the modern project in Ecuador, in June 2021, the School of Architecture of the University of Azuay and the National Institute of Cultural Heritage of Ecuador - Zonal 6 (INPC Z6), organised an international workshop in order to discuss historical cultural heritage and valuation heritage of modern architecture. The participants from all over the world offered perspectives from their fields of research through their most recent research or as compilations of their careers.

2. MODERN, MODERNITY: APPROACH FROM A DECOLONISATION VIEW

The term "modern" has a complex meaning, reflecting an awareness of an era that connects to the past, antiquity, while also considering itself as the result of a transition from the old to the new.[1]

From a decolonial and emancipatory perspective, any approach to modernity must reject all forms of Eurocentrism. It is impossible to have an emancipatory view in Latin America that can be understood as a form of modernity. In this context, "other modernities" must be questioned, and perspectives considered that go beyond the materiality of the buildings, also focusing on new processes of modern colonisation carried out by longstanding global and globalising institutions. It is important to recognise the often-overlooked role of the Catholic Church in these circles of modernity, and its desperate struggle for survival intertwined with the spirituality and emotions of vulnerable sectors. These modernising and exclusionary strategies, often enacted by the Church, are manifested in new forms, new places of habitation, and the spatial usage of thousands upon thousands of inhabitants.

Alexandra Kennedy researching the Basilica del Voto Nacional in Quito (1887-1924), argues that the terms "modern" and "modernity" would then seem to be phenomena, and often attributed to everything to the desire for secularization, as supported by liberal governments or cultured individuals, professionals educated in the new academies or schools of engineering and architecture.[2]

1. Jürgen Habermas, "La modernidad, un proyecto incompleto," in *La posmodernidad*, ed. Hal Foster. (Barcelona: Editorial Kairós, 2008), 19.

2. Alexandra Kennedy, "La iglesia renovada." I Taller Internacional de estrategias de valoración patrimonial de la arquitectura moderna. Cuenca, Ecuador, 1-2 June, 2021.

However, at the same time, it is important to develop a locally-based history through which one can value and understand one's own heritage. It is crucial to understand for example, that the occupation of the western hemisphere and the Americas coincides with the development of architecture as an autonomous discipline, and these are not coincidences, in fact, there is no coincidence. The processes of abstraction and transformation of lived space into calculated, drawn space through drafting tools reflect a form of occupation and control.

Here, the term "abstraction" suggests particular attention. The use and ownership of "abstraction" come into play due to the need to eliminate any qualification that might distort the real attribute in a specific modern architecture project. We are not aiming for simplification; instead, what interests us are its processes of formation, the processes of architectural formation. The literature on modernity has given little or almost no emphasis to the true innovation that modernity entailed, and that innovation is called abstraction.

This intricate search for the essential has a direct outcome for Fernando Luiz Lara:

> *… it is to seek information, to seek experiences, to seek affections that were erased in this process of abstraction because abstraction, as it functions, separates some variables, separates some concepts that will be worked on to accelerate the process of manipulation and control of nature*[3]

Abstraction as a design tool is inherently assumed by modern architects, as it allows for the extrapolation of project strategies attached to the constructive and/or functional attributes themselves. For example, architect Francesco Maccaferri's modern buildings in Guayaquil demonstrate how modernity can be expressed not just through style, but as a response to specific needs or circumstances. It is, therefore, possible that the principles of abstraction are inherent in the architectural design process. Compte further emphasises the need to delve deeper, and he confirms that:

> *Every place, every architecture of each site must have its own history and its own explanation, and that we must have our own model of analysis; that we must have flexibility and adaptation to what the local history is, and that this local history obviously needs to reference national history, but we also need to highlight what is significant in a specific period in the place where this architecture develops*.[4]

3. VISUAL VALUE CRITERIA. ARCHITECTURAL MODERNITY

At this point in time, there is interest in exploring how modern architectural projects represent responses to a nation's culture and society. Their physical, formal, and even spiritual realisation relates to processes achieved in each historical stage. Thus, "the modern" or "modernity" can be understood by studying specific architectural buildings and historical events that speak to the evolution of architecture in the nation.

3. Fernando Luiz Lara, "Arquitectura moderna en las Américas y decolonización." I Taller Internacional de estrategias de valoración patrimonial de la arquitectura moderna. Cuenca, Ecuador, 1-2 June, 2021.

4. Florencio Compte, "Ciudad y proyecto moderno en Ecuador. Caso Guayaquil." I Taller Internacional de estrategias de valoración patrimonial de la arquitectura moderna. Cuenca, Ecuador, 1-2 June, 2021.

Understanding modernity as a transitional, whether evolutionary or not, would help demonstrate how modern the Andean road system *Qhapaq Ñan* is, as well as the vernacular housing in rural Azuay. Similarly, the Basilica del Voto Nacional in Quito (1887-1924) is as modern as the Palacio Municipal (1953) in Cuenca. However, it must be recognised that the criteria for heritage assessment in each case are not the same, and perhaps not comparable, as they require independent attention that should avoid eurocentric comparisons.

On the other hand, architectural modernity is authentic when it eschews stylistic and ideological or aesthetic prejudices. It becomes authentic when it represents a personal interpretation of the architect or designer, in this case, assuming its role as a contemporary actor in its own time. Sometimes authenticity is mistaken for stylistic nationalism that seeks to reclaim the unique and indigenous styles, attempting to resolve projects through emotional means. In contrast, authentic modernity is rigorous and reflective operating within a framework defined by the idea of truthfulness, simultaneously sensitive and universal. Universality is a consequence of the abstraction in the process of formal realisation of an architectural project.

Following on from the earlier discussion on abstraction, the principle of visual intelligence is highly relevant, considering the constructive and cognitive dimension of the gaze, particularly in the context of photography. Photography can be understood as the art of looking so that others see. It significantly influences how architects and society at large see and understand the world, its landscapes, cities, and buildings.[5] Visual evidence, through images and photography, plays a fundamental role in heritage assessment, serving as a historical document but also as a tool for identifying design values. This argument is supported by ongoing research projects on modern architecture in Latin America and projects by architects who have enriched their work through photography.

In other words, if looking and designing merge in the same act of creation, it would be possible to unveil design criteria through careful observation.

Therefore, it is essential to conduct research on modern projects, detached from stylistic comparisons but approached through its intrinsic systematisation and the complex task of critical project analysis. The research conducted by Pablo Frontini on Raúl Sichero and his personal, academic, cultural, and political environment allows for an in-depth analysis of modern values in an interconnected manner, even encompassing the urban realm.[6]

Under this focus, modern values emerge integrally and specifically to the building. While project strategy comparisons can be seen in other projects or architects, they cannot be reduced to parameterisations like simple checklists.

4. ASSESSMENT TOOLS: SHEETS, DOCUMENTATION, LEGISLATION

The Workshop was enriched by various learning experiences with existing heritage evaluation tools. Jeff Cody, from The Getty Foundation, presented the publication "The Twentieth-Century Historic Thematic Framework: A

5. Cristina Gastón Guirao, "El modo en que miramos," in *Click 1 Fotografía como arquitectura*, ed.Cristina Gastón (Barcelona: Iniciativa Digital Politècnica, 2015), 14-19.

6. Pablo Frontini, "Análisis y crítica de obra. Estudio de caso." I Taller Internacional de estrategias de valoración patrimonial de la arquitectura moderna. Cuenca, Ecuador, 1-2 June, 2021.

Tool for Assessing Heritage Places," which seeks to understand and evaluate the significance of various modernities worldwide through ten themes. It identifies and analyses potential social, technological, political, and economic catalysts that shaped cities and rural environments in the 20th century. These themes can be applied and adapted globally by those interested in heritage conservation. The tool's versatility has allowed it to be integrated into our work of establishing criteria for modern heritage valuation. The themes have been developed based on preservation experiences in the United States:

> *There are many precedents for these thematic frameworks as they're called particularly in the United States with the National Park Service, but also in Australia, in Canada, for example. And we've benefited from looking at the way that other groups have thought about thematic frameworks. Thematic frameworks also are somewhat related to what might be called themes studies in English about particular industries, like the heritage of the oil industry issues. And these are somewhat related to the thematic framework but not identical. Similarly here in the United States, we very often use it in planning for conservation.*[7]

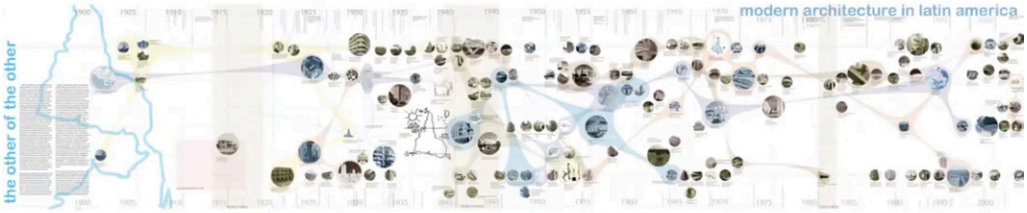
Heritage legislation for modern projects in Ecuador remains unclear. The discussion on the complex case of the struggle to safeguard Hotel Quito highlights issues with institutional bureaucracy and the aggressiveness of the real estate industry. Despite the abundance of technical documents, the protection of the property hangs by a thread. The Hotel Quito building meets all evaluation criteria with its intrinsic value, comparative importance with its iconic status, and its referential value. However, the building was sold to a private company for a real estate project leading to the land value prevailing over heritage value.

In other cases, cataloguing indeed proves to be a fundamental aid to safeguarding. The Modern Architecture in Peru Catalogue emphasises the creation of a database inventory that compiles and systematises original information and documentation, later disseminated through an online platform. Despite similarly challenges in developing modern heritage values, their efforts in dissemination have influenced official declarations, enabling interventions to develop a living heritage.

5. COLLECTIVE SENSITIVITY

Collective imagination defines heritage preservation. Values cannot be considered homogeneous, permanent, or "socially" objective. They are intangible concepts expressed through images of the attributes that represent them and make them "socially visible." They change historically, both due to evolving social dynamics and communication methods, which are particularly significant today. From the need for dissemination akin to "attractive marketing" to seduce and "connect" with the public, to the urgency of actively involving them in safeguarding processes, when speaking of collective sensitivity, it is evident as time progresses, the

7. Jeff Cody, "The Twentieth-Century Historic Thematic Framework: A Tool for Assessing Heritage Places" I Taller Internacional de estrategias de valoración patrimonial de la arquitectura moderna. Cuenca, Ecuador, 1-2 June, 2021.



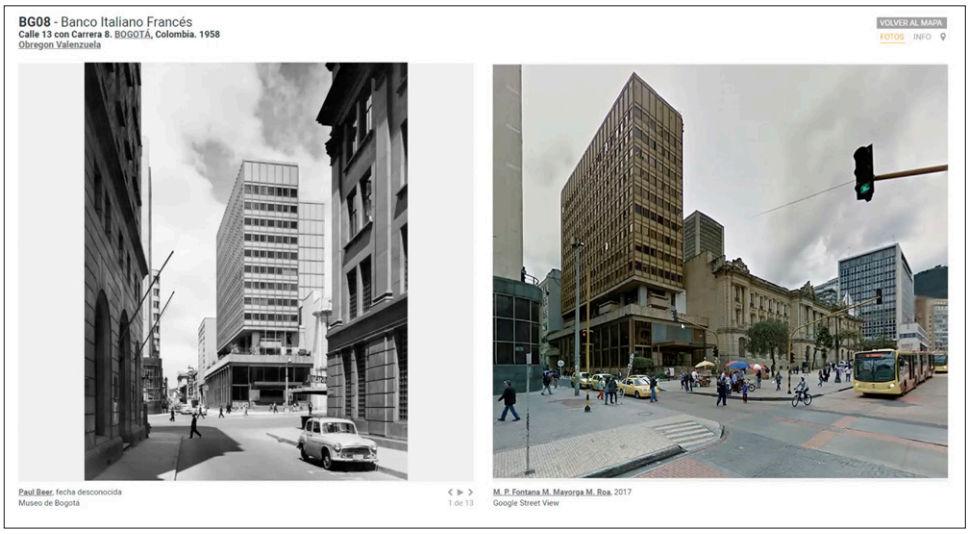




Figure 1. Other of the other. A timeline of research in Modern Architecture in Latin America. This timeline embraces the influence from Latin America throughout the world, yet the eurocentric history of modern architecture in the Americas has not fully explored those influences, often relegating them to a secondary status. ©Fernando Luiz Lara.

Figure 2. Interactive Atlas: brings together a wide collection of relevant buildings for their contribution to the city, conceived between 1940 and 1970, and located in the capitals of Latin America. It uses photography as a form of intellectual and sensitive mediation. ©Cristina Gastón Guirao.

Figure 3. The Catalogue of Architecture of the Modern Movement of Peru takes into account the most representative architectural buildings built and designed between 1945 and 1965. ©Alejandra Acevedo, IDIC Lima - Universidad de Lima.

diversity of cultural expressions, tastes, and perspectives will also become more pronounced.

Moreover, without a comprehensive social consciousness of historical, aesthetic, and symbolic values, the threat to heritage assets will remain latent.

The "classic" heritage evaluation appears marked by cultural significance and intense historical value and its identification may be more straightforward. Without aiming to describe the well-known assessment, but also without excluding valuable foundations, we refer solely to the Nara Document. This document states that the preservation of cultural heritage in all its forms and historical periods finds its foundations in the values attributed to heritage in each era. Thus, it is crucial to have accurate information about the original characteristics of cultural heritage to assess its authenticity thoroughly. Therefore, authenticity is a fundamental factor in evaluating the values of the site or asset and understanding it is vital in the conservation of cultural heritage. Depending on the nature of cultural heritage, its cultural context, and its evolution over time, the assessment of authenticity can be linked to various sources of information. These sources may encompass aspects such as form and design, materials and substance, use and function, tradition and techniques, location and surroundings, as well as spirit and sentiment, along with other internal and external factors. Using these sources helps identify specific aspects of the cultural heritage under examination including artistic, historical, social, and scientific dimensions.

In contrast, when it comes to modern heritage, historical, aesthetic, and symbolic values are not on equal footing, hence evident safeguarding is hindered. Historical values are still under construction, with ongoing research on documentation and cataloguing shedding light on the history of cities and their citizens. In regards to aesthetic values, the focus of the Valuation Workshop, does not rely on a single valuation tool based on checklists or simple comparisons with modern architectural buildings inside and outside the Americas. Instead, the project and its authentic attributes must fully and coherently reflect to its time and circumstances.

However, symbolic values are perhaps the most challenging to construct because their action, while it may be a consequence of the dissemination of the other two, will not be immediate. Symbolic values cannot be assumed or imposed unless society recognizes them as its own.

6. FINAL CONSIDERATIONS

This essay critiques the main ideas through themes that group common threads among the presenters. Without intending to force agreements or disagreements, it aims to interpret possible criteria for modern heritage assessment applicable to Ecuador and, by extension, Latin America. Therefore, the order in which the themes appear is deliberate, and each theme is argued and supported by the presenters themselves. This analysis contributes additional reflections that lead to four fundamental ideas:

1. Evaluating cultural heritage from a broad and multidisciplinary context in order to consider contributions from specialists in various disciplines.
2. Ensuring that strategies for identifying and valuing heritage have a holistic character and are based on evidence that contributes to its cultural and symbolic significance.
3. Recognising the inherent abstraction of modern buildings, understanding that the identification of modern values could acknowledge that architectural projects contain universal criteria that only become specific when rooted in the environment, programme, and contemporary technology, thus carrying an intrinsic cultural component.
4. Analysing modern buildings should consider not only the building itself but also the architect and its social and cultural context, thereby relating it to historical, cultural, and economic aspects and the disciplinary field. ■

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MODERN TERRITORIES AND LOCAL ARCHITECTURES: PERU'S TOURISM HOTELS FROM 1930 TO 1970

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ABSTRACT

Hotel architecture in Peru during the 20th century reflects the impact of modernisation on the country's tourist infrastructure and the effort to balance functionality with local identity and cultural heritage. This approach has enabled hotels to meet the expectations of modern tourists and serve as local embodiments of the cultural identity of the regions where they are situated.

This essay analyses three hotels located in emblematic cities of southern Peru, regions known for their challenges in connectivity and access. These hotels represent advancements in functionality and modern comfort, striking a balance between contemporary architectural innovations and the preservation of regional cultural identity.

These buildings are notable examples of how modern architecture in Peru does not manifest uniformly. Rather than adopting a monolithic approach, Peruvian modernity diversifies into various forms that integrate specific regional elements, reflecting a unique adaptation to local realities. These hotels illustrate how local architects enriched modern architecture to resonate with Peru's unique cultural and geographical context through designs that combine modern elements with traditional and regional features.

1. INTRODUCTION

Cultural heritage and tourism profoundly shape nations' collective imaginations. In the 19th century, the concept of cultural heritage differed markedly from that of today. During that period, heritage was primarily understood as objects and monuments of historical and artistic value, constructing a narrative for each nation-state.

Such a narrative has led to specific regulations to safeguard these sites, recognising them as sources of national pride and heritage in the Peruvian context. This approach became firmly established during the 20th century, playing a crucial role in protecting cultural heritage and focusing on archaeological sites,[1] making it a cornerstone of the country's heritage preservation efforts.

This form of heritage valuation had a significant impact on various sectors, including tourism-related policies. Throughout the latter half of the 20th century, the Peruvian government implemented a series of policies and projects to promote tourism development, including a substantial boost to hotel infrastructure. Between 1933 and 1938,[2] essential infrastructure projects facilitated tourism growth. Notable among these projects were the expansion of the Panamerican Highway and the construction of the Central Highway, which significantly improved the country's connectivity and accessibility.

In this context, the government launched an ambitious hotel plan that included the construction of new hotels, especially in key tourist destinations. This plan aimed to increase the accommodation supply and attract private investment. Expanding hotel infrastructure was a key strategy within a broader effort to modernise Peruvian cities. This initiative capitalised on the growing interest in cultural and archaeological tourism, contributing to the country's economic development and strengthening its image as a premier tourist destination. Moreover, it represented one of Peru's central ideas for modernising hotel infrastructure during the 20th century.

2. TOURIST HOTELS IN PERU: WHEN MODERNITY IS REGIONALISM

The hotel plan represented a significant effort to raise the quality standards in hotel construction in Peru. The initiative aimed to establish technical and aesthetic criteria for new hotel projects and marked the beginning of a modernisation phase in the country's tourist infrastructure. The call for this competition reflected a systematic and professional approach to tourism project planning, emphasising the importance of incorporating technological innovations and functional design in the hotel industry.

In May 1938,[3] the Ministry of Public Works of Peru announced a tender for the design of the Hotel del Cusco, as published in the magazine *El Arquitecto Peruano*.[4] This competition is significant for being one of the first in Peru to be conducted with a rigorous and professional approach, marking a milestone in the history of the country's architecture.

The competition itself and the subsequent construction of the Hotel del Cusco marked a step towards professionalising the hotel sector in Peru.

1. Adriana Arista Zerga, "Notes on the Legal Protection of Cultural Heritage in Peru," *Cultural Heritage and Law* 15 (2011): 77-108, https://dialnet.unirioja.es/servlet/articulo?codigo=3841448

2. Second government of Oscar Benavides

3. "Puntos de vista… El ministerio de Fomento y el concurso arquitectónico," *Revista el Arquitecto Peruano* no. 10 (Lima, May 1938).

These efforts formed part of a broader movement to enhance the quality of tourism services and boost the country's appeal as an attractive destination for international visitors. The modernisation of hotel infrastructure was also crucial for supporting economic growth and tourism development as Peru was beginning to open up more to the world and embrace its cultural and tourist heritage.

After the 1938 Competition for the Hotel del Cusco, the Peruvian government intensified its efforts to develop hotel infrastructure nationwide. This initiative aimed not only to cater to growing domestic tourism but also to attract international visitors, which was when Peru began to position itself as a major tourist destination. The expansion of hotel infrastructure focused on enhancing the quality and capacity of available accommodations to provide services that met the expectations of tourists of the time.

The development of hotel projects expanded to various strategic regions, each with its tourist appeal. This regionalised approach allowed for easier access to multiple destinations, from archaeological sites to natural areas, and contributed to local economic development by generating employment and promoting trade in the surrounding areas. The new hotels began building a distinctive identity as architects and planners discussed integrating modern designs with distinctive regional elements. According to the initial plan, the locations for the hotels were Cusco, Arequipa, Huancayo, Abancay, Ayacucho, Piura, Huánuco, Tumbes, Puno, Huaraz, Chala, Camaná, and Tingo María. The number of rooms ranged between 82 and 8, most under construction, except for Arequipa, which had an awarded contract; Tingo María, with eight bedrooms and six cabins already completed; Ayacucho, which was in the bidding process, and Tumbes, which was in the planning stage.

Martucelli argues that the hotels of the time reflect the profound changes in Peruvian architecture during the first half of the 20th century. These changes included innovations in design and construction and an adaptation of architectural styles to local characteristics.[5] Regionalism in hotel design incorporated architectural elements that highlighted the cultural and regional diversity of the country, offering tourists an enriching experience that resonated with Peruvian cultural heritage.

More than a mere apprehension of European heritage, the neo-colonial style allowed architects to integrate their designs with local urban environments. For some, this choice also helped shape a national narrative based on archaeological discoveries in the country, giving the constructions a historical dimension through a new artistic expression.[6]

Notably, tourist hotels in Peru have evolved in their design by incorporating elements of modern architecture. These hotels initially include neo-colonial characteristics and features on the exterior, while their architectural programmes and interior details adopt modern elements.

Additionally, regionalism played a crucial role in shaping the architectural identity of the hotels. There was an emphasis placed on preserving Peruvian cultural identity in each design through the inclusion of decorative and structural elements that echoed local styles and traditions,

4. Magazine edited by Fernando Belaunde.

5. Martucelli, Elio. "Los hoteles de turistas en el Perú. Y una breve historia del turismo en el país," *Arquitextos* no. 29 (Lima, October 2014).

6. Ramón Joffré, Gabriel. *El neoperuano: arqueología, estilo nacional y paisaje urbano en Lima, 1910-1940*. Lima: Municipalidad Metropolitana de Lima, Sequilao, 2014.

from Indigenous motifs to colonial details, thus resulting in a unique fusion of the modern and the traditional.

The early hotels featured notable neo-colonial characteristics, such as arches, pediments, balconies, and towers, reminiscent of churches due to their visual weight. However, there was a clear awareness that the environments these hotels aimed to offer were ahead of their time. These characteristics are evident in cities like Cusco and Arequipa at first glance.

Over time, some hotels moved away from incorporating neo-colonial elements, and modern features became more pronounced, adapting well to diverse geographic contexts, as seen in hotels in Iquitos, Tacna, and Chiclayo.

This essay will focus on three specific cases: Arequipa, which was one of the first projects and the first built; Tacna, known for its significant advances in modern form during the early construction period; and Ayacucho, a discordant case in the modernisation process, as it was one of the last to be built and featured neo-colonial characteristics.

2.1 AREQUIPA HOTEL

Designed by architects Álvarez Calderón and Harth-Terré,[7] the hotel, inaugurated in 1939, is part of the state-driven hotel expansion policy. This project raises the standard of comfort in southern Peru.

Although the hotel's design incorporates neo-colonial architectural elements, such as pediments and shields on the facade made of *sillar*[8] stone, it also carefully integrates modern features. This combination reflects the architects' commitment to creating a building that offers both identity and quality for tourists, which is evident in the hotel's functionality and comfort at the time.

The choice of location, in the Selva Alegre area on the outskirts of Arequipa, was vital for tourism in southern Peru. It enhanced its appeal and expanded urban growth, and the hotel acted as a reference point for this expansion, thus helping to build a new urban profile at the time. **(Fig. 01)**

The building's exterior volumetry, characterised by solid volumes, recalls contemporary religious constructions and addresses the region's concern for seismic stability. In contrast, the lightness of the green areas and extensive gardens establish a harmonious connection with the surrounding natural landscape.

A notable design feature is the arrangement of rooms, terraces, and courtyards, which offer views of the Misti Volcano, enhancing the guest experience and highlighting Arequipa's regional identity, distinguishing it from other regions. Integrating the landscape into the hotel's modern design shows a remarkable sensitivity to the natural environment.

The hotel's large dining room is also a key component of its design, providing a spacious and functional area that complements the building's character. It is worth noting that the hotel's initial design included 45 rooms. However, due to its growing popularity and high-quality services, an expansion was carried out to meet demand.

7. "Puntos de vista… Ley hotelera y los arquitectos peruanos," *Revista el Arquitecto Peruano* no. 13 (Lima, August 1938)

8. White stone is symbolic of Arequipa, which is an element of authenticity and cultural connection.

2.2 TACNA HOTEL

The Tacna Tourist Hotel, inaugurated on March 31, 1951, during General Manuel A. Odría's government, is located approximately 200 metres from the Plaza de Armas and near the city's financial centre. As a key city on the border with Chile, Tacna received particular attention in developing its hotel infrastructure, and the Tacna Hotel is a notable example of modern architecture in this context.

The design of the Tacna Hotel reflects a precise adherence to the principles of the modern movement, characterised by functionality, simplicity, and innovative use of materials. The hotel's architecture stands out for its expressive tectonic character, emphasising the honesty of materials and structural clarity. The arrangement of volumes testifies to the simplicity and efficiency that define modern architecture, with a form that responds to both functional demands and an aesthetically coherent design. **(Fig. 02)**

Although simple, handling light and treating space show precision to maximise functionality and comfort. Incorporating green areas into the design reinforces the balance between the building and its natural surroundings, complementing the modern philosophy of harmony with the environment.

The hotel features a comprehensive architectural programme, including various rooms, a banquet hall, a bar, a spacious foyer, and a basement with garages and service areas in a separate pavilion. This spatial organisation reflects the efficiency of modern design and offers optimised functionality for users, in line with the flexibility and adaptability principles of the modern movement.[9]

The Tacna Hotel is a prime example of modern architecture. It respects Tacna's cultural and urban traditions while fully integrating them into contemporary design. Its focus on functionality, simplicity in form, and innovative use of materials highlights its relevance within the modern movement and its impact on regional architecture.

2.3 AYACUCHO HOTEL

The Ayacucho Hotel, designed by architect Carlos Silva Santisteban Tinajeros, was one of the first proposed but the last to be constructed and operational. Its design paradoxically combines neo-colonial features with a modern architectural programme.

The Ayacucho Hotel is fascinating due to its location in the heart of the city's historic centre, despite the considerable debate this decision generated.[10] Architect Belaunde had initially suggested placing the hotel on the city's outskirts, like the approach taken in Arequipa, to make better use of Ayacucho's landscapes. However, the regional reality of Ayacucho, with fewer connections and transportation options compared to Arequipa, made this proposal less viable. **(Fig. 03)**

The slow progress in connecting the region with the capital affected the expected flow of visitors, which was initially projected to be 32 rooms. Despite delays in the bidding process, construction, and modifications to the 1944 plans developed by the Ministry of Public Works, the decision

9. "Puntos de vista… Política hotelera. Especial Hoteles de Turistas en el Perú," *Revista el Arquitecto Peruano* no. 174 (Lima, January 1952).

10. "Algo sobre el propuesto hotel de Ayacucho," *Revista el Arquitecto Peruano* no. 81 (Lima, April 1944).

was made to continue with the project at the original location. The few reconsiderations focused on expanding the building and adapting the design to its surroundings. The hotel, located near Ayacucho's Plaza de Armas, was integrated into an area with numerous colonial buildings, and maintained a neo-colonial facade with stone and riverbed pediments, as well as local materials in the entrance porticos and interior floors.

The Ayacucho Hotel seamlessly incorporates Peruvian regional architecture. Located in Ayacucho's historic centre, it reflects the city's rich heritage with its detailed design, blending traditional elements like wooden balconies and adobe walls with modern needs. The hotel's internal courtyards offer tranquillity and natural light, enhancing the guest experience and architectural continuity. It stands as a significant example of integrating historical charm with contemporary functionality.

Urban limitations influenced the planning of the courtyard and terraces, which became vital elements for connecting the building with the surrounding vegetation and urban landscape. Despite the constraints and historical context, the hotel's architectural programme was advanced for its time and now meets modern standards of comfort.

The hotel is currently undergoing renovations to accommodate high tourist demand during significant regional events such as Carnival and Holy Week. **(Fig. 04)**

3. CONVERGENCE OF MODERNITY AND TRADITION: A CLOSING REFLECTION

As the country emerged as an international tourist destination, the need to accommodate a growing number of visitors played a crucial role in renewing and expanding hotel and service infrastructure and indeed, in modernising and updating infrastructure in Peru. This phenomenon led to the construction of new facilities with modern standards of comfort and functionality and the renovation of existing structures to meet expectations. The modernisation of tourist infrastructure revitalised and transformed cities, connecting them in new ways.

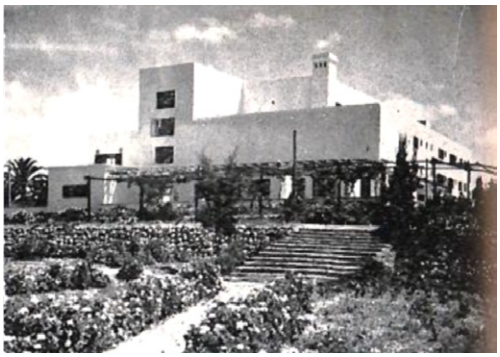
In Peru, the modernisation of hotel infrastructure led to the development of properties that embrace modern principles whilst respecting cultural heritage, with regionalism responding to how a local perspective reinterpreted the modern movement. Rather than applying uniform architectural formulas, modernity incorporated cultural, historical, and environmental elements specific to each region.[11]

Heritage discourses mobilised state policies and shaped perceptions. This approach is apparent in the reimagining of neo-colonial style as a new form of decolonisation, where modern structures serve as a physical manifestation of this reevaluation, as observed in hotels built throughout the 20th century. These examples illustrate how Peruvian architects, through a modern lens, express national and regional identity, creating architecture that is functional, aesthetic, and deeply rooted in the local context.

The three tourist hotels analysed exemplify Peru's evolution in the southern region, showcasing different architectural strategies. The Tacna

11. Velarde, Hector. "Hoteles modernos para turismo," *Revista el Arquitecto Peruano* no. 137 (1948).





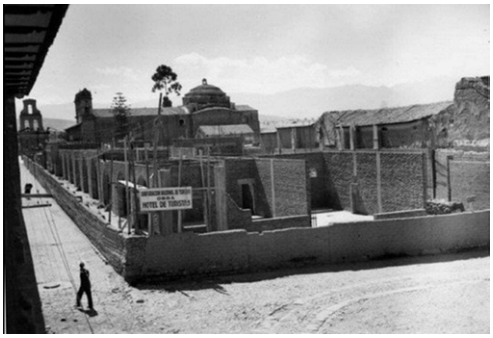




Figure 1. Arequipa Hotel © Credits *El Arquitecto Peruano*

Figure 2. Tacna Hotel © Credits *El Arquitecto Peruano*

Figure 3. Ayacucho Hotel © Credits *Ayacucho Regional Archive.*

Figure 4. Current Photo DM Hotel of Ayacucho © Credits Ilenyd Bravo

Hotel reflects modern architecture in its functional approach and tectonic design while still honouring its cultural identity as a border region. Its integration with extensive green areas and a natural environment underscores the adaptability of modernism in a historical centre. In contrast, the Arequipa Hotel, situated on the city's outskirts, achieves a synthesis by using traditional elements like stone block pediments in a functional design that integrates with the local landscape. Finally, the Ayacucho Hotel grapples with the challenges of dealing with a dense and heritage-rich context, seeking to address the situation that, despite criticism at the time, now makes sense.

Modern architecture, far from uniform and homogeneous, manifests itself in various ways depending on geographic and cultural contexts. While the modern movement promoted functionality, simplicity, and technological innovation, local perspectives have given rise to multiple forms of modernity reflecting regional particularities. In Peru, this plurality of modernities is in convergence, where regionalism acts as a local expression of modernity, perceived as an evolution that respects and represents the characteristics of the Peruvian environment. In this way, it contributed to an architecture that was not only functional and aesthetic according to modern principles but also culturally resonant and significant to the local population. ■

BIOGRAPHY

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SITUATING INDIAN ARCHITECTURAL DISCOURSE: TRANSNATIONAL NETWORKS OF LATE MODERNISM

SAURAJEETA BOSE PAUL
POLITECNICO DI TORINO

ABSTRACT.

Following independence, India's architectural development was fostered through transnational professional collaborations and international aid. MARG, established in 1946 (Modern Architectural Research Group) inspired by the contemporary MARS (1933-1957) group, published an eponymous magazine which engaged in dialogues with CIAM and later TEAM 10 through the contributions of Minnette di Silva, Otto Koenigsberger, B.V Doshi in the 1950s. At the same time, internationally educated Indian architects such as Achyut Kanvinde, Habib Rehman, and Charles Correa held positions of power in the government as well as on the editorial boards of other publications formulating a modern vocabulary for public infrastructure.

While the existing literature on Indian architecture highlights the contributions of notable architects, it overlooks the deliberations that occurred within the architectural community. Publications such as the *Journal of Indian Institute of Architects (JIIA)* and *MARG* were instrumental in advancing architectural discourse, highlighting the relationship between indigenous techniques and the incorporation of "modernism" in India. Publications such as *Design* and *The Indian Architect* were established later to address the technical aspects of the construction industry while connecting international design debates to the Indian context.

The 1959 Seminar of Architecture in Delhi marked a significant turning point for Indian architectural discourse because it challenged the validity of the modern movement in India. This shift in architectural vocabulary was driven by the discourse revived by the publications to mark the shift of Indian modernism while challenging the notion of critical regionalism. This paper delves into the discourse regarding "modernisation" in India through the lens of the specialised press, highlighting the institutional and professional collaborations which shaped it post-CIAM i.e. 1957-1969. This research connects discourses across publications to present the transnational exchanges that impacted the development of identity in post-colonial India. The paper also examines the Indian publications as a critical space for discourse building upon Beatriz Colomina's "Little Magazines: Small Utopia."

1. INTRODUCTION

20th-century architecture in India bore witness to several movements and figurative transitions, comparable to that of Western countries, particularly from 1947, i.e. post-independence. This period saw the proliferation of the International Style, brought about by Nehru's vision of a "modern" India defined by science and technology and ethics of secular humanism. The inheritance of centralised policy making and technocratic paternalism from the British along with the European socialist democratic model for industrial modernisation, combined with American funding and co-operation[1] led to an adaptation of a different notion of modernity in India.

The adaptation of the International Style in India resulted in a nationwide construction process discussed through multiple channels such as the radio, exhibitions, and seminars. The dynamic flows of knowledge were driven by the dual nature of exchanges originating from the architects trained in the West and the presence of foreign investors and industries in India. This exchange is visible through the study of architectural periodicals such as *MARG* (1946 - to date), *Journal of the Indian Institute of Architecture* 1932- to date, published in Bombay and *Design* (1957-88), *The Indian Architect* (1959 – 1986) based in Delhi. These publications were entirely in English, including the advertisements, showcasing the influence of Anglophone countries.

In 1959, a significant shift occurred in the world of architecture and history. The death of CIAM marked the end of an era and the move towards a more "contemporary" style to address the failures of "modernism".[2] This shift in global politics with the advent of the Cold war, and India's involvement in the Non-Alignment Movement (NAM) in 1961 also led to distancing itself from the western ideology of modernism, which was accompanied by the rise of regionalist tendencies and adaptation of a more historical and contextual approach to the built environment. Although 'post-modernism' is not a term directly applied to Indian architecture in the 1960s, the influences of the global debate can be seen through the reassessment of the printed media and exhibitions of that period.

This study of India's discourse on modernism and the international influences through architectural periodicals highlights the intertwined relationship between architecture and media from 1957-1969. The research attempts to unravel the discourse behind the development of 'post-modern' or 'critical regionalism' in India and its connection to the search for an 'Indian Identity' of post-colonial India. Other questions also arise such as what the nature of the international exchanges during the chosen period signify and can these publications be classified amongst the Little Magazines framework proposed by Beatriz Colomina in "Little Magazines: Small Utopia."

2. FRAMEWORK

The little magazine was defined as "a space for new ideas, led by a guiding spirit, trying to make one point, and usually representing an institution at its most iconoclastic",[3] by Denise Scott Brown in "Little magazines in Architecture and Urbanism." A critical analysis of Indian publications

1. Scriver, Peter, and Amit Srivastava. India: Modern Architectures in History. Chicago: The University of Chicago Press. 2015.

2. Laurence, Peter. "Modern (or Contemporary) Architecture circa 1959." In A Critical History of Contemporary Architecture. Farnham, Surrey : Ashgate Publishing, 2014

3. Denise Scott Brown, "Little Magazines in Architecture and Urbanism," Journal of the American Institute of Planners 34, 4 1968: 223–233. 40.

in the mid-1960s shows a period of littleness, through the nature of its communication and discourse. This research builds upon Beatriz Colombia and Craig Buckley's *Clip, Stamp, Fold: The Radical Architecture of Little Magazines, 196X to 197X*, and Veronique Patteeuw's *Architecture, Writing and Criticism in the 1960s and 1970s* to re-examine the sites of architectural production in India in the period 1959-1969.

The existing literature mainly focuses on architectural publications and spaces in Europe, America, and Australia. The representation of Southeast Asian publications is non-existent in the discourse, and only recently has the role of architectural periodicals in the development of modernity in the Global South been brought to the fore through articles such as Maristella Casciato's "Scienza e arte dell'architettura: due riviste nell'india di Nehru," 2012 and Devika Singh's "Architecture and Media" in the 2022 exhibition and eponymous publication *The Project of Independence: Architectures of Decolonization in South Asia, 1947-1985*. While publications such as *MARG* and *Design* are highlighted, the oldest and singular institutional journal, *JIIA*, is ignored. Similarly, *The Indian Architect* receives no attention even though it had global subscriptions and contributors.

This research[4] has a two-fold approach. The first part involves investigating the biography and anatomy of the selected periodicals to delineate the thematic and diachronic spaces of discourse. The second step examines the periodicals and their interconnections as a system of knowledge, constructed through the textual and visual content. For discourse analysis, Grieg Chrysler's *Writing Spaces - Discourses of Architecture, Urbanism and the Built Environment* is taken as a reference to build the framework for understanding the nature of the publications. The analysis of the discourse places the magazines as a space of knowledge, each with its own politics of writing and expression of built form. The hypothesis to be tested is the eligibility of the periodicals to be classified as "little magazines" and if the space provided for dissent and provocation through them was significant.

To gain a comprehensive understanding of the nature of transnational architectural exchange and discourse post-CIAM in India, three publications *The Indian Architect*, *Design*, *Journal of Indian Institute of Architects*, from the period of 1957-1969. Are selected. These three magazines are significant as they allow for a cross-sectional interlink between theoretical discourses of institutional publications, trade publications and the "little" magazine. The editorial board, contributing authors and the content of the magazines are analysed to identify the connections established though the journals.

3. THE PERIODICALS AND THEIR REPRESENTATIVE INSTITUTIONS

The *Journal of Indian Institute of Architects* is an institutional publication issued by the Indian Institute of Architects and has been in circulation since the 1934. As it was an institutional journal, it mainly reported on the internal occurrences and events of the IIA, publishing reports of its annual meetings,

4. This paper is a continuation of my master's thesis supervised by Prof. Paolo Scrivano and Gaia Caramellino at Politecnico di Milano.

and the various talks given by its members on other platforms. The Journal had positioned itself as the only direct link between the Institute and its readers, differentiating itself from the other publications present during that period. This journal was subscription-based only for the members of the association. This periodical was closely associated with the *RIBA Journal* and its impact could be seen through its structure and contents.

The Indian Architect was first published with the intention of sharing technical knowledge on the Indian sub-continent, and to function as a forum where architects and engineers could exchange notes. This magazine could be termed as a "little magazine" due to the critical nature of its editorials, and the self-publication nature. This magazine catered to architects, town planners and construction engineers, as stated on its title page.

Design which was later rebranded as *Design: incorporating Indian Builder* was launched in Delhi in 1957 by Patwant Singh, to combine the fields of architecture, urban planning, visual arts, graphics, and industrial design. This magazine, as a successor to *Indian Builder*, had a clear ambition to bridge the reputed gap between the artistic and the mundane. This magazine is highly regarded because of the editorial board, the diverse nature of its contributors, and its critical stance against the political and institutional stances of that period.

4. SITUATING THE DISCOURSE IN THE "POST-MODERN" TIME

The 1953 CIAM IX meeting marked a split in the ideals of the group, which came to the fore in 1959 with the disbandment of the same. The notions of identity and association with physical form propagated by Allison and Peter Smithson, later TEAM X, also had an impact in the Indian subcontinent, with the discourse shifting away from the "modernist" trope followed by Corbusier. The deliberations occurring worldwide were also broadcast in India through various seminars and radio talks, which were then reported in the periodicals. Some of the essays and speeches presented by prominent architects were also published through collaboration with other institutions. This paper studies the nature of the deliberations of the articles along with the editorials to present a comprehensive discussion.

A quantitative analysis of the contents of the magazines shows that urban planning, modernism and its identity in India and international articles made up the largest volume of discourse in each magazine, followed by education and profession. Mapping reveals the networks through which knowledge was exchanged and established.

4.1 TRANSNATIONAL EXCHANGES AND EXPOSURE

From an editorial standpoint, Design was the most international in its character by virtue of its editorial *board* which consisted of prominent figures such as Nobuya Abe, Marcel Breuer, Charles Fabri, Seigfried Gideon, Walter Gropius, A.P Kanvinde, Richard Neutra, Gio Ponti amongst others. The content of the magazine, as well as its contributors, had an equally international outlook, with commentary on events such as the World Fair

1967 (Montreal). The section on Art was also significant in this aspect as it reported multiple international exhibitions and an association of MoMA through the articles of Bernard Rudofsky, Allen S. Weller. The influence of art in architecture was also a focus of the magazine as it called for a reevaluation of the current strategies of urban development.

The *JIIA* on the other hand was affiliated with the Royal Institute of British Architects (RIBA) thus influencing its publishing style and content. The Journal, as the only direct link between the Institute and its readers, was quite vocal about its relation and the importance of counterpart institutions such as RIBA and the IUA (Internation Union of Architects) in Indian architectural education and practice. the organisation had an insular nature, as it only published articles by its members,[5] thus limiting itself. The major theme of the international articles was European examples of town planning and industrialisation, gradually shifting to an introverted stance in the mid-1960s. A vocal protagonist of this publication was L.M Chithale, who reported on the preview of the film *The New Age of Architecture* by the editors of the Architectural Forum, New York, in an effort to broaden the American influence on Indian architecture. The contribution of the USSR can also be observed through multiple articles on architectural education, but it failed to change the mainstream education system.

The Indian Architect had a large international presence, both in its circulation as well as the content it published. The magazine took on a more nuanced perspective towards the contribution of foreign architects in India, particularly through built projects such as embassies in Delhi (January 1960), through the review and role of exhibitions such as the World Agricultural Fair (February 1960), etc. The magazine also published articles from other international sources such as the A.I.A journals, RIBA lectures, and articles by eminent architects like Philip Johnson, Paul Rudolph, Juhani Pallasma. The magazine, in July 1963, dedicated an entire edition to international innovative schemes, highlighting the current mindset on contemporary architecture in Europe to inspire Indian architects. Additionally, the magazine featured reference sheets of construction details and global standards, international book reviews, and news about exhibitions and conferences worldwide to keep the audience informed of events around the world.

A major intention of the publication of the international articles in the periodicals was two-fold: first, to inspire the search for appropriate design techniques and technologies in India, moving beyond aesthetic requirements and towards a more contextual approach towards implementation of modernism in India. Second, it sought to create a platform for discussion amongst the fraternity and link Indian architectural discourse to a broader audience. Mapping the places referred to in the articles highlights the close connection of *JIIA* with the U.K., *The Indian Architect* and *Design* was very international in its publication, publishing articles from both the first and second-world power blocs.

5. The IIA had over 600 members in 1959, growing to 1750 members in 1965. Currently, there are nearly 29,000 affiliated members of IIA, and 127,202 registered.

4.2 POST-MODERNISM / CRITICAL REGIONALISM OR SIMPLY APPROPRIATE ARCHITECTURE

The revivalist stance of the *JIIA* was expressed through its editorials and articles by L.M Chithale and M.K Jadhav in 1958, where they called for the need for a coherent architectural policy and the need for technical education to include critical thinking. The editorial board took a critical stance against the adaptation of Western stylistic influences and argued for a nuanced solution to building in India. These deliberations came to the fore in the 1959 Seminar for Architecture, where multiple topics including national policy for architectural expression, the role of architect in society, the effect of climate on building strategies, art and architecture, and the role of civic design and urban aesthetics were discussed highlighting the shift of the intellectual discourse away from the "modernist" trope followed in the last decade.

The impact of the seminar was also reflected in the editorials of the periodicals in the 1960s. For instance, Mulk Raj Anand in *The Indian Architect* stressed the need to rethink the relationship of architecture and its context, its discovery and situatedness, leading to new forms. Multiple editorials touched upon the topic of designing according to climate and weather, especially in India bemoaning the current unsuitable styles adapted in the name of "modernity" continuing onto the section "Designing for the Tropics". *Design* also reflected on the outcomes of the 1959 Seminar proposing "identifying the problem areas in India and directing the limited resources to them"[6] and to develop organisational patterns which respond to the needs of the times and self-correcting based on operations. The editorial also noted that there was little that India could borrow from other countries, except the experience of what to avoid in urban development and architecture.

Towards the end of the 1960s, the discourse had shifted towards low-cost housing typologies and domestic architecture such as residences from across India and the world. The shift from the search for appropriate tectonics and form towards fulfilling the basic need of housing was also driven by the two periods of war and recession which India faced in the 1960s, along with the curtailment of American aid. In the early 1970s, an article on contemporary Indian architecture was published by *The Indian Architect*, which highlighted the new language of robustness and functionalism along with the use of new materials in erstwhile cities of Bhopal, Bangalore, Hyderabad, and Bombay which heralded the direction contemporary Indian architecture was taking. *Design* was very active in representing the dynamic nature that Indian architecture was taking in the 1960s. They published the work of young upcoming architects such as the Design Group, Uttam Jain, Jeet Malhotra and important projects across the country to provide a forum for discussion and to showcase the diverse production across the country.

A major topic of discourse was the proposed Masterplan for Delhi, which was derided for its lack of coherent vision, resulting in a "neurotic, nervous and scarred city".[7] The discourse on urban planning revolved around the recent exercises in urban planning carried out in Chandigarh, Durgapur, Bhubanaeshwar, while referencing historical cases such as Jaipur and

6. Singh, Patwant. "Editorial: How to Succeed in Destroying Beautiful Cities without Really Trying." Design, 1963.

7. Singh, Patwant. "Editorial: How to Succeed..."

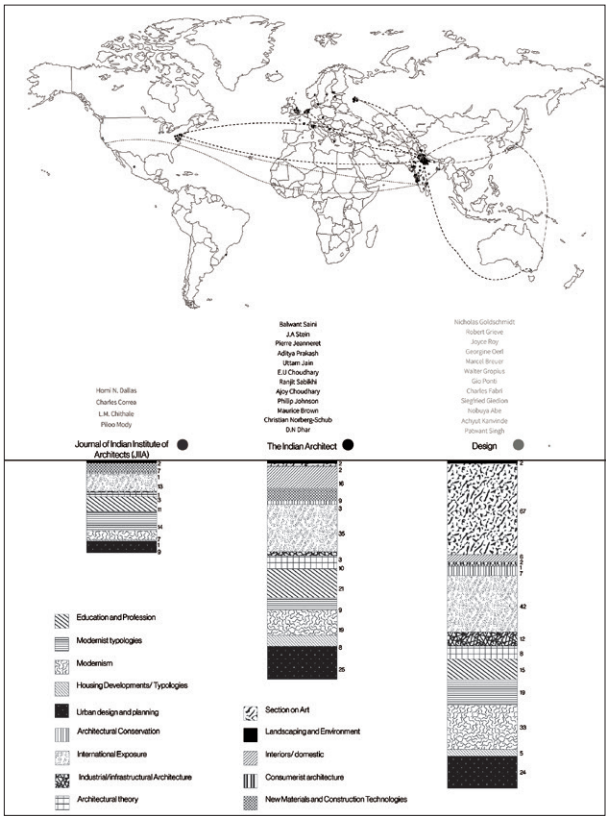


Fig 1: Chart showing thematic analysis of articles and their mapping.



Fig 2: Selection of articles highlighting international exchange and discourse related to search for appropriate form.

Fig 3: Positioning as "Little Magazines."

Fatehpur Sikhri. The aspect of climate and town planning was also addressed through a series of articles "Shopping centres in the Tropics", "Street pattern and orientation of Housing estates in the Tropics," by *Interim Plan*.

The shift towards a more contextually appropriate architecture and urban planning for India could be observed in all the periodicals, albeit focusing on different aspects. The outcome would later be considered as post-modern or critical regionalism by Western academics, a stance which is contested.

5. CONCLUSION: POSITIONING THE PERIODICALS AS "LITTLE MAGAZINES"

"Little magazines were defined as something that functioned as a networked, interactive and international platform for experimental design and discourse".[8] This, along with the self-publication, small circulation and ephemeral nature of the selected periodicals would justify its inclusion in the framework.

The importance of *JIIA* was strengthened in the 1960s during which it had become a monthly publication. However, the content of the magazine had been

8. Colomina, Beatriz. "Little Magazines: Small Utopia." In Las Revistas de Arquitectura (1900-1975): Crónicas, Manifiestos, Propaganda, 13–20. Pamplona: Escuela Técnica Superior de Arquitectura Universidad de Navarra, 2012

reduced to just a mouthpiece of the institute, rather than that of professional information due to the limitation of contributors to only members of IIA, restricting the variety of content it could publish. Additionally, the reluctance of the editorial board to acknowledge the views expressed in the journal as that of the Institute was quite contradictory to their role as the link between the Institute and its members pushes this journal to its current non-existential importance and cannot be positioned as a "little magazine."

Although a technical magazine, the articles and reviews published in *The Indian Architect* took on a critical stance. The magazine also published reviews of the preceding years, addressing topics such as housing, architectural profession and education regulations, and political shifts and complimented them with articles looking towards the future, such as "industrialisation" and "moving forward". While it was supported by subscriptions and advertisements, it was a monthly publication with reporting on technical advancements and news across the world through its reference sheets.

Design shifted towards a stronger critical stance in the mid-1960s as opposition to the political scenario and unrest of students, the ineffectiveness and "tunnel vision" of policy makers, the expression of architectural elements and design, and the rudderless direction of architectural education. It also published a vibrant discourse on art and architecture from across the world. The covers presented a bold visual character compared to the other publications of that period. The content published in T*he Indian Architect* and *Design*, with its diverse nature of contributors and editorials, positioned it as a platform for discourse and debate, justifying its position as an infrastructure for hosting change. ■

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BIOGRAPHY

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CHANGE TO PRESERVE. A CONSERVATION STRATEGY FOR TASHKENT MODERNIST HERITAGE

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ABSTRACT

This paper discusses how to balance the needs of preservation, enhancement and use of the Modernist Architecture of Tashkent, the capital city of Uzbekistan. It is by now widely acknowledged that preservation is to be intended as management of change rather than strict conservation. A sustainable preservation implies reducing waste by conserving as much as possible, while adapting the existing structures to meet the evolving requirements of use. To this end, it is essential to acquire a thorough knowledge of the building, hence to identify the most significant features that need to be retained. Using this approach, the authors demonstrate the process of analysing a building and developing an effective conservation strategy that integrates preservation and managing change.

1. INTRODUCTION

Change is an inherent aspect of human existence. Throughout our lives, we go through innumerable changes, and while we change as individuals, the environment we live in transforms with us. The very concept of cultural heritage was somewhat conceived as a countermeasure against constant change. In a world filled with uncertainty, the legacy of the past represented a lifeline to hold on to, and an essential means of understanding ourselves. As time went by, the past kept extending, and the amount of objects of cultural significance consequently increased. However, the gradual expansion of the list of cultural heritage objects is not merely owed to the passing of time. Changes in the socio-political and cultural context, in particular those that happened in the aftermath of World War II, came to redefine the very concept of cultural heritage, making it more inclusive. If until then, cultural heritage mostly comprised individual monuments extrapolated from their context, the issuing of the Venice Charter[1] and, later on, of the Declaration of Amsterdam,[2] brought about new perspectives. Today, it is widely accepted that human interaction has influenced the entire environment, making almost anything eligible to be considered heritage. The subtext is that heritage values are not static: cultural identities continue evolving as they are formed by values that are passed down and continually redefined across generations. In recent years, this process has brought recognition to the architectural heritage of the Modern Movement, which has often been included in national, if not international, lists of protection. It goes without saying that it is not only the definition of cultural heritage that has changed. The approach to conservation itself has been substantially revised. Whereas the "conventional" approach tended to value the material fabric of a monument the most, recent theories have come to recognise a more comprehensive set of values. This shift is based on the acknowledgement that heritage is important not only to conservation experts but to the whole community and that people in society attribute different values to heritage.[3] Consequently, the complete rejection of any transformation has often been replaced by the acceptance of controlled modifications, provided that the latter do not compromise the significance of the building itself. To this end, new conservation practices have been developed. Among others, the one proposed by the Burra Charter "advocates a cautious approach to change: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained."[4] It is self-evident that assessment of values plays a central role in this process, as cultural significance is the main driver of conservation, intended as "an integral part of good management of places of cultural significance".[5] We can therefore state that the management of cultural heritage is the management of change, and the operative tool to support it is the Conservation Plan.

The Tashkent Modernism XX/XXI research,[6] hereinafter described, has been based on these principles.

1. International Charter for the Conservation and Restoration of Monuments and Sites (Venice: ICOMOS, 1964).

2. The Declaration of Amsterdam, 1975.

3. James S. Kerr, *The Seventh Edition Conservation Plan* (Australia: ICOMOS, 2013).

4. Australia ICOMOS Burra Charter, 2013, p. 1.

5. Burra Charter, p. 3 (Art. 2).

6. The Tashkent Modernism XX/XXI research has been commissioned and supported by the Art and Culture Development Foundation of the Republic of Uzbekistan, and has been carried out by an international team composed of GRACE (studio of architecture), Politecnico di Milano (Department of Architecture and Urban Studies), Boris Chukhovich (independent architectural historian), and Laboratorio Permanente (studio of architecture).

2. TASHKENT'S MODERNIST HERITAGE

The rich modern heritage of Tashkent testifies to the complex history of the city, which, having been at the crossroads of cultures for centuries, is characterised by multiculturalism and vivacity. Due to its geographical location, the capital city of Uzbekistan has always been one of the most important centres of Central Asia. This became all the more true in the second half of the 20th century, when Tashkent achieved the status of the fourth-largest city in the Soviet Union, after Moscow, Leningrad and Kiev. As a result of the aforementioned, Tashkent was identified as the best candidate to both showcase the Soviet-East to the USSR, and to the rest of the world and to become the Soviet gateway to Asia. This situation called for the design of a new city "representative of the growing socio-political and cultural importance of Tashkent."[7] The latter thus became a testing ground for social and urban experiments, which were suddenly catalysed by the violent earthquake that occurred on April 26, 1966.[8] The devastating event nearly levelled the core of the old city, providing the sought-after opportunity of modernisation. Urban planners decided to organise the new city centre as a system of ensembles, each characterised by a specific role such as administrative/governmental, educational, cultural, etc. For the most part, Tashkent modernist architectures have been designed and built after the earthquake, as an integral part of the reconstruction plan of the city. While representative of those specific urban functions, these architectures were also made use of by planners to effectively manage urban nodes and structure the city, indissolubly connecting them to the urban fabric **(Fig. 1)**. Their prominent placement creates interesting perspectives, making these buildings important landmarks. In line with the international Modern Movement, Tashkent's modernist buildings were also characterised by a certain amount of novelty. This particularly refers to technological solutions, as new materials and construction techniques were tested. Experimentation was also applied in the implementation of climate mitigation systems, as well as in the research on seismic resistance. The most fascinating aspect of Tashkent modernism, however, lies in the balanced mixture of features drawn from international/Soviet modernism and those referring to oriental tradition, which generated hybridisations in terms of settlement, typologies and decorations, making these architectures unique.

Unfortunately, Soviet modernist architecture in Tashkent is facing significant challenges similar to those of modernist heritage worldwide, if not worse. The delayed recognition of their value has caused the demolition of several of Tashkent's modernist buildings. Many others have undergone substantial transformations, which have often irreversibly erased their original architectural features. The commissioning of Tashkent Modernism XX/XXI research shows that the time is finally ripe for re-evaluating the recent past and its legacy. The inclusion of several modernist architectures on the list of tangible cultural heritage of Uzbekistan[9] is an important step in this direction, and it entails the need to develop a conservation strategy, capable of retaining the newly acknowledged significance of this heritage.

7. A.I. Vanke, et al, *General'nyj plan razvitiia Tashkenta* [General Plan for the Development of Tashkent], 1967.

8. Paul Stronski, *Tashkent: Forging a Soviet City, 1930-1966* (Pittsburgh: University of Pittsburgh Press, 2010); Philipp Meuser, Seismic Modernism. Architecture and Housing in Soviet Tashkent (Berlin: DOM Publishers, 2016).

9. A first batch of modernist buildings was included in the National List of Real Estate Objects of Tangible Cultural Heritage in 2019 (Resolution of the Cabinet of Ministers of the Republic of Uzbekistan no. 846 of October 4, 2019). Further twentieth-century buildings were added to the list in 2024, together with 154 modernist mosaics (Resolutions of the Cabinet of Ministers of the Republic of Uzbekistan no. 227 of April 22, 2024 and no. 154 of March 25, 2024).

3. ASSESSING THE SIGNIFICANCE OF TASHKENT MODERNIST HERITAGE

Given that a large part of Tashkent was built from the ground up following the 1966 earthquake, the first important task was to select representative buildings for preservation. Firstly, it was decided to exclude mass housing and standardised constructions to focus on unique public buildings. At this stage, forty architectures were under consideration. To further narrow the list down, a preliminary assessment was undertaken. Evaluation criteria included the authenticity and integrity of the buildings. After the collapse of the Soviet Union, several Tashkent modernist architectures were radically transformed as a result of cultural and political shifts, as well as their alterations in use. Those buildings that were changed beyond recognition were eliminated and for the remaining buildings, other aspects were considered. These included the relevance to the local community, professionals and institutions, the willingness of owners to cooperate, and the availability of information. At the end of this process, twenty-five buildings were short-listed to be analysed within the scope of the research.

It is, by now, widely acknowledged that in order to design any conservation action, it is essential to acquire a thorough understanding of the building. This is all the more important when choosing to adopt a value-based approach, such as that which is promoted by the Burra Charter. The building has to be scrutinised from every perspective in order to assess significance in the most comprehensive and accurate way possible. It will indeed be the elements of significance, whether tangible or intangible, that inform decision-making and define the conservation strategy.

To this end, a series of studies were initiated, encompassing archival and historical analyses aimed at tracing the construction history of the buildings, on-site inspections coupled with visual and instrumental investigations to assess their state of repair, interviews with technicians involved in their maintenance to gather information on the latest issues and interventions and so on. The comparison between historical photos and current ones, as well as that between the original blueprints and the as-built, has been particularly helpful in identifying changes that have occurred throughout time and therefore, to assess the authenticity and integrity of the buildings.

Based on the data collected, a statement of significance was drafted for each building. Note that the statement of significance is not a history or description, but a concise summary of a place's cultural importance. It highlights each significant aspect, emphasising the most critical ones, to support decisions regarding its protection and management.

Accordingly, the statement of significance has been supplemented with some operational tools and, in particular, with what we called Levels of Significance. These levels consist of three different categories of elements. The first category (Maximum Level of Interest) includes those features that are of the utmost importance and need to be carefully preserved to ensure that the significance of the building is fully retained. This entails that these elements cannot be transformed in any way, and that conservation activities are required.

The second category (Medium Level of Interest) comprises elements of secondary importance, which, as necessary, can be modified following approval by a designated committee of experts.

Finally, a third category was dedicated to the so-called Hidden Modernist Features. The latter gathers those modernist characteristics of the building which have been reversibly transformed or have been concealed but still exist and could be reinstated contributing to a better understanding of the original design. This last category, more than the others, raises the question of managing change. The transformations that have led to the elimination or concealment of the buildings' modernist features have often been driven by practical needs regarding their use. Sometimes, they have occurred to adapt the buildings to a renewed architectural taste, or in an attempt to reclaim these buildings, which, as a Soviet legacy, have generated mixed feelings for some time.

In addition, the analysis of the buildings portrayed an extremely varied scenario. The twenty-five buildings proved to be very different from each other in terms of function, use, authenticity and integrity, and state of repair.

Addressing this situation obviously required decisions on a case-by-case basis, consistently adhering to the guidance provided by the statement of significance. By balancing the needs of preservation, enhancement, and use, a catalogue of possible strategies was created, demonstrating how conservation often entails change and, conversely, sometimes change is worth preserving.

4. CONSERVATION STRATEGIES

Given that change is unavoidable, we can confidently state that all the buildings analysed within the research have undergone change, if only as a result of the deterioration owing to the passing of time. Buildings that have changed the least are, however, those that, although highly authentic, are in the worst state of repair, which has often come to affect the use of the building. The extreme case is that of the Palace of Aviation Constructors, a cultural centre highly valued by the local community which, due to a prolonged lack of maintenance, has become unsuitable for use and risks being abandoned.

The most common situation, however, is that of buildings that were kept in use, thanks to transformations. This is the case of the State Museum of the History of Uzbekistan, formerly known as the Lenin Museum. Inaugurated in 1970 to celebrate the centenary of Lenin's birth, the building embodies the typical modernist theme of floating volumes. The museum was originally notable for its lightness, which straightforwardly referred to the transparent architecture of the 1960s **(Fig. 2)**. While the building has largely retained its original features, some minor or reversible changes have occurred. The most significant change has affected the transparency of the façades, which is currently lost. During the renewal of the exhibition in the 2000s, opaque panels were installed along the internal perimeter of the building, completely blocking the view to the outside, as well as incoming and outgoing light. The original transparency was extremely valuable and essential to the overall significance of the museum on a conceptual and architectural level.



Figure 1. Map of Tashkent indicating the location of the city's most interesting modernist architecture. ©Michela Barazzetti, and Laura Codilupi. "The Lenin Museum in Tashkent: A Soviet Architecture in Central Asia," Master's thesis, Politecnico di Milano, 2022.

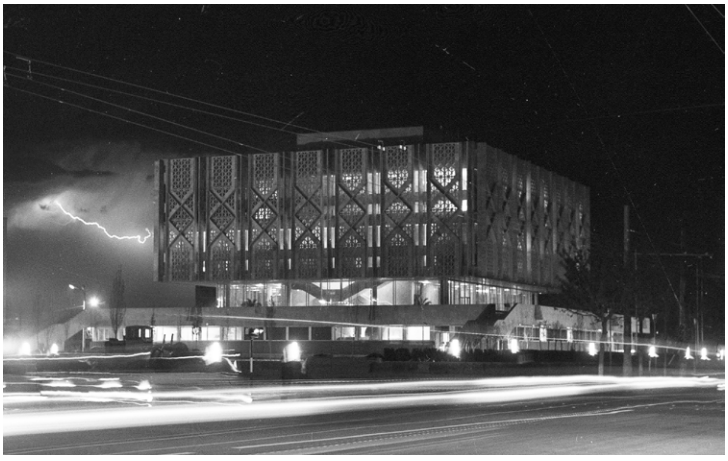


Figure 2. Night view of the State Museum of the History of Uzbekistan before the 2000s renewal of the exhibition. Notice the transparency of the facades, which is now lost ©Arkhiv kinofotodokumentov RUz, 1-37518.



Figure 3. Zhemchug residential building unfolded elevation. Comparison between the original inner façade (1985) and the current one (2022). ©Gianluca Maggio. "Living in the Post-Soviet Modernism: Zhemchug 'the Pearl' Modernist High-Rise Building," Master's thesis, Politecnico di Milano, 2023.

The proposed conservation strategy therefore aims to restore this hidden feature, re-establishing visual connections and the original lighting. This operation will involve redesigning of the exhibition, which will also provide the occasion to upgrade the museum's visitor's facilities, such as adding a café, and a bookshop, etc., aligning them with international standards. This will obviously need to be done without impacting the significance of the building while possibly enhancing its interpretation.

The Zhemchug high-rise residential building is another interesting case. Labelled as an experimental building since its very conception, it aimed to decline the qualities of the traditional Mahalla[10] in a contemporary manner. Experimentation, nonetheless, went beyond the field of sociology, extending to construction techniques. At a time when prefabrication largely prevailed, Zhemchug was built entirely using the sliding formwork system, blending in perfectly with the post-earthquake reconstruction efforts. Throughout the last forty years Zhemchug has undergone several transformations, affecting both the exterior and interior of the building. While the former are minimal and mostly reversible, the latter are more significant and permanent. Residents of the Pearl have taken full possession of the building, modifying and decorating the interior courtyard façades according to their personal taste **(Fig. 3)**. Some even expanded their homes by occupying the perimeter areas of the common courtyards. These interventions have significantly altered the original appearance of the courtyards, but at the same time, they have demonstrated the partial success of the vertical mahalla concept. Thus, the changes within the building can be viewed as a sign of Zhemchug's vitality and as a value worth preserving.

The preservation strategy developed for Zhemchug proposes a two-pronged approach, addressing the different levels of transformation of the building's interior and exterior. For the exterior façade, the goal is to reverse most changes to achieve an overall appearance close to the original. Conversely, the changes within the interior will be accepted and preserved, while protecting the most significant architectural features, which have retained a satisfactory level of authenticity.

This solution will continue to foster use, which is the first and most important guarantee of conservation, while preserving and enhancing the cultural significance of the building, both in its tangible and intangible forms.

5. CONCLUSION

The aforementioned strategies are an example of how conservation can at times be achieved through controlled change. Planning the future of a heritage building, through developing a Conservation and Management Plan, implies prefiguring possible future scenarios and preventively address any issues, even through changes when necessary. This will make it more likely to avoid reaching situations where there is no room left for decision-making, as this could cost the building its significance, either partly or totally.

"Change to a significant place is inevitable, if only as a result of the passage of time, but can be neutral or beneficial in its effect on heritage

10. The Mahalla is the traditional, community-based and self-governing neighbourhood typical of Central Asia.

values. It is only harmful if (and to the extent that) significance is eroded."[11] Conservators should thus start seeing themselves as positive changemakers who drive change instead of being passively subjected to it. In the long run, this approach will enable preservation much more than remedial conservation. ■

11. Paul Drury and Anna McPherson, eds. *Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment* (London: English Heritage, 2008).

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SHARED MODERNISM AND HERITAGE IN LATIN AMERICA AND AFRICA: CHALLENGES OF SHARED AND CONTESTED HERITAGE

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ABSTRACT.
This paper foregrounds a roundtable that has as its context the shared history of contested modernism in both Latin America and sub-Saharan Africa. It challenges the canon that posits that the evolution of modernism, in Eastern Europe and its transfer to the US and the West, since the disepersal of key architects during WW2 as providing the official 'origin-story' of the modern movement. It instead aligns its arguments more closely with more recent research which suggests that indigenous elements such as the coboga blocks and mashrabyya screens, that have longer historical traditions and local indigenous origins that have been incorporated or appropriated into our understanding of the features and reading of modernist /international tropical design. Examples of this are the idea that louvres and screen walls are 'modernist' elements without the recognition that they have much older cultural-creative histories in Latin America and Africa. This paper and roundtable propose that the genesis of international style tropical modernism, has a longer genesis than critical regionalism and other concepts coined in the late stages of the 20th century. It debates two key linked questions: Firstly what constitutes modernism and modernity in Africa and Latin America? Secondly what are the uniting challenges there are in our engagement with and conservation of tropical modernist buildings and landscapes in Africa and Latin America, considering our shared climate and cultural heritage? Its sub-questions consider the following: 1. How can we constructively examine this transatlantic link, that both defines and distinguishes these two major continental masses? 2. Can we identify shared physical as well as clear cultural conceptual heritage? Finally, and most importantly: 3. how do we successfully go about both communicating and conserving this body of 'modernist heritage'

1. INTRODUCTION AND CONTEXT

Whilst tropical modernism and its regional variations are now an established part of the non-Western Architectural canon, with Latin American modernism having one of the longest documented histories since its recognition, at the seminal 1943 MoMa exhibition 'Brazil Builds: 1652 -1942' West African modernism's recognition is more recent, emerging through journals, books and trade publications, and recently a series of exhibitions and publications about African Modernism.

This paper focuses on the challenges and contestations related to the specific West Africa – Brazil trans-continental regions as the Latin American subcontinental land mass has close cultural and physical-climatic links with Western Africa. Latin America's non-humid countries, have climate similarities with the Sahel zone in Africa, and elsewhere. Characterised by heat, and high diurnal temperature differentials both these regions share building methods incorporating local earth construction, and utilisation of wooden shutters and screens for privacy and to shield against heat and glare. To set the context to the analysis the climate and cultural characteristics of this region are important.

1.1 CLIMATE

Climatologically, the 'warm humid tropics', where much of Western Africa and equatorial Latin America is situated, have been historically defined as situated within 12.5 degrees North and South of the Equator, and having fast growing vegetation, flora and fauna within the generally warm-hot (21-30 deg C) hot humid (60 -100 %) conditions and limited wind speed (below 6m/s) which characterise this region. In Latin America this zone covers the Amazonia region, running East-West from Peru, Ecuador, Colombia, Colombia, Guyana to Brazil, incorporating states from Amazonia to Bahia.[1] **(Fig 1)**.

1.2 CULTURE

Culturally Latin America has many influences. From those of the 'first nation' origins, to European ancestry nationals, to those with Asian and African forbears. With this there is an established mix of cultural practices. With the initial domination of Spain in much of the continent and subsequent moves to independence or self-rule for different groups constituted within Latin America's different nation states. Aside from Brazil most nations also remain Spanish speaking with links to historic Catholic and Islamic cultural practices. Brazil a former Portuguese colony, remains culturally more aligned to Portugal. Within the tropical humid zone this paper focuses on Brazil and the other nations within the zone which retain particularly strong links to African cultural practice as the region was directly involved in the triangular trade involving persons, merchandise and raw products being transported from West Africa to the West coast of Brazil and other areas of tropical Latin America.[2]

Western African states, this paper's focus have this shared history as this area of the African continent was the most affected by the 'triangular' enslavement process, with those arriving bringing with them African cultures and practices. Religious practices are best known with the introduction of

1. Alvares et al., "Koppen's Climate Classification Map for Brazil," *Meteorologische Zeitschrift* 2, no. 6 (2013): 711-728, published December 1, 2013. Lasantha et al., "Data-Driven versus Koppen-Geiger System Classification," Advances in Meteorology (2022): 1-14, London: Hindawi, August 2022.

2. José C. Curto, and Paul E. Lovejoy, eds., *Enslaving Connections: Changing Cultures of Africa and Brazil during the Era of Slavery* (New York: Humanity Books, 2004).

African cultural elements to the catholic religion introducing African religious practice as evidenced through Santeria, Candomblé, and Abakua practices. Music and culinary cultures also are represented in the translocation of living and lifestyles from Africa to Latin America, with foods such as yam, cassava, and plantains consumed across regions in both sub-continents. In material culture including shelter construction practice the similarity in climate has meant local materials are similar in both regions and unsurprisingly therefore local construction practices in rural settlements are also similar.[3]

Within both these regions the perception and recording of heritage is challenging and contested. The physical architectural heritage of the built environment is particularly difficult to record. The reasons for this are many, however key amongst these are the paucity of information available on many of the lesser known buildings which have not had the documentary records that are available in archives or official documentation. Also, the hidden figures behind much of this construction remain largely un-noted and uncelebrated in the architectural historical accounts which remain defined by the northern architectural 'canon'. The recording of the intangible, which includes oral histories and narratives of buildings and those involved in their construction, is challenging to undertake. Furthermore, these 'official' architectural histories are difficult to contest or reappraise as evidence sources, such as oral histories and non-formal archival picture sources have been until relatively recently difficult to cite within academic scholarship formats such as scholarly journals and monographs.

Here our interest focuses on the challenges related evolution of (tropical) modernist design in both Africa and Latin America in similar climate and culture zones with a view to interrogating what similarities, or differences there are to its evolution and uptake across both continents with similar but not always fully aligned cultural contexts. For architecture this is important as the lived lives in places and spaces is always influenced by one's engagement with forms of culture and context.

2. EARLIER PRE-MODERN HERITAGE

Early African architectural links to Latin America through the long history and aftermath of transatlantic relations through enslavement and subsequent trading relationships with countries with significant population connections, related to enslavement, with West Africa, Latin America and the Americas. This relationship is thought to have influenced the architecture of late 19th century coastal towns such as Lagos, Freetown, Monrovia Porto Novo and Cotonou, all of which had Brazillian, Cuban and Southern American state links. The importation of stylistic elements such as the courtyard, the use of tiles and wooden crafted louvred windows are characteristics of the genre called 'Brazilian' style in cities such as Lagos. With exceptional examples such as the Shitta Mosque, designed and built by returnee formerly enslaved Catholic-affiliated craftsmen from particularly Brazil for the Lagos' Muslim population. Indeed returnee, Nigerian Yoruba citizens who had been emancipated from enslavement were re-settled in the Lagos "popo-

3. Cécile Fromont, "Dancing for the King of Congo from Early Modern Central Africa to Slavery-Era Brazil," *Colonial Latin American Review* 22, no. 2 (2013): 184-208. Albuquerque, U.P., "Journal of Ethnobiology and Ethnomedicine," 10 (2014): 12.

Aguda"area. Records also exist of returnee Afro-Brazilians who became successful traders in West Africa bringing culinary, dress and building cultures from Brazil to West Africa.[4]

This however was pre-dated by more locally originated design practices which can be traced back to both traditional or 'vernacular' domestic shelter and construction methods which Spain and Portugal, the nations most involved with the initial conquest of Latin America and also that of skilled enslaved and later on freed artisans from parts of Africa, where making and construction skills had been highly developed. The *mashribyya* being an often-quoted example of an Islamic origin form of screening that was designed using wooden battens that both provided privacy and shade in tropical shelter conditions such as housing and commercial facades.[5]

3. MODERNISM CHALLENGES

In Latin America the early 20th heralded the evolution and recognition of the 'modernist' era as design and architectural influences of the style, contrary to the past canon owes as much to its development to the incorporation of local and indigenous construction approaches and practices to the influence of architects and design from elsewhere in the world. This does not discount the influence of and involvement of Western architectural players in the evolution of 'modernist' Architecture in tropical Latin America with its Brazilian nucleus. The migration to tropical Latin America, by architects who were caught up or displaced by the politics and economic travails of Europe links to this process. This involved the pratices of European trained architects and local architects who had travelled to gain and understanding of European and US architectural trends who then went on to develop and create Latin America's modernist buildings which span the early to the later mid-20th century.

Highlights amongst these include Niemeyer's Brasilia Ensemble, the original works of Lina bo Bardi, and architecture to be found elsewhere Latin America, prime examples being in Mexico (UNAM), **(Fig. 2)** Argentina (Buenos Aries) and the Rio de Janeiro – Sao Paulo Brazilian architecture. This was not a solely a two-way relationship, as Le Corbusier's visit to Brazil in 1929, during his tour of Argentina, should be considered as evidence that key Western figures in Architecture wanted to explore and understand the unique nature of Latin American architecture, within a wider global modernist context.[6]

African modernism arguably has a later genesis and more regional variations. In the South Southern African countries being much more in step with the aforementioned Latin American mixed evolution of an authentic not totally Western-dictated post war architectural style. Southern Africa also hosted émigré architects from Europe sometimes making the move from Europe to the Americas via cities such as Johannesburg, Cape Town or Kampala. However its architecture also had distinct African influences and a local settler population rapidly did have a cadre of indigenous architects whose inspiration and ideas were unique and not only dependent on external 'Western' influence.[7]

4. Kunle Akinsemoyin and Alan Vaughan Richards, *Building Lagos*, n.d. (Lagos, 1977); M. Echeruo, Victorian Lagos (London: Macmillan, 1977); S. Otero, *Afro-Cuban Diasporas in the Atlantic World* (New York: University of Rochester Press, 2010).

5. F.L. Lara, "Cobogo and the Coloniality of the Brise Soleil," *Latin American and Latin Visual Culture* 4, no. 3 (July 2022): 113-119; Neves and Faria, 2011.

6. P.L. Goodwin, *Brazil Builds* (New York: MOMA, 1943); L.R. Hitchcock, *Latin American Architecture since 1945* (New York: MOMA, 1955); Niemeyer and Nobre, *The Curves of Time* (London: Phaidon, 2007).

7. Kai K. Gutschow, "Das Neue Afrika: Ernst May's 1947 Kampala Plan as Cultural Program," in *Colonial and Byerley, A. 'Drawing white elephants in Africa? Re-contextualizing Ernst May's Kampala plans in relation to the fraught political realities of late-colonial rule'*, *Planning Perspectives* 34, no. 4 (2018): 643-666; *Architecture and Urbanism in Africa: Intertwined and Contested Histories*, edited by Fassil Demissie, 373-406 (London: Ashgate, 2012).





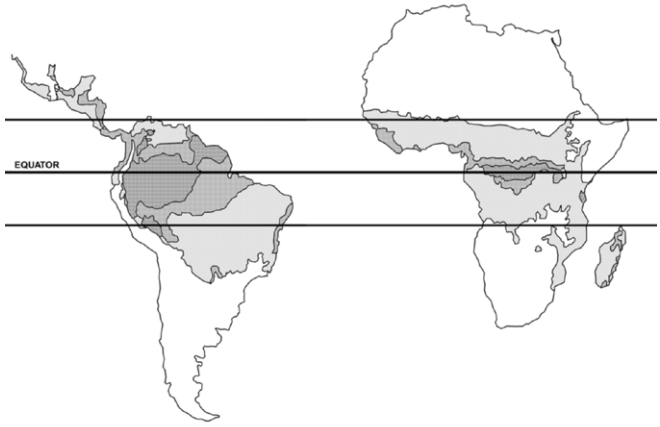


Figure 1. FESTAC MAIN AUDITORIUM - J. Berger et al. Author's photograph

Figure 2. UNAM Main Mural - Pani and del Moral - E. Valero Thomas

Figure 3. LATIN AMERICAN-AFRICAN TROPICAL CLIMATE ZONES (adapted) – E. Frith

South Africa does have a distinct or identifiable style, with the city ensembles in Pretoria tending towards the late modernist – brutalism. The more eclectic California 'case study' house types, are also to found not only in the Johannesburg-Pretoria, or Gauteng region but also in Cape Town and Durban, predominantly in the design of residences for the wealthy. The subtropical climate of the Cape, and its now post-apartheid and ongoing socio-economic stratification, means that this 'West Coast' modernism style fits particularly well in its Western Cape transformation.

Elsewhere in Africa, West and East Africa's architectural modernism emerges from a colonial architecture that had been developed from colonial architecture and engineering which provided the backdrop to the evolution of urban areas in African colonies. It also was influenced by the strong presence of Missionary architecture in the design and provision of social infrastructure such as schools and health care facilities in the global South, including sub-Saharan Africa.

The post-WW2 era led to local demands for independence and retiring colonial powers developing large infrastructure development projects including schools, hospitals and housing. These were initially designed by colonially appointed Western Architects and planners, who had been exposed to the then new modernism during their education. In West Africa, many of the AA-tropical school trained architects, and their associates from elsewhere in Europe and globally; or with Maxwell Fry and Jane Drew, had been employed by the colonial government's PWD departments and worked on developing a 'post' colonial architecture, which responded to climate science and also cultural context, as they saw it.[8]

To add to this expatriate-settler group of architects was an emerging group of indigenous architects who were Western trained and influenced by international trends in Architecture and planning. These influences were however generally from the ruling country to the colony and rarely cross influences from other 'southern' nations, in Africa or elsewhere. However as mentioned earlier on there are a few instances of architectural and design transfer, firstly the movement of Ernst May, from Europe to Uganda,

8. I. Jackson and J. Holland, *The Architecture of Maxwell Fry and Jane Drew* (London, Ashgate, 2014).

(Kampala) to the USA, also the Portuguese architect Pancho Guedes from Portugal to Mozambique and then went on to work and teach in South Africa. The architectural historian Chipkin, (1993) notes the 'little Brazil' style which identified the stylistic links of many of the architects graduating from South Africa's emerging schools of architecture at Wits and Cape Town with Latin America, and the publicity of the Brazil Builds exhibition in 1943. Indeed the president in chief of the Institute of South African Architects in his acceptance speech in 1946 "spoke enthusiastically" about the architecture he had seen during his earlier trip to Brazil.[9]

4. SIMILARITIES AND DIFFERENCES

Modern Movement architecture in most of Sub-Saharan Africa does not have this lineage. There it is a post WW2 phenomenon possibly with some interwar art deco examples of colonial architectural design. In Latin America, this distinctive time-framing is not fixed, and with its settler-émigré linkages to Europe and the US this process happened earlier, with only Southern Africa having similar encounters with Europe and elsewhere in the West. There are however similarities which are not only geographic and climatic, but that also encompass elements as varied as culture, materiality and programme-use values where both continents' architectures are closely linked.

The architecture produced by Lina bo Bardi in Brazil, it is argued is complementary to the works produced by the 2023 Golden Boot Venice Award Nigerian artist and designer Demas Woko, both of whom developed a specific engagement with the communities for whom they designed and produced original interpretations of 'modern' architecture that remain both site specific and cultural contextual.[10] This was with religious perspective in the case of Woko, and a strident socialist perspective in Bo Bardi's case. Also, Ari Sharon's Ife University team took inspiration from UNAM in Mexico in the development of the artistic – cultural program layout of the now celebrated Ife University Campus.[11] Finally, the early modernist architecture in Brazil, such as Niemeyer's Ministry of Education and Health, Rio De Janeiro, compares favourably with the 'end of colony' building typologies found in Francophone African such as Dakar.[12]

5. CHALLENGES AND CONTESTATIONS

What has yet to be investigated in detail is a deeper comparison and exploration of design philosophies and practical processes, (such as building techniques, and materials use) which have as has noted here been historically similar a century ago but also might be interesting to investigate from both a linear historical development line, which may or may not exist, but also in terms of what future correspondences a (post) modern architectural linkage might bring between the equatorial region architecture of these two continents. Nigeria's capital, Abuja for example did have its original planners go around the world seeking interesting and relevant examples, which included a trip to Brasilia, but this could have developed into deeper investigation and study linkage and engagement with Brazilian and tropical

9. See C. Chipkin, *Johannesburg Style* (South Africa: Philips, 1993), and "Artefacts Lexicon," accessed August 3, 2024, https://artefacts.co.za/main/Buildings/style_det.php?styleid=70.

10. Godwin and Hopwood, *The Architecture of Demas Woko* (Lagos: Wasco, 2007), Aneli and Bader, BoBardi: 100 (Munich: TU, Hatje Cantz, 2014).

11. Hegenbart, *Curating Transcultural Spaces: Adenowo, "Democracy Collected in Form Space and Order,"* (London: Bloomsbury, 2024), chap. 7, 109-130.

12. Oscar Niemeyer y Ana Luiza Nobre, *The Curves of Time* (Londres: Phaidon, 2007), L. Bignon, *French Colonial Dakar* (Londres: Bloomsbury, 2014).

Latin American precedents in city planning. The final design for Abuja was determined by planners and architects from the USA and Western Europe, with no reference to the research visits to Brazil.[13] Thus the UNAM-Ife design relationship remains, the closest that Western Africa has had with Latin America in the post-colonial early modernist era.

The most productive confluence of art culture and practice has been arguably during the first and second festivals of African culture, in Dakar, Senegal and Lagos, Nigeria, in 1961 and 1977 respectively. Again, though as festivals these were liminal affairs although both Dakar 61 and FESTAC77 have now been researched and written about by a host of authors, particularly FESTAC.[14] Although both were temporal and contributed to a liminal zone of engagement their legacy was significant. In 61' Senghor's idea of design working through forms or fractals is a valid thesis that remains to be explored further, whilst FESTAC77 delivered building, **(Fig. 3)**. and book *Building Lagos*. In both festivals, art practitioners from Latin America and elsewhere in the black Atlantic world as well as those in Africa were involved. There are many challenges to the successful recording conservation and preservation of buildings and their architectural genesis.

To do this successfully will require:

- More information from both sides about what architecture exists and where the similarities differences and challenges are
- Joint visions in research and enabling frameworks that allow for and encourage these transcontinental relationships and collaborations to take place at formal and informal levels to create opportunities
- Spaces for practice and praxis in a joint examination and analysis of these two regional strands of modern movement architecture.
- South-South conferences education courses policies, [such as Docomomo] – recognising these shared heritage issues and has begun culturally in areas of religion and other forms of cultural practice in parts of Bahia and Western Nigeria for example, where culture, climate and geography all align.

Importantly also this should engender more local and indigenous architectural writing about the history of these buildings and their heritage, integrating oral and other contemporary and intangible history sources.

For Latin American – African transcontinental relations at tropical regional level in architecture there remains a lot to be both explored and built upon, however there is more that unites these two geographical regions than separates them. The Atlantic may be deep but the straits between the continents are close. This is as today where issues of culture, tangible and intangible particularly environmentally for each region's-built environment. ■

13. Elleh N., *Architecture and Politics in Nigeria* (Londres: Routledge, 2017).

14. A. Apter, *The Pan African Nation: Oil and the Spectacle of Culture* (Chicago: University of Chicago Press, 2005).

BIOGRAPHY

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‘NO HOLDS BARRED’; BEHIND MODERNIST HOTELS IN NIGERIA AND BRAZIL

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ABSTRACT

During the 1960s, some countries in Africa and South America seeking to stand on their own and be counted amongst the league of nations, embarked on building commemorative white-elephant projects, such as government funded luxury hotels. Many of these turned out to be modernist, concrete monstrosities, built to harness what they hoped where the tourism potentials of the blooming capital and regional cities of these countries. Some of these cities had been slated to host international exhibitions, biennales, festivals, trade fairs or sporting competitions, and the tourists’ populations where what these hotels were meant to serve. The mid-twentieth century modernist hotels followed the design movement characterized by concrete minimalist structures, clean lines and the instantly recognizable heritage of simple décor and austere exterior finish. Most included balconies, especially where ocean views and other vistas were to be captured. Vast lobbies and enormous pool areas with generous room spaces were the order of the day. This paper adopts a case study approach using case buildings from Rio, Brazil and Lagos, Nigeria, to investigate spatial and height liberalism as a form of decolonization or revolution in modernist hotels built around the mid-20th century, with particular emphasis on the 1960s. It examines their initial rise, eventual fall and current state as concrete carcasses premised upon this ambitious ideology. The study reveals that factors such as decolonization and revolution might have played a significant role in the development of such architecture and could as well have contributed to its demise.

1. INTRODUCTION: THE ARCHITECTURE OF DECOLONIZATION

To understand the architecture of decolonization, one must first understand the concept and its history. The first waves of decolonization were originally called revolutions and independence and it happened in the Americas and the Caribbean. Decolonization in Africa is part of what is termed the second wave which came as a response to the existing coloniality of the indigenous population by the European nation states. Mignolo argues that decolonization cannot be understood without understanding modernity and coloniality that engendered it[1]. Indeed it cannot altogether be extricated from the taint of colonialism or its alter egoolonialism or its alter ego of modernity. There is no outsider"e in the worldon and marginalization. -modernity. As Grosfuguel mentioned, "no culture in the world remained untouched by European modernity. There is no outsider"[2].

So, in effect, modernity begat coloniality, which in turn begat decolonization and to end coloniality, it is necessary to first end the fictions of modernity[3]. This is where the dilemma unfolds, a study of modernist architecture, proliferated and built off the concept of decolonization is an irony of sorts.

2. DECOLONIZATION IN LATIN AMERICA

The architecture of decolonization is reminiscent of the concept of the architecture of revolution, developed more or less in rebellion to the imposed application of European architectural traditions during colonization. On this discourse, there are a plethora of scholars who have researched on and analysed the issue of decolonisation in former Spanish and Portuguese colonies of South America. They include, the likes of Ramon Grosfugel (2011), Walter Mignolo (2007, 2009, 2018) and as discussed in the context of Mexico by Luis Carranza (2010).

Their work infers those different architectural solutions reflected the varied understandings of the decolonization/revolution's significance to various members of the indigenous populace. So, if architecture reflects the needs, desires and struggles of a society, it can be understood as a material expression of that society and as such, like Carranza, we can equally infer that certain, large scale, modernist projects embarked on in the post-independence eras of some countries are ways of displaying the complex and multiple expressions of revolution and decolonisation observable through architecture of a previously colonized people.

Manuel Amábilis, an architect of Mayan ancestry in Mexico, revived pre-Hispanic Mayan architecture in the Ibero-American exposition of 1929 to serve as a message of rejection of the architecture of colonization and exploitation in the post-revolution era.[4] This shows that architecture can showcase the ideals of a people in a confrontational manner, especially when the architecture is borne out of experiences of suppression, marginalization and prejudice. Although there are several scenarios like this that paint the picture of architecture as a form of decolonization borne out of the need for freedom of self and cultural expression, it is, however, not always the case.

1. Mignolo, "Epistemic Disobedience: Independent Thought and Decolonial Freedom," 159-181.

2. Grosfuguel, "Decolonizing Post-Colonial Studies and Paradigms of Political-Economy: Transmodernity, Decolonial Thinking, and Global Coloniality."

3. Mignolo and Walsh, *On Decoloniality: Concepts, Analytics, Praxis*.

4. Carranza, *Episodes in the History of Modern Mexico: Architecture as Revolution*, 28.

Further studies reveal that there are more questions raised than answered. For instance, Carranza observed, and rightly so, that the aftermath of independence is often a period dominated by the indigenous intelligentsia, elites, and politicians, exploring the social potential of different fields of study and material culture in bringing about a new society.

Although Brazil had long before then been released from the clutches of colonialism, there was however a change of guard; a military government whose entry was sanctioned at that time by the United States of America and who had anti-communism as one its biggest agendas. This was decolonization on a different scale, using capitalism was its vehicle. As such, the architecture of the mid-20th century reflected this need for liberation as the case study reveals.

3. DECOLONIZATION IN AFRICA AND NIGERIA

Similarly, in her work on Architecture and decolonization in Northern Africa, Samia Henni (2016) posits that just as there are built environments in previous colonies that showcase obedience to colonial directives, there are also those that clearly show direct disobedience in planning and building design. She discusses this extensively in her work on the Architecture of Counterrevolution in Algeria.

Kahira Amal Djiar's (2009) also describes one of the early instances of decolonisation in Africa. she discusses the cultural and psychological implications of French Colonialism in Algiers. Unlike Henni, she does not examine how the resulting domestic architecture serves as a form of revolt against the colonialists; her study shows that although there was resistance against the colonizers, rather than create a new architecture of decolonization, Algerians sought to maintain traditions as seen in their heritage architecture, and thus enacted a refusal to change as acts of decolonization. Both Henni and Djiar argue that conditions under which independence ensued, when read and interpreted by stakeholders, can play an integral role in understanding the architecture produced after colonization, or architecture produced as direct defiance of the oppressive systems of colonization.

For the Nigerian nation state, the 1950s saw the gradual devolution of regional power from British colonials to Nigerians and this culminated in the eventual conceding of national power after full independence in 1960. Other aspects where decolonization has been examined in Nigeria is in art. Okeke-Agula's (2015) demonstrated the specific ways the experience of political sovereignty was translated into artistic modernism in relation to the experience and realities of a post-colonial Nigeria. While Toyin Falola looked at development planning and decolonization in Nigeria. But in seeking to understand decolonization in architecture in Nigeria, the concept of building in post-independence Nigeria needs to be examined.

During that era, buildings were affected by the politics of decolonization as the indigenous educated elites sought to redefine their social and political status during the early years of self-governance. This was reinforced and given financial impetus by the nation's newfound wealth from crude oil trade in the 1960s. With its financial backing, Nigeria embarked on a series of projects and infrastructural developments in various sectors of the economy,

such as electricity generation, roads, housing, schools, airports and hotels to boost the tourism industry. A popular quote from one of Nigeria's former military dictators captures the ideology behind its neo-colonialistic spending spree; "Nigeria's problem is not money, but how to spend it" (Gen. Yakubu Gowon). The 1962 Nigeria International Trade Fair, held in Lagos 18 months after independence, was one of the new country's bold and lavish developmental statements. It was supported by adverts from the likes of the United African Company (UAC) which displayed bold captions in their pavilions stating "The World Looks to Nigeria"[5].

The UAC, one of Nigeria's largest organisations at the time, created two separate pavilions for its subsidiaries, the African Timber & Plywood Limited and the Nigeria Breweries[6], at the exhibitions. Both were targeted towards Nigeria's proposed and fast-growing hotel and hospitality industry. The pavilions thus enframed a narrative that twinned progress and decolonisation with architecture, whilst simultaneously making a connection between the UAC's operations and the future economic prosperity of Nigeria. During the period of decolonisation, and by that, I mean post-independence, the UAC increasingly built specialist factories and showrooms to service Nigeria's growing hospitality demands.

Some of these large projects such as the luxury hotels were undertaken to spite the colonial government and its development arm, the Colonial Development Corporation (CDC), established in 1948 to focus on developing tourism in the British colonies. The CDC had earlier funded the Paramount Hotel, in Freetown, Sierra Leone, designed by the architect James Cubitt as a way to re-cast the empire as a force for good by reinvesting aid money back into the colonies, but with the intent of "doing good without losing money". However, by the early 1960s, and with the independence of a number of sub-Saharan African states like Nigeria and Ghana, they had a change of heart from financing luxury hotels in the West African sub-region. This was because all of a sudden, they did not think West Africa was a worthwhile investment hub for tourism anymore and that the new frontiers were the Caribbeans and parts of East Africa, like Kenya. They even changed their name from the Colonial Development Corporation to the Commonwealth Development Corporation, maintaining the same acronym.

4. PURPOSE OF THE STUDY

Some of these indigenous elites Carranza referred to, and who came into power in the Nigerian state, were obsessed with the western way of life which included its architecture and entertainment amongst other things. To them material expressions like architecture could serve as a tool for postcolonialism or neocolonialism, a symbol of dominance and political control, and a re-adaptation of indigenous bourgeoisie claims to prominence and power. Postcolonialism indicates the degree to which independence itself failed to completely eradicate the influence of colonializing powers, while neocolonialism suggests a superimposed ideology over an existing one or that the de-colonised are, through entrenched colonial economic, political,

5. Anon, "The World Looks at Nigeria," *UAC News XI*, no. 9 (October 1961). United Africa Company Collection, Unilever Archives, Port Sunlight.

6. Nigerian Breweries Ltd: Exhibition at the Nigerian International Trade Fair, UAC/2/1/A/9/6/1, United Africa Company Collection, Unilever Archives, Port Sunlight.

and epistemic structures, never entirely free from the imperial project. In effect, the force of imperial ideology is not easily eradicated.

These studies show that whether explicit or implied, architectural production has certain political undertones. This is seen not just in iconic state monuments like hotels and exhibition centres, but also in simple unassuming residential structures. This paper examines architecture that is not just iconic but loud, brash and at a white-elephant scale. It focuses on architecture of modernist hotels possibly built on the premise of decolonization or counterrevolution yet taking it a step further by their share ambition and scale to make or prove a point.

5. STUDY LOCATIONS

The selected case buildings all have something in common. They were all built within the modernist era of the 1960s and followed the concrete minimalist structures with clean lines and austere exterior finish, reminiscent of the period. Most included balconies, especially where ocean views and other vistas were to be captured. Vast lobbies and enormous pool areas with generous room spaces were also common features. In addition, the two hotels chosen as case studies had been abandoned for long periods of time in their history, due to several reasons but primarily down to the unsustainability of their grand plans and the difficulty in maintainability. The hotels were selected for their waterfront locations, enormous scope and numerous rooms, and were designed primarily as tourist centers with facilities for hosting conventions, events and exhibitions. These are the Nacional Rio in Brazil and the Federal Palace hotel in Nigeria.

Nonetheless, both structures were historic landmarks in their times and the first hotels of their status and ratings in their respective cities. This paper discusses the parallels between the two hotels in Brazil and in Nigeria respectively. It examines them through the bifocal lenses of decolonization and modernity, to show if they have certain shared or contested heritage, or alternative or parallel narratives, which may either way connect them by a common thread. Ultimately, the paper seeks to address the question of what constitutes modernity or modernism in Africa and Latin America as evidenced through the architecture of hotels.

6. SELECTED MODERNIST HOTELS IN NIGERIA: THE FEDERAL PALACE HOTEL LAGOS

Federal Palace Hotel and Suites, which has been undergoing renovation for some decades, is one of such hotels built at the dawn of Nigeria's independence in 1960. It is Located on Ahmadu Bello Way, Victoria Island overlooking the Lagos harbor. It was incorporated in 1964 and owned by the Federal Government of Nigeria until 1992 when it was acquired by The Tourist Company of Nigeria. To buy into the huge tourist boom of the 1970s, one of the wings designed by the notable Nigerian architect, Lai Balogun, was built to coincide with the Festival of Arts and Culture (FESTAC) in 1977. Constructed in the quintessential modernist style of the sixties, it was an ambitious 5-star project with over 630 rooms and suites spread across 7



Figure 1. Federal Palace Hotel, Lagos. (Source: https://commons.wikimedia.org/wiki/user.Godmyhelper)

floors and a service floor on the eight level. In addition to rooms, it spots a collection of ballrooms, restaurants, mini-bars, a sports and health club and swimming pool. It is also famous for its floating restaurant connected by a walkway and deck to the lagoon.

The 1960s was an era of experimentation for buildings in terms of height and space liberalism for a newly independent state like Nigeria. This 8th floor statement was Nigeria's first venture into the world of high-rise grand projects, of which she quickly developed a taste for, as it was followed up four years later (1964) by the 26-storey Cocoa house in Ibadan. The first skyscraper in West Africa, built from the proceeds of the booming cocoa trade, and then the 32-storey NECOM house built in 1979 during the oil boom era. Apparently, as the wealth of the nation increased, so did the height liberalism in its modernist concrete-built forms.

During the colonial era, the highest buildings did not exceed 4-storeys. The National Investment and Property Company (NIPC) founded by Chief Obafemi Awolowo proposed a series of high-rise developments on broad street in Lagos and were met with a lot of rejections by the colonial administration. High-rise buildings were part of the plan to turn parts of western Nigeria into the New York of Africa and indigenous elites had vowed that in the independence era, post-colonial buildings would dwarf all colonial structures in height and space, to make a statement emphasizing and materializing decolonization.

7. SELECTED MODERNIST HOTELS IN BRAZIL: THE HOTEL NACIONAL RIO

An ambitious modernist skyscraper of concrete and aluminum built from 1968 to 1972 as Brazil's main hub to latch onto the booming entertainment and tourism industry of that era. It had hosted conventions, music stars and events such as the prestigious Rio Film Festival in its hay days. Having fell into hard times and decline, it was also abandoned for upwards of two decades, while vandalized and stripped bare to nothing but its concrete shell



Figure 2. Hotel National Rio (https://commons.wikimedia.org/wiki/user:Ame_museler)

and structural bones. It became a home for squatters and was mummified in graffiti for those twenty unproductive years of its life. Designed by the renowned Brazilian architect Oscar Niemeyer, this building is as grand as they come, with over 600 rooms, a 2800-seater convention center, five restaurants, a helipad and several other facilities across 34 floors. Niemeyer's exploration of the use of concrete was highly influential and made him one of the key figures and proponents of modern architecture. This concrete monstrosity was said to be part of a push to develop the western part of Rio, but with its doors shutting in 1995, this idea might have been a push too far.

The Hotel Nacional Rio was built during the Military dictatorship era between 1964 to 1985, but specifically during the time of the "Brazilian Miracle" a counterrevolution era in the 1970s marked by exceptional economic growth during the military dictatorship. The growth was achieved via a developmentalist model, during which time the average annual GDP growth was close to 10%. Peak growth was reached during the tenure of Emilio Garrastazu Medici, who was President from 1969 to 1973. His tenure coincided with the construction of the hotel Nacional Rio. A time of new economic models, new policies, and even the possibility of a neo-colonialist or counter revolutionist ideology as the government sought to move from communism to becoming pro-capitalist.

The 34 floors were even considered a conservative agreement for a building that was originally planned for 55 floors. Indeed, the use of concrete and quest for verticality was synonymous with the spirit of the age which in this case is the modernist era. However, the exorbitance in height and space liberalism can be attributed to economic boom, the lure of tourism brought about by capitalism, and the need for a new image of a country transiting

from one era into another, as mirrored by other nations in Latin America and other regions.

8. CONCLUSIONS

With these connections made, the similar narratives and shared heritage exposed are not mere coincidences but a pointer to the fact that as Uduku puts it, the genesis of 'international style tropical modernism', has had a longer incubation period in both Latin America and Africa than critical regionalism and other concepts developed in the latter half of the 20th century. The root cause can be traced to the economic prosperity experienced in both regions, and in both cases immediately after the change of administration in the country. In the case of Nigeria, it was a transition from colonial rule to indigenous rule and for Brazil it was after the military junta of 1969, marking the end of the fourth republic. In both cases, the countries wanted to either project a new image by decolonization or launder an existing one tainted by corruption by possible neo-colonization or counterrevolution. And what better way to do that than to invest in the hospitality and tourism industry to bring the world to them, thus making the UAC's slogan of "The World Looks to Nigeria" apt at that point. ■

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MODERNISM AND HERITAGE IN LATIN AMERICA AND AFRICA: THE CASE OF SUSTAINABILITY POLICIES AT UNAM'S SCHOOL OF ARCHITECTURE IN CIUDAD UNIVERSITARIA, MEXICO CITY

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ABSTRACT.

The Central University City Campus of the Universidad Nacional Autónoma de México [National Autonomous University of Mexico] (UNAM) was built from 1949 to 1952 by teams with the leadership of more than sixty managers, architects, engineers and artists who contributed to the project. The ensemble of buildings, sports facilities and open spaces constitutes a unique example of 20th-century modernism integrating urbanism, architecture, engineering, landscape design and fine arts with references to local traditions, especially to Mexico's pre-Hispanic past. This integration embodies social and cultural values of universal significance and is one of Latin America's most significant icons of modernity. Essential trends of architectural thinking from the 20th century converge in the Central University City Campus of UNAM: modern architecture, historicist regionalism, and plastic integration. The last two are of Mexican origin. (UNESCO's Declaration)

In 2007, the original campus was inscribed in UNESCO's World Heritage List, which considered more than fifty buildings on 176.5 hectares. UNAM's School of Architecture is part of the site. More than eight thousand students in four programmes (Architecture, Landscape Architecture, Urban Planning, and Product Design) and more than one thousand faculty and administrative members actively utilize an area of two hectares. Like other academic entities on the central campus, the School of Architecture requires the sustainable rehabilitation of its facilities. In 2024, the life cycle and functionality of the buildings and their public space challenge us to intervene with rehabilitations that consider energy efficiency, water governance, waste management, thermal comfort and accessibility for all. The methodology considers the flow and consumption of water, food, and waste in the Central Campus. The objective is to shape architectural practices, decentralized infrastructures, and cultural narratives of environmental sustainability in a UNESCO's protected site.

1. INTRODUCTION

On March 22nd, 1954, thousands of students from different schools attended the brand-new facilities of Ciudad Universitaria [University City] (CU), in the south-west of Mexico City. It was the beginning of their academic terms at the Universidad Nacional Autónoma de México [National Autonomous University of Mexico] (UNAM). This event marked the proper inauguration the of the new campus. Seventy years later in 2024, CU is still a very dynamic academic campus (176.5 hectares) that belongs to the UNESCO's World Heritage List. However, the life cycle and functionality of the built environment in this place challenge us to intervene its buildings and public spaces with rehabilitations that consider renewable energy, waste management, water governance, thermal comfort in buildings, and accessibility for all, among other characteristic of sustainable environments. This paper will focus on recent proposals of sustainable interventions at UNAM's School of Architecture (2 hectares). The rationale of these interventions is backed with design theories and historical analysis of the Modern Movement that will be discussed in the round table called Modernism and Heritage in Latin America and Africa: Challenges of Shared and Contested Heritage. This session is part of the 18th International Docomomo Conference, with the main theme of "Modern Futures: Sustainable Development and Cultural Diversity."

In the round table, Fernando Luiz Lara comments that we witness the perpetuation of exclusion and the eradication of memory as tactics of urbanization all over Latin America. Thus, it is important that we ask over and over whose heritage and whose memories are we preserving. This is a key question in the approach of the rehabilitation of UNAM's School of Architecture. Adefolatomiwa Toye discusses the significance of Ciudad Universitaria to Nigerian delegates who visited the campus in December 1960, and how architectural features were redefined at Obafemi Awolowo University. The visit to Mexico City inspired an appreciation of architectural characteristics that would later be incorporated in the design of the university campus in Lagos, which included elaborate facade murals and terraced outdoor spaces. In 2024, what is the present situation of both campus in terms of protection and plans for a sustainable future?

Ikem Stanley Okoye asks what does it mean when architectural decoration by artists do not represent Africanness as such, but instead focus on infrastructural modernization? This is also a valid question in the case of the artworks in CU that initially were narrative tools to strengthen official discourses of the Mexican development. Warebi Gabriel Brisib uses case studies of modernists hotels from Brazil and Nigeria, to investigate spatial liberalism as a form of decolonization the mid-20th century, with particular emphasis on the 1960s. The study reveals that factors such as decolonization and revolution might have played a significant role in the development of such buildings and could as well have contributed to their demise. In the case of UNAM's School of Architecture, what kind

of sustainable discourses today contribute to the narrative of sovereignty and decentralization of energy consumption?

2. CHANGING THE NARRATIVE OF SUSTAINABLE DEVELOPMENT: THE CASE OF ARCHITECTURE AND URBAN POLICIES AT UNAM'S SCHOOL OF ARCHITECTURE IN CIUDAD UNIVERSITARIA

The Central University City Campus of the Universidad Nacional Autónoma de México [National Autonomous University of Mexico] (UNAM) was built from 1949 to 1952 by teams under the leadership of more than 60 managers, architects, engineers and artists who contributed to the project. The ensemble of buildings, sports facilities and open spaces constitutes a unique example of 20th-century modernism integrating urbanism, architecture, engineering, landscape design and fine arts with references to local traditions, especially to Mexico's pre-Hispanic past. This integration embodies social and cultural values of universal significance and is one of Latin America's most significant icons of modernity. In 2007, the original Campus was inscribed in the UNESCO's World Heritage List, which considered more than fifty buildings on 176.5 hectares. Essential trends of architectural thinking from the 20th century converge in the Central University City Campus of UNAM: modern architecture, historicist regionalism, and plastic integration. The last two are of Mexican origin. (UNESCO's Declaration).

In terms of environmental sustainability, UNAM embodies a strong tradition in the development of technologies and strategies for the mitigation of global warming from areas such as Engineering and Chemistry. For instance, Dr. Mario Molina (1943-2020) co-recipient of the Nobel Prize in Chemistry in 1995 for his role in discovering the threat to the Earth's ozone layer from chlorofluorocarbon gases, did his undergraduate studies in Chemistry at UNAM in Mexico City. Nowadays, strengthening this tradition is relevant in a global context where the consumption of fossil fuels for the generation of electricity, transport, and heating generates two-thirds of the emissions of gases that trap heat in the atmosphere.[1]

UNAM's School of Architecture is part of CU. More than eight thousand students and more than one thousand faculty and administrative members actively utilize an area of 2 hectares. The school hosts four academic programs (Architecture, Landscape Architecture, Urban Planning, and Industrial Design). Notably, these professional fields are linked to economic sectors and industrial processes with a high environmental impact. For instance, the production of cement and steel for construction, the plowing of fields, and the degradation of various ecosystems for the expansion of cities emit large amounts of carbon dioxide daily, causing also thermal retention.[2] In this context, what is the role of UNAM's School of Architecture in the construction of a sustainable future? One possibility is to propose an agenda for changing the narrative of development that motivates teachers, students, local authorities, and the

1. Greenhouse gases come from six sectors: 25% in electricity production, 24% in food, agriculture and land use, 21% in industry, 14% in transportation, 6% in buildings and construction, and 10% other energy-related emissions. Greenhouse gas sinks are the counterpoint to these sources. While ~59% of these emissions stay in the atmosphere, ~24% are quickly removed by plants on land and ~17% are taken up by oceans. See "The Drawdown Review 2020," Project Drawdown, https://drawdown.org/drawdown-review.

2. See IPCC., *Climate change 2014: Mitigation of climate change. Contribution of Working Group III to the fifth assessment report of the Intergovernmental Panel on Climate Change* (Cambridge University Press, 2014).



Figure 1. 'La Ciencia y el Trabajo' José Chavez Morado, Alfonso Caso Auditorium at the National Autonomous University of Mexico, Mexico City, Mexico, 1952. © Credits (Ernesto Valero Thomas, 2024).

Figure 2. Proposal of an accessibility plan and safe mobility at the National Autonomous University of Mexico, Mexico City, Mexico, 2024. © Credits (Coordinación de Infraestructuras Sustentables de la Facultad de Arquitectura de la UNAM, 2024).





Figure 3. Proposal of an organic recycling centre: Vegetable Garden, plant nursery, and recycling centre (paper and cardboard)-bicycle station at the National Autonomous University of Mexico, Mexico City, Mexico, 2024. © Credits (Coordinación de Infraestructuras Sustentables de la Facultad de Arquitectura de la UNAM, 2024).

civil society to imagine buildings and public spaces that help us reverse global warming.

3. FROM 1954 TO 2024: THE TRANSITION FROM A LOGIC OF EXTRACTIVISM TO A LOGIC OF REGENERATIVE ENVIRONMENTS IN CIUDAD UNIVERSITARIA

One of the characteristics in CU is the integration of murals and artworks embedded to several buildings. One of the art pieces is the mural called 'La Ciencia y el Trabajo' [Science and Labour] authored in 1952 by José Chávez Morado. It is located in the Alfonso Caso Auditorium at the Old School of Sciences. The mural shows the construction of Ciudad Universitaria. It was painted with a vinyl technique and therefore has to be protected in a display case. On the left side of the mural we can see the first scene, which reflects a group of farmers carrying construction tools. It is a transition to a different manual labour, from one that requires agricultural knowledge to another that is requested in urban environments. This scene refers to the former ejidatarios [holders of a share of common lands] who owned the ground where CU is currently located. The second

scene shows Cuatlicue, mother goddess of the earth accompanied by a child with a pre-Hispanic mask and at the top is the circular basement of Cuicuilco, an archaeological area very close to the university area of Mexico City. In the next scene, construction workers excavate the ground of CU to insert infrastructures. The scene that follows contains engineers and architects that examine plans and papers. What follows is the scene with a group of workers, who were represented in a ghost like form, fading from the frame. Finally, scientists manipulate a machine.

An interpretation of the mural serves as a backdrop of the argument that the narrative of development in Mexico should be transformed from a logic of extractivism to a logic of regenerative environments. The displacement of peasants and farmers that originally owned the lands of CU is worth of analysis. What kind of displacements do we witness today in the development of the country? The narratives are male dominated. Only men are represented as the workers, professionals and scientists in the country in 1952. In 2024, the role of women in the construction of the future must be included in the narratives of development. In the mural, pipes and tubes are elements that symbolize infrastructures in the mid-20th century. What are the characteristics of infrastructures in 2024? How can we propose sustainable infrastructures to allow the flow of water, waste, and electricity in 2024 for Ciudad Universitaria? The following section will describe two proposals for the School of Architecture.

4. INTERVENTION FOR SUSTAINABILITY AT UNAM'S SCHOOL OF ARCHITECTURE

This section will expose two projects that are proposed by the the Department of Sustainable Infrastructures at UNAM's School of Architecture. These proposals engage in "thinking futures" with attention to the social values and norms of UNAM, hierarchical structures in the administration of the university, and social imaginaries of the community that visualise the campus as a metabolic entity of circulatory flows such as food and waste that are organised via infrastructures.

The accessibility and safe mobility project for the School of Architecture is based on a shared problem on other scales and contexts: our buildings and cities discriminate and are not friendly to pedestrians, much less with people who require special and additional attention to navigate the streets and buildings. Pavement design and differences in floor levels play an important role in the solution to this problem. The sinking of the stone walkways is another aspect that affects pedestrian traffic in the School of Architecture. Actions such as re-leveling the ground and channeling rainwater is required to avoid flooding for six months a year and to provide water infiltration to the gardens.

In terms of organic waste, the proposal is to manage a collection system of food waste (10% of total generation) and from gardening activities. The project considers a 'separation islands' for the operation and correct operation of the waste management system. This prototype

will allow the separation of waste and will create the conditions to recycle and valorize a high percentage of waste.

5. CONCLUSION

The paper explores the future of a sustainable built environment at UNAM's School of Architecture. The school is located within and area of the central campus that is protected by UNESCO. This is one example from many that are discussed in the roundtable, which highlights the need for a new global approach of modern heritage conservation and sustainable policies, particularly in Africa and Latin America. The goal is to construct policies and practices on the conservation of modern heritage, while shaping the agenda in search of regenerative environments, quality of life, and better environments in cities from Africa and Latin America. ■

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BIOGRAPHY

Dr. Ernesto Valero Thomas is a professional in the fields of Architecture and Urban Studies. His research focuses on designing hybrid methods for mapping the flow and consumption of water, food, waste and electricity in emerging cities around the world. From 2017 to 2021 he held the position of Senior Lecturer in Sustainable Design at DETAO-Shanghai Institute of Visual Arts, where he served as the Academic Coordinator of the Ecological Architecture Design Program. He currently serves as Senior Manager of the Sustainable Infrastructures Initiative at the School of Architecture in the National Autonomous University of Mexico. His work has been published in peer-reviewed journals from the United States (UCLA), Mexico (UNAM), United Kingdom (UEL), and in the book Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming. (Penguin Random House) He has taught courses at the Edinburgh School of Architecture and Landscape Architecture. His research findings have been presented in Germany, The Netherlands, France, Ecuador, Ireland, India, South Korea, and China. Ernesto holds a Ph.D. in Architecture and Urban Design from the University of Edinburgh. He received an MSc in Advanced Sustainable Design from the University of Edinburgh, and a BArch at the National Autonomous University of Mexico.

WHOSE MEMORIES, WHOSE HERITAGE? REFLECTING ON THE SPATIAL HISTORY OF THE AMERICAS

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ABSTRACT

In June of 2022 Brazilian indigenous leader Ailton Krenak spoke in an interview about his country's preservation institution's obsession with lime and brick. His main point, very much valid, is that Brazilian IPHAN (National Office of Preservation) values colonial architectures over everything else, protecting mostly structures built by Iberian settlers, using Iberian technologies[1]. Krenak's words are a stark reminder that to study the built environment of the Americas is to constantly wrestle with an inherent contradiction. While our disciplines of architecture, urban design, landscape, and planning share the fundamental belief that space and place matter, the overwhelming majority of our canonical knowledge and the vernacular used to describe these disciplines comes from another continent. We still teach architectural history as North Atlantic history[2].

It is important that we ask over and over whose heritage and whose memories are we preserving. Why exactly do we fight to preserve and repurpose a neo-gothic church or a Greek- revival library thousands of miles away from Northern Europe and the Mediterranean Sea? The answer to those questions yields ugly traces of white supremacy and Eurocentrism.

At a fundamental level, we lack a basic spatial history of our continent. I dare to elaborate that despite having all that space (which, by the way, was never empty) we do not know the history of our spaces except for very selected pieces of it. Such ignorance creates a dislocated relationship between time and space, made more dramatic by the fact that modern cities in the Americas were designed to forget and to exclude[3]. The result of having not yet theorized our American spaces is that we have also not yet problematized it and therefore we witness the perpetuation of exclusion and memory erasure as main features of urbanization all over the continent.

1. WHOSE MEMORIES, WHOSE HERITAGE?

When we discuss Modern Architecture as heritage we are still discussing a Eurocentric version of modernism. Sometimes this is explicitly stated like when William Curtis wrote in his classic survey book that "modernism is the intellectual property of the West". Most time it is implicit in the way scholars present modernity as something that originated in and by Europeans. Even the two pillars of Latin American architectural thought in the late 20th century: Christian Fernandes Cox proposal of "modernidad apropriada" and Marina Waisman's proposal of "modernidad divergente" are still based on European concepts that should be adapted to local realities. Arturo Escobar's and Walter Mignolo's synthesis of modernity/coloniality as one and the same imploded the diffusionist idea of modernity as a European concept 30 years ago. When we understand that modernity and coloniality are two manifestations of the same phenomena we are forced to admit that the Americas have participated in this construction since day 1 of October 12, 1492. The exploitation of non-European peoples and the erasure of their memories are as much part of modernity as the 18th- century Enlightenment or the 19th-century industrial revolution. Modern architecture would not exist without those processes that took over the planet in the last 500 years, and it is about time we discuss it with such framework.

2. UNLEARNING EUROCENTRISM IN THE AMERICAS

Theorizing our own space and writing our own history is urgent because as reminded by Edward Said in his classic "Orientalism", European scholars developed narratives about all other societies on Earth and as a result established themselves as the center of human knowledge[4]. According to the Eurocentric narrative, the Americas were a vast continent empty of sophisticated cultures, ready to be conquered by superior knowledge of the self-proclaimed "old world". The adjective old here works much as Said's oriental; locating in the Americas a degree of infancy that required guidance, if not discipline. The first European traveler's account of sophisticated cities were buried under the convenient idea that the Americas were empty, ready to be cultured and cultivated.

My argument in this chapter is that we need a complete revision of whose memories and whose values we use to discuss our spaces. In 2022 the Journal of the Society of Architectural Historians invited me to edit a roundtable in which 9 authors discussed concepts that we need to analyze the spaces of the Americas[5]. In that text I recalled Jorge Luis Borges short story Funes el Memorioso in which the Argentine author reminds us that the being whose memory holds onto every little detail is incapable of thinking. Reasoning requires that we recall some memories to the forefront and relegate others to the subconscious. As we all know from our curriculum debates, the discussion around architectural history surveys gets intense when one proposes that parts of our canonical knowledge should be pushed aside to give space for new manifestations. As Swati

1. A. Krenak, "Colonialismo segue vivo na forma do brasileiro pensar o patrimônio," *Amazônia Latitude*, June 10, 2022, https://amazonialatitude.com/2022/06/10/colonialismo-segue-vivo-na-forma-de-pensar-patrimonio-dos-brasileiros-diz-krenak/.

2. F. Lara, "Urbis Americana: Thoughts on our Shared (and Exclusionary) Traditions," in *Urban Latin America: Images, Words, Flows and the Built Environment*, eds. Freire-Medeiros & O'Donnell (New York: Routledge, 2018), preface.

3. F. Lara, "Structures and Typologies of Latin American and Caribbean Cities," in *The Routledge Handbook of Urban Studies in Latin America and the Caribbean* (New York: Routledge, 2022), 93-116.

4. Edward W. Said, *Orientalism*, 1st Vintage Books ed. (New York: Vintage, 1978).

5. F. Lara, "What Frameworks Should We Use to Read the Spatial History of the Americas?" *Journal of the Society of Architectural Historians* 81, no. 2 (June 2022): 134-136.

Chattopadhyay proposed in Unlearning the City and Ariella Aïsha Azoulay argued in Potential History, there are plenty that we need to unlearn.

More recently, the provocative website Platformspace (full disclosure, I am one of the contributing editors) published a series of articles questioning exactly what we need to unlearn. The elegant answers by Swati Chattopadhyay, Mabel Wilson, Peter Christensen, Ana Maria Leon, Charles Davis, Lawrence Chua, Sammia Hanni and Lesley Lokko. In the words of Chattopadhyay:

> *"it's important to recognize that as good researchers, when we go out there, collect oral histories, do the ethnographic work that is necessary, that is not the solution to anything we're talking about here. That is additive. That is not regenerative. You still have to apply a practice of reading to those. It doesn't matter if it is non-textual, it's non-visual. I'm working on a project on small spaces. How do we write the history of the hidey hole? How do you write the history of that cage? How do you write that truth? What kind of language do you need to write? Where is the source? I work primarily on the historical archive and there has to be certain practices of reading. Yes, it's important to think about oral history, the non-visual. I'm thinking about sound a lot. But, I don't think we have figured out how to do that. It is extremely difficult to put that into a language of history writing. One of the struggles that I'm having is that I don't think we can write histories of that. I know I'm not writing an architectural history and I don't make apologies for that. But that's, for me, the unlearning of architectural history"*[6].

Writing in constant dialogue with the authors cited above and standing on the shoulders of decolonial theorists such as Arturo Escobar and Walter Mignolo, I argue that the rise of architecture as a unique discipline and the conquest of the American continent are not just chronological coincidences but interdependent variables of the same process of modernization. Traditional scholarship in architecture have not entertained those parallel developments at all.

The field of architectural history and theory still treats the spatial occupation of the Americas as a consequence of the Renaissance and European modernization, despite a few decades of scholarly literature in related disciplines questioning such assumptions. (Fanon 1961; Said 1978; Bhabha 1990; Dussel 1995; Escobar 1995).

The remaking of the world by modernization processes was triggered by the encounter with the Americas and implemented simultaneously at both sides of the Atlantic.

3. EDMUNDO O'GORMAN AND THE INVENTION OF THE AMERICAS

In 1958 Edmundo O'Gorman published La invención de América: Investigación acerca de la estructura histórica del Nuevo Mundo y del

6. S. Chattopadhyay et al., "Series of Unlearning Conversations," *Platform Space*, 2021-2022, https://www.platformspace.net/home/unlearning-part-i.

sentido de su devenir (O'Gorman, 1958). In this book O'Gorman uses cartographic information to demonstrate that it was the encounter with the Americas that triggered a revolution in Europe and not the other way around. The bulk of O'Gorman's argument is that America was invented as an otherness that allowed Europe to place itself as a center. The world for Europeans in the 15th century was formed by three land masses – Europe, Africa, Asia – surrounded by the Mare Oceanum. Analyzing the medieval idea of orbis terrarum (earth island) in opposition to orbis alterius (other possible islands inhabited by unkown creatures)

O'Gorman explains that the invention of America tears down the medieval notion of the orbis terrarium, the inhabitable world, as an insular entity closely bounded by a menacing ocean, and replaces it with an image of the world as a fully masterable terraqueous globe. Here I need to highlight the concept of masterable for its direct link to technology. As synthesized by Rene Descartes in the separation between res cogitans (mind) from res extensa (everything else), the minds of European men were now 'masters' of everything else that is not only land and resources but also all women and all non-European men. The connection with modern technology could not be more explicit.

Another fundamental concept to understand the role of the Americas in the development of European modernization and its architectural theories is the modernity/coloniality conundrum. Sociologist Anibal Quijano is credited with the concept when he moved away from economic-centric Dependency Theory to propose a World-System that explains the intricate relationship of modernization and colonization.[7] A few years later Arturo Escobar published Encountering Development: The making and unmaking of the Third Word, in which he elaborates the thesis that there is no modernization without colonization, both being sides of the same coin.

Doreen Massey and Ricardo Padron broke the code on how space is central to the Cartesian establishment of modernity/coloniality.[8] Up until the late 16th century most navigators used itineraries, sequences of geographical occurrences that locate the traveler within the path. The so-called cartesian coordinates, pioneered by the Portuguese system of padrões and centuries later systematized by Rene Descartes, removes the conquistador / navigator from the spaces here represented. As in the Cogito Ergo Sum, the mind now is separated from the body. The mind of the European men controls the representation of everything else: non-male, non-European and non- human. Spatial separation is key to that system, separation between mind and body, men and women, human and nature.

4. THE ARCHITECTURE OF CONTROL / ARCHITECTURE AS CONTROL

The development of representation techniques to manipulate spaces from afar, commonly known as architectural drawings, is part of this very same process described in the previous paragraph. Architecture as we know it was born from Leon Battista Alberti's idea of design as

7. Aníbal Quijano and Immanuel Wallerstein, "Americanity as a Concept, or the Americas in the Modern World," *International Social Science Journal* 44, no. 4 (1992): 549-557.

8. Doreen Massey, *For Space* (London: Sage, 2005); Ricardo Padrón, *The Spacious Word: Cartography, Literature, and Empire in Early Modern Spain* (Chicago: University of Chicago Press, 2004).

something separate from construction. In the Latin languages the concept of design is expressed by the words proyecto, projeto, or progetto, from the Latin projetare, meaning, to launch forward. Before Alberti, architecture was all about how to select the best design based on how we built in the past. After Alberti, architecture became about how we should build in the future. Intellectual concepts now mattered more than construction experience.

The Americas, as we know them, were invented when European scholars realized that Columbus had not arrived in India nor China, but instead had "discovered" a whole new world. As Edmundo O'Gorman taught us almost 70 years ago, it was the encounter with such alterity, or otherness, that forced the Europeans to rethink their entire ontology, therefore triggering the forces of modernization.

To envision why the encounter with the Americas is so relevant just follow the thoughts of Mexican historian Edmundo O'Gorman. Using maps as the basis of his analysis, O'Gorman shows that Europe had never been central to World History before 1492, nor was in any way inevitably moving in that direction. Instead, the impact of the encounter of 526 years ago was equivalent to what would occur if we find life in another planet tomorrow. O'Gorman then elaborates on how such ground-shifting event accelerated the protestant reformation (1517) and the works of Galilei and Kepler in the early 1600s.

Following the important works of O'Gorman, Walter Mignolo, and Roberto Fernandez we realize that it was here, in the Americas, that architecture's power of abstraction was first tested. This *American Laborator*[9] inaugurated in the early 16th century, gave us the processes by which a specific thread of knowledge carefully crafted from multiple roots (a.k.a. Western Civilization), became dominant in this little planet of ours, and the Gulf of Mexico is once again central in that history. It was here that all the gold and silver coming from Mexico and Peru were brought, pausing at the protected waters of La Habana before being shipped to Madrid. In the effort of controlling this vast territory of land and water, the tools of abstraction proposed first by Alberti and Descartes were tested and perfected, soon made available to European naval powers to control the entire planet.

The abstraction that is so important for every architect after the Renaissance is manifest in the very process of descriptive geometry associated with Gaspar Monge in the eighteenth century, but which in reality can be traced back to Albrecht Durer's Underweysung der Messung mit dem Zirckel und Richtscheyt from 1525. What Cortez was doing in Tenochtitlan was simultaneously being codified by Durer in Nuremberg: mathematical formulas used to describe space were instrumental for controlling lands across the Atlantic. This is no coincidence and decolonial theory has stressed over and over that everything called modernity was deeply influenced by the European occupation of the Americas as discussed by Dussel and Mignolo.

9. Ramón Fernández, *El Laboratório Americano* (Madrid: Biblioteca Nueva, 1997).

However, chronological parallelism does not mean symmetry. It was in the Americas that the project of modernity encompassed the scale of a whole continent, from the first Spanish cities of the last decade of the 15th century to the Jeffersonian grid of the early 19th century and the Argentine law of Avellaneda of 1876. The rise of spatial abstraction is shared with the rise of architecture as a discipline and any suggestion of calibrating abstract and non-abstract concepts is perceived as a threat.

Abstraction, as the definition goes, is quality of dealing with ideas rather than events, or something that exists only as ideas. The key question here is which facts have been elevated to the realm of ideas and which facts have been discarded. Modernity was created when we abandoned any relational knowledge and adopted a superficial (what occurs on the surface) understanding of space in which the controlling white man is removed from and every non-man, non-white beings are reduced to objects to be plotted and therefore controlled.

Spatial abstraction had been a tool of coloniality and inequality since the world-system took shape in the 16th century, and architecture is deeply embedded in this process. We use abstraction to separate our design students from everything they knew before and immerse them with a new set of values, architectural values. Once delinked from any previous spatial relations, our studio pedagogy teaches them to master abstraction, almost always discarding any site context or content in order to manipulate only geometry. Site plans do not register community life. Contours do not tell the history of the land. Plans and sections are arbitrarily narratives that force behaviors on people.

Those are the janus-faced powers of architecture: it could be used to envision a better world but 95% of the time it is used to reinforce the status-quo. If we want to mitigate the erasures imbedded in spatial inequality to keep moving towards more inclusive design processes, we need to understand the history of the relationship between design and exclusion. The historical roots of spatial abstraction are intertwined with the historical roots of architectural design, and the Americas played a central role in that development.

Here space, both real and abstract, acquired a central position in the transformation that we call modernity. Roberto Fernandez elaborated in his *El Laboratorio Americano* that America was the place where Europe inaugurated modernity through a monstrous negation of specific histories so that only space now existed.

5. WHOSE MEMORIES, WHOSE HERITAGES?

In architecture we are still very much enchanted with modernization. We love our modernist buildings, we plan modernizing infrastructures, we strive to modernity as synonym to building. Or better yet, we strive to development as a synonym to architecture. I propose that every architectural scholar read Colombian anthropologist Arturo Escobar, and the sooner the better. Escobar have devoted his life to showing that

modernization has a dark side called colonization – the idea that the ways of life of one population are better and therefore should be imposed on other populations.

Escobar's contribution to 21st century scholarship is to stitch modernization and colonization back together as faces of the same coin. We have been trained to abhor colonization and to worship modernization. When we understand that they are two faces of the same process we understand the crisis of the contemporary world as the crisis of white – heterosexual - male, the ones who have always been favored by modernization and development as we know it.

As Ailton Krenak reminded us in the quote at the beginning of this essay, our preservation institutions have been scaffolding for settle colonial processes and white supremacy. It is urgent that we engage the memories of indigenous groups, people of African descent, and disenfranchised immigrants that need to be weaved back into our historical narrative. ■

BIOGRAPHY

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MODERN ARCHITECTURE AND ORNAMENT?

IKEM STANLEY OKOYE
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ABSTRACT.

Despite Adolf Loos, ornamentation in 1920s and 30s New Way architecture, that is to say colonial-era modernism by Africans, was often conceived in ideas that appropriated and re-imagined African patterns, symbols, & etc. as expressions of locality, then later of Africanity, in ways quite distinct from the African customary. In time, European or euroadjacent architects working in Africa expanded this tendency. From the late 1950s onwards, we encounter in, examples in which decorative schemas involving postcolonial modernist African artists engaged in painterly imagery arises, instead, and often in the form of mosaics depicting aspects of traditional culture—this was rarely the case in the eastern half of Latin America, perhaps a comment on the status of indigenous peoples. It may have been less so in the Western Latin Americas. What does it mean, however, when architectural decoration by African artists abandon both tendencies, do not represent African-ness as such, but instead focus on infrastructural modernization as a representational content for architectural ornament? Nigerian artist Yusuf Grillo's mural at the Lagos City Hall will help answer this question or round off this history at its maximal moment.

Modernist architecture in *some* parts of Latin America, certainly in Colombia, Guyana, Surinam and Brazil—and certainly no one can claim knowledge across all of the Latin Americas—seems to have hewn quite close to the idea that ornament or decoration as central to architectural style was almost unethical if not exactly always a crime in the Loosian sense. For Brazil, to take one influential instance, we might speak of ornament in a *structural* or *formal* sense, meaning that the highly sculptural work of Niemeyer (our Lady of Fatima, Brazilia,1958) or Lina Bo Bardi (Museum of Art, Sao Paolo, 1968) are better understood as decorative on the scale of an urban landscape, even if aspects of their architecture includes elements that are ornamental. Something related can be said for Bogota, Colombia, where one is hard pressed to find anything other than the formal sculpturality or rectilinear regularities that are typically modernism's trademark, Rogelio Salmona's *Torres del Parque* (1964-70) then stands out as an apartment block invested in geometric forms apparently inspired by Islamic formalisms. And, yes, these then produce a dazzling dynamic movement on its curving façade that has the effect of being decorative. In the small, in some ways now more out of the way cities like Paramaribo Surinam or Georgetown, Guyana, the small number of modern buildings erected in these contexts, often by architects from Europe (P.J. Nagel's buildings in Paramaribo for instance) the buildings tend once more to be straightforwardly reminiscent of buildings we might see in other places. To the extent they included non-structural/non-form-focused decorative elements as was the case in the interior of the Bank of Suriname building, this came in the form of a pseudo-Abstractionist image and was restricted to a small section of the building.

By contrast, in most African locations, certainly in Nigeria, or Ghana, Senegal or Mozambique (all of course presenting no less a *differing* set of chronological trajectories of decolonization and postcoloniality than do Latin America's), ornamentation in architecture was often purely ornamental. This is not to say that African modern architecture lacked structural drama in the senses just outlined of extensive surfaces of a building subjected *neither to* structural gymnastics nor to the structural logic of something like decorative concrete blocks acting as *brise soleil*, but that what is most often encountered, instead, are *vast* areas of a wall surface acting as a canvas on which a low-relief mural is stretched across even ten floors of a multi-storey building's façade. Although this generalization may, for Latin America, be a comment more relevant to the western (Chile, Argentina, Peru et cetera) and more Pacific- adjacent "half" of Latin America than the eastern, more Atlantic and therefore Africa-facing Latin Americas (if not even the Lusophone from Spanish speaking Latin worlds), what I summarize for the east, does stand in stark contrast to the situation in sub-Saharan African contexts outside South Africa. In the African context, moreover, although indigenous architects are involved in the production of modern architecture in Africa, for at least the period up to say 1973, expatriated Europeans (and Israelis) or naturalized Europeans living on the continent, secured the commissions as architects for the major buildings including both governmental and commercial or corporate projects unlike what the narrative is in Latin America. Although Nagel was Dutch and of course Brazil's Bardi was

originally from Italy, there is quite a difference between how accounts are written of them compared to the situation in Africa where the non-African architects securing the major modernist projects where additionally marked by being white.

1. SIMILARITIES AND A DIFFERENCE SUMMARIZED

In modern architectural decoration in Africa therefore, one can posit a difference from the Americas perhaps even an effect, that has to do with the building as canvas, and often as a canvas in which certain projections of Africanity might be deployed in order quite literally to stamp an African identity on an otherwise arguably Western style or form—even despite the arguments about international style's neutrality.

Examples in Nigeria would include the later work of Godwin and Hopewood at Ibadan, or James Cubitt at Nsukka, Arieh Sharon with A.A. Egbor at the University of Ife, or in Ghana James Cubitt at Kumasi, Ghana, or even half a continent away Pancho Guedes's 1953 Santos e Rocha building, in Maputo, Mozambique. Guedes thus seemed as alert as were those practicing in West Africa, to the politics, romanticist or real, of making modern architecture African in ways not replicated in the pacific facing vs Atlantic facing worlds of the Latin American difference. In this paper, then, with a consideration of the idea of the infrastructural sublime in mind, I explore the moment of a shift in modern architecture's practices of decoration in Nigeria circa 1968—a shift without any clear companion in Latin America to which it might be compared given the different starting points.

The Cold War had political effects almost as significant in Africa as in Latin America, and there are ways in which the rise of military dictatorships and of civil wars, and of the effects these had on culture—architecture included, I insist that Africa near the turn of the 60s, and Nigeria in 1968 particularly, marks an even more specific moment for architecture—the first and only unravelling of the sacrosanct idea of post-colonial sovereignty along the lines inherited at Independence, and over which African countries were divided. What is interesting for architecture is that 1968 marks a moment, too, in which abstraction is abandoned in architectural ornamentation in lieu of a realist image that simultaneously attempts to heal a nation riven by its civil war (sometimes known as the Nigeria Biafra war), and in doing so deploys a certain rhetoric about modernity and modern infrastructure as salvific.

2. MODERNIST BUILDINGS AND ARTISTS AS ORNAMENT MAKERS

At the centre of my observation, perhaps marking a difference from parallel engagements in Latin America, is Lagos—at the time the commercial and governmental/administrative capital Nigeria. Its protagonist is not an architect at all, but rather the Lagosian artist,[1] partly of Black Brazilian descent,[2] Yusuf Grillo. Before focusing on the work that demands out attention, I must give a historical context by pointing to an early, Greek-owned Lagosian hotel, the best of its day, known as the Bristol Hotel, a mid-1960s marker of luxury tourism. A modernist building, it captured the headlines and imagination of Nigerians–not least because it replaced an older Bristol Hotel building that

1. Dele Jegede, "More to Art than Exhibition," *Glendora Review-African Quarterly on the Arts*, vol. 3, no.2 (2020).

2. Yusuf A. Nzibo, "Muslim Factor in the Afro-Brazilian Struggle Against Slavery," *Journal of the Institute of Muslim Minority Affairs*, vol VII, no.2 (July 1986): 547-556.

was a neoclassical structure destroyed in the 1940s amidst a racism-triggered uprising against colonial segregation.[3] The new Bristol, a replacement for the burned-out husk, now included a large mural on the outsides of the building.

Africa-themed murals continued to be commissioned in other buildings, for example in the 1963 Independence with sculptor Felix Idubor's high relief cement-sculpted scenes, visible upon approach, depicting highly stylized genre figures from Nigerian life, installed near the entrance. In a nearby building for NECOM, in roughly the same period, one finds a first use of mosaics by Yusuf Grillo (1934-2021), an abstracted pattern reminiscent of those constrained to the borders of a project we shall shortly explore than it is at the centre of the decorative project itself, although Grillo often later recalls this building as being Independence House itself (see Jegede, 2000).Encounters between architecture and the visual arts were expanded, especially in hotels that emerged a few years later in Lagos. An intriguing exception to the use of giant-sized murals on building externals, as a provider of a kind of local flavor (because these had no impact *par se* on building form or the spatial layout of actual buildings) occurred in the Lagos City Hall. In this modernist building, no mosaic or painted giant mural covers any portion of its external facades. The drama of mural art unfolds as a surprise, and only once one enters the building to be confronted by a large, sprawling mural that moreover seems to offer an atypical and unexpected illustration of a once unfamiliar urban scene. Other murals are also distributed in some of its more accessible but constrained spaces, passages into the building.

But first about the building. It was engulfed by a fire in 2001, and a renovation project was commenced that did not maintain the style of the original building. What one encounters today, then, is not the original building. It was, in any case, a sternly modernist building. Lagos City Hall **(Fig. 1)** was designed by Israeli architecture and engineering firm AMY Ltd, and appears to have been conceived as what one journalist calls a hub for "social engagements and business," it was later reimagined as an "address for entertainment and tourism."[4] Certainly, by the turn of the millennium, several renowned institutions have occupied some of its spaces as tenants since its founding, recently including the Nigerian offices of the Goethe Institute. Completed in the middle of downtown Lagos Island in late 1968 amidst a still ongoing Nigerian civil war, a festive inaugural event was nevertheless held, in which important figures of Lagosian social life, including its Military Governor Mobolaji Johnson, were in attendance.[5] It nevertheless appears to have been opened to full public use only in 1970 as the civil war concluded, and Nigeria had not broken apart after all, thus ushering a new spirit for a nation where as Military President General Gowon once put it, there was to be "no victor and no vanquished".

Approached from a distance, we encounter a large horizontally extended thirteen bay front-facade (sides are shorter) only interrupted by a vehicular ramp that arrives above a lower level, giving entry to its main hall. But, remaining on the outside, the building offers very little that could be considered a diversion from its strict, almost commercial, late modernist aesthetics. Its thirteen bays are clearly defined by stout concrete columns that were once clad in dark colored panels, and they support a heavy and broad cantilevered roof

3. This was brought to notice when a Sierra Leonean guest, whose reservation had been confirmed, arrived to be denied his stay once it was realized he was Black.

4. Femi Akinola, "How Lagos City Hall Came Alive Again," *Daily Trust*, February 6, 2010, accesed May 2024, https://dailytrust.com/how-lagos-city-hall-came-alive-again/.

5. Akinola, "How Lagos City Hall Came Alive Again."

providing a shallow protection to the main cladding enveloping the building. The cladding-proper is essentially a curtain wall that runs in horizontal bands of glazing and narrower opaque panels.

The Interior of the building is surprising, regardless of which way into the building one passes. Indeed, there are several entrances, and one might categorize these as a formal entrance arrived at by car and likely to be the one used on ceremonial occasions by those who arrive by car. The other, a set of more common entrances, serves mainly pedestrians walking in from the less formal other side of the building away from the main entrance. There are other Grillo murals in the Lagos City Hall. The large one on which I have focused is most likely to be encountered first if one enters the building after driving (or more likely being driven up in a limousine like a VIP), to the formal entrance hallway past its multiple swing doors **(Fig. 2)**. Other mosaics in the building are smaller and at eye level, viewed from narrow corridors pressed up to image in ways not available to a viewer who arrives by car at the main entrance. The encounter walking in from the more pedestrian entrance of the crowded back street that ordinary people will use feels quite different, and its subject matter is more familiar to Grillo *aficionados*

The experience is different being dropped off at the main entrance by car. Passing through its entrance doors brings one to its multistory arrival hall. At both ends internal stair flights soar, producing an unexpected drama. Nevertheless, although a visitor is first drawn to a vast wooden sculpture in two large panels at the entrance as one walks into this space, this is hardly architectural ornamentation as such. The hall also includes a mezzanine gallery, however, where a huge mosaic mural is installed tantalizingly out of immediate reach.

The work is a grand, photographic vista of Lagos, focused on the Island—its more modern core in other words—where can be observed its downtown. It captures tall buildings, some identifiably skyscrapers that crowd towards the middle of the panel. Another element in the image snakes away from the images' crowded center–a bridgeway hovering above the waters of the Lagos Lagoon. This is the Third Mainland Bridge **(Fig. 3)**, a project that was in part meant to ease the traffic on both the Island and on the mainland, and across the two or three bridges connecting them. This Mainland Bridge is essentially a traffic bypass writ large, and any focus on it by an artist cannot but be a comment, whether optimistic or as critique, on i*nfrastructural development*, and on *modernization* itself as figured by the state. The infinite bridge that it is, also speaks to issues of Nigerian sovereignty, given the incredibly traumatic civil war, which after all was in truth also as a global front for a proxy Cold War era struggle between two superpowers for influence on the African continent.[6]

Grillo's work at the City Hall is significant, given its obviously engaging realism in ways that the artist would not previously have been best known for. Its scale, and the difficulty of apprehending it from any location in which we may actually *stand* (as an embodied viewer in its presence rather than for instance as illustration in a book) as well as the Bridge's disappearance into the horizon as an infinite object, calls forth both Bennett's (1988) notion of the technologies of

6. Aihwa Ong, "Hyperbuilding: Spectacle, Speculation, and the Hyperspace of Sovereignty," in *Worlding Cities: Asian Experiments and the Art of Being Global*, ed. Ananya Roy and Aihwa Ong (Oxford: Wiley-Blackwell, 2011).





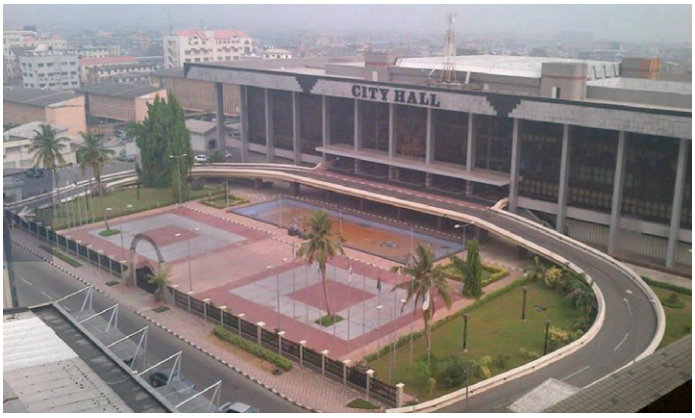


Figure 1. Remodelled City Hall, view looking down from adjacent building, January 2017. Photo, courtesy Olusola Oladotun. Source, Google Mapa (subject to fair use).

Figure 2. Double storey Main Entrance Hall, with mural at the mezzanine level, June 2017. Photo, copyright, Ikem Stanley Okoye.

Figure 3. Closeup view of left side of the mural with bridgeway snaking its way from left center upwards to the top left side of the image. Photo, June 2017, copyright Ikem Stanley Okoye.

vision,[7] as well separately as Jamieson (1991),[8] theorization of the infrastructural sublime in post modernism, and Ong's (2011) asserting the role of speculation and the spectacular in relation both to representing the Biafran threat to Nigerian sovereignty and its overcoming, as well as it does the post-civil war oil boom that enabled the most dramatic reconstruction of the Lagosian postcolonial urban landscape. The bridge-object on which our vision focuses is also quite unlike what one encounters as the decorative in other buildings of the period, including the one encountered in the constricted space of the building's other entrances.

The divergent murals, the one at the main entrance and its intentional contrast with the others in the same building, then, surprises one by their oscillations as well as other solicitations–given familiarity with murals-schemes on the outsides of African civic architecture in the postcolony. Although it is unlikely that the artist initially chose to work on the inside, rather than externally, the depiction of Lagos and its bridgeway, and its mode and medium, enhance this interior space greatly while also serving as a demonstration of the symbiotic relationship between art and transformational civic life in a universe emerging from tragedy.

Grillo's critical perspective is enhanced by thinking of how here we have architectural decoration by a commissioned West African artist on a modernist building that departs from representing African-ness as such, whether abstract or realist, non-objective or figural. It moved instead to what might seem like a mere focus on infrastructural modernization and the liberal economics of the free market as salvific. This is a veiled critique of infrastructural prowess the future. This was certainly a departure for the place of ornament in modernist architecture in Africa. I wonder whether there is evidence of a single building and its ornamentation, so cleverly capturing a similar shift, in relation to building decoration and the post-dictatorship era in Latin America. ■

7. Tony Bennett, "The Exhibitionary Complex", *New Formations* 4 (1988): 73-102.

8. Fredric Jameson, *Postmodernism, or the Cultural Logic of Late Capitalism* (Durham, NC: Duke University Press, 1991).

BIOGRAPHY

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- Bring the significance of the architecture of the Modern Movement to the attention of the public, the authorities, the professionals and the educational community.
- Identify and promote the surveying of the works of the Modern Movement.
- Promote the conservation and (re)use of buildings and sites of the Modern Movement.
- Oppose destruction and disfigurement of significant works.
- Foster and disseminate the development of appropriate techniques and methods of conservation and adaptative (re)use.
- Attract funding for documentation conservation and (re)use.
- Explore and develop new ideas for the future of a sustainable built environment based on the past experiences of the Modern Movement.

Docomomo international wishes to extend its field of actions to new territories, establish new partnerships with institutions, organizations and NGOs active in modern architecture, develop and publish the international register, and enlarge the scope of its activities in the realm of research, documentation and education.

In pursuit of the mission of **Docomomo** international, as updated in the Eindhoven–Seoul Statement 2014, the theme of the 18th International **Docomomo** Conference is “Modern Futures: Sustainable Development and Cultural Diversity.”

The Conference takes place in Santiago de Chile, from 10 to 14 December 2024, at the Facultad de Arquitectura, Diseño y Estudios Urbanos of Pontificia Universidad Católica de Chile.

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