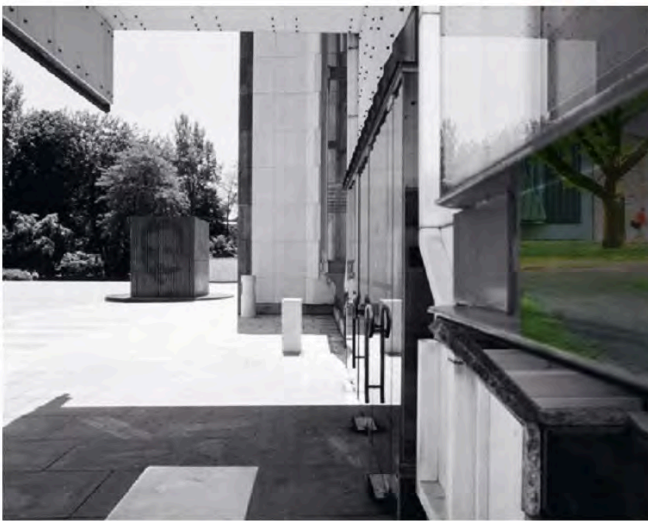


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metamorphosis

The Continuity of Change



15th International DOCOMOMO Conference

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Nataša Koselj





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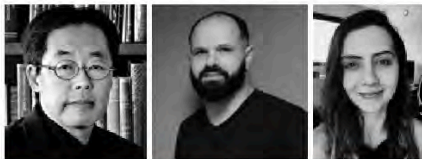
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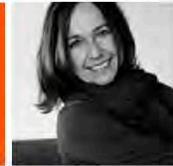


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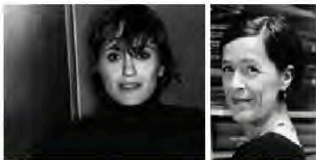
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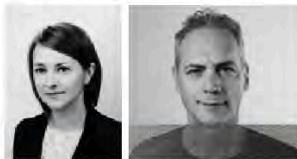
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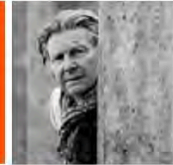
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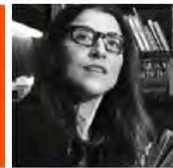
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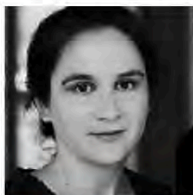
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METAMORPHOSIS AS VITAL TRANSFORMATION

The Modern Movement and the continuity of change

Ana Tostões, Chair of Docomomo International (Portugal)

Metamorphosis. The Continuity of Change is the main theme of the 15th International Docomomo Conference. Celebrating 30 years of an active life, Docomomo is addressing *metamorphosis* as part of its efforts to preserve and adapt the technical, social and aesthetic goals of the Modern Movement. The concept of *metamorphosis*, understood as a biological and organic metaphor by which change in animal structure relates to historically idealist ideas of transformation, as in Goethe's *Metamorphosis of Plants*, have influenced the development of ideas of evolution. It is also seen in Franz Kafka's oneiric creation - *Die Verwandlung* – in which he reinvented the idea of transformation, or “metamorphosis”, from the Greek *meta* meaning change and *morphe* signifying form. The aim here, is to re-apply this concept to architectonic knowledge and reflect on the transformative capacity of the Modern Movement to adapt and update, from its origins to the present day. The beautiful city of Ljubljana, with its unique poetic atmosphere, is an ideal place to do it, between Jože Plečnik's masterpieces and Edvard Ravnikar welcoming us at the astonishing Cankarjev Dom. In pursuit of this goal, Docomomo, as a collective modern project, has been – and must continue to be – brave. This is to say, it must carry on the social, spatial and technological project, engaged with the community and the creation of a better place to live.

In search of a holistic approach, the theme of the conference was elaborated through 4 sub-themes, around which are organised 18 thematic sessions, 72 papers and 32 posters: 1) Cities, 2) Buildings, 3) Identity and 4) Environment.

Our cities are evolving in response to continuously changing forces. These involve many different layers of economics, politics and science. The *cities* topic aims to question how we can reconcile the ideals and built legacy of the Modern Movement with the digital revolution, worldwide mobility, migration and increasing environmental awareness. How can our attraction towards ever new, and incessant innovation, be reconciled with sustainable urban conservation and what we have learnt from the Modern Movement? The sessions entitled “City Growth: Change, Transformation”, “Tactical Urbanism”, “Visions for

Living” and “The Impact of Mobility” put these topics under discussion and seek to find examples of success and failure.

The *buildings* theme examines the processes of restoration or adaptive reuse, in which the paradigmatic challenge is to adapt the buildings concerned for different functions, users, lifestyles, environmental and safety standards. The goal is to identify the most informative examples of the restoration or adaptive reuse of modern architectural heritage, which can address the following questions: How can we select what must be preserved and what can be changed? How can we combine preservation with legal energy-efficiency directives? What up-to-date technologies and processes for material selection can improve the experience of living in modern buildings? How can new technologies and improved materials be assessed? Within the decision-making process, how can we effectively address regulatory changes? How are interiors, environments and well-being affected by these changes? In this framework, this Conference highlights Housing as a major topic for urgent research in three different sessions – “European Housing Strategies”, “Housing in Transformation” and “Habitat; between Local & Global” –, and also pays special attention to educational and healthcare buildings in “Reinventing Public Institutions”.

The theme of *identity* is concerned with awareness of the fundamental role that human migration plays in all societies today. The forced interaction of people and places is now increasingly central to the development of cities and architecture. In the context of a society substantially shaped by physical and virtual transfers, how can identity be created, from the generic to the specific? What is the role of architectural heritage? What can we learn from the Modern Movement ideals of equality and progress, still perceptible nowadays, through its built legacy? Against a backdrop of rapid and uncontrolled urbanization and the fragmentation of the urban and social fabric, how can a sense of community and solidarity survive in our ever-more pluralistic societies? In this context, is it realistically possible to preserve character and memory in conservation and adaptive reuse projects? The sessions “Doubts on Au-

thenticity”, “Authenticity and Reuse” and “Shifting Identities” address this problematic, while “Modernity and Political Upheaval” and “Identity and Nation-building” explore the necessary relationship between identity and politics.

The accelerating processes of contemporary development, coupled with a lack of commitment and responsibility, have created incredibly damage on an ever-greater scale, including phenomena such as climate change, a breakdown of traditional cultures, and hyper-individualization. Also, the overall context of the economic crisis requires a better management of natural resources. The *environment* theme aims to address how the modern built environment can help foster a sustainable environment. How can we combine sustainability and modernity? Is it possible to identify exemplary cases of reuse projects set within different traditions, and social and physical environments, which employ sustainable architecture and urban design to reflect local requirements? “Updating materials and technology” and “Energy Efficiency and Environmental Impact” are particularly relevant for dealing with these issues.

The session “Educating for Preservation and Reuse” must be highlighted as it continues the discussion initiated in the 14th International Docomomo Conference (Lisbon, 2016): the importance of developing education on reuse. Finally, the knowledge to be gained from *Team 10* is emphasized in “About Team 10 – Continuity and Change” as we believe it should be analysed through the lens of contemporaneity and cross-analysed with the Conference motto, metamorphosis continuity of change. That’s why the keynote speakers, to whom DOCOMOMO wishes to express its gratitude, consider the relationship between architecture and society, environment and identity, reinforced by a critical reading of Plečnik’s legacy and Aldo Van Eyck contributions for the Modern Movement’s intellectual metamorphosis.

The contributions in this volume of Conference Proceedings discuss issues such as the value of the icon or the ordinary, the interrelationship of modernity and Modern Movement built heritage, economics and energy saving, the social mission of architecture and the responsibility of architects towards the future. As a multidisciplinary platform, its aim is to investigate a cross-section of the questions raised by the challenge of preserving, renovating and transforming the legacy of the Modern Movement worldwide, against the complex background of today’s changing times.

Docomomo International is very grateful to Docomomo Slovenia and its Chair, Nataša Koselj, for organising the 15th International Docomomo Conference; to the Scientific Committee

and the Session Chairs for their scientific work and active support, and to all the authors for sharing their knowledge and for agreeing to allow their papers to be published. The efforts of the Session Chairs, to review and improve the papers, together with the authors, were fundamental for the success of this project, and we thank all of the contributors who met deadlines and complied with the agreed rules so that the Conference Proceedings could be presented at the Conference itself.

In pursuit of docomomo’s mission, as updated in the Eindhoven-Seoul Statement 2014, the theme of metamorphosis aims to spur debate on the conservation and (re)use of the buildings and sites of the Modern Movement, to foster and disseminate the development of appropriate techniques and methods of conservation and (re)use, and the exploration of new ideas for the future of a sustainable built environment, based on the past experiences of the Modern Movement. Relating technology, form and social commitment to one another, through an optimistic faith in progress, modern architects sought to attain new heights of functionality and flexibility in use. How we deal with this modern legacy in a constantly changing context, encompassing physical, economic and functional changes, as well as fast-moving socio-cultural, political and scientific contextual values, is the challenge we face today.

BIOGRAPHY

Ana Tostões, PhD, architect, architecture critic and historian, chair of Docomomo International and editor of the *Docomomo Journal*. Full Professor at Técnico, University of Lisbon, where she is in charge of the Architectural PhD programme. Invited professor at universities worldwide.

She has a degree in Architecture, a Master’s degree in History of Art with a thesis entitled *Os Verdes Anos na Arquitectura Portuguesa dos Anos 50* (FAUP, 1997), holds a PhD on culture and technology in Modern Architecture (*Idade Maior*, FAUP, 2015, awarded with the *X BIAU Prize 2016*).

Her research field is the critical history and theory of contemporary architecture, focusing on the relationship between European, Asian, African and American cultures. On this topic, she has published books and essays, curated exhibitions, organised scientific events, coordinated research projects, supervised theses, taken part in juries and committees, and given lectures worldwide.

She coordinated the research project *Exchanging World Visions* published and awarded the Gulbenkian Prize 2014, and currently coordinates the research project *Cure and Care the rehabilitation*.

EDGE AND METAPHOR

The Authentic Modernism of Edvard Ravnikar

Nataša Koselj, Chair of Docomomo Slovenia (Slovenia)

Back in the autumn of 2016, as we were crossing the Republic Square on our way to a meeting in Cankarjev Dom, an example of Slovene structuralism *par excellence*, Hubert-Jan Henket expressed his sincere admiration for the square's design: "What a wonderfully human scale this square has! Keep this scale!" Once inside Cankarjev Dom, he wondered aloud how it was that Edvard Ravnikar had not been a member of the Team 10. This article is based on an analysis of ten of Ravnikar's diaries, entrusted to me by France Ivanšek, which also formed the basis of my doctoral dissertation in 2003.¹ As chance would have it, Docomomo International is celebrating its 30th anniversary in 2018, while this year also marks the centenary of the birth of Aldo van Eyck, the founder of structuralism in architecture and one of the founders of Team 10. Aldo van Eyck was Hubert-Jan Henket's teacher. This year also sees the 80th birthday of the architect Alexander Tzonis, who together with Liane Lefaivre coined the phrase "Critical Regionalism", and the 25th anniversary of Edvard Ravnikar's death, so the common thread of this year's Docomomo conference at Cankarjev Dom, entitled "Metamorphoses – The Continuity of Change" is a homage to the work of all the architects mentioned: Hubert-Jan Henket and Docomomo International, Aldo van Eyck and Team 10, Alexander Tzonis and "Critical Regionalism" and Edvard Ravnikar, the father of regionally tempered Slovene structuralism.

Begin with lawful and unshakeable order, then introduce disturbance and disorder, uncertainty. Things are born where law is no longer sufficient to exclude disorder, to prohibit dynamic particles from moving in parallel currents, to begin acting reciprocally on one another. If there is no refusal, only the laws of destiny remain, in other words the meshes of order. The new is born from the old. The new is merely the old with repetition. The angle breaks the solid chain, the endless sequence of intellects and causes. This angle disturbs and interferes with the laws of nature. This is where something alive appears, and everything that breathes; horses start to run.

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Fig. 0: Hubert-Jan Henket, Nataša Koselj and Ana Tostões, Republic Square, Ljubljana, November 2016. Photo: Zara Ferreira.

INTRODUCTION

Ravnikar's thoughts on the laws of his own creative process, in the Slovenia of the second half of the twentieth century, on the edge of developed European modernism, on the geopolitical boundary between East and West, in an out-of-the-way corner below the Alps. This position represents for him a creative starting point and an opportunity to establish new spatial relationships, new dynamics, while at the same time the edge, the corner and the boundary are, in Ravnikar's architecture, also the points of metaphors in which he substantiates his own personal architectural poetics, which I call "Authentic Modernism". The direction of development of Ravnikar's architecture was from the rigid to the dynamic, from the universal to the local, and from the rational to the sensual. In his work he combines the traditions of two important European schools, the German and French, and interweaves them with a modification of regional archetypes and his own character.

THE ORDER

Begin with lawful and unshakeable order, then introduce disturbance and disorder, uncertainty.

15IDC Metamorphosis Preface

Architecture as a discipline is based on universal laws and order. Classical order founded on the ideal of rational perfection, symmetry and axial orientation, is also a constant presence and starting point in Ravnikar's architecture, something he explicitly espoused in an interview for *Nova revija*,² although this order in itself is not enough for him, since the essence of the modern composition, in contrast to static symmetry, is founded on the dynamic equilibrium of component parts and the whole. We can show this in two of Ravnikar's early works: the Museum of Modern Art (1939–1951) and the project for the new town of Nova Gorica (1947). Both examples involve rather rigid, rational, functional and axially symmetrical orthogonal plans of Euclidean geometry created under the influence of the ideas of Le Corbusier's modernism. In the case of the Museum of Modern Art, the symmetrical order is dynamically broken by the placing of a pool to the left of the main entrance (today, unfortunately, no longer there); in the case of Nova Gorica it is broken by the diagonal of Erjavčeva Road to the main traffic axis. Ravnikar himself was quite critical of both works. Regarding the Museum of Modern Art he made the following entry in his diary: *Until long after the war I viewed the period in which I designed the Museum of Modern Art, my first work, more with shame than with pride, and was even careful never to walk past it. At that time, after the war, when I was 38 years old, so absorbed in educating myself, in the exertion of my endeavours in architecture*

at the technical college and in art at the Academy of Fine Arts, the thing seemed to me to be a perfect denial of the talent, knowledge and ability necessary for a career like Plečnik's for example. A similar influence of Le Corbusier and the postulates of the Athens Charter may be seen in the 1939 competition for the regulation of Ljubljana, where Ravnikar envisaged an ideal, radically functionalist model of new urban organisation, the zoning of urban functions, a third ring and the development of linear settlements along the main arterial roads. Of the old town centre, he retained only medieval Ljubljana below the castle and some individual monuments.

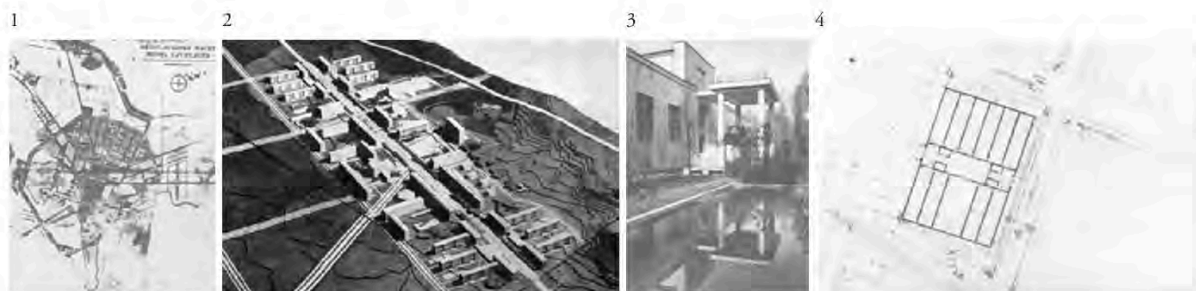
He adopted a critical view of this type of urban planning in as early as 1951, in a lecture he gave at the Slavic Club (*Slovanski klub*) to coincide with the opening of an exhibition on the Federal People's Republic of Yugoslavia at the Museum of Modern Art, in which instead of the construction of brand-new, ideal towns, he advocates a softer approach in the sense of the organic regulation of existing, living organisms (Kranj, Strnišče, Maglaj) – an approach also advocated by the members of Team 10 at CIAM congresses from 1947 to 1956. The previously dominant straight line and axial symmetry are softened into an asymmetric, organic curve and a clustered, tree-like composition. In this spirit Ravnikar also designed two covers for the magazine *Arhitekt*, the first in 1951 when the magazine first began to be published and the second in 1956 when he was its editor-in-chief.

Fig. 1: Ravnikar, Edvard: Plan for the regulation of Ljubljana, 1939 (France Ivanšek's archive)

Fig. 2: Ravnikar, Edvard: Urban plan of Nova Gorica, 1947 (France Ivanšek's archive)

Fig. 3: Ravnikar, Edvard: Museum of Modern Art, main entrance with pool, 1939–51 (France Ivanšek's archive)

Fig. 4: Ravnikar, Edvard: Museum of Modern Art, ground plan, 1939 (France Ivanšek's archive)



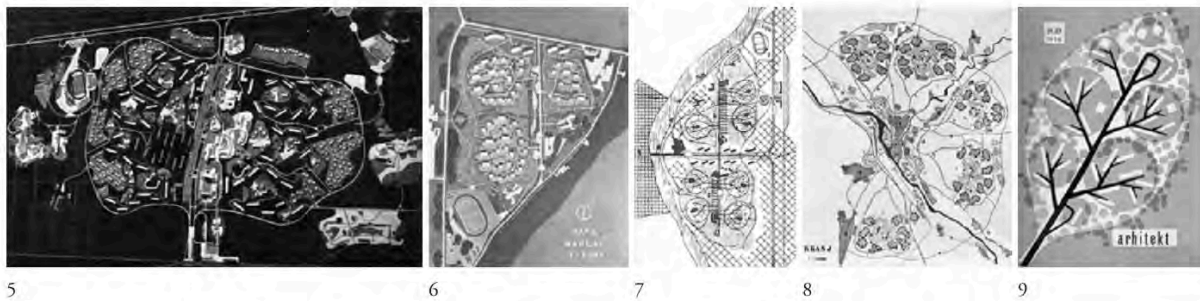


Fig. 5: Urban plan of Strnišče, 1950 (Arhitekt magazine archive)

Fig. 6: Urban plan of Maglaj, model, 1952 (Arhitekt magazine archive)

Fig. 7: Urban plan of Maglaj, sketch, 1952 (Arhitekt magazine archive)

Fig. 8: Urban plan of Kranj, 1951 (Arhitekt magazine archive)

Fig. 9: Cover of Arhitekt magazine, 1956 (Arhitekt magazine archive)

In the regional sense he first advocated the polycentric urbanisation of Slovenia in his famous Dubrovnik paper of 1950,³ on the grounds that in Slovenia one could not talk of town and country as two opposing principles, something that corresponded with the policy of that time with regard to the elimination of the differences between village and town. Like Josip Vidmar⁴ he was aware that the preservation of natural characteristics and laws of existence developed over the course of millennia was of key importance for the survival of the nation. In Slovenia these characteristics were, in his words: small size, fragmentation, geographical diversity, relatively low population density, rich forests and a relatively good transport network, reflecting Slovenia's clear role as a transit territory.

In 1946 Ravnikar wrote that “*deeply extending greenery*” was a special feature of Ljubljana to which particular emphasis should be given. He followed this idea in all three of his projects for the Republic Square development, connecting the western part of the green area known as the Convent Garden to the park in front of the National Museum. A constant of all his projects for Republic Square is the Sittesque incorporation of views of the bell tower of the Ursuline church, Ljubljana Castle and Krim (a mountain south of Ljubljana). As he put it, in the 1960 competition for Revolution Square (the original name of Republic Square), it was necessary to create a “*political space*” and therefore a certain degree of aggression was needed, for example the 20-storey towers and the conversion of the convent garden into a concrete wilderness.⁵ Economic reform in 1964 led to a change of developers and, consequently, changes to the project. The tower blocks became lower and were additionally widened at ground level, while the asymmetrical tops of the towers softened the previously symmetrical composition. The monument to the revolution, originally intended for the centre of the square, was

Fig. 10: Ravnikar, Edvard: three projects for Republic Square: 1947, 1958, 1960 (France Ivanšek's archive)

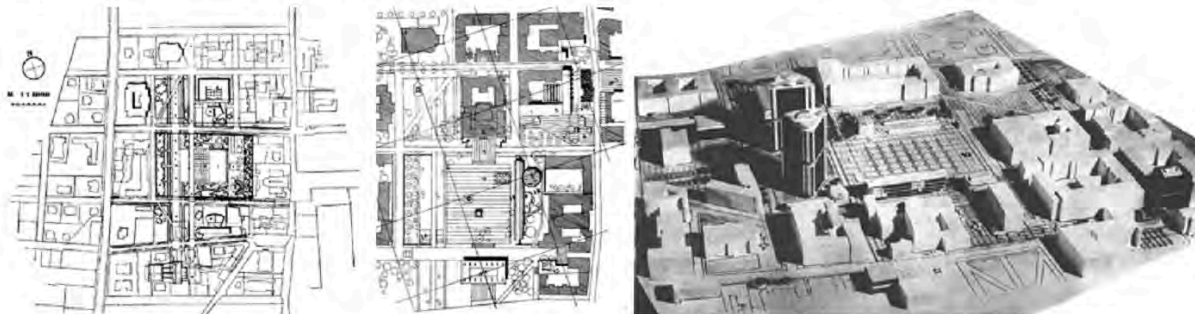


Fig. 11: Plečnik, Jože: NUK, detail of façade, 1930–31 (Docomomo Slovenia archive)

Fig. 12: Ravnikar, Edvard: Museum of Modern Art, detail of façade, 1939–51 (Docomomo Slovenia archive)

Fig. 13: Plečnik, Jože: NUK, window on the Gosposka frontage (Docomomo Slovenia archive)

Fig. 14: Ravnikar, Edvard: Cankarjev Dom, window overlooking Erjavčeva, 1980 (Docomomo Slovenia archive)

Fig. 15: Plečnik, Jože: NUK, main entrance. (Docomomo Slovenia archive)

Fig. 16: Ravnikar, Edvard: Cankarjev Dom, main entrance (Docomomo Slovenia archive)

moved to the edge. In a symbolic sense, all of this is also an expression of the development of Slovene society, which in that period was developing from communism via self-management socialism into a consumer society, or from a rather totalitarian state into a democracy.

THE OLD AND THE NEW

The new is born from the old. The new is merely the old with repetition.

In Ravnikar's work the dialogue between old and new took place at three main levels: in the sense of a continuation of the European architectural tradition via Plečnik and Le Corbusier; in the sense of a metamorphosis of regional archetypes deriving from the functional tradition of rural Slovenia; and in the sense of the incorporation of archaeological finds and views of existing spatial dominants into new architecture.

From the moment of his arrival at the Faculty of Architecture in 1946, Ravnikar consciously endeavoured to continue the tradition of "Flexible Classicism"⁶ of the Plečnik school, at that time already famous throughout Europe for characteristics such as its seminar-based approach, its attitude towards local context, its commitment to craftsmanship in its treatment of details and materials, and its concern for drawing and presentation. Given its origin, the Plečnik's school was – via Otto Wagner – the direct successor to the German school, in the background of which was Semper's philosophy of the development of architectural history through crafts and the "dressing" of buildings (*Bekleidungsprinzip*). In view of the new socio-political situation, Ravnikar endeavoured to build on the craftsman-like tradition of detail by connecting the school to the newly emerging local industry. This period was the origin of those original and distinctive industrial details that are one of the principal hallmarks of the "Ravnikar's school". On the other hand Ravnikar, who had spent some



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months with Le Corbusier in Paris, had absorbed the tradition of the French school of architecture that has its roots in Perret's attitude towards concrete structures, in a free spatial concept and urban designs, in the connections of architecture with fine art (cubism) and in the concept of the spirit of the age (*l'esprit du temps*). Ravnikar claimed that Le Corbusier helped Slovenes cross that threshold that Plečnik was no longer able to cross.

Concerning the relationship between old and new, tradition and progress, Ravnikar's diary offers the following entry:

Tradition in architecture does not only mean that Bernini and Borromini derive from Michelangelo, that Wright derives from Sullivan and that Le Corbusier derives from Perret. There is a slight similarity between the main entrance at Cankarjev Dom and NUK: there is a large "window" on its façade, like on the latter's frontages on Vegova and Gosposka. I drew both for Plečnik. How else to explain the appearance of such things, things we do not see in other works. A series of other decisions belong here, of course. Tradition understood in this way does not mean a kind of sterile persistence but rather a specific, elastic connection that turns to the past in order to find points d'appui, rather than the desiccated model of an entire work and its details. These elements of Plečnik's are his pride and the centre of gravity of a concept developed during the course of the work (something clearly evident from his words and emotion while working on the project). I don't know if anyone else who studied with Plečnik understood things in this way and has held onto them. It is from this unique understanding between tradition and progress that Ravnikar drew his own creative strength. Recognising and overcoming this tension enabled him to develop his own distinctively individual architectural language.

At the same time as building on the local and European cultural tradition, Ravnikar made a conscious effort in this period to incorporate modified regional archetypes ranging from national costumes to the functional tradition of rural Slove-

nia into his architectural expression. He found inspiration above all in the wooden joints of drying racks and hay barns, in the spatial relationships between structures, and the natural position of a village in the landscape.

Many "traditional wooden joints" are visible in the reinforced-concrete cantilever structures of Ravnikar's architecture. In his efforts to make new, inventive use of traditional materials, taking advantage of industrial, mass production and take into account the economics of construction and the social mission of architecture, which gives the user the opportunity to participate in its construction, Ravnikar and his students even came up with a design for a minimal prefabricated house made from waste wood that used sawdust as insulation. In this case we can once again find models in Plečnik, a continuator of the Arts and Crafts movement, with its emphasis on the human aspect and the social mission of architecture (Ruskin, Morris), which Ravnikar frequently mentioned in his articles. Other models, of course, may be found in the work of Walter Gropius and Konrad Wachsmann, who in 1942 patented the Packaged House, a mass-produced prefabricated wooden house, in the United States of America. Above all, however, Ravnikar always remained aware of the psychological and archetypal importance of basic architectural elements such as: roof, entrance, enclosure, window, wall and corner. He always paid particular attention to these ele-

Fig. 17: View of Kranjska Gora (Arhitekt magazine archive)

Fig. 18: Detail of rural house in Podgora near Dobropolje in Dolenjska, Photo: M. Mušič.

Fig. 19: From the archives of the Ethnographic Museum in Ljubljana

Fig. 20: Part of a barn in Mali Vrh near Šmarje in Dolenjska, Photo: M. Mušič.

Fig. 21: Herders' settlement on the Pokljuka plateau (Arhitekt magazine archive)

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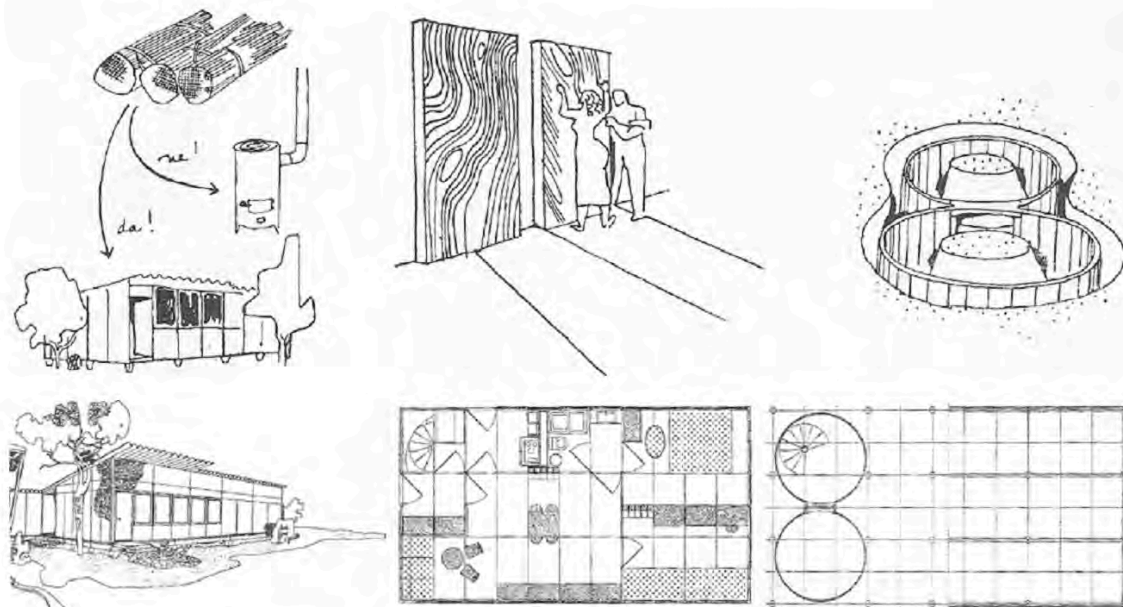


Fig. 22: Ravnikar, Edvard: Plans for a prefabricated house from waste wood; advantages, user participation, excavation of basement foundations in the form of two barrels, view, ground plan of ground floor and basement, 1952. (Arhitekt magazine archive)

ments. He himself claimed, for example, that the bold structure of the folded roof shell of the OLO hall in Kranj derived from the structural form of the upper, folded part of the *avba*, a traditional head covering from Slovenia's Gorenjska region. As well as building on cultural and natural traditions, Ravnikar made public efforts to preserve certain buildings earmarked for demolition, for example the Kozler building in Ljubljana (1958), and to incorporate existing historical structures or archaeological finds into new architecture. For example: the incorporation of the Ursuline convent into the Republic Square complex, the inclusion of existing historical structures, archaeology and green areas into the new composition (the pavement in Republic Square, neoclassical railings,

the preserved section of the convent garden in front of Cankarjev Dom), and the focusing of views towards existing spatial dominants (Krim and Ljubljana Castle, the reflection of the bell tower of the Ursuline church in the windows of the Maximarket department store, the placing of Plečnik's column on Gregorčičeva on the site of the house where Plečnik was born) and even repetition of these forms in new architecture (the façade of the Jakopič Gallery on Slovenska Road).

THE MOVEMENT

Things are born where law is no longer sufficient to exclude disorder, to prohibit dynamic particles from moving in parallel currents, to begin acting reciprocally on one another.

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Nataša Koselj Edge and Metaphor

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Fig. 23: The *avba*, a traditional head covering from the Gorenjska region (Nataša Koselj's archive)

Fig. 24: Ravnikar, Edvard: Detail of OLO roof, 1960 (Nataša Koselj's archive)



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The new mode of movement of architectural elements and man within a space is a dynamic phenomenon in modern architecture founded on a new spatial concept that is characterised above all by its consideration of a fourth dimension, time, alongside the three standard dimensions. It was this concept that brought cubism to painting at the start of the last century and, via Le Corbusier, transferred it to architecture. When we take into account the dimension of time, the previously uniform perspective of sequential views, that are supposed to give more precise information about a space, simply disintegrates. Ravnikar talks about the rational demystification brought by the concept of time.

At the same time, the development of new materials and technologies, in particular reinforced concrete, steel, glass and plastic, liberated architecture from traditional static and tectonic laws. A reinforced concrete structure enabled a flexible ground plan and thus almost unlimited possibilities for spatial formations and the merging of exteriors and interiors. The next step was Maillart's monolithic supporting structure, where the functions of supporter and supported combined and columns became "mushroom columns" or columns with corbel-like outgrowths. The façade, previously static and tied to the supporting structure, began to breathe again when it became independent from it and was transformed into an object of experimentation, innovation, fashion or sometimes even into a confection. The third reason was the accelerated development of urbanism in the first half of the twentieth century and, later and related to this, of hybrid structures where the border between exterior and interior, between square and house, between passage and street is no longer clear.

Ravnikar's architecture is literally imbued with the idea of movement, a search of new dynamics, both in its spatial concept and in its details. Ravnikar – himself a restless, freethinking, constantly doubting, searching, erudite, innovative and enlightened spirit, whose family used to call him "spinning

Fig. 25: Ravnikar, Edvard: Ferantov Vrt complex, apse on the site of the Roman curia. Photo: Damjan Gale

Fig. 26: Ravnikar, Edvard: Maximarket, views of Ljubljana Castle and the Ursuline church, reflection Photo: Damjan Gale

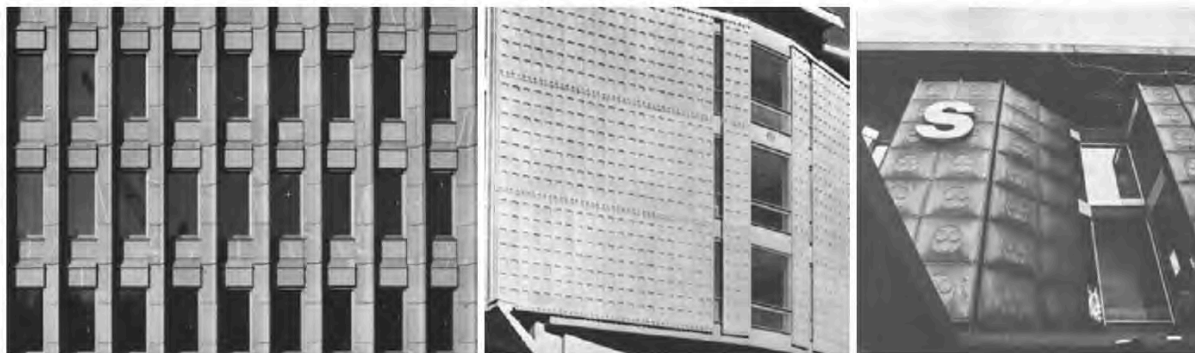
Fig. 27: Ravnikar, Edvard: Republic Square, steps of the passage: use of old neoclassical iron railings removed from the gardens of villas by the previous regime on the grounds that they were an expression of bourgeois values. Photo: Damjan Gale

Fig. 28: Ravnikar, Edvard: Plečnik Square, ancient columns. Photo: Damjan Gale

Fig. 29: Ravnikar, Edvard: Republic Square: archaeological finds from Roman Aemona shown in the pavement. Photo: Damjan Gale

top" when he was a child because he could never sit still – seized upon façades, roofs and structures as a field in which to experiment with new materials, forms and dynamics of movement. The materials he experimented with were: plastic (the Ljudska Pravica publishing house), stylised panels of visible concrete (tower blocks on Rozmanova and Cigaletova, banks in Kranj and Celje), glass (OLO in Kranj), corten (Globus Kranj), brick (Ferantov Vrt, Creina) and stone (cut stone panels on the façades of Republic Square and Cankarjev Dom). The new volumetrics of the building thus offered a new perception of space with expressions of lightness, slenderness, floating, breathing, reflection, sliding, folding, undulation and layering.

Roofs are similarly dynamic in Ravnikar's architecture, since for him they represent a kind of psychological backdrop that gains a new form through the use of new structural and technological approaches. After a long period of the flat roofs of pre-war modernism, post-war modernism, which coincided with the emergence of regionalism, saw the return of pitched roofs. Ravnikar had always paid particular attention to roofs, even when they were flat, as in the case of the tower blocks on Rozmanova and Cigaletova and in Republic Square. In his architecture, the roof frequently gives an impression of floating



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Fig. 30: Ravnikar, Edvard: Façade of Republic Square tower. Photo: Nataša Koselj

Fig. 31: Ravnikar, Edvard: Façade of bank in Kranj. Photo: Janez Kališnik

Fig. 32: Ravnikar, Edvard: Façade of Globus department store in Kranj. Photo: Nataša Koselj

(OLO), jutting (the banks in Celje and Kranj, Maximarket, FGG), folding (OLO) and undulation (Tronchetto).

The concept of a new spatial dynamics, in the sense of an intertwining of the functions outside/inside, above/below, public/private, religious/secular, old/new, found particular expression in the Republic Square complex, where the focus of the composition is the empty central space and the north-south axial orientation which, through the positioning of the prismatic towers, intensifies the movement of the wind in the space between them, thereby further emphasising the compositional axis. Today Republic Square is integrated by a department store, a covered shopping street, restaurants, a church, a monastery, a school, a bank, embassies, the parliament building, apartments, a square designed for public gatherings,

which has also been appropriated by alternative urban sports, parking spaces and an underground car park, the archaeological finds of Roman Aemona, a park and the Cankarjev Dom cultural and congress centre, with the opera house and a museum in the immediate vicinity. It thus incorporates almost all historical periods in the city's development, from Roman Aemona, via the baroque, to the neoclassical period and pre- and post-war modernism. Ravnikar himself said: *It is necessary to strive for the city as a process, not the city as a view. Fullness of content develops on its own, in the flow of time, during the process. It is a matter of finding an architectural language that becomes, at the architectural level, highly differentiated, rich and exciting. Aesthetics must necessarily appear here with one principal social role, that of taming the omnipresent fear of geometrisa-*

Fig. 33: Ravnikar, Edvard: Roof of Globus department store in Kranj.

Photo: Nataša Koselj

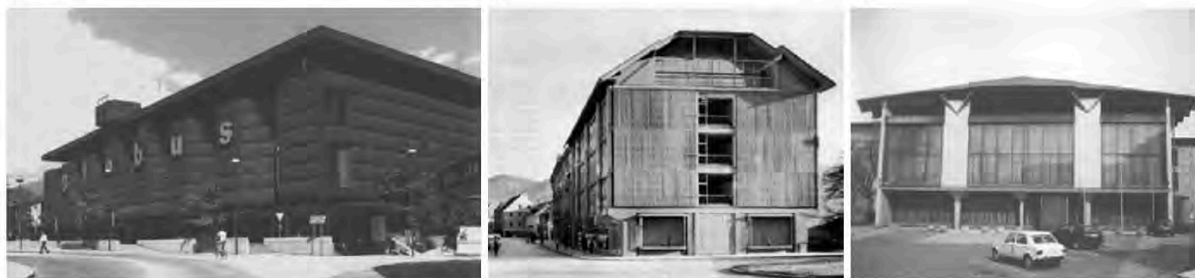
Fig. 34: Ravnikar, Edvard: Roof of bank in Celje. Photo: Janez Kališnik

Fig. 35: Ravnikar, Edvard: Roof of OLO building, Kranj. Photo: Nataša Koselj

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Nataša Koselj Edge and Metaphor

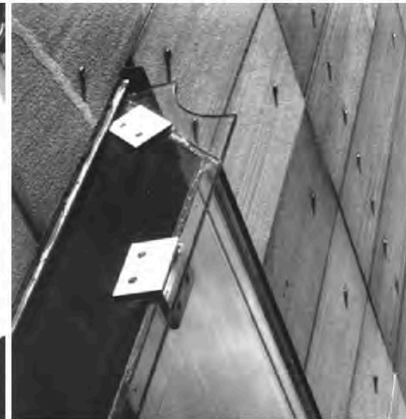
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tion and the stark usefulness of modern cities, of the slavery of functionalism as a merely calculative power of production. With an influence on the psyche, when the architect can add the emotive to the intellectual basis, like a sum of the real and the imaginary – until the development of something like a social anthropology of space.⁷

Such thinking coincides with the philosophy of social dynamism (Peter Smithson) then current in architecture, and with action painting in art. Ravnikar formally developed these ide-

Fig. 36: Ravnikar, Edvard: Republic Square from the air. Photo: IZTR archive

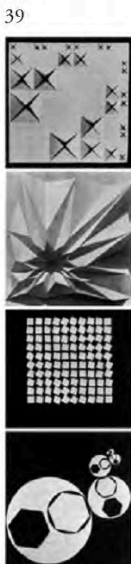
Fig. 37: Ravnikar, Edvard: Republic Square, façades. Photo: Nataša Koselj

Fig. 38: Ravnikar, Edvard: Republic Square, detail. Photo: Nataša Koselj

Fig. 39: Ravnikar, Edvard: B-stream exercises (Arhitekt magazine archive)

Fig. 40: Ravnikar, Edvard: Entrance to Cankarjev Dom. Photo: Damjan Gale

Fig. 41: Ravnikar, Edvard: Cankarjev Dom, Gallus Hall Photo: Damjan Gale



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as at the School of Architecture with compositional exercises for students of the new B-stream course that he devised, following the Bauhaus model, in the early 1960s, just at the time that he won the Republic Square competition. His pedagogical model was based on an erudite knowledge of history and architectural issues, a solid concept, the scientific method of analysis and synthesis, and experiment conditioned by doubt. The artistic exercises of the B-stream students are full of rhythmic movement caused by the folding, shifting, layering and rotation of basic geometric figures, with their starting point in the golden ratio. It was from this stream that the first industrial designers in Slovenia emerged. The influence of these exercises can be particularly felt in the structuring of the volumes, façades and interiors of Cankarjev Dom, which was completed in 1980.

With the Republic Square complex, Ravnikar endeavoured to create a democratic, dynamic and modern space for urban dwellers, which, despite originally having been conceived as a monument to a revolution and what was then an authoritarian regime, does not erase collective memory but instead, with a rare sensitivity for human values and the existing, re-establishes it through movement in the flow of time. The basic distinguishing element is the diagonal, which appears both in its urban plan and in its structures, details, façades and roofs. The diagonal is the leitmotif of practically the whole of Ravnikar's architectural oeuvre. We may therefore say that his architecture is an architecture of the diagonal, of sliding, of bold experiment, an architecture of the inclusion and simultaneous transcending of the existing.

EDGE AND METAPHOR

The angle breaks the solid chain, the endless sequence of intellects and causes. This angle disturbs and interferes with the laws of nature. This is where something alive appears, and everything that breathes; horses start to run.

The breaking of symmetry relates, in evolutionary terms, to development, as Darwin remarked in his notebook on the transmutation of species. Edge, corner and boundary are not only the civilisational, geographical and historico-political characteristics of Ravnikar's work on which he built and based his personal poetics, they also represent the *spiritus agens* of the whole of his work, since in addition to the meaning they have in the language of geometry and in the architectural discipline itself, they also offer a fine reflection of his character. *I have never been a professional, in anything, because of my fear of being at the centre of things – I am much more comfortable on the edge.* Moreover, his restless, exploratory spirit was always looking ahead, over the edge, beyond the boundary. He even developed his own distinctive style of drawing, which he called "float drawing", where the stroke of the pencil never ends in a corner but slides beyond it and projects into the void. In the conceptual sense, too, for example when approaching a competition, he always addressed a broader context of space than that contained in the competition brief. This metaphorical combination of natural characteristics and

Fig. 42: Ravnikar, Edvard: Façade of Hotel Creina in Kranj. Photo: Nataša Koselj

Fig. 43: Ravnikar, Edvard: Façade of bank in Celje. Photo: Janez Kališnik

Fig. 44: Ravnikar, Edvard: Façade of Ferantov Vrt complex. Photo: Nataša Koselj

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Nataša Koselj Edge and Metaphor

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personal character is most vivid in his treatment of corners. His material – brick, glass, steel, concrete – practically never ends in a corner but instead projects into space at various angles, in this way defining the space in a specific way, so the building gives an impression of incompleteness, while at the same time the external space around the building takes on a more active role in relation to the building itself. A uniquely dynamic dialogue is established between the full and the empty, between the finite and infinite, between the building and its surroundings. Contributing to this impression are the numerous corbel and cantilever elements that Ravnika uses, for example in the Hotel Creina and the Ferantov Vrt residential and commercial complex. These sometimes appear as structural supports and sometimes as the capitals of columns transitioning organically into the ceiling, or as overlong projecting concrete beams.

Another interesting aspect of the treatment of angles and corners is the observation of the development and intensive use of triangular and hexagonal shapes in Slovene architecture in the late 1950s and the 1960s, not only by Ravnika but also by many of his pupils and imitators. This is apparent in the perforations of supporting elements, the decoration of visible concrete, the shapes of windows, furniture, roofs, ground plans and urban planning designs. Given the mass scale on which these shapes appeared, it is reasonable to describe the phenomenon as a fashion, which, however, had a certain rational geometric background (when arranging circles of equal size around one central circle, the number of peripheral circles is always six), connected to the search for new spatial and social relationships in the community, which is the essence of the philosophy of structuralism, which emphasises that the relations between the elements of a community are more important than the elements themselves. It is a question of the decentralisation of the subject. Reasons why this particular geometric form should have become so popular in Slovenia

may also be sought in the topology and geology of the Slovene landscape, full of angles of every kind, but also in the beekeeping tradition, since many structuralist concepts of this period formed honeycomb-shaped communities. In art, these prism-like forms were popularised in the early years of the twentieth century by cubism, and then of course there was Richard Buckminster Fuller with his geodesic domes. At the same time, science was developing away from static and predictable Newtonian determinism and towards the discovery of dynamic phenomena which, in the early 1970s, led to the discovery of fractals and chaos theory, which deals with similar patterns and structures. A member of Ravnika's seminar class at this time produced a bachelor's thesis on this subject entitled "The Rational Definition of Organic Structure". Ravnika himself wrote: *In architecture, nature is visible in the structure like a formation of the physics of the world. Its meaning is in all of us, and also in animals, insects and in collections of inanimate matter. Beauty is the beauty of the constructed, which is a reflection of something. This is where the problem begins: when we try to put it into words. A reflection of what? Of something that is in the human being and is human (it is this reflection that makes the human being human; where it is absent, the human being is absent too). Ever since the Renaissance, when they believed that this is contained in Vitruvius, and Alberti, Leonardo, Michelangelo, Colonna continued to explain their findings and discoveries in nature as a reflection, which is then expressed in*

Fig. 45: Ravnika, Edvard: Monument in Draga near Begunje. Photo: Janez Kališnik

Fig. 46: Ravnika, Edvard: Interior of Ljubljanska Banka. (IZTR archive)

Fig. 47: Ravnika, Edvard: Corbel element on Ferantov Vrt complex. Photo: Nataša Koselj

Fig. 48: Ravnika, Edvard: Ground plan of Republic Square tower. (Nataša Koselj's archive)

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form, because it cannot be any other way. That reflection starts to speak if we find or devise a formula that is a record of it.

These are therefore metaphors of life transferred into architectural language. *This is where something alive appears, and everything that breathes; horses start to run*, as Ravnikař says. The energy of a living metaphor. In this sense, Ravnikař's architecture becomes an artistic creation, an allegory, a poetic vision, an innovation. Its innovative power also means the start of a new tradition. Groy's definition of the work of art is helpful here: *Innovation thus means the strategy that combines the positive and negative continuation of tradition in such a way that the continuity and discontinuity of tradition are formed with the utmost clarity and intensity. In this way the work of art momentarily becomes a place where hierarchical differences disappear and the power of time is overcome.* Ravnikař's architecture, which derives from the modern paradigm in which the very concept of time is incorporated into a new spatial concept, in this way becomes timeless and, as it were, classical. And precisely because in its origin and the power of its personal metaphors it truly dared to be authentically modern, while at the same time always observing the universal laws of the architectural discipline, today we are able to treat it as a work of art and as the classical tradition of modern Slovene architecture.

CONCLUSION

Architecture developed through the intellect and personal character, architecture that is based on civilisation, geographical and historic-political characteristics, also approaches, through the anatomy of the metaphor, ethnic or national characteristics, since according to Josip Vidmar "nationality" means the character of collective individuality and represents the spiritual laws that are part of every human being. Ravnikař – like Plečnik, Aalto, Gaudí and also his own contemporary Miguel Fisac – built his poetics on a point that consisted of feeling, recognising and acknowledging the national characteristics woven into his own character and the collective character of the people who live here, and on his own personal and profound interpretation of those characteristics, since this, unlike internationalism, is what he felt and accepted as his principal task in the context of the development of modern architecture. This gave him the additional strength to develop his own distinctive architectural language in the second half of the twentieth century, one that I call, in the light of all of the above, "Authentic Modernism", and which together with Plečnik's "Flexible Classicism", as Ravnikař called it,

represents the foundation of the modern Slovene architectural tradition of the twentieth century. Which in the end was also his goal: *An architect is worth something and means something to the extent to which he has succeeded in building his own world of forms.* The works of both architects, Plečnik and Ravnikař, are permeated with the expression of that bitter beauty, so typically Slovene, by which we are able to recognise the lyrical character of the people who live here, and which we call the soul of the nation. This is perhaps the greatest thing we can say about their work.

NOTES

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- 2 Ravnikař, Edvard; *Nova revija*, 35/36, 1985.
- 3 Ravnikař, Edvard: Kratak oris modernega urbanizma v Sloveniji, referat na 1. posvetovanju arhitektov v Dubrovniku [Brief Outline of Modern Urbanism in Slovenia], paper delivered at the first conference of architects in Dubrovnik 23–25 November 1950.
- 4 Vidmar, Josip: Kulturni problem slovenstva [The Cultural Problem of Slovenians], 1932.
- 5 Ravnikař, Edvard: Trg revolucije [Revolution Square]: IZR 1961–1976, pp. 1–16.
- 6 Ravnikař, Edvard: Jože Plečnik in sodobna slovenska arhitektura [Jože Plečnik and contemporary Slovene architecture], *Arhitekt*, No 2, pp. 1–3, 1952.
- 7 Ravnikař, Edvard: Trg revolucije [Revolution Square], Ljubljana, IZTR 1961–1976, p. 2, 1976

BIOGRAPHY

Nataša Koselj is an architect with a PhD on post-war Slovenian architecture (2003), who studied and worked in Slovenia (University of Ljubljana), Finland (MARCH2002), UK (Oxford Brookes University) and France (Cit  de l'architecture at du patrimoine). Docomomo Slovenia Chair since 2004, who has formed the course »20th Century Slovenian Architecture«, at the University of Ljubljana, Faculty of Architecture, which she has been teaching since 2005 as a freelance. She has researched, lectured, edited, exhibited and published extensively on post-war Slovenian architecture, especially on Danilo F rst and Edvard Ravnikař, whose unpublished diaries she analysed during 2000-2005. She received Plečnik's Medal (2014) for the monograph on Danilo F rst.

ARCHITECTURE AS A LANGUAGE WITH EMOTIONAL IMPACT.

ALDO VAN EYCK AND PANTO GUEDES

Ana Tostões (Portugal)

This essay aims to look at the architectural approaches of Aldo van Eyck (1918-1999) and Panto Guedes (1925-2015), considering their critical attitude against the prevailing bureaucratic functionalism of their time, and their aptitude for developing a deeper modern and human architecture. Following parallel paths, sometimes crossed, they both defined architecture as “built meaning”, evoking its multiple significances, languages and responsibilities.

Aldo van Eyck, from his studies on the sub-Saharan Dogon region to the *PREVI* (*Projeto Experimental de Vivienda*) housing proposals in Peru, or Panto Guedes, from his survey on the Mapogga doors to his Dadaist proposals in Mozambique, provide examples of the process of metamorphosis, in which the modern project acquired elasticity, creativity, endurance, and finally accomplishing the utopia.

These two thinkers envisaged architecture as a language with an emotional impact emphasizing its social and cultural scope.¹ The value they recognized in the role of the community and the importance of the social being as the primary visual medium through which humankind expresses and reveals itself, explains the way they both conceived architecture as a dialogue; designing buildings as means of creating relationships between people, rather than as an end in itself.²

They both took an uncommon interest in anthropology, as well as in archaic cultures. Their vision pushed beyond Western culture in the direction of what they believed to be a fundamental human heritage and which they considered as important as the classical and modern heritage of Western culture.³

Within this background, they were key in fostering the renovating shift in the architecture of the Modern Movement (MoMo) during the period after World War II (WWII).

They were both part of Team 10 and the young group of “rebels with a cause”, and both took part in the metamorphosis of the MoMo, which connects perfectly with the theme of this conference. Finally, in private terms they were both descended from Portuguese grandparents – Guilhermina Gouveia, the grandmother of Aldo van Eyck, came from a noble

Portuguese family, as her surname attests – and they were both inspired during their childhood by the marvellous world of the former overseas colonies, outside the European frame of experience.

Astonishingly, during his childhood, Aldo van Eyck was familiar with the legend and magic of Surinam and Paramaribo, the colonial capital where his mother was born and where his grandfather had been a physician and researcher.⁴ Panto Guedes was the child of a doctor serving the overseas Portuguese colonies around the world. He attended primary school (1927-1931) in the São Tomé e Príncipe archipelago, before moving with his family to Mozambique in 1933, firstly living in a rural settlement in Manjacaze village and then moving to the high school in Lourenço Marques (until 1939), and later to Maritz Brother's College Observatory in Johannesburg (until 1944). When his family moved to Mozambique Island, between 1945 and 1949, he studied for his Bachelor of Architecture at the University of the Witwatersrand, Johannesburg, then returned to Mozambique until 1975, when he finally moved to South Africa, London and Portugal.

They both shared a fascination for remote, non-European cultures. The discovery of these other worlds, and the power of otherness, undoubtedly marked these two characters in the most decisive period of their development, their childhood.

THE VERNACULAR OF THE HEART

Aldo van Eyck contributed to deepening the progress of modernity through a modern approach, that for him meant, above all, connecting architecture with the community. The importance of meeting places and of an architecture designed as a place for dialogue led to the desire to produce public space and to think that children and places destined for play activities developed within public space, not only have the potential for structuring society but also, and through this, for structuring the city. Aldo van Eyck developed a pioneering and original body of work starting in 1947, in which he considered the importance of play, of the collective happen-

ing, of architecture as a shaper of life in society, with the power for intensifying relations between people.

1947 was a very special year for Aldo van Eyck. At the age of 28, he just had graduated from ETH (Eidgenössische Technische Hochschule) Zurich and attended the first post-war CIAM meeting in Bridgewater. Their comments there not only had an impact among the meeting's participants but were even included in the report drafted by Giedion.⁵ His participation in this CIAM was fundamental to his future. When he returned to Amsterdam, he started putting his ideas into practice. As an employee of the Public Works Services of Amsterdam, he began to work with Cornelius van Esteren, his boss, who had also been his closest link to CIAM since its inception. After the War, Cornelius van Esteren became responsible for the reconstruction of the city according to CIAM principles. At the suggestion of Jacoba Mulder, a woman architect who was part of van Esteren's team and who had already designed the Beatrixpark in Amsterdam (1936), Aldo van Eyck dedicated himself to a humble job, a new problem with an innovative programme: to design a simple playground. For Aldo van Eyck, it was an opportunity to try out the themes that interested him, which involved overcoming the mechanical functional limitations of the preconceived and deterministic theories of the Athens Charter, reviving concerns with community and envisaging the scale of proximity.

Two years later, he was to be called to design the first exhibition of the avant-garde art movement COBRA⁶ at the Stedelijk Museum in Amsterdam, where the child and the ingenuity of children's expression was the key value and the theme. Aldo van Eyck was close to the movement that shared his fascination with play, spontaneity without prejudice, children's expression, experimentation and a taste for primitive art forms.

Aldo van Eyck's architecture of playgrounds as a cultural critique against the functional mechanical city that, in its "massive, large-scale planning view, had ignored minor spaces, abandoned between existing buildings"⁷, is linked to this movement.

This fundamental shift caused Aldo van Eyck to start looking at the city in terms of the daily use of space, without distinguishing between the private and the public, and focused on children's lives. This process led to the playground projects that Aldo van Eyck proposed for children throughout the city of Amsterdam, taking advantage of many vacant lots, abandoned or destroyed by the war. In these interstices, he proposed that life should replace misery, neglect, destruction and abandonment. This capillarity system, joyfully used by the children of



Fig. 1. Aldo Van Eyck, Peter Smithson and Pancho Guedes, 1960s.
© Pedro Guedes (org.), *Pancho Guedes. Vitruvius Mozambicanus*, Lisboa, Museu Coleção Berardo, 2009.

the post-war boom, from housing with a scarce supply of generous areas, was to be instrumental in rebuilding the city's broken fabric. And it was to be van Eyck's weapon for exposing the limitations of a narrow and mechanical functionalism.

As John Voelcker stated, "these small-scale projects dedicated to the everyday life of children, were woven into the neglected holes of the urban fabric, formless stretches of land located on different kinds of lots, made out of unconventional, unsophisticated materials found close to the site."⁸

The Amsterdam Municipal Orphanage (1958-1960) is one of his situationist projects, and the first large-scale one. In it, Aldo van Eyck put into practice a decade of experience of children's lives applied to public space, and above all, his convictions on the importance of architecture to establish relations within the community and dialogue between people, as opposed to neutrality and repeated massification, and what he called "nobody feeling he is somebody living somewhere".⁹ In the orphanage, inspired by archaic form language, he used the polycentric paradigm. He made a kind of anthropomorphism tangible by reverting to the communicative features of the human body, the symmetry of its frontal appearance, organising a plan of void and built modules adapting and adopting the microcosmic realm of its former playgrounds. The aim was to stimulate the creation of meeting places, areas where human exchange would occur and dialogue take place.¹⁰

Aldo van Eyck wrote "the vernacular of the heart"¹¹ according to what he held to be the "archaic principles of human nature", the primal values that survived in archaic cultures.¹²

His interest in archaic or distant cultures went beyond an understanding of their way of building. Aldo van Eyck was moved, above all, by the power of their entire production in terms of understanding their associated view of life and the world. Much like Pancho Guedes, who collected incredible artefacts in Mozambique¹³, Aldo van Eyck assembled a wide collection of ethnographic artefacts, including masks, figurines and cult objects, pottery and fabrics.¹⁴ When pursuing his research, he focused his interest on two special cultures: the Dogon people from the former French colony of Sudan and the Zuni from New Mexico.

Undoubtedly, the studies, investigations, and readings he made of archaic civilizations had consequences for the way he approached the modern project and sought to overcome mechanistic functionalism. The non-western design elements borrowed¹⁵ from the Dogon settlements in their relation between private and public and the understanding of the community in their design, are a result of this extraordinary research that moved him to visit Sudan in 1960.

From the Dogon, he collected fascinating images from sculptures and building that instilled a desire to become familiar with their culture. In 1960, after the completion of the orphanage, he travelled with his wife to Western Africa.

Understanding its mythology, rites and symbolic vocabulary “helped (him) to get to know not only the houses and villages (he) had admired for so long, but their builders also.”¹⁶ This real and honest experience, the concrete experience of their everyday and ritual life, houses, ritual and meeting places, made a profound impact on him.

It emerged clearly from his research that the Dogon “saw not only their environment but the whole world as a chain of related, mutually nested structures.”¹⁷

The stimulus of the playgrounds, combined with the culture of these archaic settlements, led Aldo van Eyck to deepen the involvement of people in decisions and increase citizen participation.

With respect to participatory processes, the *PREVI* project was an important experience for Aldo van Eyck. *PREVI*, an acronym for *Proyecto Experimental de Vivienda* (Experimental Housing Project)¹⁸, was the result of a consultation process initiated in 1965, by the President of Peru, Fernando Belaunde Terry (1912-2002), with the goal of developing a social-housing program able to regulate the spread of self-construction in informal settlements that was taking place in Lima, as a consequence of unstoppable migration flows into the city. Asked by the Government of Peru and by the UNDP (United Nations

Development Program), the architect Peter Land conceived and carried out its Master Plan as UN Project Director. In 1969, an international competition was organized for the design and construction of a sustainable neighbourhood of 1,500 dwellings. The urban principles required were human scale; a pedestrian orientated environment; high-density and low-rise development; small private courtyards; the potential to grow and be adjusted over time; new and appropriate building technologies, and earthquake resistance. Among the 6 teams, selected from 26, was Aldo van Eyck's, who had designed houses able to grow according to the needs of the family. Eschewing the usual rectangular shape, he designed elongated hexagonal plots, occupied in the centre by the elementary core, the house cell, with the intention of offering the necessary space for building and expanding the house to the owner's taste, and include front and rear gardens. These were oriented in a way to benefit from continuous ventilation and sun shade. With *PREVI*, Aldo van Eyck was also able to address the issue of interstitial voids to define meeting places within his ambition of creating spaces for children as part of the urban settlements, fulfilling his wish to follow a housing programme based overall on the strength of community relationships.

BUILDINGS SHOULD SMILE AND SPEAK

Pancho Guedes¹⁹ (1925), the Luso-African architect (Witwatersrand University, 1953) active in Mozambique, the Portuguese colony until its independence in 1975, made in his writings and architectural production a major contribution to the reassessment of architectural modernity, connecting different disciplines and cultures and developing an affinity with various creators, notably the painter Malangatana Ngwenya (1936-2009). His fantastic and magical architecture comes from the stimulus of a large worldwide network of artists and thinkers that he himself assembled from different sources such as: MoMo architects, namely the South African contributors such as Martiessen or the inspiring Brazilian influences of Lúcio Costa and Oscar Niemeyer; Frank Lloyd Wright's spatial research or the contesting critical movement at CIAM in the context of Team 10 which he joined at CIAM's Royaumont meeting together with the Smithsons, Aldo van Eyck, Candilis and Giancarlo di Carlo; or lastly, the new African artists who he promoted.

Therefore he sought for an architecture full of significance, carrying a personal dimension based on research focused on all formal dimensions and on the possibility for architectonical elements to contain and express emotion: “I claim for ar-

chitects the same rights and freedom painters and poets have had for so long.”²⁰ Pancho Guedes wanted to appropriate the primitive’s universal motifs, mixing them with his own sophisticated architectonical culture, in order to achieve the atmosphere of a de Chirico painting in his buildings. Pancho Guedes knew that architecture is not perceived as an intellectual experience but as a sensation, an emotion²¹. Therefore, he was interested in the quest for such a quality “long ago lost among architects but able to reach a spontaneous architecture capable of magic intensity.”²²

In the 1950s, this search resulted from the desire to create an alternative modernity, different from the mechanical international style also growing in Africa.²³ Unlike the majority of architects working in Africa forced to design in dialogue with climate constraints, Pancho Guedes also claimed the creator’s right to innocence stimulated by the sensuality and drama of the surrounding African culture.

The will to discover an alternative modernity was a response to an inner appeal, but also to an Africa awakening to contemporaneity, to a new world which was in a state of ferment²⁴. Pancho Guedes witnessed and acted at a time when architecture was open to popular culture, when architecture without architects and architecture of fantasy were accepted.²⁵ But it was also a time of complexity and multiple solutions opening up to the MoMo in continuity or crisis²⁶, the ones Giedion identified as a result of an equation between reason and emotion²⁷.

Pancho Guedes assembled the conditions to follow an alternative, original and idiosyncratic path of his own. Besides his huge talent, broad culture, experimentalism and genuine curiosity, he had the experience of living in Africa at a time when, despite the imperialistic presence “anything seemed possible”²⁸.

On the international circuit, Pancho Guedes established himself both as an architect, patron and champion of African art at the same time. In Paris, the publication of his article about the painted houses of the Ndebele people of South Africa, entitled “*Les Mapogga*”, which featured on the cover of the magazine directed by André Bloc, *Aujourd’hui: Art et Architecture*²⁹, was considered ground-breaking: “the first to highlight the architectural and sculptural formalism of the dwellings.”³⁰

In the area of architecture, there were important “Stiloguedes” buildings in Lourenço Marques at the turn of the decade, such as the Prometheus Apartment Block (1951-1953) and The Smiling Lion (1954-1955); the Saipal Bakery and the Otto Barbosa Garage (1952); the Abreu Rocha and Tonelli



Fig. 2. Pancho Guedes, Leão que Ri [Smiling Lion], Lourenço Marques, Mozambique, 1954-55. © Pedro Guedes (org.), *Pancho Guedes. Vitruvius Mozambicanus*. Lisboa, Fundação de Arte Moderna e Contemporânea – Coleção Berardo, 2009.

Building (1955), and the Pyramidal Nursery School (1959-1961).

Peter Rich, a former student and now also a professor at Witwatersrand, states that “the work of the architect Pancho Guedes is a fusion of European modernism with African artistry.”³¹ For him, “Pancho was a great mentor because he was a painter, a sculptor, a Dadaist, a Surrealist, and he had an incredible energy. When we were at school, we were very lucky; everyone who was a student or member of staff somehow exceeded their potential by about 300%, making you believe you could do anything and everything and the more you did the better you were. You could shoot a film, create sculpture, paint, perform in a play and make architecture as well”.³²

From technical issues to poetic approaches, Pop Art and African expression, Pancho Guedes promoted the possibility of

modernity issuing from a complex procedure nourished by diverse and eccentric cultural sources. Pancho Guedes divested himself of the colonial hegemony of his time and immersed himself in the myriad of cultural influences and motifs that constituted the very particular African cosmopolitanism of the city of Lourenço Marques in the 1950s and beginning of 1960s.³³

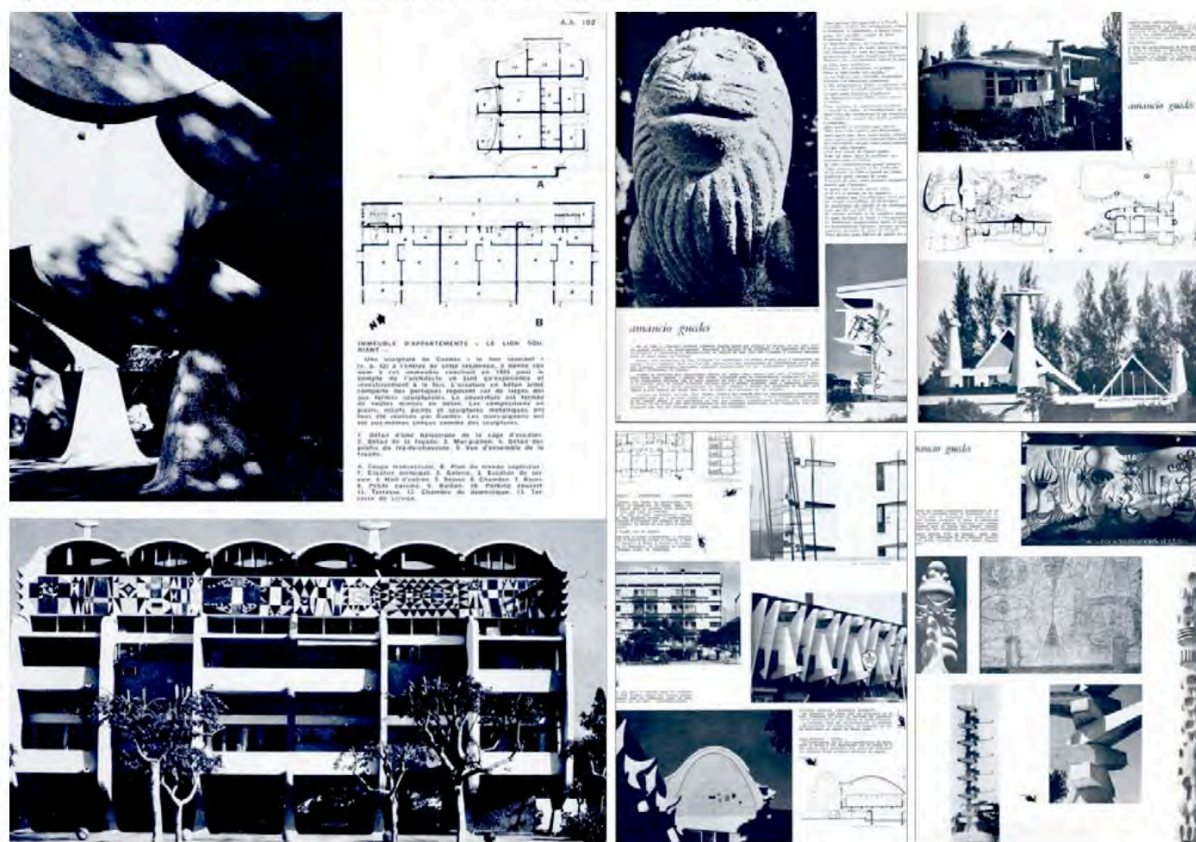
Pancho Guedes promoted the viability of the success of a new African art rooted in the character of local roots and cultural conditions. He consciously led a kind of patronage to support to the birth of a new African art.

In his architectural work, he developed an original style and intense expression, revealing influences ranging from the paintings of Picasso to his friend Malangatana with whom he shared research and inventiveness, from a dreamlike Freudian

universe to African sculpture, mixed with an expression characterized by a "Dadaist" disposition, fostered by his friendship with Tristan Tzara.³⁴

Establishing links with the local population, he found in Africa a favourable atmosphere for the realisation of his projects. By showing interest in issues ranging from African sculpture or indigenous architecture to Malangatana, from Gaudi to Art Nouveau, reflecting the fundamentals of his oeuvre: open and unorthodox, eclectic and irreverent, freely revisiting and reinventing both modern and primitive art in his constructions, with his architectural projects that borrowed from his painting and sculpture in a complete creative process. Malangatana recognized that "no architect had ever linked architecture to indigenous culture. In his designs we see a geometry that reflects patterns resembling the tattoos of

Fig. 3. Amâncio Guedes, "y aura-t-il une architecture", *L'Architecture d'Aujourd'hui*, n. 102, 1962, 42-48.



African mythology". Famous for his fertile imagination, for him, each project sprang naturally from its surroundings, climate, geology and the culture of those who use it.

THE METAMORPHOSIS

With their prolific outputs, Pancho Guedes and Aldo van Eyck anticipated various trends and ways of thinking that are still to be found today in the international context inspiring relations between art and architecture.³⁵

They are examples of how the interest in anthropology and archaic cultures was important for the renewal of post-war MoMo architecture, particularly in the framework of Team 10. The aim was to overcome the limitations of the 1950s, regarding which Aldo van Eyck stated that "rarely had the possibilities been so great for the architectural profession, but never had it failed so badly."³⁶

Somehow, they personified a profound metamorphosis that proves the hybrid nature and capacity for inclusion of modernity. With careful attention to the myriad of cultural influences and local features that define societies, from culture to climate, Pancho Guedes and Aldo van Eyck were able to deeply explore the human nature of architecture, responding to its challenges with creativity.

In a way, they both explored metamorphosis in their approach to MoMo, while envisaging otherness, and emerged with a creative stimulus as well as a prolific synthesis. Aldo van Eyck established a school of thought³⁷, influencing generations with his usual wisdom of intuition and praxis, spontaneity and innocence. Pancho Guedes could not be considered a conventional teacher, but his influence extended around the world from Mozambique, influencing artists of the calibre of Tristan Tzara³⁸ or encouraging Malangatana to establish himself as the painter of Mozambique. The workshops he organized and his genuine admiration for black art were not only central to the international affirmation of his own work³⁹, but confirm the MoMo's capacity for metamorphosis.

Docomomo must foster the humanistic learning launched by Team 10, and realised by Pancho Guedes and Aldo van Eyck in their architecture, so that the modern project keeps contributing for a better world made with the active participation and inventive capacity of architects and planners.

NOTES

1 Liane Lefaivre and Alexander Tzonis, *Aldo van Eyck, Humanist Rebel*, Amsterdam, 010 Publisher, 1999.

2 *Idem*.

3 Francis Strauven, *Aldo van Eyck, The shape of relativity*, Amsterdam, Architectura & Natura, 1998, p. 28.

4 *Idem*, p. 30.

5 Liane Lefaivre and Alexander Tzonis, *op. cit.*, p. 14.

6 COBRA was an artists' collective created in Paris, in 1948, whose name derives from the initials of the three northern European cities from which its founding members came: Copenhagen (Co), Brussels (Br), Amsterdam (A). Among the founding members were Karel Appel (1921-2006), Asger Jorn (1914-1973), Constant Nieuwenhuys (1920-2005), Corneille Guillaume Beverloo (1922-2010), Christian Dotremont (1922-1979), Joseph Noiret (1927-2012) and Ernest Mancoba (1904-2002). The group was dissolved in 1951.

7 Liane Lefaivre and Alexander Tzonis, *op. cit.*, p. 17.

8 John Voelcker, "Polder and Playground", *Architects'Year Book*, n. 6, 1955, p. 89-94; Liane Lefaivre and Alexander Tzonis, *op. cit.*, p. 17.

9 Aldo van Eyck, presentation of the *Nagele grid* project at CIAM Conference, Dubrovnik, 1956.

10 Liane Lefaivre and Alexander Tzonis, *op. cit.*, p. 72.

11 First presented in the XI CIAM (Otterlo, 1959), the concept "vernacular of the heart" was later developed by Aldo van Eyck in articles published in the journal *Forum* (1962).

12 Francis Strauven, *op. cit.*, p. 380.

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BIOGRAPHY

Ana Tostões, PhD, architect, architecture critic and historian, chair of Docomomo International and editor of the *Docomomo Journal*. Full Professor at Técnico, University of Lisbon, where she is in charge of the Architectural PhD programme. Invited professor at universities worldwide.

She has a degree in Architecture, a Master's degree in History of Art with a thesis entitled *Os Verdes Anos na Arquitectura Portuguesa dos Anos 50* (FAUP, 1997), holds a PhD on culture and technology in Modern Architecture (*Idade Maior*, FAUP, 2015, awarded with the *X BIAU Prize 2016*).

Her research field is the critical history and theory of contemporary architecture, focusing on the relationship between European, Asian, African and American cultures. On this topic, she has published books and essays, curated exhibitions, organised scientific events, coordinated research projects, supervised theses, taken part in juries and committees, and given lectures worldwide.

She coordinated the research project *Exchanging World Visions* published and awarded the Gulbenkian Prize 2014, and currently coordinates the research project *Cure and Care_the rehabilitation*.

THE IN-BETWEEN REALM;

SOME MEMORIES OF ALDO VAN EYCK AND OTHER TEAM 10 MEMBERS IN THE 60'S

Hubert-Jan Henket (The Netherlands)

THE INDESEM LECTURE.

From Aldo van Eyck I learned that our memory of the past and anticipation of the future are both children of our imagination and that in our imagination, mind and intuition meet like a magic handshake. This is the realm of the in-between. So may I invite you to join my imagination by recreating some experiences I had with van Eyck and other Team10 members as a student at the Faculty of Architecture of the Delft University of Technology in the Netherlands in the 1960's.

To set the atmosphere I will begin in the middle, on a hot summer evening in 1967. Students and staff of various schools, participating in the INternational DEsign SEMinar gather in an oldfashioned lecture room packed to over-capacity. Ron Herron and Peter Cook start with an exiting talk about their futuristic Archigram walking cities. Followed by James Stirling showing a stream of images of Leicester University Engineering Building, Cambridge University Library etc. Slowly it gets noisy due to Big Jim's boring slideshow, the heat and the inconvenient seating. In comes Aldo and we all fall silent. By now it is 10pm. Aldo starts.

'The culture of form is nearing its end, the culture of relations has begun'. These important words by Piet Mondrian were spoken forty years ago, yet they still are not taken seriously today, which should be regarded as a deviation at best, attributed to impatience and lack of insight. Today even art is in a hurry! But art-architecture- cannot be accelerated, no more than time and existence can be.

Then he refers to the Great Gang, a selected group of Avant-gardists who contributed to a new way of thinking, in which relativity opened completely new perspectives. This leads him to twin phenomena and the built homecoming, the meeting of inside and outside at the doorstep and the unconditional equality of architect and user. From here he takes us to the vernacular of the Dogon people in Mali and the Pueblo Indians in New Mexico. He is just starting at the value of tradition and timeless qualities of architecture when his words and our concentration are abruptly cut off by the loud voice of

one of our porters: "Sorry Professor, it is one o'clock at night, we are going home. In 5 minutes all lights will be switched off". And so one of the most memorable architectural lectures ever, comes to a halt after 3 hours. That was the inspiring Aldo van Eyck, spontaneously weaving thoughts and practice into poetic strings of words, boyish almost.

DELFT IN THE EARLY 60'S.

When I arrived at Delft in 1958, the Netherlands were in an optimistic mood. Reconstruction efforts dominated life, everyday there were stories of bigger and better results and inventions. The welfare state showed its wonders, yet society in general and the staff of our school in particular were still in the grip of pre-war conventions and the voice of authority. About this dictate from above dissatisfaction was growing among the young generation in Europe and the States. We were attracted by a different kind of social responsibility and by individual freedom. Feelings well interpreted by the Beatles, Bob Dylan etc.

Our search for the new was stimulated by magazines like Architectural Design and the Dutch Magazine FORUM.

Forum, primarily edited by Aldo van Eyck and Jaap Bakema (1959-1963), had such enigmatic topics as: The Story of Another Idea and the Vernacular of the Heart. They rejected the logic of CIAM rationalism, did an appeal on one's imagination instead and demanded residents participation. We loved their optimistic belief in the future, their fight against universal solutions and their attention to everydayness and local conditions. They inspired us by their battle against formulae and formalism and their interest in non-western cultures. We were impressed by their search for a flexible yet indestructable communal aesthetic, called Configurative Design. (fig.1)

And then in 1964 the two modernist professors at our faculty, van de Broek and van Eesteren, managed to get the Team 10 activist Jaap Bakema appointed to a chair in architecture.

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PROJECT WITH BAKEMA-VAN EESTEREN.

In my third year we did three projects with the extrovert and inspiring visionary Jaap Bakema. In one of these Prof Cor van Eesteren was our mentor as well. Just imagine, what a luxury for 10 students to have such prominent mentors for 2 months. However, the cooperation between van Eesteren -one of the heroic CIAM founders- and Bakema- the TEAM 10 activist- did not last very long.

At our first meeting van Eesteren told us that urban design was like music. Furiously Bakema got up and said that a new way of thinking had emerged. Urban design was not about music but about people, about social responsibility and nothing else. One should do away with the CIAM doctrine of separating functions. Van Eesteren, feeling terribly embarrassed, got up and left. Bakema followed. From the corridor we could hear loud voices and after three minutes Bakema came back. "Van Eesteren will not return as your mentor" he said in his typical everyday language. "Not to worry, our task as architects stretches from chair to city, so we won't miss him."

MY FIRST PROJECT WITH VAN EYCK.

Aldo van Eyck who was appointed in 1966 at our faculty, was our mentor for the first 4th year project. Interestingly he was not a teacher at all, nor did he use any educational tools. All he did was inspire one to discover the excitement of architecture, to investigate whatever one thought important and to develop one's own self-confidence. He used to say "architecture is the appreciation of it", so observe people to understand how and why they behave, move and live and translate this understanding into places and occasions.

In Aldo's "Story of another World" a selected group of 20th century Avantgardists played a crucial role because they opened a new way of thinking. This "great gang", included artists like Cezanne, Mondrian, van Doesburg, Brancusi and Klee, architects like Le Corbusier, Rietveld and Duiker, scientists like Einstein and philosophers like Buber and Bergson. Aldo considered it his responsibility to continue the efforts of "the great gang" and to stimulate us to 'interiorise' this frame of mind as well, because as he said it always takes a long time to fit a new sound to everyday life and vice versa.

The great gang took down the barriers between outer and inner reality, between object and subject, between mass and space, between head, heart and abdomen, between what can be ascertained by the limited senses and the "vaster reality" only imagination can grasp. As Einstein showed in the theory of relativity this "vaster reality" is a unity of space, time,

matter and energy, no longer to be considered separate entities. On the contrary they form the space-time continuum. And when our imagination enters this continuum, reality is experienced as a dynamic continuous flow of energy. This flow is neither dependant on any type of centre nor on hierarchy. It is purely connected through reciprocal relations: you and I, chaos and order, young and old, land and sea, day and night. To be honest it took me quite some time to begin to understand all this.

And then Martin Buber, the philosopher, entered Aldo's mind. Buber explained that modern Individualism implies part of man, whilst modern Collectivism implies man as part. Since the reality of man is one man and his fellow man, both Individualism and Collectivism cannot be reconciled as absolutes. Reality is something that happens between one man and another man in a dimension only accessible to both persons. Only what is real can shake hands. The beautiful elementary discovery was this: "On the other side of the subjective, on this side of the objective, on the narrow borderline where you and I meet lies the in-between realm".

But how does this in-between realm acquire form, since space has no room for man and time no moment for man. Space in the image of man is place and time is occasion. Yet in today's context man cannot find the right place for the right moment, his feeling of homecoming, because both the current rationalised approach and devotion to form, split things into separate abstract entities without real meaning.

Meaning should be derived from the intrinsic nature of a building, form and content being a unity.

"So start with this: make of each place, of each house and each city a bunch of places for each man and all man. Make a welcome of each door and a face of each window".

In his famous "By Us, For Us" circles which van Eyck presented at the Otterlo meeting in 1959, marking the end of CIAM and the coming of age of TEAM 10, he brought much of his frame of mind together (fig.2.). Equality of things and their inter-relationships are at the core of this symbolic entity. Architecture is a constant rediscovery of constant human values translated in place and occasion. Man is always and everywhere essentially the same. He has the same mental equipment, though he might use it differently according to differing social and environmental backgrounds. We meet ourselves everywhere in all places and ages, doing the same things differently, reacting differently to the same.

Consequently for van Eyck there was no distinction between him -as our professor- and us. There is only relationship.

An anecdote as illustration. One day we were waiting for Aldo's arrival when he walked in furiously. He had for the first time attended the bi-weekly private meeting of the faculty professors. "These people still live in a world of secrecy and hierarchy. Imagine, the board sits on one side and we the others sit in rows behind each other, facing the board. So I asked is this seriously a faculty of architecture? For a long time architects used to be the allies of kings, popes and tyrants. Today the architect is the ally of every man or no man. So why don't we form a circle, instead of sitting in this hierarchical arrangement?" Later things were arranged differently.

GIANCARLO DE CARLO IN URBINO.

In the summer of 1968, together with two friends, I represented Delft at the Columbia University workshop in Urbino Italy, organised by Team 10 activist Giancarlo de Carlo. Like van Eyck, the anti-establishment de Carlo was outspoken about the participation of users.

The historic town of Urbino- as a protected monument- was dying both socially and economically. We were asked to study the environmental consequences of reactivation proposals for the region and the old town.

With wonderful precision de Carlo inserted new interventions in the old landscape and in the vernacular city fabric. He used to say things like: architecture is too important to be left to architects alone. The barriers between users and builders should be taken down. For de Carlo it was the user experience that mattered.

MASTER THESIS WITH VAN EYCK.

As the subject of my masters project I choose the social and environmental transformation of postwar highrise housing areas, with Aldo van Eyck as my mentor.

These CIAM inspired estates of merely 10 years old were desolate deserts of monoculture and emptiness. My investigation was, could I design a structure to meet society's plural demands and could this structure substitute the present loss of the vernacular? Could this result in a liveable place for a large multitude of people, whereas in former times the vernacular always coped with limited plurality.

The secret of form, according to van Eyck, is that it is the object and at the same time the border of it. If a built structure is to be the counterform of a social structure, it should be a configuration of repetitive polyvalent units which condition social contact and changing individual needs. To be visually experienced these conditioning units should be designed in a



Image 1. Orphanage in Amsterdam by Aldo van Eyck, 1955-1960. Copyright Aldo van Eyck, from the Aldo van Eyck archive.

human scale and in a single structural and constructional idiom. The repetition of these units into clusters enriches the multi-meaning and identity of the total structure.

The orphanage in Amsterdam (1955-1960) is the first example of this configurative design approach, also referred to as Structuralism. (fig. 1.)

According to this configurative concept, I tried to design conditioning units and clusters and join them into a city structure. One of the complicated matters was the conflicting extremes of the long lifecycle of the collective structure and the short term lifecycle of loose fit elements catering for different individual needs. And how to solve this in an environment where one can decide on one's own habitat as well as experience the feeling of communal homecoming.

My design involved the adaptation of six highrise housing blocks for a variety of household types and a new lowrise development in between the blocks catering for the necessary multilayered variety of functions. The roads, parking, trees, playgrounds, shops and public facilities were situated at ground floor level and adaptable dwellings on a deck at first and second floor levels. (fig. 3.)

U.N. LIMITED COMPETITION PERU

Afterwards, Aldo invited me to assist him on the United Nations limited competition for low cost housing in Lima Peru in the summer of 1969, in his tiny office in the centre of Amsterdam.

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The issue was to design dwellings, which could be extended over time with local materials and selfhelp, without restricting one's neighbour or the collective and securing a maximum use of the prevailing wind direction in a warm humid climate? Besides how to multiply these into a city structure where users feel at home.

We clustered many different dwelling types, six units deep along parallel roads. In between footpaths, schools, playgrounds, and options for little shops.

After we finished I went to study urban design at the Otaniemi University in Helsinki on a scholarship van Eyck had arranged with the Finnish government.

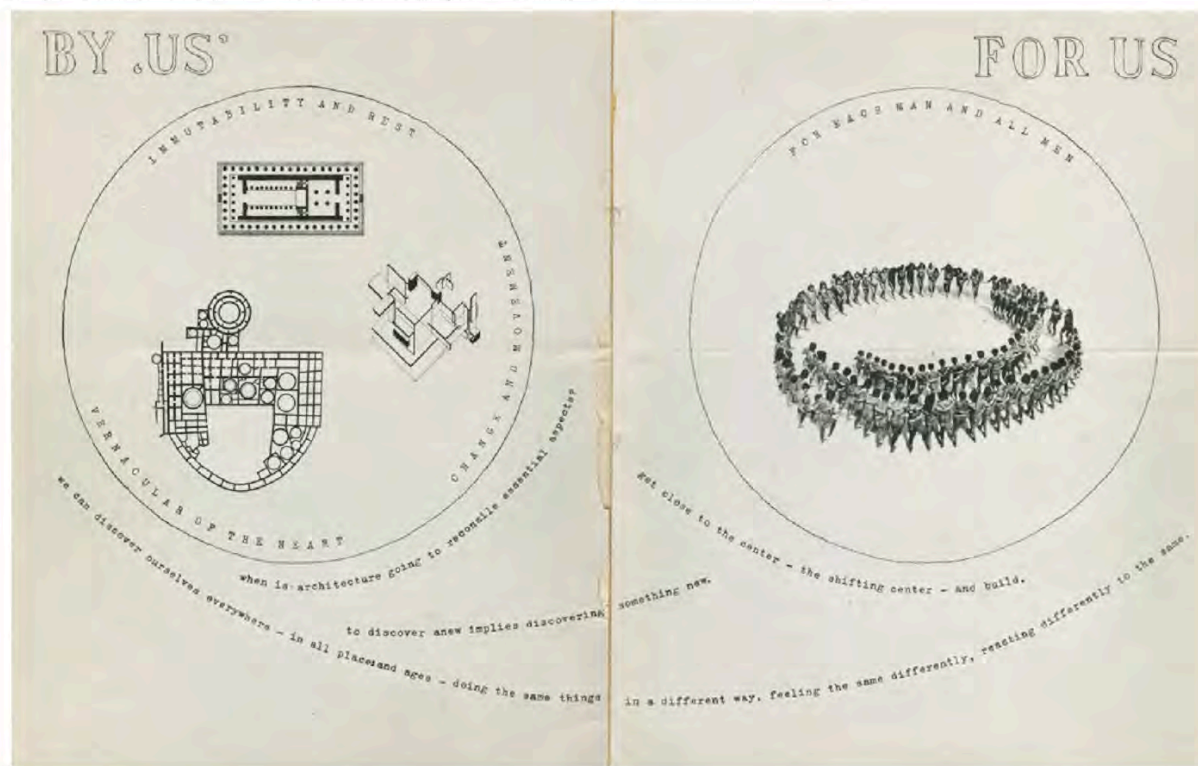
REIMA PIETILA AND THE OLD CITY OF KUWAIT.

In Helsinki I met Reima Pietila who asked to come and work on the demonstration projects in the old city Kuwait. In the

1960's Colin Buchanan and partners presented to the Emir of Kuwait a development plan for a modern city for 2 million people. Yet they did not demonstrate any connection between traditional Arab-Kuwaiti architecture and new urban form. The Smithsons, Candilis, Belkioso and Pietila were asked to design demonstration projects to show how this could be done. Pietila was asked to design an extension to the Sief Palace, the new council of ministers and the ministries of Islamic and of Foreign Affairs. On his own account Pietila added a proposal for inner city housing to cater for a vernacular functional mix. Reima, working together with his wife Raili Patelainen, had just finished the Suvikumpu housing estate in Tapiola and earlier the Dipoli Student Centre in Otaniemi.

We worked day and night in their small inner city appartement in a homely atmosphere. Reima unfolded his architectural theories in his self invented Anglo-Finnish language which only he could comprehend.

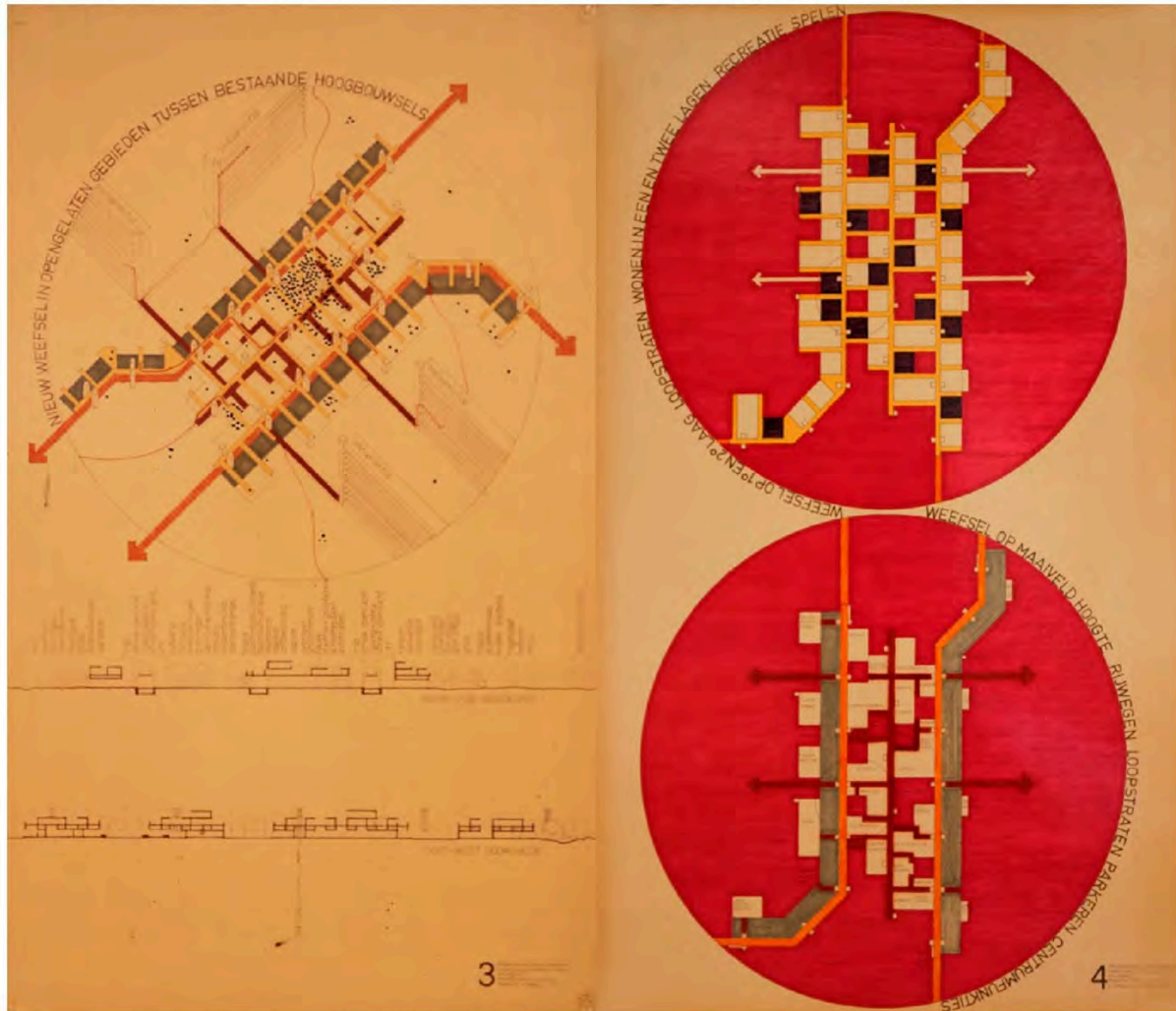
Image 2. Otterlo Circles by Aldo van Eyck, 1959. Copyright Aldo van Eyck, from the Aldo van Eyck archive.



His goal was to discover a language connecting Islamic-Kuwaiti tradition and the visual requirements of today. He was fascinated by the clever arrangement of the traditional Arab house with its privacy and quiet atmosphere centered around the inner courtyard. He was equally asthounded by the bluntness of modern Kuwaiti houses. Here the traditional concept was turned inside out, a house in the middle of a plot without privacy or quality.

To suit today's requirements for living in a middle highrise urban situation, he translated the vernacular Kuwaiti concept, like he had done in Suvikumpu. In a similar approach we designed solutions for the large covered spaces of the ministries. Here the traditional Arab lantern was the inspiration for huge beams providing filtered light and at the same time cool air. Reima called this "the poeticisation of metaphoric elements". As he had done in Dipoli he treated a rational system

Image 3. Images of master thesis by Hubert-Jan Henket 1969. Mentor Aldo van Eyck. Source: Hubert-Jan Henket archive.



in an apparently random way by masterly combining plan and sections. (fig. 4.)

Pietila often stressed his artistic approach to architecture contrary to rational modernists and CIAM doctrine. He would look at any problem from many different angles for a long time, slowly discovering the poetic keys to the content. Once he had found one, he would put his foot firmly down, like a

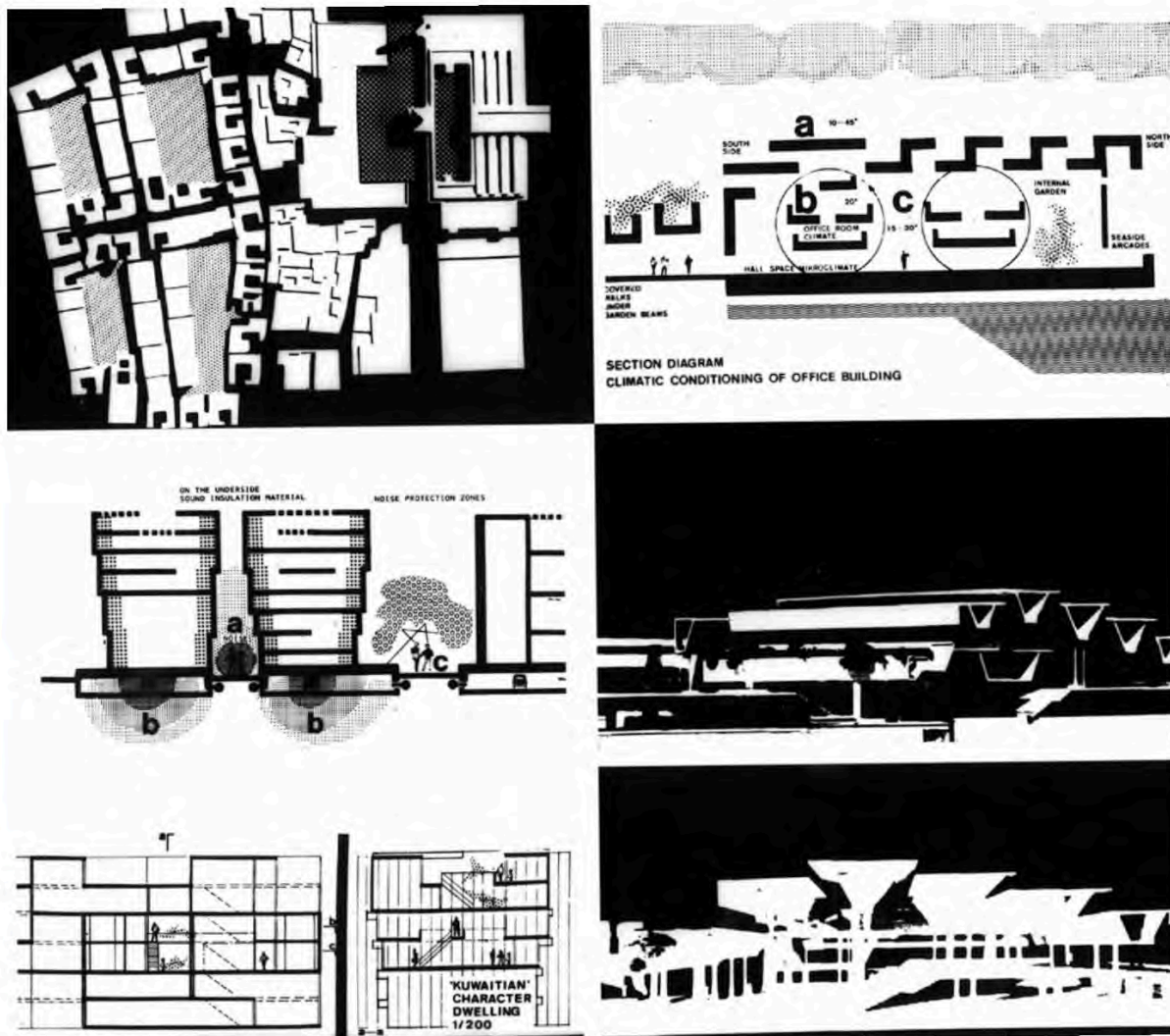
wanderer in a swamp, to continue his journey of invention, without looking back.

CHRISTOPHER DEAN IN LONDON.

After Helsinki Lily, my wife, and I moved to London where I worked for Christopher Dean of CPDH architects. Chris had participated in the TEAM 10 meetings in Otterlo and Royau-

Image 4. First proposals for housing and ministries in the old city of Kuwait, Reima Pietila.1970.

Source:stage 2 report summer 1970, Reima Pietila and Raili Paatelainen Architects, Helsinki.



mont. Later he became very active in the first ten years of Docomomo.

When I worked for him in 1971 on the Leicester University Library, the concept of “identifying devices”, first presented by TEAM 10 at the Dubrovnik CIAM meeting in 1956, was our favourite topic. Aldo van Eyck described these as new, historic, or natural artefacts articulating visual meaning, framing civic association between people and remaining in our memory. Without these a house will not become a home. Particularly at city level one needs closely related identifying devices to establish comprehensibility and the sensation of homecoming.

Isn't Ljubljana a perfect example showing the magic results of these identifiers, of unity through diversity, of the individual and the collective, of far away and nearby?

The last time Aldo van Eyck had a decisive impact on my life was in 1993. About 300 people had gathered to convince the then Secretary of State of Cultural Affairs to finally restore the iconic sanatorium Zonnestraal of Jan Duiker.

In the pandemonium van Eyck asked for the microphone. He said: 'How can the Heritage Departement demand for the delicate windows to be double glazed. This is impossible to do within the existing thickness of the frames without ruining the precious buildings ... Imagine restoring a Piet Mondrian by adding just 1mm to the thickness of the lines. If you do that you won't have Mondrian any longer, you are just left with a simple painting. The only person I would trust to do this work properly is Henket'. Some time later Wessel de Jonge and I were appointed to restore this magic complex.

CONCLUSION

Yet, what remains are Aldo's precious gifts to me and thus to my work. His first gift was the interiorisation of the “Great Gang”'s frame of mind. This among others lays at the core of the idea of Docomomo. He introduced me to the in-between realm and reciprocity. He showed me that tradition and invention form a twin phenomenon, embedded in the continuous change of existence. He showed me the importance of built homecoming and made me feel that architecture is the appreciation of it. All of these are contemporary and essential elements for a sustainable and humane architecture, fitting the polyvalent societies of today and the future.(1.) Thank you Aldo!

For influences of Team 10 on my architectural designs see www.biermanhenket.nl/docomomo

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BIOGRAPHY

Hubert-Jan Henket (1940), emeritus professor of the Delft and the Eindhoven Universities of Technology, the Netherlands is the founder (1988) and honorary president of DOCOMOMO international. In 1969 he graduated cum laude with Aldo van Eyck as his mentor at Delft. From 1969-1976 he practiced in Helsinki and London. In 1976 he started his own practice, since 2010 known as BiermanHenket architects. His portfolio includes the restoration of sanatorium Zonnestraal (with Wessel de Jonge), the Gerrit Rietveld Art Academy in Arnhem and the supervision of the Berlage Stock Exchange in Amsterdam, the Dudok Institute Neerlandais in Paris, the Theo van Doesburg house in Meudon (France) and Amsterdam Airport Schiphol (1995-2008). Among others he designed the Dutch Embassy in Bangkok and several musea like Teylers in Haarlem and “de Fundatie” in Zwolle. He has written the book “Waar Nieuw en Oud Raken” (2013) and edited (with Hilde Heijnen) “Back from Utopia” (2002).

ALDO VAN EYCK AND THE POSTWAR AMSTERDAM PLAYGROUNDS. AN URBAN METAMORPHOSIS*

Liane Lefavre (Canada, Austria)

"It was not my objective to define the place of play among other manifestations of culture, but rather to ascertain how far culture itself bears the character of play."

J. Huizinga, *Homo Ludens*¹

From the time Aldo van Eyck burst onto the scene as a rebellious "angry young man" in 1946, his writings and statements influenced architectural thinking to a degree that has rarely been surpassed by other architects and critics.² He coined many important phrases, catchwords and slogans that have passed into standard architectural discourse. Among his epoch-making and lasting contributions was the distinction between "space" and "place."³ Another was the importation into architecture of

the philosophical term of "in between" that he borrowed from Martin Buber.⁴ Simply put, place was the "realm of the in between." When he began to theorize about the space/place distinction in relation to architecture and urban design, it was perceived as extremely threatening. There have, of course, been examples of attempts at place-making—mostly from the 1960s, with populists like Jane Jacobs, with so-called critical Regionalists, and Dirty Realists—but Aldo van Eyck's Amsterdam playgrounds are among the most successful. The reason is understandable to some extent. The architectural profession was not capable of perceiving them because they were so immaterial, built out of thin air, as it were. This oversight by the profession is surprising. The playgrounds are not only Aldo van Eyck's

Children playground before/after; Laagte Kadijk, Amsterdam Centre, 1953-54; source: Aldo van Eyck the playgrounds and the city, 2002.
Copyright Stadsarchief Amsterdam



most important works, but they were also one of the most original contributions to architecture, urbanism and art of the post-war period, and one whose potential has yet to be tapped.

A series of photographs of Amsterdam playgrounds, taken in the late 1950s and 1960s, captures the kind of impact they had in Amsterdam. Their focus was not close-up and engaged with actual children, but rather on the urban environment. But they do have a uniqueness, and it lies in the concept behind them that has everything to do with the thinking of Aldo van Eyck, who was working closely with the civil servants responsible for implementing the Amsterdam playgrounds. Fundamentally, their before-and-after character illustrates the essence of the metamorphosis of what may be called urban “space” into urban “place.”

Just how many playgrounds can be attributed to van Eyck is open to interpretation. He himself guessed that since 1947, when he built his first one on the Bertelmanplein, 700 “were carried out according to my designs” in Amsterdam.⁵ A check in the municipal archives, however, reveals many more. Archival material documenting the playgrounds designed between 1957 and 1959 for the new western suburbs of Amsterdam—Geuseveld, Slotervaart and Slotermeer—points to

mass production of playgrounds by civil servants based on van Eyck’s initial design elements as opposed to the detailed, unique, in situ designs that characterise the approximately 200 playgrounds built up to that time. Are they van Eyck playgrounds? It depends on how you define them. In the narrow sense of the term, they are not; in the largest sense, they are. In fact, in this latter sense, given the superabundant spread of playgrounds all over the Netherlands since 1947, the number is myriad. Aldo van Eyck has changed the Dutch cityscape to a much higher degree than he ever knew.

REBEL WITH A CAUSE

Henri Lefebvre wrote about the pressures that were brought to bear upon traditional, historically inherited urban fabric in the process of modernization.⁶ According to Lefebvre, the early twentieth century saw a marked increase in the tendency toward the dissolution of these places and the unprecedented rise of a new, anonymous, sterile, technocratic alternative space that Victor Bourgeois referred to it as “rationelle Bebauungsweisen,” (rational development),⁷ Le Corbusier to “la Cité radieuse”⁸ Ludwig Hilseimer to “Grosstadt Architektur,”⁹ and Cor van Eesteren to the “functionele stad.”¹⁰

Children playground before/after; Van Hogendorpplein, Amsterdam South-West, 1953-1955; source: Aldo van Eyck the playgrounds and the city, 2002. Copyright Stadsarchief Amsterdam



Liane Lefaivre Aldo van Eyck and the Postwar Amsterdam Playgrounds

One more major change that affected the thinking about cities in the aftermath of the Second World War consisted in turning this “top-down” CIAM approach to urbanism on its head and adopting an approach that was “ground-up”, “dirty real”, “situational.” The first real alternative, or at least complement, to CIAM-style urban planning was these playgrounds by Aldo van Eyck.”¹¹ The other members of Team Ten besides van Eyck, were to follow in his footsteps. Two images sum up the difference in approach to the city that accompanied the design of the first playground: van Eesteren’s General Expansion Plan of Amsterdam (AUP) of 1934, with its sweeping standardizing, regimenting blocks, and the insertion of some post-war playgrounds into the fabric of the Jordaan neighbourhood of Amsterdam. One conforms to the strategy of the ‘master plan’, the other is what could be called the strategy of the interstitial and the polycentric.

Van Eyck’s idea of adapting design to a given urban setting, rather than working with a pre-conceived set of assumptions, has an equivalent in the way many other people dealt with their respective fields in the immediate post-war period, whether in literature, cinema, politics, philosophy, or science.

Characteristically, reacting against a priori concepts and abstract principles of metaphysics, researchers as varied as philosophers of ordinary language, existentialists, phenomenologist, and mathematicians, whatever disagreements they had, shared one thing: they approached their problems as embedded in real “circumstances,” “lived-in conditions,” “experienced cases,” “immediate contexts,” “situational” spirit of the time, in particular the existentialist writings of Jean-Paul Sartre.. Van Eyck’s “space” and “place” distinction can be seen as a parallel in the field of architecture to Sartre’s more philosophical categories of “Nothingness” and “Being.”¹² Naturally, both van Eyck and Sartre rebelled against the idea of grandiose, top-down, authoritative systems. For Sartre they suffered from the “illusion of immanence.” Accordingly, he had challenged his contemporaries, in particular the new post-war generation, to become “engaged in the world” and in its unique “situations.”¹³

The attitude predominant among the discontented, upstart anti-heroes of the generalised post-war rebellion against the traditional, conformist, “big bluff” cultural values personified in England by John Osborne’s “angry young man,” in France

Children playground before/after; Buskenblaserstraat, Bos en Lommer, New Amsterdam West, 1955-56; source: Aldo van Eyck the playgrounds and the city, 2002. Copyright Stadsarchief Amsterdam



by Albert Camus's "home révolté," and in the US by Nicholas Ray's "rebel without a cause."¹⁴

Closer to architecture, we find the same rebellious, non-conformist, ground-up thinking in the work of Henri Lefebvre. Lefebvre's *Critique de la vie quotidienne* came out in the same year as Aldo van Eyck's first playground, in 1947 and bears a remarkable similarity in feeling or the of urban geographer Pierre Henri Chombart de Lauwe's *Paris et l'agglomération parisienne*.¹⁵ But perhaps what van Eyck's playgrounds come closest to, in the way they combine top-down and ground-up, was Norbert Wiener's cybernetic theory of self-regulating organisms constantly adjusting themselves in response to new inputs, "learning from" their evolving contexts through feedback loops, through what one might call a process of "inbetweening."¹⁶

INTERSTITIAL AND DIRTY AESTHETICS

There are many facets to this cybernetic inbetweening of top-down and ground-up thinking. Indeed, what is unique about the Amsterdam playgrounds that they are interstitial, inserted within the living fabric of the site. They are all site-specific, now lopsided and blob-like as in Pontanusstraat, now contorted, now fractured and broken as in the Zeedijk playground a family of forms created in reality that was unprecedented in architecture and urbanism.

The search to express the genius loci is always associated with irregularity or roughness of real forms. Reality has always been dirty and messy; it has always been "dirty real." Anthony Shaftsbury. Speaking of the new natural order, the new topographic regionalism, he proclaimed: "Your genius, Genius of the Place, and the Great Genius have at least prevailed. I shalt no longer resist the passion growing in me for things of a natural kind; whether neither Art, nor the Conceit of Man has spoiled their genuine order, by breaking in upon that primitive State. Even rude rocks, the mossy caverns, the irregular unwrought Grottos, and broken Falls of Waters, with all the horrid Grace of the Wilderness itself, as representing Nature more, will be the more engaging and appear with magnificence beyond the formal Mockery of Princely Gardens."¹⁷ This is the same spirit in which van Eyck wrote a letter to the Director of Public Works of Amsterdam dated September 5, 1951 where he declined to prettify the bare firewalls surrounding the playgrounds, preferring what he called the "positive" aspect of the "sculptural" reality of their roughness.¹⁸ Much closer to home, however, is the COBRA group consisting of Asger Jorn, Constant, Corneille and Karel Appel among others. Van Eyck had particularly close ties with artists immediately after the war.

He spent the war studying architecture at the ETH in Zurich and also under the aegis of a senior, authoritative figure, one of the greatest art historians and critics of the time, who introduced him to the world of avant-garde art, Carola Giedion-Welcker.¹⁹ Interestingly, when he returned to the Netherlands after the war it was with artists of his generation, and not architects, that he formed the closest ties in the late 1940s. It is well known that van Eyck was a close friend of many members of the COBRA group of painters, and that they chose him to install a famous show of theirs at the Stedelijk Museum in 1949 called "Experimental Art."²⁰ What has not been pointed out is the formal debt his playground designs owe to these artists. His contribution to a meeting of CIAM in Bridgewater in 1947 is revealing of his state of mind. It was entitled "A Report concerning the Interrelation of the Arts and the Importance of Cooperation."²¹

There was much cross-over between art and architecture at this time. That Aldo himself was an influence on one of the main figures of the group, Constant, is clear.²² In at least one case, the Dijkstraat playground of 1945, van Eyck created a work of art and a playground simultaneously, in keeping with the spirit of the Experimental Art exhibition. As opposed to the post-war public sculptures in Rotterdam—by Picasso, Gabo, Moore or Zadkine—which were conceived as monuments to be looked at in isolation from their surroundings, the playground "learns" from its context. It is one of the first site-specific sculptures of the post war period. From this point of view it is more than coincidentally germane to Kurt Schwitters's *Merzbau* (1947)—an artist with whom van Eyck kept up a correspondence²³—a sculpture carved into an existing dilapidated building in Newcastle-upon-Tyne where Schwitters had taken refuge from Nazi Germany.²⁴ It is tempting to draw a parallel between Aldo's playgrounds and the fourth issue of the magazine *COBRA*. It coincided with the Stedelijk exhibition of Fall 1949 devoted to the theme of childhood, with paintings like Corneille's *Les Jeux d'enfants et le grand soleil* (1949). In a major role reversal, the child became a model for the adult in "naïf", child-like Art Brut works by Jean Dubuffet and Joan Miró, and post-war expressionists.²⁵ Constant, for his part, wrote that "the child knows no other law than the spontaneous feeling of being alive and knows no other imperative than to act it out."

One cannot help thinking that the collective publication by Peter and Alison Smithson with Aldo van Eyck called *Team Ten Primer* (1961) was a direct allusion to the kind of book children learn to read from in primary school and germane to the return to basic truths and primitive values that one finds in the

expressionist painters of the time. Aldo van Eyck's architectural renderings in children's crayons of some of the playgrounds share something else with COBRA art. Like these artists, who were trying to imitate children in their drawing style, van Eyck used children's crayons in his renderings of the playgrounds, as the drawings of Zeedijk, for example, reveal.

HOMO LUDENS

Van Eyck's playground scheme also expresses a deep-seated cultural continuity in an updated form "*longue durée*" in Dutch culture. As Simon Schama has pointed out, *kinderspelen* or "children's play," represented in readily recognizable urban settings, is a topos of Netherlandish painting that goes back at least to the sixteenth century. "Nothing illustrates the peculiar bias of the Netherlandish culture toward children and the world more graphically than the compendia they put into paint, print and even wall tiles. There was a *kinderspelen* series of pictures embodying "the perennial conflicts between diversion and instruction, between freedom and obedience, between exploration and safety that were at the heart of contemporary attitudes towards the child. By situating the games not in some imaginary vacuum of time and space but in topographically meaningful (...) settings, nearly always with some public building, a town hall or guildhall in view, they evoke the civic and public virtues to which the correctly brought-up child should be led."

What is striking about this representational tradition, as Schama again points out, is "the absence of any figures other than children from these public places."²⁶ This tradition in painting, unique to Dutch culture, had a foundation in reality. It was not so much an expression of *homo ludens* for the sake of play alone. As in the case of Huizinga's theory of play, it filled a practical purpose. It reflected the wish to instil republican values into children from an early age and bring them into the fold of the reality of civic life in a bourgeois society.

COR VAN EESTEREN, HOMO LUDENS? ONE APPROACH TO URBAN DENSITY

This uniquely Dutch tradition of *kinderspeel* goes a long way towards explaining why Cor van Eesteren was influenced by the ideas of the new generation, particularly Aldo van Eyck, more deeply than any of the CIAM old guard. In fact, this old top-down, arch-functional architect and urban planner, who had made no provisions for playgrounds in his Extension Plan for Amsterdam of 1934, became a devoted ground-up situationist, actively dedicated to placing what he, in a memo dated November 9 1958, idiomatically and, yes,

tenderly called *Kleuterspeelplaatsjes* or "small playgrounds for the little kids" in his post-war projects like Sloterveer.²⁷ As head of City Development for the city of Amsterdam after the war, he changed his approach radically, and this was directly because of the Amsterdam playgrounds, as recent research into newly discovered archives in the Amsterdam Municipal Archive has shown." Without abandoning the idea of top-down planning, he began to "learn" from the particularities and irregularities of left-over, interstitial places in the existing fabric of the city and to work with them rather than overlook them. Thus it was that what had begun as an ad-hoc response of a young architect to a perceived need on the part of a war torn city for playgrounds in 1947 became, by the time the new neighbourhoods went up, official policy. Every block in the new towns that wanted a playground was granted one.

LUDIC CITY

Like the COBRA painters, van Eyck used the child as a foil to the pre-war idea of the "functional city." For him, childhood was equated with the ludic. As with the other ideas we have mentioned above, the idea of the ludic city projected by van Eyck was part of the debate of the time. In the post-war *Theory of Everyday Life* he had used the concept of alienation developed by the young Marx as a springboard to outline the theory of "everydayness," or *le quotidien*, the potential of the humble and repetitive aspects of life, as opposed to those related to the world of production or consumption. Lefebvre asserted the "right" to the city as a place of pleasure and enjoyment, independent of the imperatives of the economy a locus of "festival."

Aldo van Eyck's playgrounds shared with Johann Huizinga's *Homo Ludens* of 1938 a profound belief in the civilizing function of play. The very first playgrounds were embedded very often in the voids of Amsterdam where the houses of deported Jews had stood. Filling them with life, in the face of these facts, was a redeeming, therapeutic act, a way of weaving together once more the fabric of a devastated neighbourhood. The intention was to thwart what Huizinga entitled "Play and War" had called the "agonal" (or combative) by overcoming it through play.²⁸

CYBERNETIC, PARTICIPATORY URBANISM

Aldo van Eyck's playgrounds arose within a semi-hierarchical, semi-anarchic, highly participatory process involving many people over many decades. It was what might be called a cybernetic process, ground-up, top-down, inter-relating a mass of agents, each playing an equally crucial role, impossible to

disentangle from one another. Aldo van Eyck is simply the most well-known. Also involved in the process were, as we have seen Cor van Eestren, Jacoba Mulder, the citizens of Amsterdam, and the Public Works Department. It is complex, interactive, seething mass of coincidences and chain reactions. The playgrounds were shaped by the city but they also shaped the city. The city was seen as a temporary phenomenon. So were the various interventions of the architect within it. Today this seems an obvious fact, but within the universe of CIAM thinking, what was important was the “plan,” a large-scale, functional, timeless spatial pattern. For van Eyck, on the other hand, the playgrounds were actions in space occurring where and when they were needed.²⁹

POLYCENTRIC NET

The most original and significant aspect of the playgrounds is the net-like or web-like quality they assume when taken as a

whole. They are conceived as a constellation, a scheme made up of situationally arising units—the playgrounds—bound to time, accident and circumstance. The idea of the city as an open-ended pattern removes “the duality of interior and exterior space,” to quote van Doesburg and van Eesteren’s 1923 text on De Stijl once again. Perhaps even more, it recalls a work by Piet Mondrian, an artist whom van Eyck referred to as “an angel.”³⁰ Indeed, when taken as a whole, the over seven hundred playgrounds can be seen as resembling Mondrian’s so-called Starry Sky paintings, in which the artist decidedly moved away from the classical, closed, monocentric composition towards an open, anti-classical compositional strategy based on a randomly distributed, polycentric galaxy of nodal points, as he did also in his composition no. 4, a painting that closely resembles a Mondrian painting in van Eyck’s personal collection.³¹ Emerging in the cracks and interstices of the city and overlaid upon the existing urban fabric, the playgrounds are also fore-

Children from the main multi-cultural 15th district of Vienna whom Liane Lefaivre invited to participate in her course on Play as a Multi-cultural Tesign Tool at the University of Applied Art in Vinna in Spring 2012. Photo credits: Liane Lefaivre



Liane Lefaivre Aldo van Eyck and the Postwar Amsterdam Playgrounds

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runners of the interstitial approach to the city that Kevin Lynch was later to refer to as a "polycentric net."³² Van Eyck's "starry sky" city precedes the visionary schemes by Constant's New Babylon Yona Friedman's Mobile City, Shadrach Free University of Berlin.³³ Also van Eyck's design for this "starry sky" of playgrounds in post-war Amsterdam, one of the great breakthroughs of an architecture of "place."

NOTES

* A version of his article was originally published by the same author in 2002 under the title: «Space, place and play» in the book titled «Aldo van Eyck, the playgrounds and the city», published by Stedelijk Museum Amsterdam and NAI Publishers Rotterdam, edited by Liane Lefaivre and Ingeborg de Rode. From this book is also the photo material of the playgrounds attached to the article. Among other versions is that appearing in her ToolGround Up City: Play as a Design Tool (co-edited with Henk Doll. Rotterdam, NAI, 2007.

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BIOGRAPHY

Liane Lefaivre, a Canadian and an Austrian, is o-Professor (Professor Ordinaria) of Architectural History and Theory at the University of Applied Art in Vienna Austria, now retired. She completed her undergraduate degree at McGill University and her doctorate at the University of Utrecht. Her writing and research relates to two formative modern periods: first, from the Renaissance to the end of the Enlightenment, and second from the late nineteenth century to the present. She coined, with Alexander Tzonis, her partner in work and in life since 1972, the concept of Critical Regionalism, inspired by the wide-ranging aesthetic, historical, political and environmentalist writings of Lewis Mumford and they have published widely on the topic of critical regionalism as a global phenomenon, in English, Spanish, Portuguese, French, Greek, German, Chinese and Japanese. She is a member of the board of The Journal of Architecture (Royal Society of Architects, London), and she has been on the boards of Design Book Review (Berkeley), and Archithèse (Zurich) and Architecture (New York), Architect's Newspaper (New York) Cahiers de la Recherche (French Ministry of Culture, Paris). Her latest book, published in 2017, is *Rebel Modernists*.

JOŽE PLEČNIK – ARCHITECTURA PERENNIS

Damjan Prelovšek (Slovenia)

Plečnik's life story is extraordinary: from being a cabinetmaker apprentice with a less than adequate general education, he developed into a master of architecture with an extraordinary sense for material and form. Although he initially aspired to become a painter, he abandoned the idea following a misunderstanding with his teacher. He came to Vienna as a factory worker in the furniture industry and would probably have re-

mained one, had not his younger brother Janez, a medical student, joined him in the capital of the Hapsburg Monarchy. This encouraged Plečnik to follow an academic career as well. Even though he was rejected by the School of Arts and Crafts of the Austrian Museum of Art and Industry, he was accepted by Otto Wagner at the Academy of Fine Arts, who recognised in him a talented draughtsman with a vast creative

The crypt of the Church of the Holy Spirit in Vienna, 1910-13. Photo credits: Damjan Prelovšek



Damjan Prelovšek Jože Plečnik – Architectura Perennis

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imagination. Wagner introduced him to Gottfried Semper's theory of cladding (Bekleidungstheorie), which Plečnik followed throughout his life. His participation in planning the Vienna municipal railway stations clarified his view of the relation between construction and decoration, and he became an unsurpassed master in the adaption and application of classical architectural forms. He concluded his three years of study at the Academy of Fine Arts in Vienna by going on a study tour through Italy and France. Upon his return, he was employed for a short time with Wagner, then went his own way. When planning a department store and residential building in the centre of Vienna, he befriended the client Johann Evangelist Zacherl and was a regular guest of Zacherl's family from then on. At that time, he was also considering marrying Zacherl's sister-in-law, but ultimately abandoned the idea out of fear that his creative freedom would suffer.

The Zacherl House (1903–1905) represents one of the highlights both of Plečnik's early work and of early twentieth-century Viennese architecture. Via Zacherl's circle, Plečnik, who was deeply religious by nature, came into contact with some of the leading representatives of the Austrian catholic movement. His reinforced concrete Church of the Holy Spirit (1910–1913), located in a distinctly working-class district in Vienna, can be seen as a defiant response to the more lavish Kirche am Steinhof, designed by his master Otto Wagner. By offering him a professorship at the School of Applied Arts in Prague, his classmate Jan Kotěra rescued him from the daily struggle for existence. Plečnik taught with great enthusiasm for ten years, during which time he did not have the opportunity to build anything of importance. These years prepared him for the important tasks at Prague Castle that the Czechoslovakian president Tomáš Garrigue Masaryk entrusted

The Prague Castle renovation, Czech Republic, 1920–1935. Photo credits: Damjan Prelovšek



ed to him after the end of World War I. Plečnik was able to implement very exactly the president's desire to transform the aristocratic castle into a seat of modern democracy. The goal was to return the castle building as far as possible to its pre-Hapsburg appearance. To help him achieve this Plečnik used symbolism taken from Czech legends and national saints, as well as from Czech and Slovak folk art. While remodelling the castle, he also installed an apartment for the President on the second floor of the south wing (1923–1927), and also designed the presidential park and summer residence in Láň. Through his work for the president Plečnik established a close bond with Masaryk's educated and artistically inclined daughter Alice. Through his conversations with her, a partial renovation program began to evolve into a complex one. Plečnik's redesign of the southern castle gardens (1923–1926) represents one of the most important examples of twentieth-century park design. A further major task was the paving of the third castle courtyard (1926–1932) and its decoration with a monumental obelisk and the fountain of Saint George. Unfortunately, his grand theatrical design for the surroundings of the Prague Castle (1934) could not be fully realized as Czechoslovakia was suffering an economic crisis at this time, which impacted considerably on the political situation. Nevertheless, Plečnik reached the peak of his creativity in Prague.

He was engaged simultaneously on designing projects for his native Ljubljana and working on Prague castle. Although he had returned to Ljubljana, where he was appointed professor at the newly founded Technical University, he went back to Prague in the school vacations. During his absence, his loyal pupil Otto Rothmayer continued his work on the castle. Rothmayer was also site architect for Plečnik's Church of the Sacred Heart of Jesus (1928–1932), which was under construction in the Vinohrady suburb at that time. By using a ramp in the bell-tower, Plečnik proved that he was able to build in the spirit of functionalism, even though he had doubts about this new direction in architecture. When he started to get larger commissions in Ljubljana towards the end of the 1920s, his work in Prague in many respects influenced his designs for his home town and vice versa. In Ljubljana Plečnik found loyal supporters in the engineer Matko Prelovšek, who led the Municipal Construction Office, and in the art historian France Stelè. Both assisted him with anything that he needed so that he could work without interruption on his work of transforming Ljubljana as the capital of the Slovene nation. In comparison to Prague, Plečnik had incomparably smaller funds at his dispos-

Damjan Prelovšek Jože Plečnik – Architectura Perennis



Interior of the Church of the Ascension in Bogojina, Slovenia, 1924–27
Photo credits: Damjan Prelovšek

al in Ljubljana, which is why he often had to use substitute concrete instead of real stone. Besides the Municipality of Ljubljana, which commissioned him to design city parks, streets, and squares, he worked extensively for the Franciscan and Jesuits orders. For the Franciscans he built a monumental church with a square ground plan and an elongated nave (1925–1931) in the Šiška District. The high altar is located almost in the middle of the space, anticipating long before the Second Vatican Council the future direction that the church liturgy would take. In the village of Bogojina in the very northeast of Slovenia, Plečnik built a new church (1924–1927) as an addition to the existing one; he based the ground plan of the new church

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on the proportions of the bays of the old building. The ceramic plates on the church ceiling are an affectionate reminder of the pottery tradition in the Slovenian Prekmurje Region. Especially interesting is Plečnik's Church of St. Michael in Črna Vas in the Ljubljana Marshes (1937–1938). Because of a lack of funds, he built the church with stones, bricks and sewer pipes. The visible roof of the church is modelled on Auguste Choisy's interpretation of classical constructions. Plečnik firmly believed that his people were descendants of the Etruscans. This also explains his frequent use of Tuscan order columns, the most magnificent example of which is St. Mary's Column (1938) near the Church of St. James in Ljubljana. In Belgrade, he built the Church of St. Anthony of Padua for the Bosnian Franciscans (1929–1932), using clay facing brick. Since he believed he was insufficiently familiar with traditional Serbian

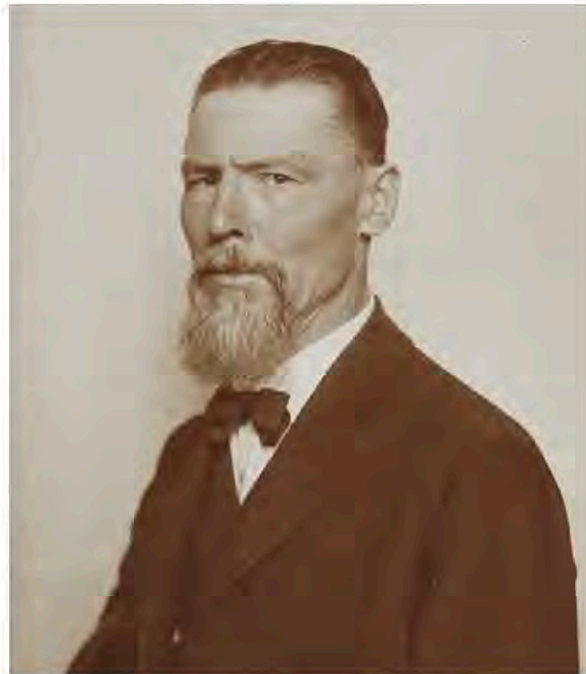
medieval churches, he modelled his plan on the Pantheon in Rome. Furthermore, since he was unsure of the abilities of the contractors, he abandoned his original design for a dome and replaced it with a technically simpler concrete slab. His reconstruction of the former Chamber of Trade, Industry and Commerce in Ljubljana (1925–1927) is worth mentioning among his secular works. Its staircase, built at the time of the birth of the international functionalism, is a real apotheosis of the classical column, as well as a reminder that this symbol of the humanism of western European civilization was disappearing from world architecture. Both Catholic financial institutions, the Vzajemna Insurance Company (1928–1930) in Ljubljana, and the People's Loan Society (1928–1929) in Celje are based on the design of Zacherl's palace in Vienna, but with an emphasis on the three-dimensionality of the building volumes.

National and University Library, Ljubljana, Slovenia, 1936–41. Photo credits: Damjan Prelovšek



The pinnacle of Plečnik's work in his hometown is undoubtedly the University Library (1936–1941), the façade of which is designed as a textile mantle, the same as in the Prague church. The protruding windows reminiscent of English bay windows function as folds in the façade cladding. The single-flight staircase in the interior is shaped like an antique peristyle, with a reading room placed across it. Here, Semper's theory of cladding was carried out to the very last detail. Consequently, the large chandelier in the reading room does not hang on the axis of the staircase, but rather from the middle of the ceiling as the central decoration of an imaginary carpet. Plečnik also realized this idea in the Prelovšek Villa (1931–1932), which represents a chronological continuation of the interiors from the Prague Castle. Plečnik developed several further plans for Ljubljana, most of which were not realised, initially because of the Great Depression, and then by the outbreak of World War II. Nevertheless, with the help of the municipality in the 1930s, it was possible to implement part of the promenade he designed for Ljubljana Castle and to regulate the riverbed of the Ljubljanica river, over which he planned several bridges. He also regulated the flow of the river through the city with a monumental flood-gate (1940–1944), composed of elements of classical architecture assembled in a very non-traditional combination. Žale, which is a large complex of buildings in Ljubljana's main cemetery, in front of which stand monumental propylaea, was built right before the start of World War II. The Žale cemetery represents a good example of how to incorporate the traditional manner of burial into an urban area, while still preserving due reverence for the deceased. According to Plečnik, the farewell to the departed should be made in the spirit of hope instead of debilitating sorrow. Žale is the synthesis of an antique building typology, in effect the artist's swansong before the massacre that turned the world upside down and concluded in Slovenia with the rise of the communist regime.

After World War II Plečnik no longer received any important commissions. Most of his work was religious, renovating or modifying churches that had been damaged during the war. Among these, the church in Zgornje Stranje near Kamnik (1947–1950) and the church in Ponikve above Most na Soči (1954–1958) are the most notable. From this period, his design of the Slovenian Parliament building (1947), based on an older study of the Catholic cathedral in Sarajevo, is especially interesting. He covered the circular space with a much smaller dome resting on inclined columns, thus avoiding the technically difficult construction of a large dome supported by flanking buttresses. Plečnik died at the beginning of 1957



Jože Plečnik (1872–1957). Source: Damjan Prelovšek

in his home behind the Trnovo church in Ljubljana. A magnificent funeral was arranged for him, as if in preemptive atonement for the decades of oblivion that were to follow. Since Plečnik's death, world architecture has undergone multiple phases of development and has taken various unfruitful paths. Everything that was once considered a fundamental principle is no longer valid. Plečnik lived and worked in a time when certain rules of design were still followed. Through breaking and changing these rules, he arrived at unique new solutions, as Michelangelo once did by transforming the rules passed down from the antiquity. Nowadays, when everything is allowed, this is no longer possible, and architecture veers constantly from one paradigm to another. The time of celebrity architects and their extravagant "l'art pour l'art" is starting to bore us. All this contributes to increasing the significance of Plečnik's art, which drew from the healthy foundations of the European classical tradition and preserved the human element even in the most monumental tasks. Throughout his life, Plečnik dealt with fundamental architectural topics, to which he brought novel and unique solutions, which attracted great

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contemporary interest. He was an avid supporter of the tradition of the European humanism. His architecture is full of unusual ideas, turns and proportions; it is never dull and is always full of life. Consequently, with his alphabet of designs and topics, Plečnik may be considered the personification of a higher education in architecture, through which future generations will have to pass if they wish to achieve an art of building that is not merely functional, but also suitable for its time.

BIOGRAPHY

Damjan Prelovšek, born on 18 February 1945 in Ljubljana, where he finished grammar school in 1965. He studied history and history of art at the University of Ljubljana. After his graduation in 1969 he spent one year in Vienna as holder of the Herder post-graduate scholarship. He took his doctor's

degree in 1977. Since 1971 he has been employed at the Slovenian Academy of Sciences and Arts – the France Stele Institute of Art History. He has often made study trips to Italy, Austria and Germany. In 1990, 1991 and 1996 he lectured as visiting professor at the University of Salzburg and in 1992 at the Middle European University in Prague. Since 1992 he has been a regular member of the European Academy of Science and Art, domiciled in Austria. From 1998 to 2002 he was posted as Ambassador of the Republic of Slovenia in the Czech Republic. 2008 he became to be honoris causa of the High School of Applied Art in Prague. His main field of research is the history of architecture from the baroque to the modern, times especially the work and life of the Slovenian architect Jože Plečnik, about whom he published some books in Slovenia and abroad.

Žale Cemetery (1938-40). Photo credits: Damjan Prelovšek



PLEČNIK AND PRAGUE

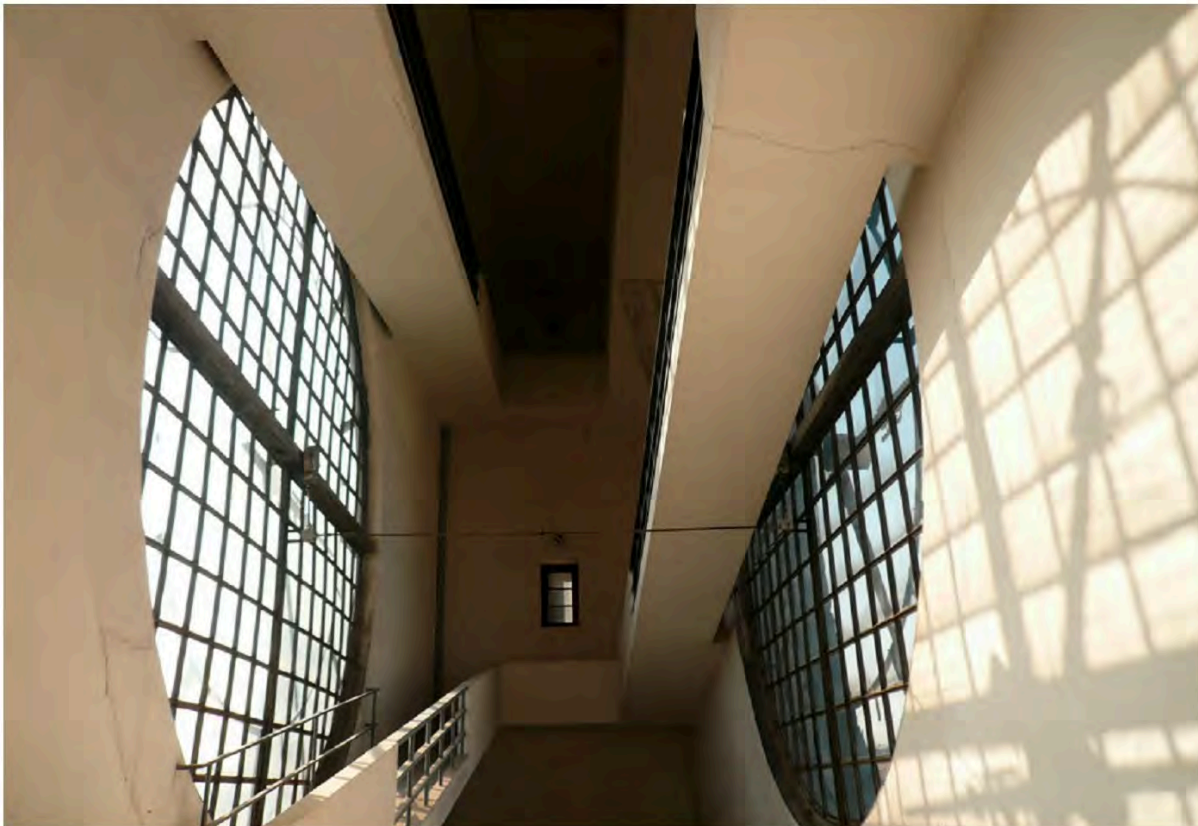
Vladimír Šlapeta (Czech Republic)

ABSTRACT

Jože Plečnik worked regularly in Prague as a professor from 1911 to 1921, later at distance from Ljubljana /and during summer on building-sites/ till 1933, when he was engaged in the reconstruction of Prague Castle for residence and office of President T.G.Masaryk. His works appeared in Bohemia,

thanks to his friend Jan Kotěra from 1900 onwards. He certainly went through both good and bad time here, but he was by no means a man who cared for official success, however his activities in Prague cannot be regarded only as an episode. Although Czech architecture between two world wars was taken with phenomena of the international Avant-garde, went in

Jože Plečnik - The Church of the Most Sacred Heart of Our Lord, Prague - Vinohrady, photo Vladimír Šlapeta



Vladimír Šlapeta Plečnik and Prague

different directions, and although only a few Plečnik's students followed in their master's footsteps, he represented for all his students the highest moral and artistic authority. His architectural heritage in Prague, however, even after 90 years is by no means history. His strong individual architectural language still has much to say to present and future generations.

PLEČNIK AND PRAGUE

The work of Jože Plečnik divides into three periods: early works in Vienna, his works in Prague, and finally his definitive establishment in his hometown Ljubljana. Prague played a distinctive role in his life. He admired Prague, like most of the central European intellectuals, as a metropolis uniting the Slavic world with the Western European culture. He formed this close attachment to Prague thanks to his friendship with Jan Kotěra during their studies in the school of Otto Wagner. As most of the intellectuals, after his return to Prague to take the position of professor at the School of Applied Arts, Jan Kotěra started to publish Plečnik's works in the art magazine *Volné směry* (Free directions) and later in the magazine *Styl* (Style). From time to time his students and collaborators went to visit Plečnik in Vienna and thus Prague was informed about Plečnik's activities. Some of Plečnik's early works, e.g. the design of the facade for the Stollwerk factory or a cubist sketch of a funeral chapel, have probably inspired Kotěra's students to develop the Prague cubist architecture.

In 1911 Ferdinand d'Este, the successor to the Austro-Hungarian throne, prevented Plečnik from becoming the head of school of architecture at the Vienna Academy, to assume the office of Otto Wagner. Though by coincidence at the same time a new school of architecture was established for Jan Kotěra at the Prague Academy of Fine Arts. Thus, Jan Kotěra invited his schoolmate to Prague and helped Jože Plečnik to become his successor at the School of Applied Arts. Hence Plečnik became part of the Prague academia and a strong voice of the local architectural discourse.

On the eve of the First World War, the instruction in architecture in Prague oscillated between the instruction at the Czech Technical University which was oriented towards traditional classicist spirit, or even towards French Art Nouveau/neo-baroque architecture of Josef Fanta; and between the different concepts of instruction of the two graduates from the Wagner school – Jan Kotěra at the Academy and Jože Plečnik at the School of Applied Arts. The school respected each other and were connected also by their warm friendship. Plečnik even rented a room at Kotěra's mother's place in the immediate vi-

cinity of Kotěra's villa where was also located the school of architecture at the Academy. For his friend, Plečnik used to import his favourite red wine called "cviček" from Slovenia.

The schools differed immensely. Plečnik's school at the School of Applied Arts was called "a school of decorative architecture" and the teacher used to concentrate on students mastering the stylistic repertoire based on the antique and renaissance traditions. The atmosphere there was strict, at times almost students could almost smell the frankincense of the catholic church which was introduced by the otherwise kind teacher. This was also reflected in the tasks which students were assigned: funeral chapel, baptistery, tombstone, mausoleum, a memorial, which were mixed with palaces, houses and town houses. Some of his students, as for example Josef Štěpánek or František Lydie Gahura, who had had the training in sculpture, were able to follow the plastic ambitions of their teacher. Their dependency on the style developed by their teacher was evident.

On the contrary Kotěra's master school of architecture at the Academy of Fine Arts was oriented towards modernity. They had at their disposal the portfolio of works by Frank Lloyd Wright published by the Wasmuth publishing House in Berlin, *Das englische Landhaus* of Hermann Muthesius or the publications of structures by Raymond Unwin or Hendrik P. Berlage. Kotěra let his students create independently and this intention was enhanced by his corrections. During the World War the instruction at all schools was severely limited as the students were drafted to the army. Many of them did not come back.

The liberation and establishment of the Czechoslovakian Republic, which was welcomed enthusiastically by all, was not the best time for Jože Plečnik neither Jan Kotěra. Although being only in their 50s, they were suddenly considered an old generation connected with Austrian-Hungarian administration; they were insulted in the press and had to face dirty intrigues concerning the commissioning of the works. This led to a certain disillusion for both, Plečnik and Kotěra became bitter. "The interior development is not very promising. Nasty figures are multiplying." Plečnik wrote to Kotěra on the first of January 1920 and continued: "Reluctance to public life is growing. It will be necessary to face this reluctance and to show that not an escape from the public life, but an active and determined participation will lead to the improvement of the situation. Only bad principles may fail. Must we drink the bitter cup to the last, we shall not get scared not even by the last piece..."

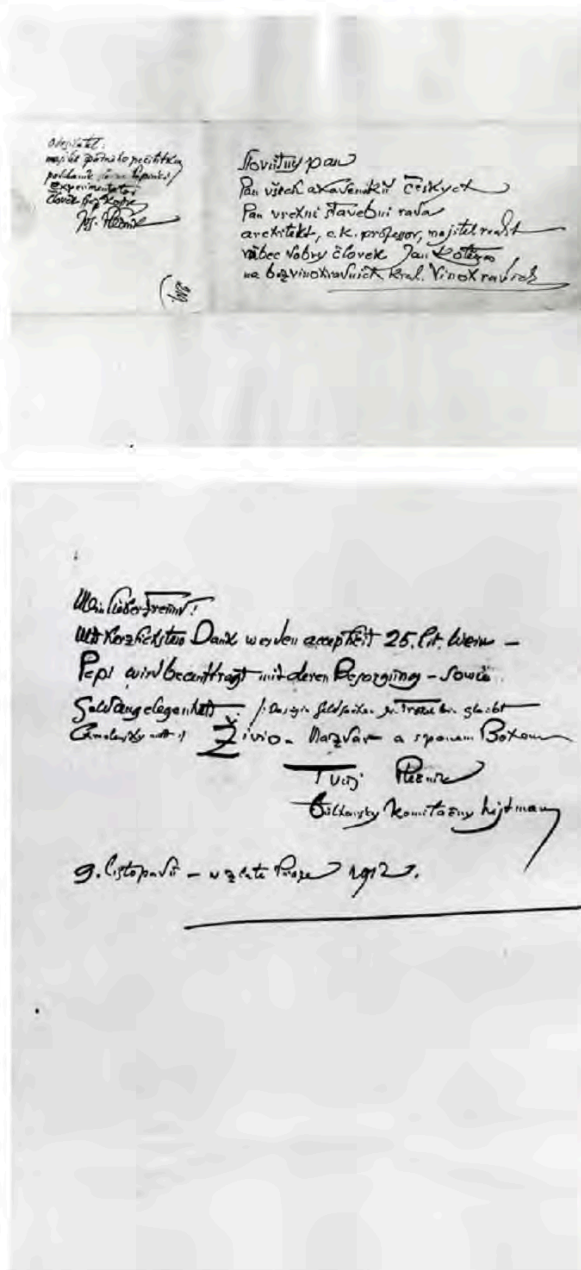
Such atmosphere led Plečnik to consider his return to Ljubljana which was enhanced by the invitation from Ivan Vurnik to help him establish a school of architecture at the University of Ljubljana. It was considered a certain satisfaction when his students and other Czech architects made a grand gesture after the competition for the Church of the Most Sacred Heart of Our Lord won by the design of Jindřich Merganc. Czech architects signed a declaration in which they unanimously claimed so that the project of the church was assigned to Jože Plečnik. After certain hesitation Plečnik accepted and created a monumental work. Nevertheless, in the autumn 1921, after a decade of pedagogical activity, he left for Ljubljana.

Although working on the implementation of the designs for the schools of law and theology for the Charles University at that time, Kotěra managed to prepare the first design of the flat for the president Masaryk at the Prague Castle. Simultaneously he had had health issues for many years which led to his premature death on 18th of April 1923. Nevertheless, he managed to recommend his friend Plečnik to complete the adaptation of the president's residence. Plečnik was also appointed – after an unsuccessful competition among Czech architects – to redesign the gardens. With the support of the president and his daughter Alice Masaryk, Plečnik became the architect of the castle. It meant for him a challenge to take up this long-time and extremely demanding but interesting creative work in Prague when he was about to leave. He managed to unify this unique historic complex via a generous concept of public spaces – courtyards and gardens, to connect it with the context of the topographic terrain and the town via a number of new views and vistas, and thus to complete here this remarkable gradation of scales, from an intimate to a monumental character.

While Karel Teige, a theoretician and leader of the Czech avant-garde, claimed that in architecture we must create not monuments but instruments, at the Prague Castle under the Plečnik's baton, an evident and deliberate contrast was growing – monuments, instead of instruments. Monuments which were justifiable in their symbolic meaning which they delivered – as symbols of democratic state built under the lead of the president Tomáš Garrigue Masaryk on the foundations of the antique traditions.

For long time this Plečnik's method was respected and found positive reaction even in the artistic circles of the Czech avant-garde. It was only in 1929 when a disgraceful proclamation by 232 Czech women contested the fact that the

Vladimír Šlapeta Plečnik and Prague



Jože Plečnik - letter to Jan Kotěra, 9. 11. 1912-, Šlapeta-Archive Prague-Brno

Prague Castle was renovated by a foreigner. It was related to the disagreement with the building authority about Plečnik's changes in the profile grade in the third courtyard and subsequently Plečnik was opposed when designing the tram loop in Chotek's road. These events led to Plečnik's decision that after the year 1933 he never returned to Prague. In 1936 Pavel Janák became the architect of the Prague Castle who – as the author of renovation and extension of Černín Palace, the seat of the Ministry of Foreign Affairs – had a full confidence of the second president Edvard Beneš.

At the beginning of 1930s Plečnik was also working on the completion of his second monumental assignment in Prague – the Church of the Most Sacred Heart of Our Lord in Vinohrady. This proposal had undergone a rather complicated development – from a basilica space in the study from 1922, through the design with the system of arched windows, to the proposal with a ceramic frontage, completed with a colonnade along the whole body of the church and a detached "Venetian" campanile on the south side, up to the final monumental variant with the bell tower in the form of a stela with a great rosette, in the interior intersected by a ramp. Thanks to the perspective, this generous, wide interior of the church with a coffered ceiling covering the steel structure of the roof truss gives an impression that it is a central space, although in fact it is a longitudinal space.

This monumental figure of the Vinohrady church and the grandioso intervention at the Prague Castle were created in a deliberate contrast to the Czech functionalistic architecture developing in the Prague city below the castle and in many other Czech towns. After Plečnik's departure from the School of Applied Arts for the Ljubljana University, the Czech architectural community respected his works, but was absorbed by other inspirational sources. From Plečnik's topics it was only the idea of the church space with five altars on the frontage which was expressed in the competition for Vinohrady church in Plečnik's presence, and later again in the competition for the church of St. Wenceslas in Prague – Vršovice in the years 1927-1928. In the final and completed design, this idea was masterly interpreted by professor Josef Gočár.

Meanwhile the Czech architectural community was briefly attracted to the Dutch modernism and later Bauhaus and Le Corbusier whose influence dominated until the end 1930s. Plečnik's Czech students from the School of Applied Arts coped with such a situation in different ways. There were about 50 of them. Mostly they admired Jože Plečnik as an exceptional authority. Later, when they had coped with his leg-

acy and they searched their own expression. Plečnik's closest student was Otto Rothmayer /1892-1966/ who participated in the designs at the Prague Castle and later proposed an impressing hall (nowadays called Rothmayer Hall) with a black column, and so called Wedge hall, and a spiral staircase leading from the Vladislav hall. Another successful architect (Plečnik's student) was Alois Mezera /1889-1945/ who won the competition and in 1925 built a crematorium in Prague–Strašnice, the embassy in Belgrade, Berlin and Ankara, several administrative buildings, schools and residential buildings. He was also successful in the international competition for a new parliament building in Ankara where he was awarded second place.

While Karel Štipl /1889-1972/ worked on designs of decorative architecture and built two villas with fair-faced brickwork in Prague-Hanspaulka. Alois Metelák /1897-1980/ engaged in glass design and worked as the director of the School of Applied Arts in Železný Brod. Jindřich Merganc /1889-1974/ spent most of life in Bratislava and his outstanding work comprises Dr Koch sanatorium designed in the cooperation with Dušan Jurkovič, and a villa for the writer Zuzka Zguriška. Václav Ložek /1892-1951/ in cooperation with his partner František Novák built a colony of wooden residential buildings Prague-Dejvice which is the only work that Jože Plečnik included into the canon of his students' works. This colony was the home of professor Pavel Janák until the time he built his own house in Prague-Baba. Hubert Aust /1891-1955/ worked in Olomouc where he built a monumental Husův sbor československé církve (Czechoslovak Hussite Church) and antiquity resembling memorial to Yugoslavian soldiers, and later in the style of rondo-cubism a house in Bystrice pod Hostýnem, and in 1930s several residential buildings in the functionalistic style in Olomouc.

A prominent position among Jože Plečnik's students was held by Karel Řepa /1895-1963/ who as the only one followed Plečnik to Ljubljana in order to finish his studies and his master's study project there. During 1920s his designs were strongly influenced by his teacher, but at the turn of 1920s he reached his idiosyncratic "soft" interpretation of functionalism. His outstanding works are the building for the Exhibition of Sport and Physical Education held in Pardubice /1930/ and after the WWII a generous, elegant building of the new train station /1947-1958/. At the end of his life Řepa and his son Miroslav won the competition for the theatre in Zlín which was completed after his death. One of Plečnik's students was also the main architect of Baťa's Zlín - František Lydie Gahura /1891-

1958/ who later graduated from the master school of architecture led by Jan Kotěra at the Academy of Fine Arts. His work, which culminated in Baťa's monument /1932-33/ and a master plan for Zlín, is predominantly connected to Baťa's shoe manufacturing concern.

Another prominent student of Plečnik was Josef Fuchs /1894-1979/ who in cooperation with Oldřich Tyl designed the Veletržní palác (Trade Fair Palace) in Prague /1924-28/, one of the iconic constructivism buildings in Prague. Later in 1930s he designed a villa for F. Munk, the director of Prague Sample Trade Fair in Prague-Baba, the entrance building of ZOO, hockey stadium in Prague-Štvanice, his own villa and several residential buildings. Also Ludvík Hilgert /1895-1967/ belonged to the successful architects of the interwar era. He started his career with a grammar school in Konice /1924/ which exposes the influence of Plečnik as well as the Dutch modernism. Later in a series of residential buildings in his hometown Kyjov, in Prague-Vokovice and Prague-Košíře he developed his personal view of functionalism which culminated in the designs of a villa in Dalečín, in a department and residential building Rodinger and the town savings bank /together with Antonín Tenzer/ in Vsetín. At the beginning of the war he managed to build a wooden weekend home in Karolinina Huť (Charlottenhütte, today town Karolinka) in Valašsko (Moravian Wallachia), and after the war an elegant kindergarten in Vsetín, and a group of residential buildings in the programme of two-year economic plan of redevelopment in Český Těšín. At the end of his life he designed "buildings of last goodbye/ farewell" for the Czech Cremation Association.

As his most talented student, Jože Plečnik considered Josef Štěpánek /1889-1964/. Štěpánek came to Plečnik's studio at the School of Applied Arts when he had graduated from the Stonemason School in Hořice. As a brilliant sketcher he excelled already during studies with his designs of baptistery and Žižkov memorial. Later he also attended the studio of Jan Kotěra at the Academy of Fine Arts. After two years of cooperation in Kotěra's studio, he designed furniture for the Chamber of Deputies, Parliament of the Czech Republic, and later he founded an office together with his younger schoolmate Bohuslav Fuchs. Together they achieved first success in the urban planning competition concerning the access to Letná, in the competition on local zoning plan in Prostějov and, in an expressive dynamic form, they built a complex of hydroelectric power plant and a villa for its owners in Háj u Mohelnice /1921-22/. Also his individual competition pro-



Josef Štěpánek - dam, Předměřice 1942-52,
photo Vladimír Šlapeta

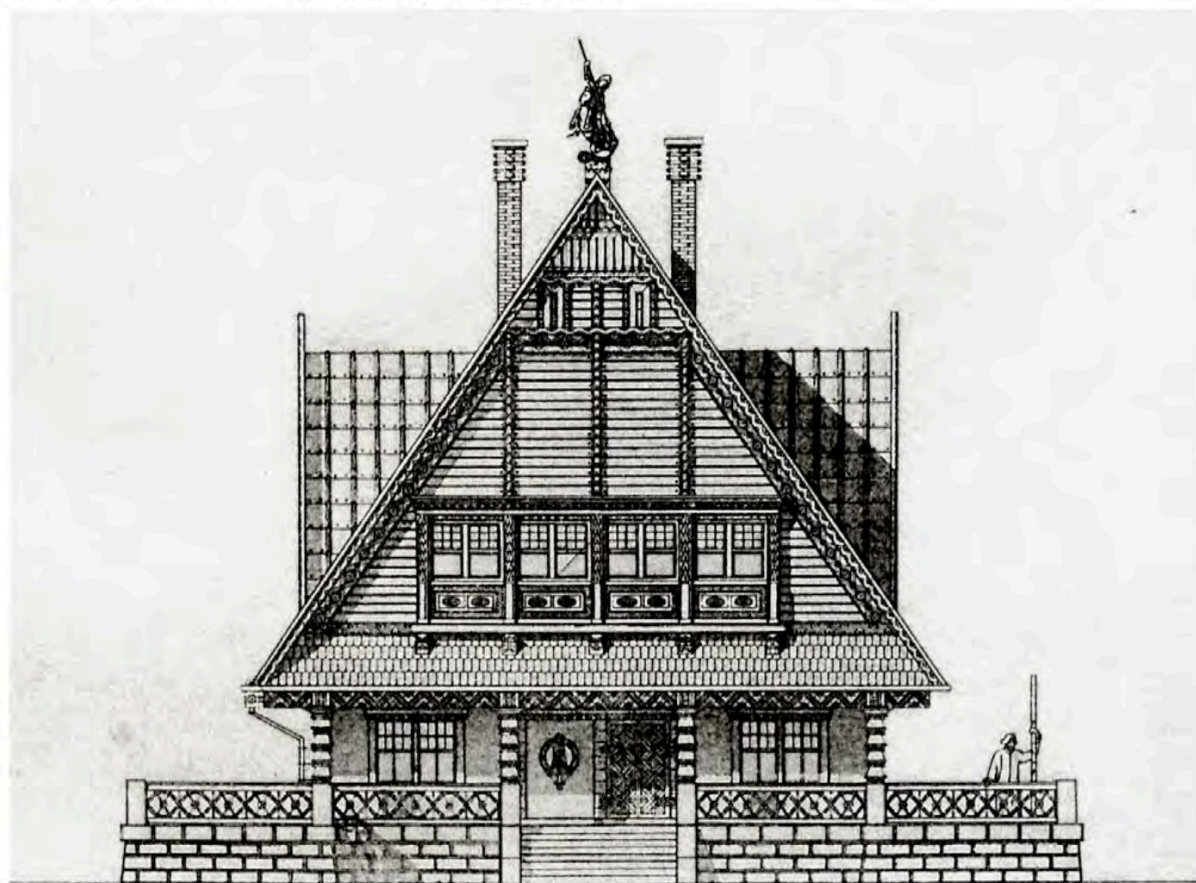
posals from 1921 were remarkable - in the same spirit he designed the headquarters of Československá obec sokolská (Czechoslovak Sokol Community) in Prague-Malá Strana and Dům umění in Brno (Brno House of Art). After Bohuslav Fuchs left for Brno in the spring 1923, Josef Štěpánek designed a villa for the sculptor Julius Pelikán and together with sculptor Rudolf Březa an elegant memorial to Bedřich Smetana in Olomouc. In the same year 1924 he was the chief editor of Stavitel (Builder), a leading Prague architectural magazine. He achieved his major success in the years 1928-1929 when in a short period he was awarded the highest prizes in the competition for the parliament in Prague-Letná and a huge sporting grounds in Prague-Braník. From his works completed in 1930s it is necessary to remind his design of the catholic church in Brno-Židenice which has a free organic form and

icipating the post-war churches by Alvaro Aalto in Imatra and Wolfsburg. At the end of 1930s he built a romantic wooden weekend house in Vodňany; and in the cooperation with prominent Czech sculptors he worked on several memorials. During the war he developed two more remarkable proposals for a church in Baťa's Zlín; the first comprising a courageous roofing in the form of hyperboloid paraboloid; the second – probably under the influence of the German administration – reminding the church buildings by Dominik Boehm. The last significant structure by Josef Štěpánek was the weir with a hydroelectric power plant in Předměřice on the Labe (Elbe) river /1940-1951/. The structure, designed in the spirit of "soft" functionalism, and completed only at the turn of 1940s, is

the largest completed structure by Josef Štěpánek, and this assignment, very similar to what Jože Plečnik designed for the river Ljubljanica, documents the generational shift which occurred between the teacher and one of his prominent students.

While in 1920s Plečnik's work was published very frequently, after 1930 it appears only sporadically and outside the main architectural magazines /*Stavba, Styl, Stavitel, Architekt SIA*/. It is only in 1942 when the magazine *Architektura* draws attention to Plečnik's work on the occasion of his 70th birthday in the text by Oldřich Starý and Josef Štěpánek. The restricted publicity of Plečnik's work might be explained, for example, by the fact that he was excessively connected with

Jindřich Merganc - Family House /Plečnik-school/, appr. 1919, Šlapeta archive



the legacy of the president T.G. Masaryk whose personality was unacceptable for the communists, and also because none of Plečnik's students became a member of the Communist Party of Czechoslovakia; thus all of them remained without influence, outside the main stream of the official architecture in the communist Czechoslovakia. Even this moral stance of Plečnik's students is possible to ascribe to a strong emphasis on ethical education which the teacher passed down to his students.

After Plečnik's death in January 1957 Josef Štěpánek, his most faithful student, published the obituary in the magazine *Architektura ČSR*. A renewed interest in his legacy was raised during the time of so called "Prague Spring" when Boris Podrecca organised a small exhibition in the Austrian Society for Architecture which was later moved to the Fragner Gallery in Prague. During this exhibition there was the invasion of Soviet troops into Czechoslovakia on 21st of August 1968. In 1973 the art historian Zdenka Průchová drew attention to Plečnik's legacy in the magazines *Československý architekt* (Czechoslovak Architect) and *Umění* (Art). His great international satisfaction awaited Jože Plečnik only in 1980s when Francois Burkhardt, at that time the director of IDZ Berlin-West, initiated the organisation of exhibition of Plečnik's works. When he was later appointed the director of Centre Pompidou in Paris, he transferred this project into this world leading institution, and in 1985 he organized an exhibition which later travelled to the United States, Germany, Italy and Spain, and introduced Plečnik's work to the international discourse. I consider it a great honour that I could – under extremely difficult conditions of the communist regime – co-operate on this project on the Czech side, together with Francois Burkhardt, Damjan Prelovšek, Friedrich Achleitner, Friedrich Kurrent and other colleagues.

Prague finally commemorated Jože Plečnik at the time when the Czech president was a great humanist and European, the writer Václav Havel. Thanks to the 1995 exhibition, Plečnik returned to the places which he created, to the Prague Castle, and simultaneously, and justly, to the Czech architectural history.

BIOGRAPHY

Vladimír Šlapeta was born in Olomouc /Moravia/, graduated in architecture at the Czech Technical University ČVUT in Prague. After short architectural practice in Ostrava, he served as a Head of Architecture Dpt. of the National Museum of Technology in Prague /1973-91/. After the Velvet revolution he became professor at the ČVUT, where he was 9 years Dean of School of Architecture, later also at the University of Technology in Brno /Dean 2006-10/. He prepared and curated around 40 exhibitions and published books on Czech and Central European Architecture / Czech Functionalism - AA London 1987, The Brno Functionalists, Bata - architecture and urbanism 1910-1950, The Werkbund Estate Baba 1932, Adolf Loos and Czech Architecture, Neues Bauen in Breslau, FLW and Czech Architecture, Jan Kotěra, Adolf Benš etc./ He is a member of the Akademie der Kuenste in Berlin and he lectured in Europe, North and Latin America, Japan and Australia.

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ARCHITECTURE AND SOCIETY.

WHITE ARCHITECTS AND SWEDISH POST-WAR ARCHITECTURE

Claes Caldenby (Sweden)

The Stockholm exhibition in 1930 was a breakthrough for the Modern Movement in Sweden. Even if not uncontested it was a great success both domestically and internationally. Four million Swedes and 40000 foreigners visited Gunnar Asplund's architectural summer festival. For modernists Scandinavia and above all Sweden became the promised land in the elsewhere "monumental era" of the 1930s. The exhibition almost coincided with the Social-Democratic access to power in 1932, which made Sweden into a Middle-Way model for many in a politically dark period, even if the Social-Democratic support for modernist architecture to begin with was by no means unanimous.

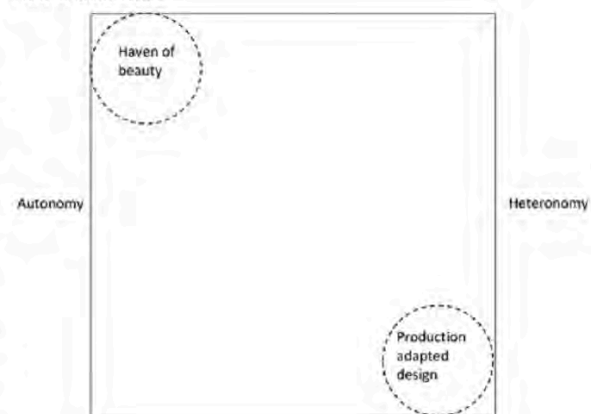
With the help of politically active modernist architects the policies for building a modern society were formulated in earnest in the first post-war years. A new housing policy was installed in 1946–48, with advantageous state loans to municipal housing companies and with a focus on multi-family dwellings. The international economic boom rapidly raised the demand for Swedish export of wood, paper, iron and machinery and there was a lack of workforce. Swedish housing standards were low in an international comparison. This social problem was made worse by a migration of workers from farming to industrial towns. The building trade, traditionally organized in small companies, had to meet the challenge to build more without using more workforce. This was solved with an agreement between a few larger builders and the state, which gave loans for a rapid mechanization of the building industry. The builders promised to solve the housing problem if they were given control over the building process. During the 1950s the Swedish building industry became unusually large-scale for a small country. Large clients, in the form of municipal housing companies, were supplied by large builders and large architects' offices. At the same time the architect's position as the client's main adviser was marginalized by the builders who took control over the building process, claiming to have the technical and economic know-how needed for that.

THE FIELD OF ARCHITECTURE

The Swedish post-war architecture can be described using Pierre Bourdieu's theoretical model for fields of culture.¹ In such a field there are two poles, the autonomous where criteria for good architecture are set within the field, by architects, and the heteronomous, where criteria are set by external agents, like builders or politicians. Generally the autonomous field is valued higher than the heteronomous, within the field.

Such a polarization between what could be called architecture as art and architecture as building could, following Bourdieu, be found in any country's architecture. But it can be argued that the polarization was unusually strong in Sweden from the late 1950s, because of the shear force and success of the "production adapted design" pole, especially in housing, which was financed by state loans and carried out in large scale by a private building industry with far-reaching, state sanctioned control over the building process. The success, not to be forgotten, lay in the fact that in the early 1970s Sweden had one of the highest housing standards in Europe, starting 25 years earlier with one of the lowest.

Field of architecture



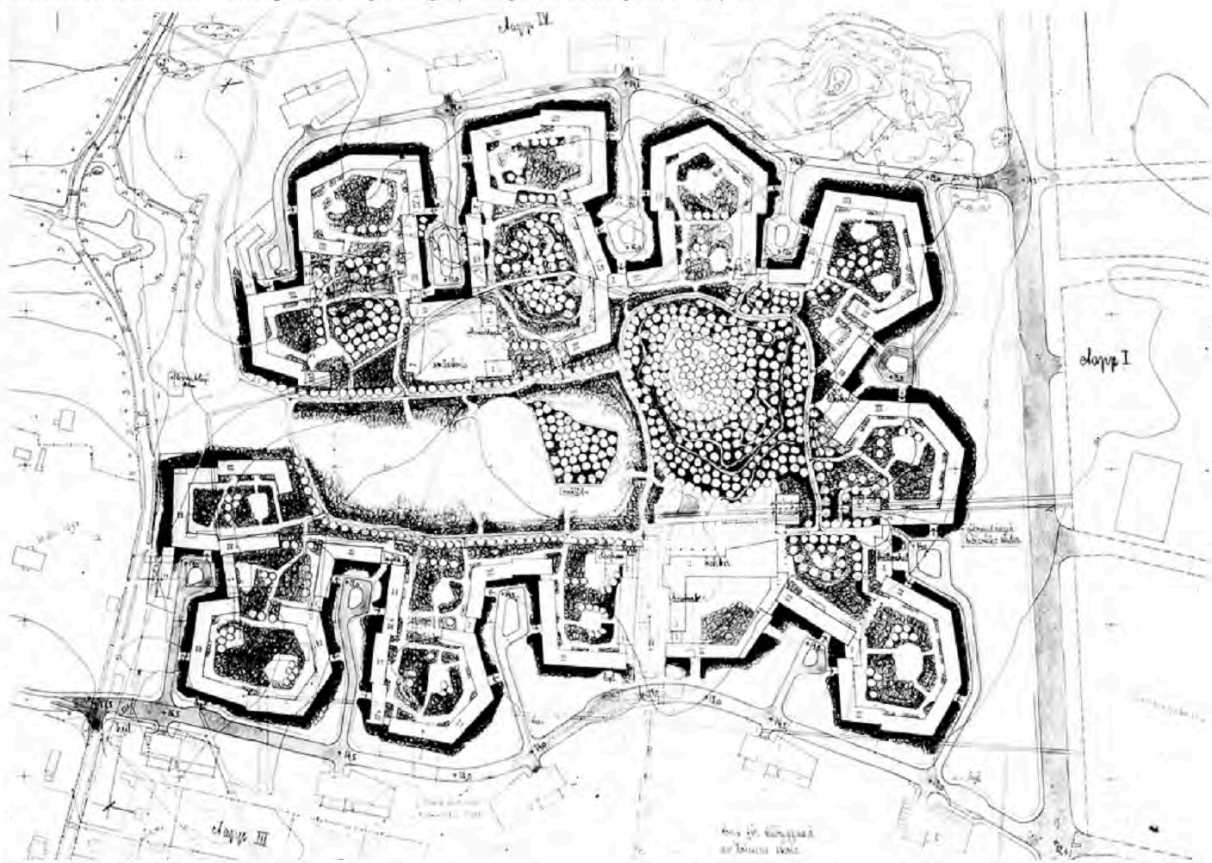
The other pole, the autonomous one, was also quite strong in Sweden. Somewhat paradoxically the clearest case for this is the very active church building in Swedish suburbs, in a country which already was one of the most secularized and with a government that was reluctant to give building permissions to non-prioritized buildings like churches. Architects like Sigurd Lewerentz and Peter Celsing designed archaic brick churches in stark contrast to the surrounding welfare society. The idea of churches as a “haven of beauty”, open for existential questions in an otherwise rational modern world, was formulated in 1960 in a debate about Celsing’s St Tomas church in Vällingby. In the internationally renowned suburban satellite centre outside Stockholm this church turned inwards into a monastery-like courtyard.

This was the context in which White architects started in 1951: A prosperous market for large scale housing projects, with social ambitions but also with a strong pressure to rationalize.

THE LEGACY OF SIDNEY WHITE

In a newspaper interview in 1954 Sidney White and his colleague Per-Axel Ekholm described a situation where “politicians and clients impatiently are knocking on the doors of architects’ offices, wanting promptly to have finished drawings for town plans and thousands of apartments”.² Ekholm and White architects had started in 1951 in Gothenburg. They were soon to part ways, when Ekholm was not ready to follow Sid White’s outspoken ambition to work on a large scale.

Baronbackarna in Örebro. Housing for municipal company. Site plan from competition entry 1951.



Claes Caldenby Architecture and Society

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Bergsjön in Gothenburg. Competition entry 1967.
Large scale, straight lines.

A few words first about Sid White's background: His father Jack was a British merchant trading in timber from Sweden and Russia to be used as pit-props in English mines and with his base in Gothenburg. Jack married a Swedish woman and Swedish was the language spoken at home, so Sid never really mastered English. He studied architecture in Stockholm and came back to Gothenburg to work in the town-planning office. After winning the competition for Baronbackarna, a large housing project in the city of Örebro in 1951, he and his student mate Ekholm started their own office. When Ekholm left in 1958 the office already had some 50 employees. "Before maybe the architect's relation to his employees was that of the master and the pupils. Now the collaboration is more on an equal basis. This is especially important in relation to the engineers and the economic consultants ... Here there must be true coordination, constant contact and exchange. Team work – that is a key concept for modern architecture". This is again Sid White interviewed in a daily newspaper in 1953. A large office, to match the large clients, and team work with technical and economic consultants, but also with other specialists, was part of Sid White's idea of a mod-

ern architecture. To this can be added a strong belief in evidence based knowledge and a model of partnership, introduced in the late 1960s. This legacy from Sid White has proven to be sustainable. Today White architects is Sweden's largest office with more than 900 employees. It has its own research department and a research foundation and it is owned by its working staff, with two levels of shareholding. In Bourdieu's field model White architects in the beginning clearly belonged to the production adapted pole, so much so that it among colleagues had a reputation for being too much into mass production. This has been a challenge for the office

Bergsjön. As built in early 1980s.
Small scale, variation.



15IDC Metamorphosis Keynote

which slowly has been overcome. Until now (2018) White has only designed one church (and one mosque!), thus maintaining a distance from the “haven of beauty” pole.

FROM PEOPLE'S HOME TO RECORD YEARS 1951–1970

During the first 20 years, from 1951 to the early 1970s, White architects worked mainly for public clients with housing, schools and health care. Baronbackarna in Örebro was the first large project and has become a classic of the Swedish 1950s “people's home” (“folkhemmet”). The city of Örebro, in central Sweden, with its Social-Democratic government, became a model city for its housing projects, starting with Rosta in 1947–52. The competition program for Baronbackarna in 1950 asked for a “social mix of inhabitants” and an “intense use of the ground without in any way neglecting the demand for an in every way adequate and pleasant town plan”. Over 1000 apartments should have a small centre with shops as well as school, day nursery, auditorium and library. Children should not have to cross car traffic to get to the school. The winning entry by Ekholm and White had the motto “You can play in our courtyard” and showed a winning focus on the needs of families with children. The meander pattern of the housing had courtyards with playgrounds facing the large interior park alternating with car parking courtyards towards the ring-road around the whole area.

An experiment which in the end was tested in ¼ of the apartments was the “multipurpose room” (“allrum”). The premise was that a workers' family could afford renting some 50 sqm, which normally is a 2 room apartment. A decent family apartment should have 3 rooms (parents sleeping in the living room and sons and daughters having each a room of their own). By shrinking the kitchen and presuming that families should eat, do homework and sewing in the multipurpose room an extra bedroom could be achieved. Post-occupancy evaluations showed that people preferred to eat in shifts in the small kitchen to be able to keep the living room as a parlour only for guests. The corners of the houses are not rectangular, to avoid standing sound waves from playing children in the courtyards. It also made a very precise adaptation to the site with its trees and boulders possible. Already in the late 1950s such sensibility was seen to stand in the way for an industrialization of building. In Pennygängen in Gothenburg from 1959 the municipal housing company demanded that all the 760 apartments were similar, now already 4 room apartments. With a “turbine solution” mirrored sets of kitchen cupboards could

be avoided. Much to the irritation of the client the town-planning office required closed corners of the blocks, and thus special corner solutions, because of the windy site.

The 1960s were called the “record years” in Sweden. Economy was booming, people were moving into cities and the public sector was expanding like never before. The Million Program was a state program to build one million flats in ten years, 1965–74. The state guaranteed loans which should make it possible for builders to invest in prefabrication systems. Step by step, within a few years, mechanization took command and designs had to adapt.

Three housing areas in Gothenburg by White architects for the same municipal housing company show the change. In Tynnered a project from 1964 with just over 1000 apartments was asked to avoid levelling of the steep ground because of high costs. A solution with U-shaped houses built from crane tracks left the terrain relatively untouched. Sloping courtyards gave additional ground floor space for temporary facilities. Facades are in brick. In a block of eight storey houses in Hammarkullen from 1968 most of the ideas of the architects to temper the new concrete panel system were rejected with economic arguments. Much later the responsible architect talked with regret about “a time of great hurry”. In Eastern Gårdsten a project with 1300 apartments was planned, also in 1968. Now it was considered economical to blow the rugged terrain flat to build on. Floor area ratio was higher than before. Two 1 km long rows of houses, in 3 and 8 storeys, were built to form a street of the same measures as the main avenue in the centre of Gothenburg. Both Hammarkullen and Gårdsten are among the districts stigmatized as typical Million Program areas and have later been substantially remodelled.

FROM CRISIS TO C-SOCIETY 1971–1990

Structural changes in the international economy made the expansion of the public sector in the Social-Democratic “strong society” difficult to pursue. The oil crisis 1973 made things worse. The Million Program was cut short, housing projects were stopped and White architects had to fire half the staff and try to reorient the office in a new context. Building costs were rocketing when large prefabricated housing areas were replaced by small infill projects with higher demands on detailing. In the late 1980s there was an inflation economy which caused a short boom for the real estate business, building luxury offices and commercial facilities, a new and somewhat inconvenient market for White architects. Some-



Asken office in Gothenburg 1986.
Luxury office for real estate financing company.

thing called the C-society, based on communication, creativity and culture, was seen to replace the strong society.³ In the field of architecture autonomous values, like architectural history, were upgraded. Post-modernism was part of this development, a tendency rather reluctantly embraced by fundamentally modernist White architects.

In 1975 the National Board of Building Research published a book called *Svensk bostadsmiljö, upplevd och kommenterad* (Swedish housing environment experienced and commented). Its aim was to cure some of the "serious shortcomings" in the Million Program by translating environmental research into practical advice. The translation was made by Armand Björkman and Olle Stahle from White architects through simple sketches on black and white photos. Recommendations focused on concepts like variation, corners, roofs, detailed facades, identity and friendly houses. The "long rulers" of the 1960s were replaced by a free geometry, small scale and historical associations. A striking example is the building of a steep site in Bergsjön in eastern Gothenburg. In a competition in 1967 White architects got a second prize for a 350 meter long eight storey house with a funicular overcoming the steep verge. Nothing was built then. 15 years later White architects built a small project on the same site with villas carefully placed to preserve the landscape.

Offices for private clients were a new market for White architects. Asken in central Gothenburg from 1986 is in all ways a characteristic project for the short boom of the late 1980s. An infill project in central Gothenburg was built with the outspoken commission to "last for 200 years" from the client, a former textile company now financing commercial facilities. It was built in sandstone, teal and copper with specially designed furniture and a winter garden and a sauna with a view on the roof. Quality was high and money was not an issue. Five years later the company went bankrupt.

Export of architecture became another option when the domestic market failed. To start with type projects for hospitals in Africa were designed and built with money from SIDA, the Swedish International Development Cooperation Agency. In the 1980s White architects followed large Swedish builders to oil countries, such as Saudi Arabia, Libya, Iraq and Nigeria. After the fall of the wall former eastern Germany became a potential market. Problems with clients were many and the number of employees working with international projects was never very big, but many lessons were learnt.

RETREAT AND NEW VALUES 1991–2008

The 1990s started with another crisis, when the real estate bubble burst. The following economic crisis struck Sweden quite hard, with reductions in welfare systems managed by alternating right-wing and Social-Democratic governments. "Retreat and new values" is the title of a research report from 1997 which critically discussed the swap of housing policy in Sweden in the mid-1990s, a retreat from a social and state-led policy to a market-oriented one in the wake of the neoliberal 1980s. The new values were state policies on ecology, aesthetics and gender equality, more ideological statements than substantial support. Waterfront projects on former industrial ground was an international phenomenon in the 1990s. Most of them were quite luxurious projects, sold as condominiums to those who could pay. At the same time the total number of apartments built remained low. White architects designed some housing areas in the "design segment" of the market in the neo-modernism that now had replaced 1980s postmodernism. An architecture of "rational comfort" in other, less exclusive projects suited the ideals of the office well. But there was a lack of economic interest from the dominating big developers in building rented apartments. As a solution to this White, and other architects, started in small scale to act not only as designers but also as clients for new housing. This gave back the control of the building process lost in the 1960s.

Schools were one of the public institutions that White architects had designed from the very beginning in the 1950s. In the 1990s this was combined with a growing interest for ecology, both as “healthy buildings” and as recycling and resource saving. A special group for research and development and consulting in environmental questions was started. White’s office in Malmö in southern Sweden designed several schools in Malmö and Lund which tried natural, non-mechanical ventilation, reduction of chemicals, meaning untreated interior surfaces, and reuse of components like brick and windows.

“Naturum”, entrance buildings for national parks with exhibition, café and other facilities to make a visit to the nature more attractive, became a sort of speciality for White from the late 1980s. The client was the Swedish Environmental Protection Agency, usually organizing a competition. White architects designed some ten Naturum in late 1990s and early 2000s, almost half of all built. The buildings are trying to

be contemporary, but at the same time clearly site specific, often using wood as a material.

In 1991 White architects merged with Coordinator architects, known for its structuralist projects for the National Board of Building. The reason for the merging was White architects’ need for higher capacity in Stockholm and Coordinator’s generation shift when the original owners retired. Soon after the merging the crisis struck but in the long run there was a need for new larger facilities in Stockholm. A site on the southern outskirts of central Stockholm was found. White architects decided in this case to be both client and designer of their own office. The building from 2003 is a rectangular glass-box with a sophisticated climate control system using the nearby canal for cooling and existing bridges to the west as sun blinds. A structuralist design method proved its value in thinking sustainability. The building was awarded with the Kasper Salin prize, the most prestigious architecture

Östratorn elementary school in Lund 1997. Natural ventilation, no chemicals, recycled bricks and windows.



Claes Caldenby Architecture and Society

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prize in Sweden. A critic described White architects as belonging to a most timely “no-nonsense” tradition of deeply humane order. This credit from the architectural profession for the first time was obviously very important for White architects. The quality of their work also counted.

SMALL MEANS, GREAT ENDS: 2009–2018

The hurricane Sandy destroyed Rockaway outside New York in 2012. An international competition for its reconstruction in 2013 was won by White architects with a proposal that combined ecological and social sustainability. The motto was *Small means, great ends*, indicating incremental measures with respect for nature and local people to create a great sustainable future. When developers entered the project they showed no interest in the social sustainability, no support was to be had from planning authorities and White architects decided to back out from the prestigious project.

The crisis in 2008 left Sweden relatively unharmed. The economy is hot and there is a lot of building going on, both of housing and of commercial and public buildings. Architects are very busy. At the same time inequality is increasing dramatically, not least in Sweden, and sustainability policies leave a lot to be desired. There is a general distrust in planning. Essential parts of the modernist project are thus questioned.

At the same time White architects are involved in one of the biggest planning projects ever, that to move the whole city of Kiruna in the very north of Sweden. The reason is that the rich and expanding iron mine, owned by state company LKAB, is literally undermining the existing city, established in the early 1900s. White architects won an international competition in 2013 for the plan with a proposal for a “dense city with meeting places close to nature”. The city centre and 3000 homes are moved. A planning process based on a dialogue with inhabitants is essential, since people are moved

Katsan office for White architects in Stockholm 2003. Structuralism as sustainable architecture.



from their homes. Social anthropologists from White architects are very active in this process.

Public hospitals and health care have been leading large-scale commissions for White architects ever since the 1960s. This is a highly specialized branch of the profession with high demands on technical knowledge. In the late 2010s there is a hospital building boom in Sweden, caused by a large generation of new health care facilities from the 1970s in need of renewal. In 2017 one third of the 900 employees of White architects were working with health care buildings, which is also one third of the ongoing projects in Sweden. The real prestige project is New Karolinska Hospital (NKS) in Solna just north of Stockholm, finished in 2016–2018 and with its 330000 sqm probably the largest project ever for White architects. An invited design competition was won in 2006 with a proposal that is an intellectual achievement in its structuralist generality and efficient logistics. The tender process was based on principles of

Public Private Partnership, with the only tender coming from the largest Swedish builder Skanska, something which has caused serious economic problems.

“Meeting places” is a buzzword in 2010s architecture. Universities, schools and offices all look more and more the same, compact, energy efficient buildings with an interior atrium where you are supposed to socialize, while the workplaces on the periphery of the building are more compact. White architects designed or redesigned two of the four schools of architecture in Sweden, one in Umeå a new building from 2010, the other in Gothenburg a comprehensive renewal of a 1968 building, both compact boxes. In Norway White architects have designed several schools, after winning invited competitions. In 2018 White architects have offices abroad in Oslo and London, thereby focusing on regions similar enough for the cultural differences to be valuable rather than problematic. Complex public buildings like hospitals and schools are

New Karolinska Hospital in Solna 2018. White architects’ largest project ever with a high degree of flexibility.



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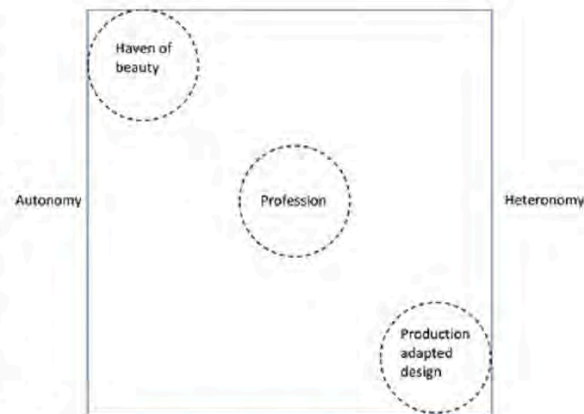
tasks where Swedish architects are highly competitive. The Swedish habit of trying to understand the local conditions has met with some query and a lot of positive reactions, like when the architects wanted to practice in a hospital in Bogotá which they were asked to redesign.

CONTINUITY OF CHANGE 1970/1990/2008

With thousands of projects over 67 years White architects have helped building post-war Sweden with all sorts of buildings (except churches!). As this short narrative has shown the shifting commissions are shaped by the continuous change of society and its needs and ideals. The organization and ideals of the architects' office also changed to adapt to new types of commissions and to crises like the ones in the early 1970s and 1990s. At the same time there are some core values of White architects which seem to have survived the changes relatively untouched. The large office, able to handle large tasks, the team work between different specialists, the belief in research and new knowledge and the ownership by the architects themselves who give priority not only to economy but also to quality.

In the terms of the field of architecture, following Bourdieu, there can be introduced a third sub-field between the "production-adapted design" and the "haven of beauty". We could call this a "professional" sub-field which tries to provide the buildings demanded by society, while also defending a professional standard of architecture. White architects can be seen to have oscillated between such a professional standpoint and approaches to the production-adapted pole, whether state-led or market-based. Sid White, who was known for his somewhat rough language, formulated such an oscillation quite early on. He was famous for a kind of "management by walking around", commenting projects in progress. Sometimes he would say "You have to damn prune this", thereby asking for a clear-cut architecture but also for rational and economic solutions in the interest of the client. Next time he might well say instead "It can't be so damn boring", thereby asking for a more humane architecture.

There is a narrative favoured by the management of White architects in the 2010s, saying that with the recent focus on sustainability (social as well as ecological) and research the office has regained its roots from the 1950s, while at the same time becoming highly competitive internationally. It is a story similar to the structure of the traditional fairy-tale: A problematic situation at home forces a young person to go on an adventurous trip, learning many things and returning back home to solve the problems.



Field of architecture with professional subfield.

Facing the continuity of change of society there is a need for a resilient architecture that can adapt to societal challenges, new clients and types of commissions without compromising its fundamental values.

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3 The Swedish economist Åke E. Andersson launched the term "K-samhälle", with the same meaning, in his 1988 book *K-samhällets framtid* [The Future of C-society]. Prisma, Stockholm.

PHOTO CREDITS

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BIOGRAPHY

Claes Caldenby is an architect and architectural historian. He is professor emeritus in Theory and history of architecture at Chalmers university of technology in Gothenburg. He has also been one of the editors of *Arkitektur*, the Swedish review of architecture, since 1977. As an architectural historian he has specialized on Swedish post-war architecture. He has edited and contributed to books like Asplund (1985), Sigurd Lewerentz: Two churches (1997), 20th century architecture: Sweden (1998) and several others in Swedish. Altogether he has written some 80 books and 800 articles.

IN TIMES OF CREATIVE DESTRUCTION, THE STRUGGLE TOWARDS A NON-OPPRESSIVE ENVIRONMENT

Alexander Tzonis (Greece, France)

*Looks like this place could use
A bit of misbehavior...
We take what we want ...
We got all the ways to be
So many ways to be wicked*

Dove Cameron, Sofia Carson, Booboo Stewart
and Cameron Boyce, *Ways To Be Wicked*, 2017

'In Times of Creative Destruction, the Struggle Towards a Non-Oppressive Environment,' is a reflective excursion to the 'days and works' that followed the end of World War II till today, one of the most seminal and dramatic epochs of wicked 'metamorphosis' in architectural and environmental history.

Of all human products, architecture has been referred to as the most silent and stable. However, in contrast to this time-honored belief, in our epoch, architecture appears as undergoing continuous change, a creative and destructive metamorphosis confusing inseparably the natural and the artificial, the possibility of a universal desert or of a glowing 'third ecology'.

At first glance these are very good news.

They tell us that there was never a better time for architecture than now, that there was never such cornucopia of technological, financial, and legal means to create, so much unabashed financial and legal freedom to conquer space, to build high above the clouds, deep in the earth, and in the water, that never had architecture so many varieties of materials, to dress, contain, and protect structures, the same time arouse sensual effects, pleasing to look at and to touch, soft and sparking. Never, the desire of clients to create was so strong, never was such a desire for daring flamboyant 'star' constructions, (prize-winning master-pieces.), an abundance of 'star' free-wheeling buildings building complexes (many prize-winning master-pieces) by 'star' architects attained by 'star' developers.

Alexander Tzonis In Times of Creative Destruction

But at the same time, as if living in two separate universes, equally credible news media tell us that for all this creativity, this architectural affluence has been leading to environmental poverty, to deprivation of the senses, to unanticipated, intractable, to irreversible destruction, 'flattening' of cultural, social, and ecological diversity.

In addition, we should consider how these two sets of environmental facts, the good and the bad, relate to the inhabitants on this earth. Unfortunately, it is not very easy to do that for the moment, since we do not have an 'index' to measure environmental inequality – as we have since the time of *Gini indexes* of other inequalities – to tell us on one hand about construction and development achievements on the other about environmental misery and devastation and showing how the two are distributed among the world population. But, even without such a scientific index, based on the partial facts we have, we can suggest that there is a gap between the 'environmentally affluent' and the 'deprived of environmental amenities', and the gap increases fast: the 'environmentally wealthy' are becoming proportionately fewer and richer while, the same time, the 'environmentally poor' are getting more numerous and more underprivileged. How did this happen?

How did this unprecedented split world come about? Why? Why all those gorgeous prize-winning buildings did not prevent it to happen?

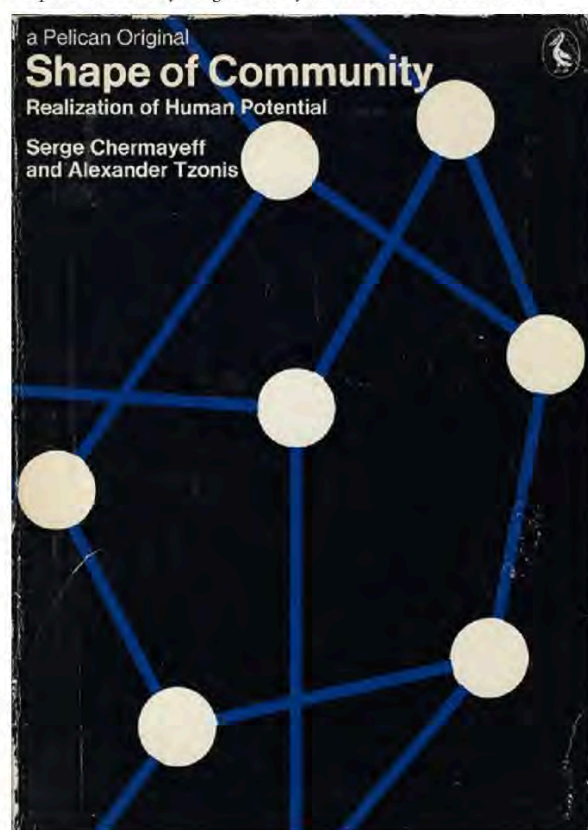
Just two generations and a half ago, humanity emerged out of one of the most catastrophic conflicts in history, the second WWII, (some have argued that the conflict started with WWI). The war annihilated millions of people but also obliterated massively structures and infrastructure.

Already in 1945, in the West, most people responded in most countries in a most bold way demonstrating that despite the killings and the ruins there was strong will, hope and promise in the future of a total reconstruction. (China of course was not part of this reconstruction continuing to be in a state of war). Assisted by the state, the decade that followed the end of WWII, became one of the most dynamic epochs of building

and production in human history, creating of 'housing for the greatest number', a slogan created for the first time for western colonial ruled countries adopted later for the whole post-WWII western world. Although US did not suffer from directed aggression in its soil, the long negligence of giving support to housing and public services made it adopt the ideas and policies of reconstruction as the devastated countries.

Unparalleled construction activity run parallel with unprecedented economic growth, both changing the 'face of the earth'. Economic growth was measured by record figures of GDP, a rather complex index, and the production of shelter and other built facilities and services were measured by more primitive means, just quantities of covered surface or running meters of service lines.

Shape of Community; Serge Chermayeff and Alexander Tzonis, 1971



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But as Simon Kuznets, the American Nobel Prize winner of 1971 who taught us how to measure GDP, warned, there is a big distinction between 'quantity and quality of growth', 'measuring the improvement of human life involved more than just the counting of the growing numbers and sizes of consumer products'. Similarly, it became soon clear that measuring the construction output was not telling us much about 'increase' in 'happiness'.

No surprise, the generation of the end of 1950s begun to complain bitterly.

And while the writers and artists of the post WWII generation (such as Vittorio De Sica *Bicycle Thief* 1948 or Jules Dassin's *Naked City* 1948) focused on the material poverty of post WWII cities, those of the 'post-reconstruction' years (like Michelangelo Antonioni and the most vitriolic ones by Saul Steinberg) attacked the 'alienating' effects of post war renewal.

What went wrong? The answer is given in a series of brilliant books that appeared around the Kennedy era that focused on the environment, urban and ecological crisis reconstruction feats overshadowed, such as Jane Jacobs *Life and Death of Great American Cities* (1961), Michael Harrington's *The Other America* (1962), and Rachel Carlson's *Silent Spring* (1963) that took a critical stance towards 'establishment' approaches to the built and natural environment. They asked for revisions and practical measures, to be taken urgently but also for new knowledge to be born to guide the new uncharted universe produced by the economic-reconstruction 'miracle' the knowledge supplied by traditional professions being limited and inadequate.

Consequently, between the end of the 1950s and during the 1960s, many multidisciplinary research centers were established at Harvard, Yale, MIT, the University of Pennsylvania, and Cambridge, UK and the Joint Center for Urban Studies and begun to produce soon high level influential research and books investigating in depth the new design problems and challenges, such as Kevin Lynch's *Image of the City* 1960 and Chermayeff and Alexander's *Community and Privacy*, 1963. Bringing together many different disciplines, these new institutions tried to conceive new design tools and methods to understand and 'plan' the new artificial environment and cope with the intricacy and complexity of the 'qualitative' aspects of the environment social, psychological, and ecological. Architectural thinking by itself imprisoned as it was in the traditional idea that cities and landscapes were just three-dimensional objects like 'buildings', could not grasp

15IDC Metamorphosis Keynote

these issues that war destruction and subsequent massive growth and reconstruction generated. They failed to look at the environment as a 'system' but also as a 'place' containing people and processes leading not just to an individual object but to a community of people and to a dynamic 'plan'. The challenge therefor was to develop a new design thinking framework to relate with the reality of the new built world.

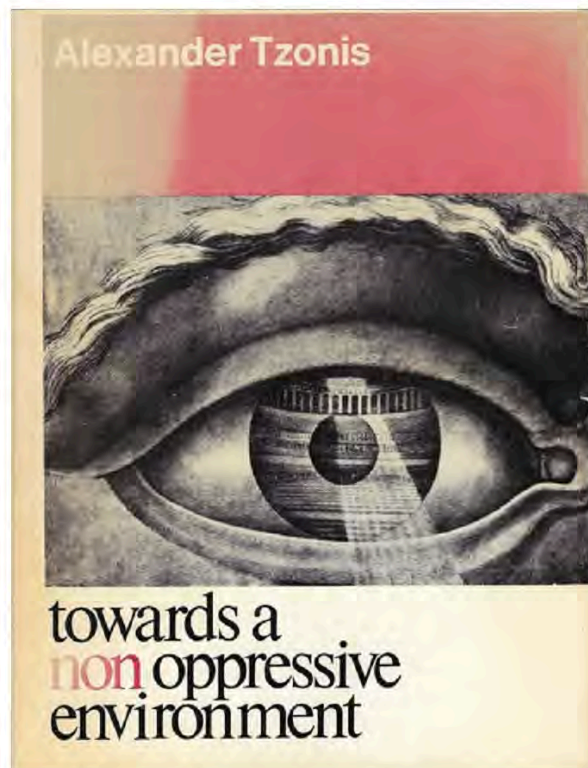
One must note parenthetically here that the same time these new institutions were formed there were efforts by architects, heads of schools of architecture, to develop a new kind of educational program to catch up with the new developments in environmental research centers. A leading one and the most influential was the Harvard Graduate School of Design Urban Design Program founded by Jose Luis Sert. The approach however of those programs were still linked to traditional methods that looked at urban projects as buildings only of a larger scale.

Yet, just as the new ideas about design, 'system' and 'place', started to be formed and tested just, as their influence on architectural practice and education began to be felt, it became clear that that their development was only a 'brief spring' event, an 'unfinished plan'. Once more, happiness did not happen. What went wrong this time?

The press, the academics, and many 'informed laymen' blamed the many mistakes that were made during the initial period of reconstruction 'for the greatest number' but also during, what we might call 'revisionist' period of research and exploration of new design methods through concepts such as 'plan', 'system' and 'place'. Both phases of 'new ideas' were an easy target since they were not yet ready to be applied at the scale they were applied.

Certainly, eager enthusiastic architects that turned during this period into publicists-propagandists using 'words and icons' borrowing techniques from the artistic avant-garde works but also from advertising, to promote their new, 'modern' ideas, were responsible for the building miscarriages. But besides the professionals, architects, engineers, and 'planners', politicians and administrators, not to mention financial speculators, have to be blamed. Many of them without long term moral values or ambitions, they rushed to usurp the modern ideas about 'planning', 'place' and even 'system' urged by political interests or speculation turning their back to most people who desired built space first quantitative and later qualitative.

The most common recognized failures of the modern approaches in architecture appeared in the production of 'planned', in fact hastened mostly half planned housing pro-



Towards a Non-Oppressive Environment; Alexander Tzonis, 1972

jects. They were supposed to be replacing slums but they soon abandoned by their inhabitants in favor of returning to their original old slums, if they were not already demolished. The literature is full of reports of such failures, more stories than facts or analysis, very little understood and very often exaggerated by an opportunistic or conservative press calling planning the cause of failure and asking for the abandonment of the very idea of planning.

In addition, even more damaging for the new ideas were the reports, articles, and even books that pointed out the failures of places that were planned places, labeled 'places', but they just remained empty spaces, because they were inimical to human contact, because they were materially hostile, physically repulsive, and/or using anti-sensual elements. Other place failures were caused by the wrong location of the place having poor accessibility, or being too exposed, or too hidden from inhabited surroundings or too overcrowded confusing

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community with 'togetherness' or the reverse, too hidden, mixing up privacy with unfriendliness.

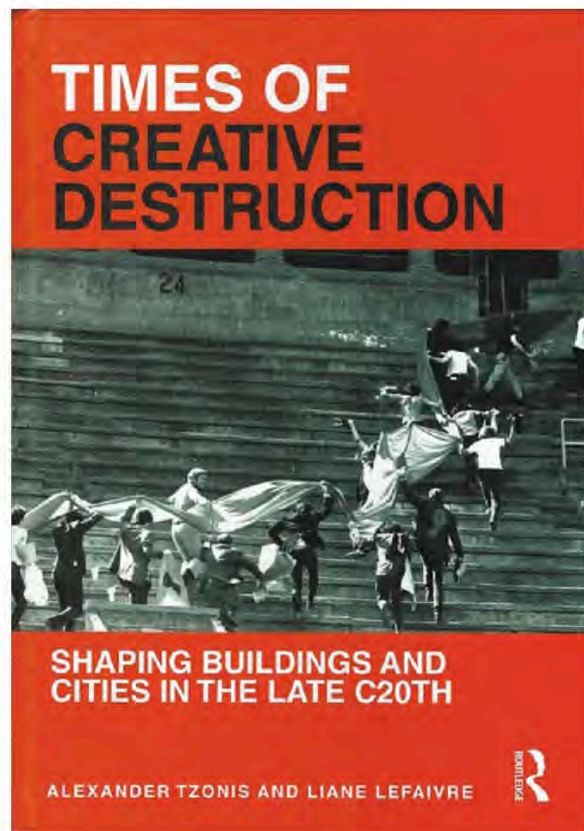
And there was also the paradoxical reverse evidence of real life success but failure of 'planning', the success of 'places' that never had a planned destination but emerged unexpectedly and inexplicably as 'successful' places, swarming with 'members' of informal 'shapeless communities' who found themselves 'without a place'. Such were the young people with special interests in pop music, or skating, or migrants and immigrants, who found a place in spaces that were 'left overs' 'between' formal 'functions' in the planned urban tissue. In conclusion the new approaches to design about how to plan and how to make real places did not have a solid theory to guide practice.

In the end, what decided the case against the new post WWII ideas was not theory but reality: the formidable fiscal crisis of the state of the 1970s, a crisis without end. Whatever the causes of this crisis, it became clear that the state and public institutions could not run any more the design research and development programs they had undertaken since the end of World War II. The golden period of the new studies that took place during the same time of a period of economic growth in the West that tried to expand welfare environmental programs, driven by state and public institutions, by economic, social, and ecological ideas and ideals trying to increase environmental quality for all and reduce the inequality in the environmental gap, was no more. Together with 'multidisciplinary design methodology', 'planning', 'community', 'urban environmental systems' and 'place', it was over.

Again, the new values do not appear to have arrived because of poor ideas, wrong thinking, the outcome of 'cognitive' flaw, of design biases and illusions, of bad design theory and bad methodology that make professionals and their clients not to be able to grasp the destructive aspects of their design actions.

They were the result of deep, radical changes in the economic structure of financing construction and development of the human environment: They followed the fiscal crisis of the state and public domain that replaced the state and public institutions as producers of the human-made environment and as custodians of its quality, by private initiatives and enterprises.

The page was turned, and the construction of cities and urban projects was assumed under the general category 'developers' whose priorities, at least for the time being, are far removed from the idea of 'planning', 'system', and 'place'. They under-



Times of Creative Destruction; Alexander Tzonis and Liane Lefaivre, 2017
Harvard Spring 1969, photo: Li Chung (Sandi) Pei.

stood buildings as autonomous isolated entities, as 'stars' and they viewed the city as a collection of such stars expecting their multiplication, the aggregate of added-value of individual quality buildings to be necessary and sufficient condition to make better cities and a better environment.

The accumulation of single buildings, even if they are prize-winning masterpieces, 'star-buildings' by 'star architects' and 'star-developers', but also buildings excellently detailed, fitting harmoniously into their site, interpreting spatially programmatic requirements, are not enough to add value to the environment, ecological, social, or cultural, and make it more rightful. Even more, in the absence of environmental knowledge that the research institutions of the 1960s aspired to achieve, of any idea of *environmental system*, and

thus the lack of any possibility of effective understanding of environmental reality, more construction achievements discriminatorily distributed among the world population, can even result in greater environmental unhappiness as 'wicked, cruel, and unusual' 'misbehavior' of freewheeling, wrongdoing agents 'havin' some fun', after taking over the creation of buildings cities and landscapes, following the withdrawal of public institutions as producers of the human-made environment and as custodians of its quality, that have produced and maintained the false beliefs about the human environment.

P.S.

What kind of thinking and action is needed to reverse the process of decline and destruction of environmental quality? What kind of institutional framework?

Due to the complexity and scale of these new environmental problems, it seems that it is no more possible to handled them relying only on individual corrective actions or on the individual good will of architects or their clients as it has been done during the last half century.

BIOGRAPHY

Alexander Tzonis is an architect, educator, researcher, designer, and author. He has made contributions to architectural theory, history, and design cognition, bringing together scientific and humanistic approaches in a rare synthesis. Since 1975 he has been collaborating in most projects with Liane Lefaivre. Tzonis is known for his work on creative design by analogy, the classical canon, history of the emergence of modern architecture, and introducing and elaborating the idea of Critical Regionalism. In 1981 he was appointed Crown Professor of Design Methodology at Delft University of Technology, Netherlands where he founded in 1985 'Design Knowledge Systems', a multi-disciplinary research institute on Architectural Cognition. He has held visiting professorships at Technion, Israel, (1985), MIT, (1996), National University of Singapore, (2006, 2007), College de France (2003). In 2009, he was appointed Professor of Architectural Theory at Tsinghua University. Among his books, *The Shape of Community*, co-authored with Serge Chermayeff, (Penguin, 1972), *Towards a Non-Oppressive Environment*, (IPress, 1972), *Hermes and the Golden Thinking Machine*, a murder story, (MIT, 1990), *Le Corbusier*, (Universe, 2001) and among the books co-authored with L. Lefaivre, *Classical Architecture* (MIT, 1986, translated in seven languages), *Aldo van Eyck, Humanist Rebel* (010, 1999), *Emergence of Modern Architecture*,

(Routledge 2004.) Their latest book on 'critical regionalism' *Architecture of Regionalism in the Age of Globalization*, (Routledge, 2011, Tzonis was General Editor of the multi-volume *Garland Architectural Archives*, one of the largest architectural publishing projects in history Among the several major international symposia that Tzonis conceived and organized: *The German Werkbund*, (1980, Harvard University), *Automation Based Creative Design*, (1992, TUDelft, Lustrum), *The Mediterranean Landscape*, and *The Mediterranean City*, *Mishkenot Sha'ananim*, Jerusalem, *Value Learning in a Changing World*, 1993, and *The Spiritual in Architecture*, 2000, both hosted by Her Majesty Queen Beatrix at the Royal Palace, Amsterdam. The latest book by Tzonis with Lefaivre is *Times of Creative Destruction*, Routledge, 2017.

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IDENTITY THROUGH CHANGE

Špela Videčnik (Slovenia)

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The mentality towards modernist architecture in Slovenia should be understood in the context of the general attitude to our half-past history. In the rapid transition from our socialist system towards something better, the public denied the values connected with the regime, culture and ideology between the Second World War and our independence. Therefore, an evaluation of modernist architecture is problematic, mostly due to the fact that the private and public sectors have no awareness of its quality. Bringing the discourse of modernism and pointing its values to the general public will be especially important in the next few years, when architecture from that period will reach the age and condition at which renovation or regeneration will be needed.

Through our practice, we have encountered several extensions, renovations, refurbishments and conservation projects connected with modernist architecture. We tried to face the new needs and limited budgets of clients from both the private and public sectors and create contemporary architecture in dialog with that already existing. We could mention several interventions ranging from public projects such as the extension of the Ljudski vrt stadium in Maribor and the ground floor refurbishment of a primary school built by architect Emil Navinšek to residential projects like our addition to Navinšek's own private house. Hopefully, we managed to prove to the general public that existing modernist qualities can be appreciated and incorporated into the creation of the spaces of tomorrow.

THREE INTERVENTIONS:

THE GROUND FLOOR REFURBISHMENT OF MAJDA VRHOVNIK PRIMARY SCHOOL IN LJUBLJANA

"Inside the no-corridor system, we suddenly get space. Instead of a multitude of narrow corridors, one large, bright, useful space is created. In buildings with corridors, the function of a corridor is only to connect other spaces. People are trapped and compressed

between windows and walls. They are forced to move only in the one direction. Therefore, whenever we find ourselves in such corridors, we subconsciously look to move as quickly as possible. And you know, the bigger the building, the longer the inside corridor is. Inside the non-corridor system, there are no long corridors and also no unnecessary courtyards or spaces resulting from the inability to organize the building differently".

From the conversation with architect Emil Navinšek in 1974, published in the *Tovariš* magazine, in an article by Alenka Bibič under the title "40,000 Hours of Some Doubt".

I still remember my first day of school, entering with my mother into the large bright lobby, the "aula" as we called it back then, of dr. Joze Potrc Primary School in Ljubljana. It was an airy and sunny space, full of sounds and lively kids where we gathered before and after school hours, between breaks and during performances and ceremonies. When my parents moved I had to relocate to another school – Trnovo Primary School – where my classmates and I grew up together into teenagers. Almost everything that I remember from those times actually happened inside this lobby. Chinese jump-rope, forbidden football, small fights, chatting with my classmates, my first love... I attended high school in Bežigrad, a building by the same architect, with the same spatial organization: a large, column-less lobby with a bright, wide staircase creating a sort of amphitheatre and classroom doors around this central space. And during our teenage years, we could hardly wait for what would happen in those short five-minute breaks inside that central lobby. I am realizing today how, with his floorplans, Navinšek actually influenced both my own generation as well as that of my kids. We surely became different growing up inside these large, sunny, central spaces that provoked communication and interactions.

It was with these memories in mind that we approached the refurbishment of the ground floor of Majda Vrhovnik Primary School. My three kids attend this school today and I am happy they are also growing up inside an Emil Navinšek lobby. The tight budget allowed the rearrangement of the entry and the re-

furbishment of the lobby, cafeteria and school kitchen. The project follows Navinšek's concept, distinguished by brightness and communication. To encourage it, we inserted transparent glass walls at the entrance, in the lobby and along the cafeteria. The spaces create everyday meetings and conversations between children and parents. The entrance, lobby and cafeteria connect visually into a single space.

The renovation of the façade is a small shading intervention, which preserves and respects the original elements and design. The game of geometric patterns - circles in perforation - create a dialogue with a shading element typical of Navinšek. This pattern also appears in the furniture. It creates cut-outs in the equipment of the lobby and the cafeteria. Warm materials and colours were chosen by scholars. Wooden elements on the ceiling operate acoustically and have built-in lights, all necessary installations and a fire alarm.



The Majda Vrhovnik Primary School – Renovation of the cafeteria
Photo credits: Ana Skobe

The Majda Vrhovnik Primary School – Renovation of the main entrance. Photo credits: Ana Skobe



Špela Videčnik Identity through Change

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SHOE BOX HOUSE / EXTENSION OF EMIL NAVINŠEK'S HOUSE

Our next project connected with Emil Navinšek was an extension to a small house in the Trnovo neighbourhood of Ljubljana. He designed the house in 1934 next to his residence for his two elderly, unmarried sisters who lived together in the small surface of only 50m² per floor.

The street where the house is situated was mostly built in the 60s and 70s with typical single-family residential houses made using a combination of white plaster render and dark wood cladding. The extension creates a different intersection between the old and new parts on each floor. It is composed of three cube volumes, each in the proportion of a shoebox-like existing house floorplan. The boxes are stacked with 90 degree shifts creating overhangs and terraces. The volumes are clad in dark wood – spruce vertical lattice - in the theme of the street's ar-



The Shoe Box House – Side facade. Photo credits: Tomaž Gregorič

The Shoe Box House – Front facade. Photo credits: Tomaž Gregorič



chitecture. The structure is a combination of a concrete base, metal frames and a wooden substructure. The interior of the new part is formed mostly by wall cladding creating integrated wardrobes and walls. The old house is renovated in a simple fashion, keeping all the existing textures and materials. The interiors of the old house and new extension are connected in different layouts – a new extension perforates through the old walls creating associated facilities: the ground floor as a living area, the first floor with kids’ rooms and a guest room, the top floor with a master bedroom and living room. The heart of the house – the intersection of the volumes and the connector of old and new – is a staircase attached to the main vertical concrete wall. Inspired by Adolf Loos, the interior forms elevated podiums, niches, wardrobes and small sitting areas and is partly extended into small spaces in the existing part of the house creating private living areas on each floor.

EXTENSION AND RENOVATION OF THE LJUDSKI VRT STADIUM IN MARIBOR

A project of a very different scale is that of the Ljudski vrt Stadium in Maribor, a public competition that we won as students and managed to build 10 years later. The beautiful, notable features of the stadium include the main stand – a 129.8-metre-long by 18.4-metre-high concrete arch that is protected as an architectural and historical landmark. It was built in 1961 by architect Boris Pipan. The stadium is the home of the successful football club NK Maribor, so important international matches are played on the pitch. The surrounding plot is used as a multi-functional sport field and is located in the centre of the city. The brief was to convert the field into a football stadium and to extend the existing building with covered bleachers (12,500 spectators, VIP and press facilities) and additional public programmes such as the

Renovation of the Ljudski Vrt Stadium in Maribor – view. Photo credits: Tomaž Gregorič



Špela Videčnik Identity through Change

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Renovation of the Ljudski Vrt Stadium in Maribor – night view. Photo credits: Tomaž Gregorič

four big gymnasiums, the fitness-club with swimming pools, the shops and the restaurants. The project proposed a ring of bleachers weaving above the enclosed base with public programmes. The lowest and highest points of the bleachers are defined by the spectator's quality of view. In the corners of the field, where the views are restricted, the entrances to the bleachers were displaced. The ring was pulled down here to the level of the entry plateau. Then it rises gently to reach the highest point in the middle of the pitch. The maximum number of the seats is provided there, offering the best views of the field. The corridor of the ring has a double skin and provides rooms for VIP, the press and refreshments. In the base, sport halls and shops are displaced. The roof of the base forms an entry plateau to the bleachers and also offers views to the smaller sports field beside the stadium. The dialog of shapes along with the existing concrete shell, the apparent simplicity of the curved form and the selection of basic construction materials play their parts in generating an object as a whole.

These days we are also completing the plans for the renovation of the existing old bleachers by preserving the concrete arch entirely and reshaping the bleachers and connected spaces following the UEFA/FIFA requirements.

BIOGRAPHY

Špela Videčnik and **Rok Oman**, both graduates from the Ljubljana School of Architecture and London's Architectural Association, established OFIS arhitekti in 1996. Its international team is based in Ljubljana and Paris. Since its creation, the practice has been investigating space relations in different scales and context. Their build work is represented by various programs from public, sport, cultural and religious buildings to single and multiple housing. Most of their work is result of winning competitions, including their internationally completed construction of a student residence on Route des Petits Ponts in Paris and Football Stadium Bate Arena in Belarus. Their academic research combines different interests and curiosities. They investigate European and local Slovenian identity in contemporary architectural language, which includes traditional knowledge of vernacular buildings into revitalisations, conversions and new build in Alpine Area. They teach, run studios and workshops in various Schools for architecture including Harvard Graduate School of Design, ENSA Paris Val de Seine and Faculty for architecture in Ljubljana.

Session 01_CITY GROWTH, CHANGE, TRANSFORMATION: MODERN PROJECT AND THE INCLUSION OF DIFFERENCE

Session Chair: Horacio Torrent (Chile)



Modernity might have seemed to the unwary merely as an experience relating to present times, but there is no doubt that's not all. Modernity has not only to do with change, it is also the ability to respond to changes: population growth, urban developments on a global scale, and mainly to increase the access to the benefits of social and economic development.

A narrow understanding of the idea of evolution has led us to think that changes are natural and unavoidable, as inevitable transformations, undermining the influence of human will, its risks and its possibilities. The Modern Project was quite the opposite: it meant the explicit recognition that man's will could broaden access to the benefits of those changes generated by humanity itself.

In our field, the built environment, efforts were undertaken to expand the benefits of a healthy, broaden and fruitful life, through minimum dwelling and social facilities.

The Modern Project sought for the optimal relationship between members of society, and between men and their time, with the idea of bringing access to the benefits of modernity to all, thus strengthening the future for a better humanity. This aspiration was central to the debate on architecture within the Modern Movement during the 20th century.

Only chance – or a wide understanding of the exotic – could have gathered such varied works within this session; perhaps due to certain remains of that exclusivism that Western thought put into action during the 19th century; or maybe because global urban growth puts forward the need for greater inclusion of different identities and customs, different social and cultural practices.

It is likely that, even within the restricted Western mind, this situation was partially acknowledged. In their "Nine Points on Monumentality", Giedion, Sert and Leger included as their sixth point what appeared to be prophetic evidence: "*A new step lies ahead. Post-war changes in the whole economic structure of nations may bring with them the organization of community life in the city which has been practically neglected up to date*"¹.

As early as 1942, urban growth was a matter of concern. The seemingly rhetoric question, "Can our cities survive?"² led to a rather systematic reflection on the issues that lay ahead.

The post-war period prompted a revision of the ideas of the Modern Movement's heroic phase. The Sixth Congress redefined the aims of the CIAM as follows: "*To work for the creation of a physical environment that will satisfy man's emotional and material needs and stimulate his spiritual growth*", adding that "*to achieve an environment of this quality, we must combine social idealism, scientific planning and the fullest use of available building techniques. In so doing we must enlarge and enrich the aesthetic language of architecture in order to provide a contemporary means whereby people's emotional needs can find expression in the design of their environment. We believe that thus a more balanced life can be produced for the individual and the community*"³.

The set of values behind the declaration were not as relative as to consider that only progress was important; it is clear that ensuring reception of the benefits of such progress for most of the population was also considered a key factor by the protagonists of modern architecture.

Although the CIAM often found itself trapped in its own desire for progress, the facts that followed proved that the project's development was unaware of social, cultural and political factors that gradually went on to assume a greater importance among human relationships. Much has been said already about the abstract features that allowed different ways of instrumentalizing the Modern Project's main objectives – from varied and often opposite points of view – throughout the 20th century. Within its strongest trends, the Modern Project had an exclusivist orientation towards economic progress, often leaving little space for the understanding of wider social conditions.

The failures of modern architecture in the Amazon or Kosovo illustrate the conflicts of imposing national development models with a lack of consideration for regional conditions, in both urban planning and buildings. If the banal pretense

of developing local languages seems a more harmonic and therapeutic approach towards such conflict, it does not assume the key issue laying at its base: the lack of understanding of local conditions, both in the activity of the design itself as in the conception and treatment of the built environment. The States' political, economic and cultural agendas often imposed processes of control and unequal development, polarizing the conditions of local conflict and overemphasizing identity differences. The proposals for the urban future in contested environments, as in the case of Palestinian settlements in Israel, place public space as a priority for the transformation of the city, overcoming architecture's more traditional ways.

The recent UN Report on Population and Development stated: "In 2018, a majority (4.2 billion of a total of 7.6 billion) of the world's population live in cities and other urban settlements"⁴. This clearly indicates that the challenges still stand ahead. The consideration of the increasing urbanization phenomena implies – contrary to the abstract conceptualization of the CIAM – the need for acknowledging of difference. Perhaps the architecture of the Modern Movement was unable to consider difference and conflict due to its therapeutic and healing pretensions.

One of Bridgewater's objectives was, as outlined by Giedion: "(...) *simply to find out whether we could still understand one another...*"⁵. At this turning point, a statement on the better understanding of "one another" should attend to: a full consideration of "the other," acknowledgement of diversity and difference, caution in the exercise of any widely comprehensive idea intended to encompass all, an assumption of conflict, and the recognition of conditions that are culturally distinct to those aspired by the Modern Project.

This could be one of the possible paths for the affirmation of the new Docomomo objective, recently incorporated to the declaration of Eindhoven in Seoul 2014: "*Explore and develop new ideas for the future of a sustainable built environment based on the past experiences of the Modern Movement*"⁶. For over a decade, Docomomo has recognized some of the restrictions of ideas that blocked the incorporation of social contents into the built environment. Recognizing the lack of openness towards difference in the experience of the Modern Movement will only be another step in the consolidation of a better path towards a sustainable future. A new step lies ahead.

NOTES

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2 SERT, José Luis. *Can Our Cities Survive?: An ABC of Urban Problems, Their Analysis, Their Solutions*. Cambridge: Harvard University Press, 1942.

3 CIAM. Reaffirmation of the Aims of CIAM, Bridgewater, 1947. In: GIEDION, Sigfried. *A Decade of New Architecture. Dix ans d'architecture contemporaine · Les congrès internationaux d'architecture moderne*, Zürich, Editions Girsberger, 1951. p. 17

4 Report of the Secretary - General of the United Nations for the 51st session of the Commission on Population and Development (E/CN.9/2018/2).

5 GIEDION, Sigfried. *A Decade of New Architecture. Dix ans d'architecture contemporaine · Les congrès internationaux d'architecture moderne*, Zürich, Editions Girsberger, 1951. p 1

6 Eindhoven-Seoul 2014 statement, Docomomo International <https://www.docomomo.com/eindhoven>

BIOGRAPHY

Horacio Torrent; Architect from the National University at Rosario – Argentina in 1985; Magister in Architecture from the Catholic University in Santiago (2001) and Ph.D. from the National University in Rosario (2006); he has developed research on modern architecture at the Canadian Centre for Architecture, the Getty Institute for the Arts and the Humanities, the National Gallery of Arts in Washington, and the Iberoamericano Instituto in Berlin. He is author of an important number of articles on Latin American modern architecture, and on contemporary Chilean architecture. Has taught and lectured at universities in Argentina, Brazil, Canada, China, Colombia, Germany, México, Portugal, Spain, USA, Venezuela. He is Founding Member and President of Docomomo Chile since 2004 and currently Professor of Architecture at the School of Architecture of Pontificia Universidad Católica de Chile.

RECREATING THE PUBLIC THROUGH TRANSFORMATION

Fatima Abreek-Zubiedat, Ronnen Ben-Arie (Israel)

ABSTRACT

The Arab-Palestinian society in Israel is undergoing in the past decades an intensive and paradoxical process of urbanisation without urbanity. That is, an accelerated growth of cities and urban spaces, with no political public space and a sense of urban life. The origins of this process are to be found in the 1948 war and the establishment of the state of Israel, when all Palestinian cities and urban centres, but one, went through destruction and desolation, and almost all Palestinian urban population and society was eradicated. Since then, state led planning and development policies have deterred the urban development of Palestinian settlements, condemning them to constant growth with no possibilities for expansion or evolution. Thus, as spatial products of these processes, Palestinian settlements in Israel, are becoming more and more dense and deficient, lacking almost any sense of urban public life. In this paper, we will first outline the loss of the Palestinian city and the elimination of Palestinian urbanity; then, we will present final thesis projects, conducted under our supervision, of architecture students who aim, through research and design, to confront this reality and propose novel modes of intervention in the built environment of Palestinian localities in order to reclaim the urban public space, and through that to create new possibilities for collective social and cultural identities. We will define these proposed modes of intervention as three possible tactics: confrontation, subversion and negation.

1. URBAN TRANSFORMATION AND THE LOSS OF THE PUBLIC

Since the end of the 19th century and through mid-20th century, cities in Palestine were key in the progress of the Palestinian society and modernisation processes as part of "Bilad al-Sham" in the Arab world, acting as nodal points in the network of encounters between Europe and the Levant.¹ These urban spaces served as the arena for the evolution of a bourgeois middle-class, and the places where culture, art, media, and modern governance, commerce and industrialisa-

tion, have thrived. In recent years, it has begun to be acknowledged that the destruction of Palestinian urbanity – urban space and society – had a crucial role in the Palestinian Nakba,² that is, the disaster of the Palestinian people – the expulsion of 750,000 Palestinians from their historic homeland and their becoming refugees; the obliteration of more than 400 rural villages and towns; and the destruction of 10 cities and urban centres, out of 11 that existed prior to the 1948 war, leaving Nazareth as the only Palestinian city to survive the war and continue to exist as such in the new established state of Israel.³ Everything has changed for Palestinian urbanity with the 1948 war and the Palestinian Nakba. In the aftermath of war, only around 5 percent of the Palestinian population in the major cities survived the war; connections to the region and neighbouring countries were cut as new borders were drawn; and those that withstood the war and expulsion and remained, lived first under military rule and struggled for many years to come to maintain their place in the city.

As Manar Hassan asserts,⁴ the urbicide of Palestinian cities had a crucial effect on the Palestinian society at large. As it lost its urban centres and rural society turned to be its majority, Palestinian society became recognised, but also self-acknowledged, as rural, backward and patriarchal, underlining mostly a traditional, chauvinist and nationalistic connection to the land. This was complemented by a process of forced urbanisation that dominated the rural settlements that survived the war and where the majority of the Palestinian population within Israel continued to live.

As the 1948 war ended with the establishment of the state of Israel, only around 160,000 Palestinians remained within the borders of the new state, constituting about 15 percent of the total population. This Palestinian minority was concentrated mostly in rural localities in four peripheral regions of the state that were under military rule up until 1966. Freedoms of transport, mobility and migration were harshly restricted, separation was maintained, and most of the population

growth was absorbed within the rural localities and villages.⁵ These processes were spatially formalized in the 1951 Master Plan, known as the 'Sharon Plan' after its principal architect Arie Sharon. This plan has set the conditions for the Israeli state intensive development and modernization as part of contemporary global trends of de-colonization. This was limited to the state's Jewish population and concentrated on the advancement of the 'Judaization' of space and land, while ignoring the needs and necessities of the Palestinian population and for decades to come refraining from development and modernization of Palestinian localities.⁶ Under these circumstances, Palestinian villages and towns went through processes of in-situ urbanisation, as population and density grew within them, without the complementary required urban development of infrastructures, social and civil services and public spaces. Scholars have termed these processes as "detained urbanisation",⁷ "latent urbanisation",⁸ and "selective and misshapen urbanization".⁹ All referring to the "unnatural" urbanisation of Palestinian localities, under severe restrictions on expansion and development, and without almost any production of urban life within them.

2. RECLAIMING URBAN PUBLIC SPACE

Facing the reality of the urbanising Palestinian settlements in Israel, planning often seems futile. The absence of available land, and particularly public land, versus the growing needs of housing, employment, infrastructures and public services and spaces, and the increasing tensions between traditional social structures and trends of transformation and progress, pose vital challenges to attempts of intervention in the built environment. Questions of economic resources, heritage, identity and political collectivity are pressing and cannot be overlooked. The Urban Transformation in Action studio at the Faculty of Architecture at the Technion Institute adopts a pedagogic approach which aims to allow the final thesis project students to research and critique the spatio-political reality, and to propose new possibilities for architectural intervention that aim to draw alternative trajectories for development in these conflictual spaces. Within the walls of the studio, the students are able to experiment a conceptual space which is not possible - as of yet - in the real political world outside the studio. In the following sections we present such alternative proposals that aim to reclaim the city as public space. These alternatives are conceptualised along three categories, according to their proposed mode of action: confrontation, subversion and negation.

2.1 Confrontation

In her project, Kawthar Anabossi chooses for her intervention a space which is at the same time one of the most symbolic spaces of the conflict in Israel-Palestine, and a real and visible one – the Separation Wall, which since 2003 separates between Israel proper¹⁰ and the Occupied Territories. Specifically, in this case, the wall cuts through the built environment of two adjacent Palestinian towns – Baqa al-Gharbiyye and Baqa ash-Sharqiyya – separating families, demolishing houses, confiscating lands, obstructing movement, and eradicating the vital public space of a market which used to function in the area between the two localities and to connect them through the ordinary daily lives of the people (Fig. 1). The project proposes to appropriate this space of separation and to transform it into a space of encounter and confrontation. On the one hand, to use the wall as the foundation of a public space which would be created on both sides of the wall and shared by residents of both towns. A space for them to meet and share their lives, and recreate a collective public based on the shared history and national and cultural identities, regardless of their official status as citizens and non-citizens. And on the other hand, this public space is a space of confrontation with the Israeli sovereignty in its utmost manifestation.

Laila Anabtawi uses a similar mode of intervention in a different situation. Her project is located on the main road going through Kafr Kanna, a Palestinian town within the state of Israel, where she proposes to build a museum as part of a public space that connects the local churches, a famous pil-

Figure 1. Kawthar Anabossi. © 2015



grimage site, with the town square which is known for the political demonstrations that are taking place there. The museum aims to expose the many tourists that visit the town for religious reasons, to the political and social reality of the local residents. In this case, the Israeli sovereignty is not as evident and blunt as in the previous case, and the main road of Kafr Kanna is not the real tangible border of the Separation Wall. Nonetheless, it is still the boundary line where the local Palestinian residents encounter the public at large, of both Israelis and foreign tourists. Both projects seek the border as a space which enables encounter and visible confrontation with the Israeli regime and public.

The architectural expression of these projects is of an appearance in the public space. The architecture exposes itself, does not conceal or restrain itself, but rather confronts the boundaries that are set upon it. It is fully aware of the power which is in operation, recognises and acknowledges its function, and aims to face and challenge it.

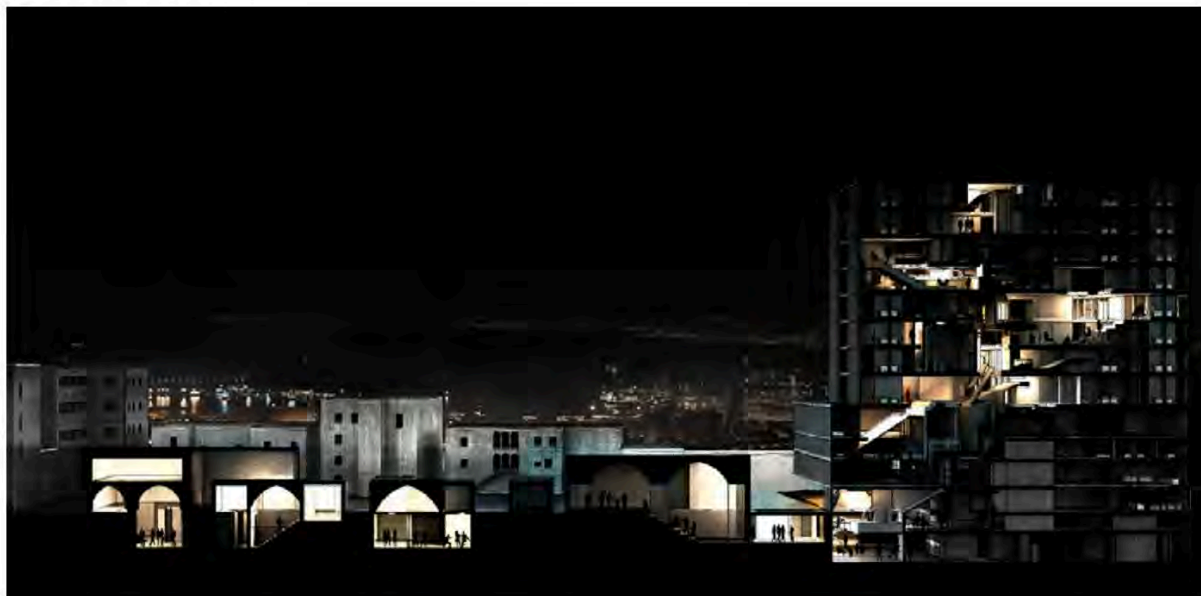
The production of public space through confrontation raises the questions whether the public space, as a space of appearance¹¹ which is inclusive and open for all, obligates the demonstration of identities and positions, and evidently constitutes confrontation? Does this mode of action remain en-

trapped within the limits of conflict with no real possibility to create an alternative, free and liberated public space, away from the confinements of the existing power relations? And what, if at all, could be the power of confrontation in such unequal and asymmetrical power relations?

2.2 Subversion

The next two projects also propose a similar mode of intervention in different situations and conditions. The first takes place in Haifa, a major urban city that went through destruction and lost its Palestinian urbanity and which has today a Palestinian minority, and the second in Umm al-Fahm, a village that went through an intense urbanisation process and is currently one of the largest Palestinian cities in Israel. In her project in downtown Haifa, Reem Shurush identifies and analyses urban spatial practices that are being used by young Palestinians who appropriate empty spaces in ruins and abandoned and derelict buildings, for the use of their artistic creative activities. Based on her analysis, she articulates architectural design principles, that she uses to guide her intervention in the urban fabric of the city which until 1948 used to be a spearhead of the Palestinian progressive urban society, and in recent years is going through a process of constituting a “reconstructed urbanity”.¹²

Figure 2. Reem Shurush. © 2017



Fatima Abreek-Zubiedat, Ronnen Ben-Arie Recreating the Public Through Transformation

The project proposes the possibility of creating a public space which is constituted of a series of underground and subterranean spaces, some excavated in old buildings and ruins and some hollowed out in empty and unused modern buildings (Fig. 2). The result is a covert space for the use of a specific public who is knowledgeable of its existent.

In her project, which is located in Umm al-Fahm, Lama Shhady confronts different conditions that obstruct the emergence of public space. As an oversized and congested village, which is now home for more than 50,000 residents and is formally classified as a city, with an increasing need for housing and almost no available public lands, public space has literally no place in Umm al-Fahm. The city is extensively dense and crowded and with no state allocation of public land for development, needs for public space are left unanswered as the residents are compelled to find solutions for the growing needs for housing by densifying even more the city's already overly dense built environment. In Umm al-Fahm, which is a perfect example of "detained urbanisation",¹³ the formal definition as a city contributes no urban qualities, the village is continuously growing inwards with ever more housing being built, and public use which no space is left for, is coerced to take place in the streets. Facing this reality of no available land, the project proposes to produce "new land" by excavating new spaces for public use underneath the surface of the earth. A new layer is added to the city, dedicated exclusively for public space and activities, creating the place for possible encounters to occur and for collectives to be constituted (Fig. 3).

Both projects share an architectural expression of excavation and hollowing out spaces that are concealed, dark and secluded. Such an operation produces an inner urban space which is not meant to be accessible to everyone, but rather to an exclusive public – only those who are taking part in its creation and knowledgeable of its existence. In face of the Israeli state's negation of the Palestinian public space, these interventions are fully aware of the constraints and limits, but instead of confronting them, they rather propose to disregard them, draw away from the conflict, and create an alternative public space with its own logic and reason. This mode of action raises questions regarding the possibility of an excluded public space, a public space which is not shared by all. What kind of publicity is it, that is not open for all? What is the point of subversion, if the power of the public space consists in its appearance? Could there not exist a shared urban space outside the constraints of conflict? And what kind of urbanity does that imply?



Figure 3. Lama Shhady. © 2015

2.3 Negation

The last project is a more speculative one, and it takes place in various spaces and times – in Jaffa, Haifa and Beirut; and in the past, the present and the future. In his project, Karam Jebara looks back to the time when these three cities were part of a shared open space, port cities on the Mediterranean coast, without borders or other limitations on movement and flows of people and ideas. A time when these cities had a leading role in a process of modernisation and progress in the Middle East, as they functioned as spaces of encounter between Europe and the Levant. The project overlooks the present reality of nation states and borders that separate between once related regions and cities, and proposes to reconnect the past to the future and to reignite the processes that were obstructed. It proposes to expose remnants of the past urban fabric of the three cities, reconnect them and reactivate through them a dynamic and ever changing urban space that always produces new identities and new collectives.

Facing the ongoing conflict, the project does not recognise the nation state and negates its existence and power. It identifies the urban borders and boundaries as lines of encounter, and denies the state borders as lines of separation. It is an architectural intervention which demands from the city the urbanity that has been lost, and seeks to recreate the urban space as a space for the public. This mode of action proposes the possibility of urban citizenship that might exceed the national citizenship and make it redundant, and it raises the question whether it is indeed possible to disregard the national and its power, when considering the urban? Where and how can such a public space exist in the "real" world? And is negation at all effective as a way to resist unrecognition and denial?

3. CONCLUSION

In this paper, we have presented three conceptions that aim to address the absence of public and political space, which emerges from processes of modernization and development that benefit one people to the detriment of another. By presenting these cases we suggest that the different act of resist-

ance engage in different ways with the built environment. The acts of confrontation emphasize the demand for national and cultural identity, attempting to reconnect to a ruptured modern past through the articulation and design of a new modernist architecture. Therefore, conservation of the past through reclaiming a new modernism – other modernism which is based on values of the place. The act of subversion intervenes in the existing urban fabric which is the product of distorted modernization processes. This intervention is an attempt to expose and conserve the modernism of the past by developing a new one – a conservation in action. The act of negation reuses the modernist buildings of the past, aiming to create a continuity in time. This is a modernism which does not react or subvert the modernization processes of the state, but rather places the modernism of the past in a different political context.

The accelerated growth and urbanisation of the Palestinian settlements in Israel pose crucial challenges to Palestinian society and to architects and planners, but also bring new possibilities for change. The transformation of these settlements opens up critical opportunities for intervention, that might serve as the foundations for a renewed urbanity and for the creation of new social and political collectives. In this paper, we have presented several such attempts, made by architecture students in their last stage of studies, as they strive to articulate their own personal architectural language, aiming to make a change in the world.

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THE LIFE OF KOSOVO MODERNISM

Flaka Xërxa Beqiri, Vlora Navakazi (Kosovo)

ABSTRACT

This paper examines the rapid change that Kosovo Modernism has been facing from the construction period until the last decade and the ultimate need for preservation. Kosovo Modernism counts a significant number of good architecture examples. Yet, compared to the architecture of the same period of other countries of Yugoslavia, it remains a 'grey area'. Modernism in Kosovo came in the name of prosperity and progress. But this meant that a number of traditional buildings and old city cores were erased following the maxim 'destroy the old, place the new', to make place for new modernist structures. Major cities of Kosovo witnessed major transformations. Also, these transformations were not led by the local authorities from the Kosovo region, but were mostly imposed from the outside. For both reasons modernist architecture has enjoyed a negative reputation in Kosovo as being foreign and imposed. As a result of this negative reputation as well as other significant factors – such as political and social changes after '99s war in Kosovo, mostly connected with the process of privatization – the second urban and architectural destruction in Kosovo started in the beginning of the 21st century. This time not the destruction of the traditional structures, but of the modernist heritage. This paper aims to present the life of modernist buildings in Kosovo that can be considered a process of metamorphosis. The purpose of this paper is to call attention to the quality of modernist buildings in Kosovo and show the necessity for preserving Kosovo modernism.

1. INTRODUCTION

Modern Architecture of Yugoslavia is in focus of international visual presentations lately. It is highlighted and valued in different professional quorums. Kosovo is generally missing in this matter-of-fact, despite the presence of significant examples of modernist architecture. Modern architecture of Kosovo is hardly found in publications, exhibitions or other forms of media.

Kosovo, which after WWII remained under the territory of Yugoslavia, was constructed and deconstructed several time in the name of progress and prosperity, trying hard to adopt the influences from the neighbour countries, also part of Yugoslavia! This process was used also under the name of modernity and the construction of modern identity in Kosovo. Kosovo cities, that until late 1950 maintained their medieval structure, begin to change dramatically in the name of modernity [Paçarizi, 2014].

Precisely the spirit of modernity brought the biggest transition to Kosovo cities through the process of urban regeneration. In this period with the new administrative system, the demand for adequate infrastructure was highly evident. Through various legal acts, many of the private properties turned in public properties in the name of prosperity and development of new administrative centres. In this spirit, new urban city cores were designed, differentiating from the pre-existing historical centres [Gjinolli, 2015].

Kosovo witnessed rapid changes in the name of modernization. As a result of the empowerment of the labour force, the opening of factories, promotion of education and employment in various administrative positions, the number of people in the cities of Kosovo began to increase. The construction of new city centres, the growing of cities in new urban movement, the construction of major number of public building, the development of new neighbourhoods and touristic points... all together present a reach study area in matters of establishment and destiny of Kosovo modernism [Ismajli & Kraja, 2011].

The modern architecture of Kosovo is less analysed and documented compared with the Byzantine and Islamic Architecture, whose conquest counts a significant influence on building urban and architectonic identity of the country. Kosovo Cultural Institutions still doesn't legally protect modernist buildings (with only few exceptions), hence they are not considered as national heritage values. Lately, after '99s war in Kosovo and Kosovo's independence many of the buildings

that belong to modernist movement were reconstructed, going through major transformations. Concrete was replaced with new materials, questioning the identity of the building itself [Elezi, 2017]. Several were completely demolished. It is evident that Kosovo never absorbed modernity [Paçarizi, 2014].

The political and social context of the construction of Kosovo modernism and the current state of modernist iconic buildings in Kosovo, shows that Kosovo modernism could be considered as a process itself (**Figure 1**). This process counts several stages of deconstruction and construction. Initially, the arrival of modernity determines the deconstruction of the traditional architecture that had strong identity connotation. In order to bring modernism, Kosovo architecture has undertaken a dominant process of construction. Certain decades of designing and implementing modernism brought in line several architecture and urban planning projects, but little valued and appreciated in the public context. This led to the current state, the second deconstruction phase, that of the fading of Kosovo Modernist Architecture.

2. FIRST DESTRUCTION: ERASING TRADITIONAL STRUCTURES

After World War Two, Kosovo remained (under Serbian Federation) part of Federal People's Republic of Yugoslavia, which consisted of six republics [Limani, 2017]. The influence of Yugoslav Architecture, dominated Kosovo [Gjinolli and Kabashi, 2015]. While Byzantine and Islamic Architecture brought in Kosovo most important public buildings of

the time, such as churches, mosques, Turkish baths, open bazars etc., further political movements forced major changes in Kosovo's architecture and cultural identity. After year 1945 we count major changes in built heritage, with the rapid destruction of the old trade markets, city centres and historical monuments.

A decent number of traditional buildings and old city cores were erased to make place for new modernist structures. The new Kosovo's architecture in major cities of Kosovo was constructed on account of the destruction of the existing heritage and in the name of new architectural identity, questioning the connection with urbanity and national habitat [Fehmiu, 1971]. Under the fast urbanization based on the socialist and modernist ideological orientation of the time [Mrduljaš and Kulić, 2014]; major cities of Kosovo had to transform into new cities, following the examples of urban centers of Yugoslavia. The new developments of urban core in most important cities of Kosovo were seen in the new investments in boulevards and mostly in public and residential buildings [Gjinolli and Kabashi, 2015].

City centers, which had the most concentrated elements of the built heritage, religious, residential, trade and artisan structures, facilities for refreshment and other structures of traditional environmental values, turned into areas with potential of developing new urban structures, minimally influenced in the heritage values of the context, and maximally oriented in the new developments of the neighbouring cities, such as Belgrade, Ljubljana, Zagreb, Skopje etc. To achieve this, new structures followed universal norms and standards

Figure 1. The process of the evolution of Kosovo Modernism a. destruction of the Old Market (Çarshia) in Pristina; b. construction of Media Building "Rilindja" in Pristina, designed by G. Konstandinovski; c. renovation of the Technical Faculty in Pristina, designed by Edvard Ravnikar.
© Credits: a. CHwB. Heritage of Pristina – Remained Heritage of Pristina. Pristina: Prograf, 2008; b. Gjinolli, Ilir. and Kabashi. Lulzim. Kosovo Modern: An Architectural Primer. Prishtina: National Gallery of Kosovo, 2015; c. authors



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[Hoxha, 2008], bringing new architectural spirit for Kosovo, but very similar to what was already happening in wider region. A platform of new political and social movement in Kosovo was being promoted.

The external forces, in this case political and social context of the time, transformed major cities in Kosovo, migrating their identity from oriental spirit with narrow streets to huge boulevards and 'socialist concrete' [EU/CoE, 2012]. The architecture of socialist Yugoslavia brought the light of a cultural movement that was already gravitating in most of the countries in Yugoslavia. As valued, Yugoslavia was a country deriving between traditional cultures and competing concepts of modernization. [Kulić, Mrduljaš, and Thaler, 2012]. This diversity led to a valuable movement in Kosovo's architecture, the modernist architecture.

3. FIRST CONSTRUCTION: BUILDING KOSOVO MODERNISM

While loosing the connection with its cultural heritage, mostly influenced from Byzantine and Islamic architecture, Kosovo in the same time was opened toward new architectural qualities, featuring rationalism to the dynamic plasticism [Mutnjaković, 1981].

The social, cultural and architectural developments of Kosovo started in 1950s, and continued till late 1980s, aiming to bring 'modern contemporary' cities. However, the decade of the 1970s in Yugoslavia could in many ways be considered the golden age regarding the development of architecture in Kosovo [Jashari-Kajtazi, 2016]. This was the time of extensive modernization and urbanization in tune with the socialist ideas, which required also a significant construction of housing and civic structures [Mrduljaš and Kulić, 2014]. This period is characterized also by the willingness of the Yugoslavian government to apply advanced urban planning and architectural design in the rapid process of urbanization. In the 1960s and 1970s also the political position of non-Slavic groups within Yugoslavia improved significantly. This was the case also for the region of today's Republic of Kosovo [Mrduljaš and Kulić, 2014].

The political status of the Autonomous Province of Kosovo and Metohija (1945 - 1963) was in 1963 changed from the 'autonomous region' to the 'autonomous province' and in 1968 to the 'socialist autonomous province'. This was the moment when Kosovo received its own constitution (Kushtetuta e Krahinës Socialiste Autonome të Kosovës, 1974) and began to be represented in federal institutions, retaining a

complete state apparatus including a Parliament, Supreme Court and independent police force [Limani, 2017]. Since Kosovo was granted to have its own administration, assembly and judiciary it also needed the buildings to house these political bodies and institutions. It also became evident that it had to be modernized and urbanized, in short, the need to build modern cities of Kosovo was evident. Modern architecture was seen as a tool that could be used in this process of modernization and urbanization as well as incorporation of the Province of Kosovo into the developed modern Socialist Federal Republic of Yugoslavia.

During the modernist period, Kosovo became a land of opportunities where architects from other republics of Yugoslavia, and later on also local architects, could express their architectural statements. While cities of Kosovo were going through a process of transition, with the urban regeneration of old city cores and the construction of main public facilities, community of architects took the opportunity to participate as well as to contribute to the state agenda, that of a modernizing Kosovo and incorporating it or placing it on the same level of urban and technological development as the rest of Yugoslavia.

Mostly in 1970s major cities of Kosovo were already planning and bringing designs of most representative buildings, listing here administrative city buildings, libraries, cultural houses, city hotels, post offices, bank offices, sport facilities etc. The need for modernist cities, emerged all national and city capacities in designing modernist city centers, planning new neighbourhoods, designing new industrial areas and generally re-conceptualizing the urbanistic solutions of main cities of Kosovo. However, the process of modernization and the attainment of the prosperity for Kosovo didn't simply include major cities (Pristina, Mitrovica, Prizren, Peja, Ferizaj, Gjiilan, Gjakova). It also included the turning of un-urbanized areas into touristic and new attractive meeting points for the entire region (Brezovica, Landovica and Istog). Kosovo was gradually transformed and modern architecture and urban planning was used as a tool and support of this transformation (Figure 2).

Kosovo modernist architecture started to get published in the main architectural magazines of the region ('Arhitektura Urbanizam - časopis za arhitekturu, urbanizam, primenjene umetnosti i dizajn'; 'Arhitektura - časopis saveza arhitekata hrvatske'). Some modernist buildings were included in foreign books on modern architecture as fine examples of modernism of the time [Kultermann, 1993]. In 1981, Kosovo modernist architecture of 1970s was presented among archi-

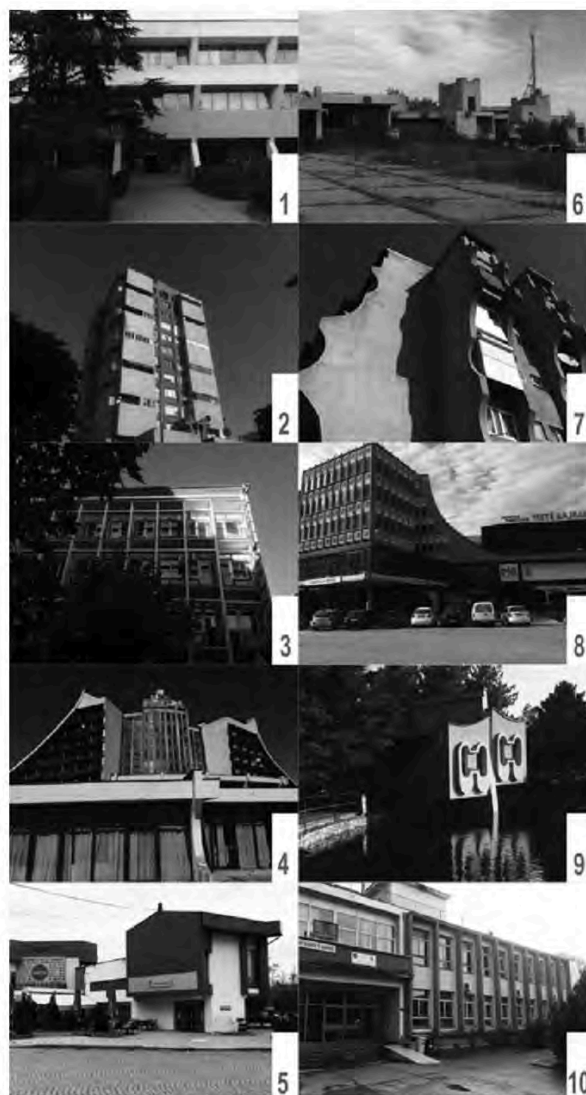


Figure 2. Overview of the development of modernist architecture of Kosovo in the main cities and touristic areas: 1. Institute of Albanology in Pristina, M.Pečić, 1975; 2. Residential Tower in Gjilan, M.Pečić, 1976; 3. Hotel Lybeteni in Ferizaj, D. Šugarčev, I.Šabić and M.Damjanović, 1960; 4. Hotel "Narcis" in Brezovica, M.Durić, R.Stanojević, 1978; 5. Shopping Mall in Prizren, Srbija Projekt, 1967; 6. Motel "Vëllazërimi" in Landovica, M.Pečić, 1973; 7. Apartment Buildings in Gjakova, M.Pečić, 1976; 8. Shopping Mall in Peja, S.Zivković, 1978; 9. Motel "Trofta" in Istog, Q.Beqiri, 1979; 10. Army House in Mitrovica, D. Hadzipešić, 1952.
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architecture of other republics in the Croatian magazine 'Arhitektura', speaking of similar architectural values and professional achievements during the 'golden ages' of architecture of Yugoslavia (Arhitektura 176+7/'81 and Arhitektura 178+9/'81). This is one indication of the fact that gradually architecture fit the political and cultural agenda of the state, which was to raise Kosovo to the same level with the other republics of Yugoslavia.

Among the material production of the modernist period of Kosovo, we find well-known architects from different nationalities (all from the region) that became actors of the modernist architecture of Kosovo. Kosovo architecture counts the contribution of significant regional architects, listing here Croatian architects Juraj Neidhardt and Andrija Mutnjaković; Slovenian architect Edvard Ravnikar; Macedonian architect Georgi Konstatinovski.

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Out of a sudden, Kosovo became a place where different regional architecture school could be compared in a matter of their achievements and their 'products', since some of these buildings became good examples of modern architecture. National Library of Kosovo (**Figure 3**) was mentioned internationally (14th International Architecture Exhibition, Fundamentals) as one of the examples of regionalist architecture of

the region [Ivas, 2015]. It is published in dozen of international publications as a significant example of regional architecture [Kultermann, 1993]. Youth and Sports Center "Boro and Ramizi" (Figure 4) was elaborated as one of the three selected projects in the comparative article of modernist architecture of Yugoslavia "Tri Značajna Društvena Centra" [Mladenović, 1982], speaking of its importance in the regional context. Motel "Trofta" (Figure 2.9) was awarded with Borba Prize in 1981 a competition organized for the best project realized in former Yugoslavia.

It is evident that during modernist period some of the best Kosovo's architectural works were designed and built; the School of Architecture was established (1978); architecture institutions did their most significant work and Kosovo ar-

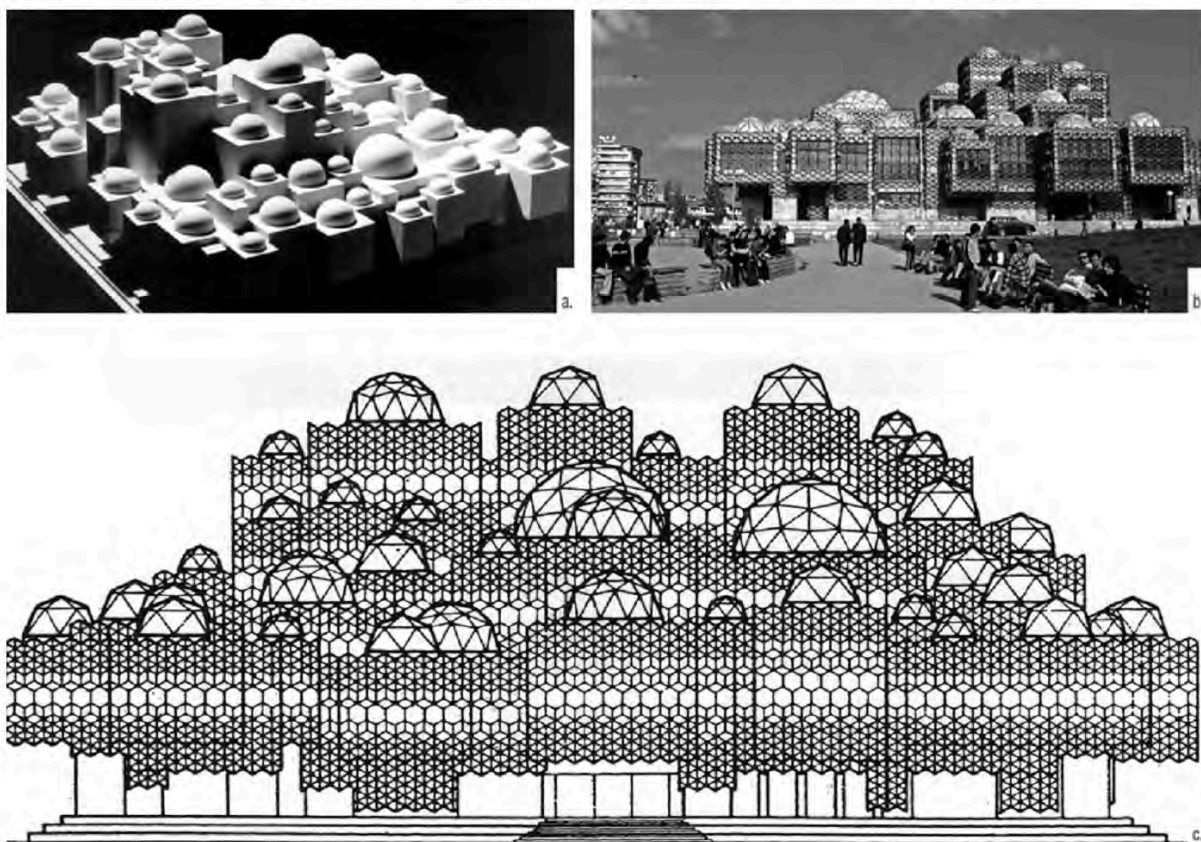
chitecture began to be included in the written reviews and books of modern architecture of Yugoslavia. Practically, the productive dimension of Kosovo modernism consists of not only the construction of the important buildings and public areas of the time but also the establishment of professional institutions and the regional school of architecture. All the significant achieving facts of Kosovo modernist movement prove the architectural values of this period.

4. SECOND DESTRUCTION: VANISHING MODERNISM

At the end of the 1980s, beginning of 1990s, intensity of the construction of modern architecture began to diminish [Gjinolli and Kabashi, 2015]. Significant political changes that took

Figure 3. Kosovo National Library: a. paper model, 2. exterior view, 3. west facade. A. Mutnjaković, Pristina, 1973.

© Credits: Gjinolli, Ilir. and Kabashi. Lulzim. Kosovo Modern: An Architectural Primer. Prishtina: National Gallery of Kosovo, 2015



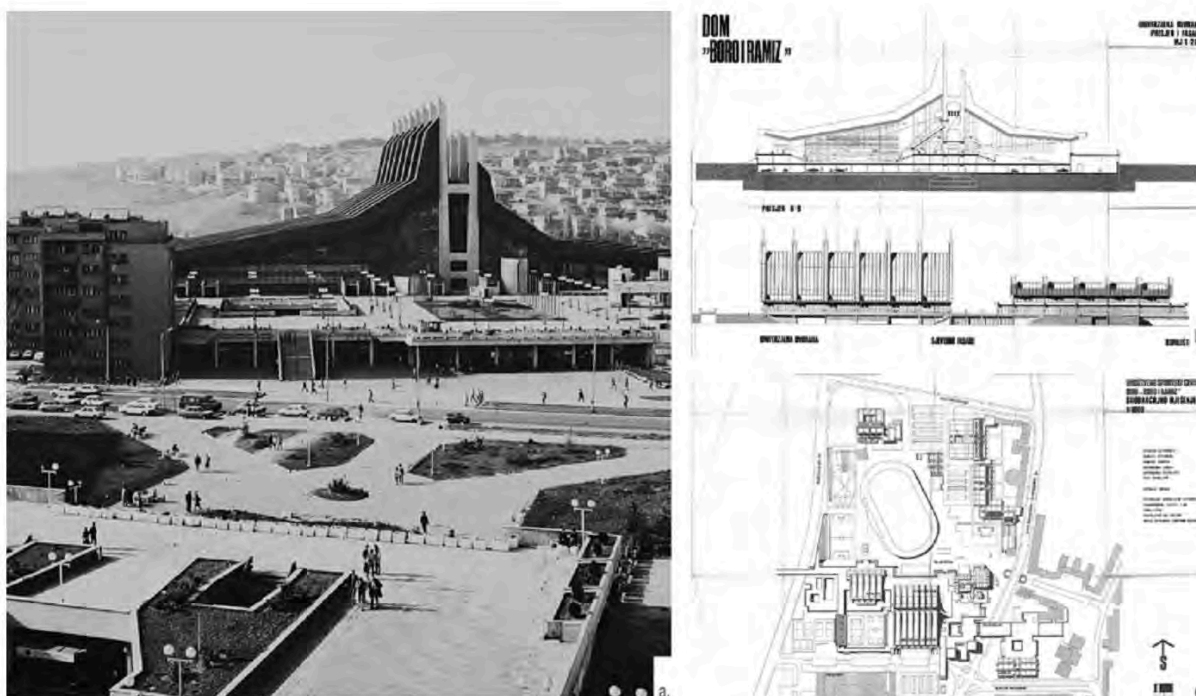


Figure 4. Youth and Sport Centers: "Boro & Ramizi": a. exterior view, b. section and Facades, c. detailed plan. Ž.Janković, H.Muhasilović, S. Ešpek, Pristina, 1973 © Gjinolli, Ilir. and Kabashi. Luzim. Kosovo Modern: An Architectural Primer. Prishtina: National Gallery of Kosovo, 2015

place in Yugoslavia in 1980s (after TITO passed away), affected also the socio – political and architectural situation in Kosovo. In 1991 Serbia took radical steps in excluding Albanians from the institutions, leading to '99s Kosovo War [Is-majli and Kraja, 2011]. With the independence of Republic of Kosovo, significant developments took place in the newly consolidated country. These developments influenced directly the inherited modernist architecture.

Kosovo, which after the end of the war was administrated by the UN Mission – UNMIK, witnessed rapid transitions in the administrative system. Kosovo cities were again attached with economic, political and social changes. What affected directly the modernist architectural and urban structures of Kosovo was the process of the privatization, as the most radical aspect of the transition from the socialist state system to the democratic and market system [Gjinolli, 2015].

During the privatization process, buyers of social properties were not limited for future interventions in respective facilities. Hence, after a decade of rough interventions, the inher-

ited modernist architecture of Kosovo is facing major changes that are influencing directly the original state of structures.

5. CONCLUSION

Modern architecture of Kosovo counts remarkable architecture examples, rationally comparable to the modernist architecture of the wider region. Besides the architectural values, the development of modern architecture in Kosovo was an important factor in the development and improvement of the political and economical position of Kosovo in Yugoslavia. Unfortunately, even though a considerable number of modernist buildings of Kosovo could be valorised as good examples of modernist architecture, Kosovo Modernism is still not enough valued and promoted. In addition, recent developments have endangered iconic modernist buildings. The latest transformations of modernist structures of Kosovo, ultimately call for evaluation and protection.

It is evident that Modernist Architecture of Kosovo is also poorly researched and promoted comparing to the modernist

architecture of the region. Additionally, it is mostly endangered of being vanished without firstly being researched, valorised and nationally appreciated.

By historically building the life of Kosovo Modernism, its social and political context, this paper highlights the quality of modernist movement of Kosovo and the urgency of its protection as national heritage. It calls for attention for international and national involvement on valorising the presence of Modernist Architecture of Kosovo and further more, taking on all the necessary steps on its promotion and protection.

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THE BRAZILIAN AMAZONIA AND ITS MODERNITIES

Hugo Segawa, Marcos Cereto, Marianna Cardoso (Brazil)

ABSTRACT

The Amazonia occupies about 60% of the area of Brazil and is the last and largest portion of the country to be developed. In the 1930s the Brazilian government improved an Amazonian integration program. After the WWII, the increase of large-scale economic activities, especially mining, along with predatory natural resource extraction, marked the beginning of major environmental problems and uncontrolled urbanization for the existing cities. The change of the capital to Brasília in 1960 established a milestone in the internalization process. Actions that aimed the improvement of region's economic conditions characterized a modernization induced by governmental input. This scenario demanded a planned framework, and the migration of architects from the developed centers to the Amazonia, resulting in the insertion and assimilation of an architectural culture within the region. The dialogue between the universality of the modern and the vernacular, between the modernity of Southeastern Brazil and induced modernization, constituted a peculiar architectural production that matured over decades. Works from architects such as Vital Brazil, Bratke, Antunes Ribeiro, Bina Fonyat – central figures of the modern Brazilian mainstream – were built in Amazonia. A following generation of migrants or disciples, such as Severiano Porto and Milton Monte, developed architectural languages in which regional knowledge became expressive, even though they were embedded in the canons of mainstream modernity. This paper aims to narrate episodes of a possible double identity – Brazilian and Amazonian, and the process of making such architecture.

1. INTRODUCTION

In 2008 a play titled *Amazonia* was in the Young Vic Theatre in London. According to synopsis published in the newspaper *The Guardian*, *Set in the Brazilian rainforest, Amazonia tells of the all-singing, all-dancing local villagers whose traditional way of life is threatened by deforestation. With the fish dying in the rivers, the rubber tappers losing their livelihood, and*

*the best bull in Amazonia refusing to dance, things look bleak, particularly when farmer Seu Antonio leaves his nephew – who believes that cutting down the forest is modernisation – in charge. Fortunately the spirit of murdered activist Chico Mendes is on hand to make sure that wrongs are righted, and everyone can have another nice dance after he has dressed up like a sparkly yeti and issued a manifesto.*¹

The play deserved disappointing reviews from *The Guardian*, as well as from *The Telegraph*:

*Frankly, Amazônia is an often incomprehensible mess, with a disjointed and confusing story-line based on unfamiliar myths, characters you don't learn enough about to care for [...]. The worst thing about the show is its dishonesty. At the end, the village leader's nephew has felled all the trees and the characters' traditional way of life is doomed. But that doesn't prevent an interminable celebratory ending of colourful costumes and traditional quadrilha dancing.*²

The *Guardian* reviewer concluded: "poor rainforest, and poor, poor us."

The Amazonia occupies about 60% of the Brazilian territory and is the last and largest portion of country to be developed. The geographer Eidorfe Moreira (1921-1989) problematized the definition of Amazonia in the 1950s: "it can mean both a river basin and a botanical province, a political complex as an economic space." He goes on to say: "it is not only a physiographic individuality, but also the fixation of a human experience on the landscape, thus allowing us a particular view of the greatness and vicissitudes of man in a cosmic sense."³

Belém and Manaus, founded in the 17th century, are the two major Brazilian cities in Amazonia. The extraction of latex in the second half of the 19th century brought prosperity to the region and urban culture, a period known as the Amazonian *belle époque*. Amazonia lost the world primacy of productivity after the increase of the rubber plantations in English colonies in Asia, causing almost its immediate decay in the second decade of the last century.

2. INTEGRATION EFFORTS OF THE BRAZILIAN AMAZONIA

The Revolution of 1930 and the presidential term of Getúlio Vargas (1882-1954) established a geostrategy to expand the urbanization of the country in an effort of national unification. Amazonia represented a frontier to be integrated, more specifically to the economies of Rio de Janeiro and São Paulo. In the post-WWII, the increase of large-scale economic activities, especially mining, along with predatory wood extraction, marked the beginning of the environmental problems and uncontrolled urbanization of the cities, that still remain nowadays. The change of the capital to Brasília in 1960 established a milestone in the internalization process. Considering the continental dimension of Brazil, this move shifted the geopolitical vector of growth towards the North and Midwest.

Actions that aimed improving the region's economic condition induced by governmental input brought some modernization. One of these initiatives was the creation of an Amazonian industrial pole that begun in 1967. The Manaus Free Trade Zone allowed the economic integration of the region with the rest of the country, although it did not result in the expected regional development. The opening of roadways, the construction of hydroelectric plants were other attempts of appropriation of Amazonia, however with negative impacts and numerous environmental and social conflicts.

3. THE MIGRATION OF SOUTHEASTERN⁴ ARCHITECTURE TO AMAZONIA

The entry of the United States into WWII motivated a strategic approximation for Brazil. The Brazil-United States Military Agreement of 1942 changed the situation of Amazonia. Due to the control of rubber plantations in Asia by the Japanese, the resumption of latex production in Brazil became a priority to the Allies. The lack of rubber tappers to meet the new demand resulted in the creation in 1943 of the SEMTA by the Brazilian government. Its direct impact was the migration of about 55,000 workers to the Amazonian rubber plantations.

Álvaro Vital Brazil (1909-1997), an architect from Rio de Janeiro, headed the Engineering Department of SEMTA and designed the *pousos* (shelters) built every 300 or 400 km to provide a refuge to the "rubber soldiers" after the painful displacements from the Atlantic coast to Amazonia. The project envisaged its execution in less than 30 days. The construction system involved local manpower and regional materials for the structure and straw for the roofs. The *pousos* can be con-

sidered the pioneering combination of modernist rationalism and vernacular construction system within local needs.

Vital Brazil also designed Manaus Air Base (1944) and Belém Airport (1945), which allowed the rubber to be exported by airplanes and connected the two cities to the national air network. Both used wood structure combined with industrialized materials, such as fiber cement and plywood.

He was of the first generation of modern architecture in Brazil referred to the doctrines of Le Corbusier. The works of these architects had international visibility in books as *Brazil Builds*⁵ (1942) or *Modern Architecture in Brazil*⁶ (1956) and in magazines as *L'Architecture D'Aujourd'hui*, *Architectural Forum*, *Casabella*, *Architectural Review*.

After the end of the war, the government resumed infrastructure policies, such as the construction of the headquarters of the federal retirement and pension institutes: in Manaus, the building of the IAPETEC (1947-1951), and in Belém, the building of IAPI (1949-1950), projected in Rio de Janeiro by Edmar Penna de Carvalho (1913-2003). A sanatorium for Tuberculosis in Manaus (1947-1953) was designed by Jorge Machado Moreira (1904-1992). These public works disseminated modern architecture in the region.

The opening of international airspace has led to the expansion of air routes between countries, resulting in the need for a hotel with an international standard in Manaus. Paulo Antunes Ribeiro (1905-1973), hired by a local businessman, designed the Amazonas Hotel (Fig. 1) in 1947 with Roberto Burle Marx's landscaping (1909-1994).

Other modern samples were built in Manaus until early 1960s. Some of them were authored by architects trained in Rio de Janeiro, as the Roadway Palace (1955-1960) by José Bina Fonyat (1918-1977) and the SESC building (undated) by Norberto Rizzo; the Ponta Pelada Airport (open 1954), the Ypiranga movie theatre (open 1959) the LOBRAS store building (open 1963), and the Palace of Culture (open 1963) are by unknown designers.

While these buildings represent isolated cases of modern architecture, the most accomplished experience integrating Southeastern modernity and Amazonian environment was the planning and the architecture of two company towns in now Amapá state.

In 1953 the Brazilian company ICOMI obtained the federal concession of manganese exploitation in a site 200 kilometers from Macapá. The enterprise required meticulous planning and construction of industrial facilities, transportation systems (railroad, port), accommodation and infrastructure for

the workers involved in this initiative - in other words, settlements with urban characteristics.

Oswaldo Arthur Bratke (1907-1997), an architect from São Paulo, designed *Vila Amazonas*, settlement near the port of Macapá and *Vila Serra do Navio*, an operational base near the mineral deposits, for a population of about 2,500 inhabitants (Fig. 2). The project examined a number of site variables (ecology, environmental preservation, working conditions, sociability, livelihoods, local culture and the presence of external technicians) and defined some criteria for the functioning of these towns (urban design within the CIAM principles, sanitation, mobility logistics) and architecture and furniture - administrative building, hospital, school, cinema, supermarket, clubs, hotel, church, employees' accommodation and miners' dwelling. He also defined the operation schedule, the selection and rationalization of constructive and material systems, and the bioclimatic adequacy of build-

ings. The projects were contracted in 1955 and the town started operating in 1960.

The *Vila Serra do Navio* became a landmark urban-scale undertaking in Amazonia, and its architecture a reference for the architects of the region from the 1960s.

3.1 Surveying Amazonia

In addition to the migration of building projects, the 1960s saw the migration of architects to the region. One of these, Severiano Porto (b. 1930) formulated a *local knowledge*.

Graduated in Rio de Janeiro in 1954, in 1965 he was invited to work in Amazonas. At the time he established a partnership with the architect Mario Emilio Ribeiro, which was fundamental for the development of the works in the North of Brazil.

His first Amazonian buildings were affiliated to the method and aesthetics of Oswaldo Bratke, with a structural rational-

Figure 1. Paulo Antunes Ribeiro, Hotel Amazonas (1947-1951), Manaus. Hugo Segawa archive. Unknown photographer. Undated postcard.



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ism and control of the productive and constructive process with the use of reinforced concrete, castings, industrialized tiles and blades in exposed concrete. These usual construction systems in the 1960s architecture were adopted at the Military Police Barracks (1966-1967), the headquarters building of CAMTEL (1965-1966), Vivaldo Lima Stadium (1965-1971). However, the restaurant *Chapéu de Palha* (1966-1967), with straw on the roof and wooden pillars of *aquari-quara*, a regional tree used for streetlights, pointed a new repertoire.

In 1967 Porto moved definitely to Manaus and approached to the place with a differentiated understanding of the fragilities and opportunities of Amazonia.

The architect's house (1971), a plan unfolded from a garden living room, is laid on a distinctive ambiguity between indoors and outdoors, responding to the climate. The use of rough wood connects modern practice with popular carpen-

try. The elevated reservoirs of COSAMA (1972-1974) and the headquarters building of SUFRAMA (1971-1974) present metabolic principles through the repetition of parts and / or expansion.

In the 1970s Porto reached a constructive maturity through experimentation. This was aligned to the Rio Negro Manifesto of Integral Naturalism⁷ proposed in 1978 by Frans Krackberg, Sepp Baendereck and the French critic Pierre Restany, reflecting environmental concern with Amazonia, performed by art.

The Residence Schuster (1978) was a wood "Jungle House" in dialogue with the rainforest and organized from a central void that continues the upper floors to the ground, released with pilotis as a living place with hammocks. The Pousada in Silves (1978-1984), for ecological tourism, has its structure with rough and squared wood. The circular plan with an eccentric garden in the geometric center of the composition has

Figure 2. Severiano Porto, Balbina Environmental Protection Center, Balbina, Amazonas. Photo Severiano Porto, 1984.



an asymmetric roofing in a sophisticated constructive system experiment. The campus of the University of Amazonas (1973-1985) is within an area of urban forest. It is a regular grid scheme oriented to better ventilation and insolation, organizing the buildings of reinforced concrete and steel. Laboratories, administration, classrooms, auditoriums and social centers are integrated into pedestrian covered walkways surrounded by dense vegetation. The Balbina Environmental Protection Center (1985-1987) is the masterpiece of the architect (**Fig. 3**). The complex was designed to monitor the impacts of the Balbina hydroelectric plant. The buildings appropriate the sense of the interior of indigenous *malocas*, with a sinuous roofing in *cavaco*, sheltering the several laboratories and protecting the walkways of the weather conditions. Severiano Porto explored the properties of the various materials in the Amazonian context. Just as Vital Brazil used the materials and techniques available in the *pousos* and airports

in the 1940s, Porto experimented with concrete, steel, reinforced masonry, gypsum panels and wood. The peculiar way he used wood in large buildings distinguished him as a wood mastermind. Although he had this fair recognition, he could be known as the architect of the *appropriate materials*.

4. FACING THE TROPICS

Amazonia was the last region to offer professional training in Architecture in Brazil. It was held since 1964 at the UFPA, in Belém, and was the only course until 1992. These architects' and students' efforts, in interaction with the schools of other parts of the country, were fundamental for the maturation of local practices, in dialogue with the Brazilian and international modernity.

It is possible to point out a search of an Amazonian perspective in the organization of the 1st Specialization Course in Architecture in the Tropics, promoted by this school from

Figure 3. Oswaldo Bratke, dwelling for miners, Vila Serra do Navio, Amapá. Photo Hugo Segawa, 1996.



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1985-1987. Its content discussed issues of identity, environment, environmental control, bioclimatic architecture, technology in the Amazonia, vernacular architecture, the city in the tropics, and various approaches for the recognition of local culture and, in a larger scope, inspired in the debate on Critical Regionalism⁸. Coordinated by João Castro Filho (b. 1950) and José Raiol (b. 1947), professors from the University of Brasília, University of São Paulo and independent professionals, as Severiano Porto, were lecturers in the course. The group around this initiative constituted a local movement, having a role during the 1980s and 1990s. Milton Monte (1928-2012), was an important activist. During his professional career he experimented solutions that derive from his interpretation of an architecture for the tropics (Fig. 4).

5. AMAZONIAN COROLLARY

The November 1947 issue of *The Architectural Forum* magazine was dedicated to Brazil. Its cover exposed an allegory that distinguished Brazilian architecture: a smiling sun, whose rays are deflected in umbrellas held by buildings. The texture of each umbrella is an enlarged image of the *brise-soleil* of each of the buildings, published in the issue. The bioclimatic concern has always been a value attributed by international critique to the Brazilian identity, symbolized in the sun protection devices of the Ministry of Education and Health.

Such modern architecture values were gradually conveyed in mid-20th century to Amazonia in public buildings, designed in Rio de Janeiro, or by architects that aimed to embed the Amazonian character to a peculiar modernity, as in *Vila Serra do Navio*.

In the post-WWII years several architects migrated to the Amazonia carrying the Brazilian modern repertoire, and gen-

Figure 4. Milton Monte, Interpass Club (1989), Ilha do Mosqueiro, Belém, Pará. Photo Hugo Segawa, 1992.



erations of local architects have filtered this modern attitude deepening in local perception, as did Severiano Porto and Milton Monte. Both, as well as the group around the Course in Architecture in the Tropics, constituted a set of reference values for a regional practice, from antecedents like Bratke and later, Porto itself.

The *architectural rigor* in Amazonia refers to the adequacy of buildings to the environment. This attitude means a deep understanding of the Amazonian being, the nature and their interactions. It is inspired by the Amazonian habitude, the naive architecture, the indigenous dwelling - repositories of local knowledge. This approach to popular culture is the persistence of the Brazilian modern movement posture: the interpretation of the traditional and the context - reason for an accomplished "Brazilian modern regionalism," from the international viewpoint.

The Amazonian architecture relies not only on wood, brick, cement; it considers breeze, wind, rain, water, smells, fauna, flora. An anthropologist will certainly see formal analogies with indigenous dwellings. Architecture is in its essence a shelter. The form of the Amazonian architecture has an intimate relation with this symbolic approach, the function. It is an architecture fed of allegories: the wind blows; the tree is a symbol of comfort, of shade; architecture is a tree (João Castro Filho); architecture is a generous roofing, an open space, airy, save from the sun and the rain, a cozy place for the Amazonian life (Milton Monte). Principles concerning environment and development, as declared at the Stockholm Conference in 1972, is an Amazonian statement (Severiano Porto). The constitution of an Amazonian language is still an inquiring process. Amazonian architects must respect a popular saying: Nature does not react readily against the aggressions that victim it. It simply takes revenge on its aggressors.

NOTES

1 GARDNER, Lyn. "Amazonia," accessed on January, 12, 2018, <https://www.theguardian.com/stage/2008/dec/106/amazonia-review-young-vic>

2 SPENCER, Charles. "Amazonia at the Young Vic - Review," accessed Jan., 12, 2018, <http://www.telegraph.co.uk/journalists/charles-spencer/3702542/Amazonia-at-the-Young-Vic-review.html>

3 MOREIRA, Eidorfe. *Amazônia: o conceito e a paisagem*. Rio de Janeiro: SPVEA, 1960, p. 9-10.

4 The Southeast of Brazil is comprised by the states of Rio de Janeiro, São Paulo, Minas Gerais and Espírito Santo. This is the most developed and wealthy region of the country.

5 GOODWIN, Philip, KIDDER-SMITH, Daniel. *Brazil Builds: Architecture New and Old 1652-1942*, New York, MOMA, 1942.

6 MINDLIN, Henrique, *Modern Architecture in Brazil*, Amsterdam, Co-libris, 1956.

7 KRAJCBERG, Frans, Rio de Janeiro, Index e Libris, 1992.

8 The Spanish review A&V Monografías de Arquitectura y Vivienda, in the edition dedicated to the theme Regionalismo (n.3, 1985) is a good sample of the dissemination of the debate at the moment.

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THE PLAZA AS THE LOCUS OF CONTINUOUS MODERNITY

Maximiano Atria (Chile)

ABSTRACT

Modern architecture, in contrast with the common idea of *tabula rasa*, was based on a new approach to history, and there has been long discussions about its continuity or discontinuity within the cultural history of the Western world. These issues of continuity/discontinuity deal with the past (modern architecture as inserted in the long-term history reaching back to the Renaissance) and with the future (modern architecture's ideals being still alive and valid for the changing world of today or tomorrow).

This paper follows this line of continuity expressed in the continuous/discontinuous use of the plaza as the public space that concentrates the values of culture, history and identity, inserted in the everyday life of the city. It discusses the role of the Latin American plaza as a typology that comes from the arrival of the Spaniards to America, as the focus of order in the republican city after the independence in each country, and as the modern place that replaced the "corridor street" and constitutes today the epitome of contemporary society, the place of reunion, demonstration, and revolt. In that light, this paper analyzes the capacity of modern architecture for applying new meanings and values to a traditional structure, turning it into the core of its urban proposals, as some modern projects show, such as the Bogota Plan by Le Corbusier or the Plaza of the Three Powers in Brasília, by Lucio Costa.

Opening a different front in this discussion, the paper address the case of Santiago de Chile's Plaza de Armas as an instrument of "modernity", since its inception in the XVIth century as an empty, multifunctional square to the mixed and hybrid space that it is today.

1. THE TRADITIONAL PLAZA AS A TYPOLOGY

In January of the year 2000, works for the renovation of the main square of Santiago de Chile, the Plaza de Armas, were inaugurated (Fig. 1). The project, by a team of local architects led by Rodrigo Pérez de Arce, had been selected in an architectural competition held in 1996, when a new subway sta-



Fig. 1. Pérez de Arce, Bianchi, Caamaño, Salas, architects. Model of winning entry at the 1996 competition for the redesigning of Santiago's Plaza de Armas. Source: ARQ 39, 51.

tion was planned in the underground of the plaza, and whose construction required the destruction of at least a fourth of its surface. The existing plaza, with its decaying gardens and benches, had been designed by the French landscape architect Guillaume Renner in 1896, one hundred years before, following the tastes of the epoch for urban gardens, with winding roads, water fountains, cast iron lamps and exotic pieces of vegetation. The new plaza recovered, in a historically conscious act, two models widely used in the configuration of the typical Latin American plaza: the garden and the esplanade. (Fig. 2)

Even if its concordance with a written law (the Leyes de Indias) is contested,¹ the layout of the first cities founded by the



Fig. 2. Pérez de Arce, Bianchi, Caamaño, Salas, architects. Drawing of proposed esplanade in front of the Cathedral. Source: ARQ 39, 51.

Spaniards in America followed the grid and established, at its center, an empty space where all the public acts would be carried out: military parades, official activities, diffusion of news, informal—and at some times, formal—commerce, executions, etc. It was the most important place in the city, around which were built the cathedral and the bishop's palace representing the Catholic Church and the public buildings representing the Spanish Crown, the real powers in the colonial society.

It remained, in every major or middle city, almost unchanged until after the Independence, when the new cultural model was France and everyone wanted to imitate the ways of Paris, in its architecture, its urbanism and its quotidian way of life. In the second half of the nineteenth century, picturesque gardens started to appear, as well as monuments, marble sculptures and other amenities, making the plaza the place to stroll and to see and be seen. Even if the cities grew to reach metropolitan sizes, the central plaza remained “the heart of the city”.

That is why at the turn of the twentyfirst century it seemed all too obvious to redesign the new square in Santiago paying homage to these two models, leaving behind the identification with a specific model and recognizing the actuality of a public space in a capital city of more than five million inhabitants.

It was, also, an opportunity to highlight the surrounding buildings of this historically charged place, and the geometric configuration of the new design answered to their disposition, which had stayed unchanged since the day of the city's

foundation. To the North, the public buildings representing the State (the current Central Post Office—former Governor's Palace in Colonial times and seat of the republican government after Independence—, the current National Historic Museum—former Real Audiencia or High Court—and the Santiago Municipality); to the West the buildings representing the Church (the Archbishop's palace, the Parish of the Tabernacle and the Metropolitan Cathedral); to the South and East, the private buildings with commercial porticoes (originally the residential houses of the most powerful families). Facing the two public sides the new design of the plaza left an empty L-shaped esplanade, an open space to receive multitudes and to provide free passage and flowing movement for pedestrians, and to allow extended views of the magnificent stone and stucco façades. Toward the southeast corner, the vegetation (old and new) was concentrated, together with benches and a music kiosk, where small orchestras could entertain in the weekends.

All the buildings surrounding the plaza have been successively transformed and modified over previous ones, in a permanent work of updating and embellishing, to compose the image we see today, a mixture of epochs and styles to which we should add the four eccentric corners: a small metallic building from the late nineteenth century, a rather nondescript building from the forties, a modern high-rise building in the slab and tower typology from the fifties and a mirror curtain wall building from the eighties.

This accumulation of remains from an ample past is common in the central plazas of Latin American cities, and the inclusion of contemporary interventions is a signal of the continual relevance these spaces have in the present life of these cities. Besides, the neutrality of the original layout—an empty square surrounded by relevant buildings—has allowed, throughout history, to keep these plazas as active and bustling places, and not as a fixed site museum, with a strict univocal function, like a small square in front of a church, for instance. Besides, as they were the initial focus of a new city, they concentrated a variety of functions and operated for centuries as the only public space open to all in the colonial societies. There is some signal of modernity there that should not easily be overlooked.

“Modern”, in the sense that I use it here, relates to a certain *conscience* of being modern,² as an attitude of straight impudence toward the past, in a permanent conflict between what to preserve and what to change—or reuse. In that sense, the incorporation of picturesque gardens in the plazas of the

nineteenth century (in Lima, in Mexico, in Buenos Aires, in Bogotá and in Santiago, to name just a few) was, indeed, truly modern regarding the current ideas of their respective societies. The transformation of its surrounding buildings in order to “update” them was, also, a truly modern attitude. All that only to confirm the position of modernity as a coherent experience regarding the times in which we live.

We find a similar positive attitude of “making space” as a modern intervention in different moments in history, as in the creation of regular, empty squares in old cities like Paris (the Place Royale or Place des Vosges, 1605) or Madrid (the Plaza real, 1590), for instance. The Latin plaza, reaching back in history to the Greek forum, as opposed to the Anglo-Saxon main street, is the mark of a new way of conceiving public space, not only as a mean to go from one place to the other, but to reserve an open space, usually regular in shape, even if the surrounding city lacked regularity, to allow for new uses, and for the expression of new human groups inside the changing society of the Enlightenment.³

The enormous task of spreading population over a whole continent starting with the arrival of Europeans in America in the XVth Century was, mainly, based on a city-building effort. Describing today that task forces us to place it in the tradition of modernity, founded in humanist and rational conceptions of the city and acting on the new territories with the intention of applying order and regularity. The Spanish Crown would use the city as a controlling tool, suspecting everyone who lived off-limits⁴ and forcing the informal commerce of the lower classes to establish inside the central plazas, turning them into markets, reinforcing the multipurpose condition of this singular place.⁵

This aspiration for order resulted in a strong and long-lived lesson. Modernity took the plaza as the key typology of public space, related it to the exercise of democracy and built the image of society inserted in this open area. The idealized modern city imagined by Le Corbusier at the beginning of the twentieth Century had at its center an open space surrounded by buildings, and in each proposal we find a special relevance reserved for the central area, an empty space filled with people in his renderings. In Latin America, where there was a long tradition in this respect, the modern validity of the central void as the place of community was confirmed in the design of Brasília, by Lucio Costa. In its overall design, the city is structured as the crossing of two axes, but the focal point is not the point of intersection but the “Praça dos Três Poderes”, or Three Powers Plaza, around which the Parla-

ment, the Supreme Court and the Presidential Palace face each other over an empty surface, paved in stone and planted with grass and palms—again the duality garden/esplanade. Other projects assumed this structure, stressing the relevance of setting an urban layout that considers an open space as the focus of political life in the same disposition: the urban proposals for Chimbote (Sert, Wiener and Schultz, 1946-48) and Bogotá (Le Corbusier, Sert and Wiener, 1947-51). In Chimbote the architects introduced the idea of a Civic Center where the main public buildings were proposed around a central open plaza, about which Sert and Wiener said that was an “essay of reinterpreting the ancient tradition of the colonial square with a modern vision”.⁶

Regarding Le Corbusier and his plan for Bogotá, he took the traditional plaza (Plaza Bolívar) and proposed an enlarged version of it, around which he preserved the old buildings representing the Church (the cathedral) and the republican powers (the Parliament building). Describing it, Le Corbusier said that in this project he was “[uniting] past and present” and by using Plaza Bolívar to create the new Civic Center he was “confirming the choice made by the founders of the city”.⁷

2. CONTINUITY IN OUR TIME: SANTIAGO DE CHILE

Cities are in permanent transformation, and change can be physical or cultural. Not every city changes at the same rate and some stay physically the same for centuries but evolve rapidly into new societies. In fact, it is rather evident that cultural change is more dynamic, and the built mass of the city tends to transcend and adapt itself to new uses and tendencies. In Latin America, cities were founded mainly as a control and domination tool spread over extended territories, and change was precisely the kind of danger that had to be avoided. The cities founded by the Spaniards in the XVIth Century were praised by the Conquistadores as being “founded in our own times”,⁸ a qualification that not only relates them to a modern attitude, but that assumes a striking similarity with the aspiration of the Italian Futurists of each generation building their own cities. History proved differently, and the Latin American cities remained very much the same for three hundred years at least, with their regular and straight streets and their empty and barren plazas. The new societies which developed after the Independence (definitively resolved around 1830) rediscovered their cities as their own generation’s responsibility and started to introduce amenities that transformed the face of their urban fabric.



Fig. 3. Santiago's Plaza de Armas ca. 1840. Photographer Eugène Maunoury. Source: Archivo Visual de Santiago, <http://www.archivovisual.cl/la-poste-et-la-prison> (accessed April 22, 2018).



Fig. 4. Santiago's Plaza de Armas ca. 1900. Photographer unknown. Source: postcard.

In Santiago, the first step toward this transformation was the introduction of a marble statue in the center of the plaza in 1836, replacing the functional water source that occupied that spot until then (Fig. 3). Later, in 1850 came the planting of a round garden with a small fence, some 25 meters in diameter and, in the years that followed, additional trees, fountains and benches. At the same time, the buildings that surrounded the plaza were transformed and embellished, most of the times just by adding new ornamentation or changing the style of the facades. The plaza would be, from then on, the subject of permanent evolution, keeping its central role and sanctioning the value of institutions and citizens that lived in its proximity (Fig. 4).

Paradoxically, modern architects gave the plaza their backs, and stayed away from it during practically the whole twentieth century. A new urban plan proposed in 1934 by Austrian urbanist Karl Brunner took charge of the downtown area but did not propose any change to the plaza itself. This can be explained by the displacement of real symbolic power from the Plaza de Armas to the square in front of the Presidential Palace, when the old building on the northern side of the former was replaced by the mint factory built in the last years of colonial power, at the end of XVIIIth Century, by Italian architect Joaquín Toesca. The republican ideal of the open space appeared as evident, some years before, in the creation of a new empty plaza in front of the new Presidential palace, which implied the demolition of a whole block to make room

and gain perspective toward the main façade of the palace.⁹ All the energies of urban transformation were concentrated in the new “center” around this square, leaving the old Plaza de Armas as a forgotten and traditional, but highly symbolic, foundational place.

So, during the XXth Century, the only significant interventions in or around the plaza were the two buildings in its northern corners: the 1955 residential building in the north-east (by Sergio Larraín and Emilio Duhart) and the 1981 office tower in the north-west (by Echeñique, Cruz and Boisier).

In this context, the unveiling of the new design of the Plaza de Armas in January 2000, was a momentous step to retrace a suspended history, recognising the continuing significance of a typology that, in its sheer abstraction, and as the product of a particular historical turning point, expresses the true condition of a modern urban form.

As Nicolás de Ovando was telling the King in 1502, the success of this particular act of transformation was due to it being a true “product of our own times” in the same way as, for the modernists of the XIXth Century, the inclusion of a decorative statue in 1836 or the definitive layout of picturesque gardens in 1896 were a product of *their* times.

NOTES

1 Dan Stanislawski, 'Early Spanish Town Planning in the New World', *Geographical Review* 37, no. 1 (January 1947): 94–105. The Leyes de Indias were drawn after some decades of Spanish settlement in the New World, and came to fix in paper much of what was being done in practice. Stanislawski studies the use of the regular grid—which implies the existence of a central square—based on the knowledge of the Ten Books of Vitruvius and later instructions sent by the Crown in order to unify criteria when tracing new cities.

2 Marshall Berman, *Todo lo sólido se desvanece en el aire: la experiencia de la modernidad* (Bogotá: Siglo XXI, 1991).

3 This duality has been developed in relation with (or inspired by) the cultural and economic characterization made by Max Weber in *The Protestant Ethic and the Spirit of Capitalism*, relating a certain *ethos* of capitalism and entrepreneurship to the busy city centers of Anglo-Saxon tradition.

4 In the XVIIIth Century Spain implemented a series of political and administrative reforms (the Bourbon Reforms) to give impulse to the decaying economy of a vast empire whose institutions were no longer adapted to the dynamics of local administration and international commerce. One of those reforms established the obligation for Spaniard settler of fixing their residence inside the cities.

5 In Santiago de Chile, this control-oriented reform resulted in the construction of a market building inside the open space of the plaza, eventually demolished in the first years of the XIXth Century.

6 Fernando Freire y Aldo Facho, "El Plan Regulador de Chimbote", en *La Forma Moderna en Latinoamérica*, <http://laformamodernacnlatinoamerica.blogspot.cl/2013/06/plan-regulador-de-chimbote.html> (accessed April 22, 2018).

7 Quoted in Pedro Bannen, "Bogotá-Colombia. Cinco viajes y un plan para una ciudad latinoamericana" in Fernando Pérez O. (ed.), *Le Corbusier y Sudamérica, Viajes y Proyectos*, Santiago, ARQ, 1991, 82.

8 Nicolás de Ovando, founder of Santo Domingo (1502) in a letter to the King of Spain. Quoted from Ramón Gutiérrez, *Arquitectura y Urbanismo en Iberoamérica*, Cátedra, 1983, p. 14.

9 In 1937 a competition was held to select the design of this new plaza, which was won by architect Ignacio Freitag.

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Session 02 TACTICAL URBANISM

Session Chair: Eui-Sung Yi (South Korea, USA)



The integrity of an urban plan is seen in its continued ability to serve modern culture effectively. That same plan's identity is its ability to enmesh functionality with local topography, culture, politics and resources. Small scale urban interventions can help to balance those two overarching qualifiers. It is the strategic allocation of urban artifacts for the preservation of history and the improvement of community life and public space that can preserve the original intent of an urban plan in modern context.

To keep original intent alive, any urban intervention must appraise metropolitan artifacts' interaction with their environment and society. It must also examine their functional, technical, aesthetic, historical and social significance at the time of creation. By this definition, new monuments should appraise historical significance without detracting from societal progress. Because socio-political paradigm shifts color every inch of newly built works, urban intervention is necessary to connect the past and present in a legible and functional way.

The demarcation of functional zones in a city that can be separated from one another and rehabilitated from the top-down is no longer a valid model for preserving urban integrity. This assertion connects the varied styles of urban work proposed in the Tactical Urbanism papers. Each of their approaches proposes urban interventions that function as epicenters for the creation of multivariate metropolitan areas. These styles create scattered urban updates that grow naturally from mutual influence and a shared connection to local and regional heritage.

Torrent, in his paper concerning modern heritage and the challenges of urban conservation, seeks to understand the nuances between preserving unique buildings, residential fabric and their encompassing region. Torrent holds that legible connection to heritage is the ultimate criteria for determining which changes to an urban fabric are appropriate.

In the city of Arica, Chile, city planning was closely tied to a regional dimension. This resulted in an urban form featuring decentralized modern architecture and urban culture con-

nected mainly to future territorial goals; An urban strategy that lead to drastic expansion of city boundaries to accommodate contemporary political need. Porosity and flexibility were paramount to this urban strategy. Under this belief, Arica installed a plan conducive to integrating new styles across successive planning generations. Housing units and city centers were allowed to evolve, but their assemblage always maintained effective relationships with the street and overarching urban form.

Marina Waisman (1980) supported this dynamic attitude towards conservation. In her model of unconsolidated historic centers, she stated that monuments and buildings deserving of preservation need to be dispersed throughout an urban fabric undergoing constant and natural change. Waisman believed that monuments are disconnected wayfinders reminding us of the past and guiding our cities' growth. Her approach is defined by reinterpreting readable history and injecting its language into each building, plaza and monument to link the city's original plan to present culture. This reinterpretation however, can be difficult as historic character is often wiped clean by paradigm shifts in politics and economics. This erasure blurs the appropriate boundaries of urban intervention reducing any tactical intervention to a shot in the dark.

In Stoilova's essay on the metamorphoses of cultural memory in Bulgaria, a critical approach to defining lost heritage is found. The 20th century in Bulgaria was characterized by the fluctuating political climate of the Balkans. 1920's Bulgarian architecture focused on quantitative efficiency to accommodate a housing shortage. In subsequent decades, a reactionary quest for local expression of modern ideals ensued. Compatibility with local materials and climate became paramount and unsurprisingly, Le Corbusier's machine for living was indoctrinated into the country. In the second half of the 20th century, Bulgaria became increasingly concerned with codifying government values. As a result, privilege was given to architects who devoted themselves to communism and preservation was reduced to protection of financially valuable ob-

jects. Because urbanism did not emerge as an independent discipline until after WWI in Bulgaria, city plans varied drastically for in each of these periods.

Corbusier's five points were viewed as a way of maintaining value in the face of political instability. Stoilova references Chavdar Mutafov's *Nova Uchilishtna Arhitektura* to support this claim. Mutafov believes the manifestation of modernity is not in individual constructive elements. It is in their binding and the rational organization of processes corresponding to the changing needs of life and the organizational beginnings of architecture. Stoilova proposes that current urban preservation efforts be based on international consensus divorced from local political influence. By providing digital access to detailed historic data, Stoilova believes it is possible to globally agree upon which artifacts are truly worth preserving.

In *The Carbonia Project*, tactical urban intervention takes on the form of regional integration of coherent language. A strong fascist political climate allowed the city of Carbonia to expand its borders without examining how this expansion was related to historic initiatives. Fascism flattened the region's character preventing references to local history. This vacuous expansion and cultural suppression has made it difficult for the region to trace its own heritage and create new urban artifacts representative of a cohesive identity. Carbonia's town center for instance, is a juxtaposition of different systems of buildings and public squares. It embodies the remnants of uncoordinated generations of planning robbing Carbonia of a coherent center. The project's brand of urbanism therefore focuses reconstruction efforts at connecting disparate political eras within the framework of the city's original plan. The project is founded on development aimed at making consistent future progress possible for Carbonia at both urban and regional scales.

In *Dirty Realism Reloaded*, there is no attempt to overcome homogenized and fragmented urban space. Instead the author highlights the ability of decorative artifacts from previous generations to productively redefined for a modern age. For the Dirty Realists, the refusal of modernism to honor decorative monuments made community building an impossibility. They held that it is possible to represent more than one era's cultural zeitgeist in a single object. Through architectural provocations, the Dirty Realists thought that icons of the past could shift how we consider which urban artifacts are worth preserving. Their goal of pushing architectural preservation to the limits of rationality was viewed as both critical of historic value and progress-inspiring.

As we have seen in Bulgaria, Chile and Italy, critical deconstruction of any city's formative history is a necessary precursor to urban intervention. While cultural phase shifts often break the integrity of a city's original plan, intelligent urban intervention will continue to fill cracks in time. The interventions discussed in this paper are nodal in nature and necessitate a bottom-up approach to repairing the integrity of a city's original plan. These nodes must be located at points of historical significance such as the original city center or a surrounding industrial belt. If designed and placed correctly, meaningful urban structure can cascade from individual buildings' recharacterizing relationships of commercial areas' to high-quality residential design.

BIOGRAPHY

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METAMORPHOSES OF CULTURAL MEMORY AND THE OPPORTUNITY TO SAFEGUARD THE MODERN MOVEMENT HERITAGE IN BULGARIA

Ljubinka Stoilova (Bulgaria)

ABSTRACT

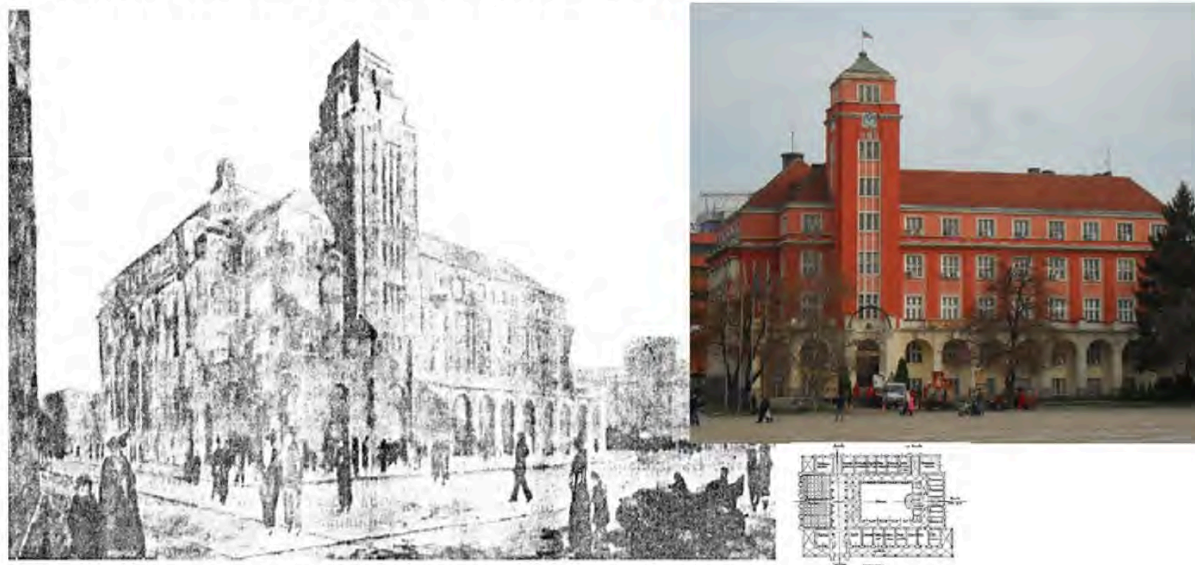
A diachronic analysis traces the parallel stages of transformations of Bulgarian cities during their 20th century modern development after WW I.

These metamorphoses were accompanied by the shift of society's cultural values and relevant safeguarding priorities from the 19th-century National Revival towards the Antiquity and Middle Ages. While in the 1970s-1980s the legal status of Monuments of culture prevented them from significant modifications, since the 1990s, the conservation process has been distorted by the removal of sites from the registers with hardly any new additions.

In line with the conservation principle for equal protection of all layers of cultural heritage, the author proposes a safeguard-

ing model for the urgent listing of the Modernist layer on equal terms with other strata of immovable cultural heritage in the country. Towards this goal urgent but thorough update of the registers with Modern monuments and sites is needed. This will help to clarify the boundaries and possibilities for intervention in historical urban areas. It is necessary to verify the present status of registered sites and add a considerable number of post-WWII examples. Further detailed documentation, evaluation and digitization of surveys would be possible with the united efforts of experts from different fields, institutions, NGOs and age groups. Effective safeguarding policy can be achieved only through a transparent system of monitoring by all stakeholders, i.e. officials, corporations and citizens.

Figure 1. Kosta NIKOLOV, Pleven County Headquarters. Competition project (1st award, 1924); construction (1927-29); **1a.** Competition design perspective and plan [Nikolov 1924]; **1b.** Contemporary view (photo by L. Stoilova, 2010).



1. THE INTER-WAR PERIOD

The 20th century architecture in Bulgaria is characterized by a frequent change of paradigms influenced by stormy historical events on the Balkans.

Since until 1943 there was no higher architectural education in the country, Bulgarian architects were educated in Central and Western Europe,

To the extent that Bulgarian architects applied the lessons learned after their return home, the ideas of orthodox Modernism were realized in Bulgaria after the First World War in synergy with the processes in Europe. By the end of the 1920s a stylistic transition from late Secession /Jugendstil to Art Deco with the traditional building methods and materials can be observed.¹ [see Figure 1]

With the emergence of urbanism as an independent scientific discipline after WWI, the 1920s focused on the problems of collective living, low-cost housing, hygiene, work and recreation.² In Bulgaria, although still in a limited range, the “*ensemble placement and solving of tasks*” also started to emerge.³ Legislation was aligned with the post-war severe housing shortage due to migration of refugees and proletarian rural population to cities - thus encouraging cooperative movement and low-cost housing loans.⁴ After 1925, the first modern attempts at the construction of multi-storey offices and apartment buildings and of workers’ dwellings were extremely laconic.⁵ One of the first examples of the cooperative construction of economical dwellings on “Avicenna” St. in Sofia is the build-up of rows of typified maisonettes. This neighbourhood of intellectuals, known as the “Professorial Colony”, is an evidence of the modern transfer of the English social model of a “garden village” further developed as a “Siedlung” in Germany.

Workers’ dwellings, most often designed in groups of standard small-scale row-building, provided for minimum plots of houses, reduced farm yards and gardens; homes for more than one family, a kitchen serving as a living room (so-called Wohnküche in Germany), and “*simple to minimalist*” furniture. In the housing for railroad workers in Sofia (1927) architects rejected “*any luxury and redundancies in the facade*”.⁶ As the jury commented in the competition notes, the foreign specimens and the traditional local architecture are combined at this stage: “*With very little money, many good effects have been achieved. The use of local Bulgarian forms is commendable.*”⁷

Gradually, projects became more complex, different types of housing were being explored, social elements such as a common resting place, a common playground for children, and shopping venues were introduced. [see Figure 2, 3].

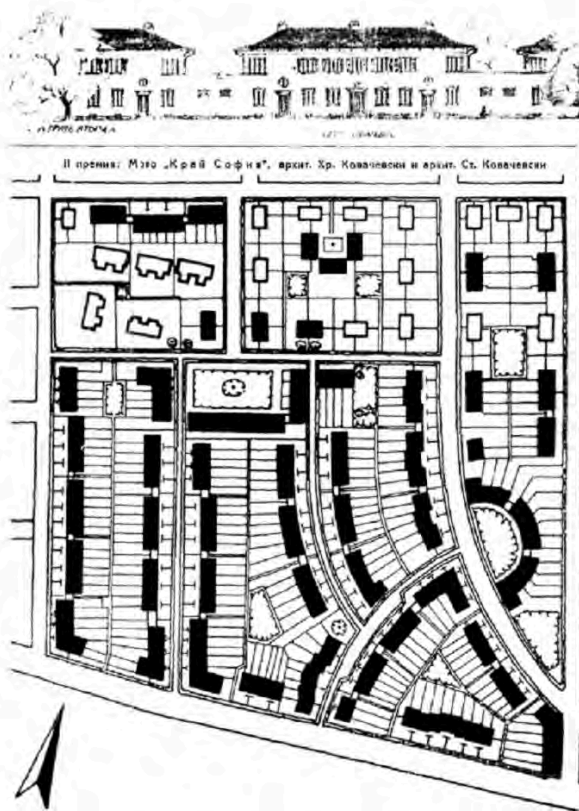


Figure 2. Hristo KOVACHEVSKI and Stoyan KOVACHEVSKI. Plan for development and construction of quarters for railroad workers in Sofia (2nd award in a contest, 1927) **2a.** facades [copy from Kovachevski 1927]; **2b.** plan [copy from Tonev 1978, 324].

Among the more conservative circles, the emergence of high-rise apartment buildings, likened to “multi-storey barracks,” provoked sharp criticism for the damage to “*aesthetics, prosperity and hygiene ...*” when deployed in small plots and narrow streets. By the late 1920s, criticism had grown into comments about preserving the specific look of traditional buildings not only in individual neighborhoods, but as whole cities, as means of preserving national memory and identity. An important condition for this was to urgently document the characteristic building and archiving of drawings and photographs in “*a treasury of shapes ... Another imperative condition is the obligatory construction of state, public and larger private buildings in local domestic forms.*”⁸

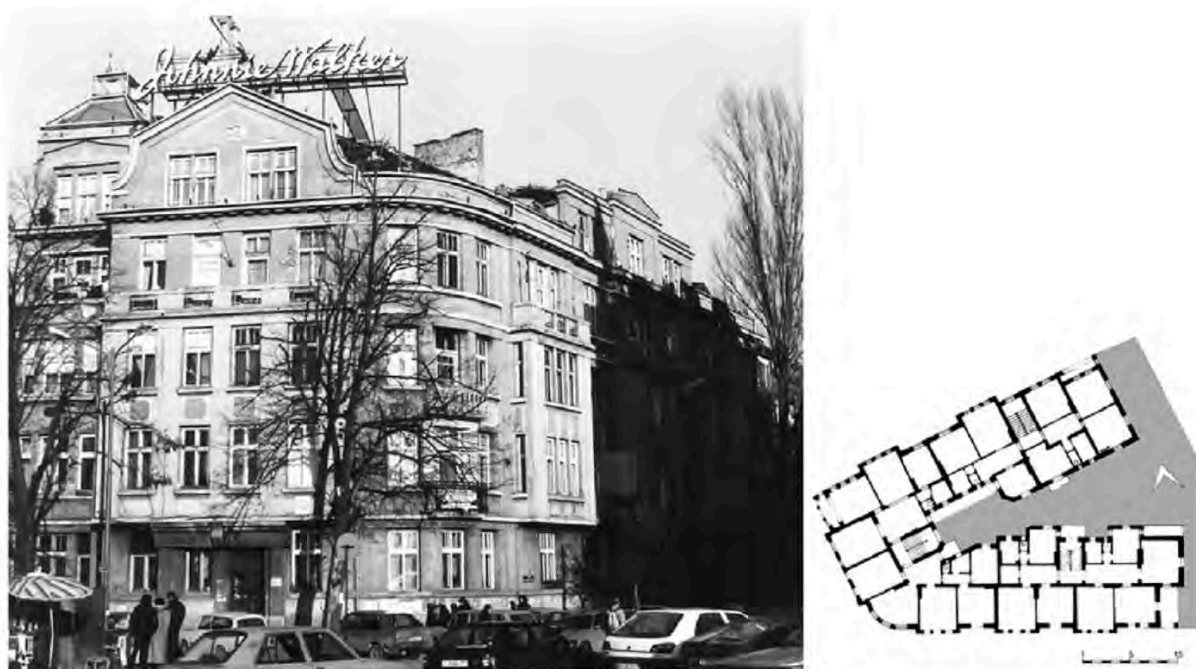


Figure 3. Boris Boyadzhiev & Velyo Debelyanov, Cooperative apartment building Asenevets, 1 Tsar Ivan Asen II Str., Sofia, Bulgaria. 1925.
3a. Contemporary view (photo by P. Iokimov, 1999*); **3b.** plan [copy of Kazmukov 1978, 329].

Contrary to the claims of non-discriminative procession of the militant modernism, at this early stage of its affirmation in Bulgaria, emphasis was placed on the need to promote conservation and even its idolization "... because the cities are pages of the cultural and artistic history of the country "... *from which we can not be deprived. Moreover, the opulence of the new construction opposes the possibilities of compromise in the dialogue between old and new ... in full agreement with modern urban planning, ... if the artistic power and skill of the architect merges with the practical requirements of modern times ...*"⁹

At that time, the translation of the Modernist aesthetic, which had been codified by Le Corbusier (1926), was being introduced to the professional audience in Bulgaria (1927).¹⁰ Freedom for application of Modernist concepts provides the obligatory requirement the Building Regulations to apply skeleton reinforced concrete structure in new constructions after a devastating earthquake in the country (1928).

The economic stabilization of the country in the 1930s unleashed not only more generous financing but also a much more varied application of building materials and technolo-

gies. It is paradoxical that this rise took place after 1933, when the movement in Germany, where many Bulgarian architects were educated, gradually settled as a branch of left-wing moods and influences from Soviet Russia, and its representatives were subjected to persecution and even sent to concentration camps.

Beyond devotion to Bauhaus's functional credo for marginal economy and purism, architects often demonstrated interest in Hans Pölzig and Erich Mendelson's expressionism through convex-contour shapes and flowing volumes. Permanent tendencies were the quest for regional dimensions of modern ideas, or because of the conviction of compatibility with local natural assets and climatic conditions, either because of technological limitations or because of the tolerant receptivity to divergent and even contradictory ideas, typical feature for the Bulgarian people. .

With pragmatic attitudes of investors and designers, total use of Le Corbusier's five compositional principles, contrary to tradition, was rarely met. Traditional pitched roofs were very rarely replaced by flat-roof terraces. Instead of wooden win-

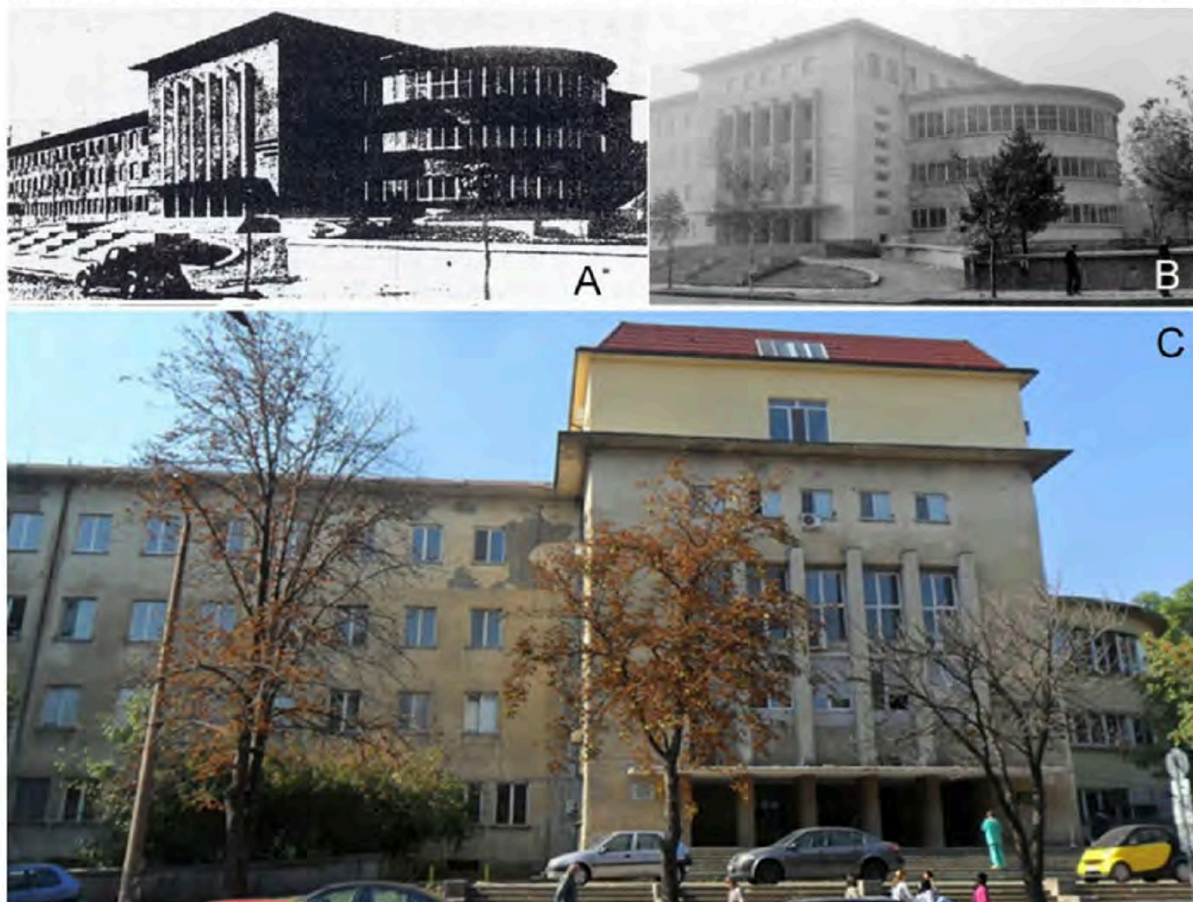
dows, steel was rarely used, which somewhat explains the more limited dimensions of glazed windows. It was not until the second half of the 1930s that the interest in individual technological innovations such as lifts, new types of interior flooring local heating and ventilation installations, increased. Another feature is that modern forms were mainly applied to private objects - family houses, multi-storey apartment buildings. In public construction - state or municipal, modern techniques were mostly found in schools, hospitals, sanatoriums, industrial sites. Obviously, in the Bulgarian context, the Modernist aesthetics turn out to be more relevant to the vari-

ety of everyday functions of living, labour, health-care and recreation.

If we refer to the assessment of one of the most dedicated Bulgarian modernists - Chavdar Mutafov, the manifestation of modernity is not so much in the individual constructive or beautiful decorative elements as in their binding and in the rational organization of processes, which adequately correspond to the changing needs of life:

... Therefore, when it comes to a new style, it should first of all concern the organising principle: ... - and then the architecture gets a new component: life with its own laws and measures. ... In

Figure 4. Victoria ANGELOVA, P. HARBOV, B. KAPITANOV, Second Surgery University Clinic, Alexandrovska University Hospital (former Second Surgery Ward), 1935-36, construction until 1941. **4a.** Initial view, 1941 (copy from Stoilova 2002, 29-34); **4b.** Lilia NASLEDNIKOVA, one-storey high superstructure, 1948 (photo, 1965 - personal archive 'P. Iokimov' - L. Stoilova); **4c.** Recent one-storey high superstructure (photo - google map, 2017).



this sense it is acceptable to talk about humanised architecture, i.e. to include the dynamic as a component, as a revised coordinate through which the shape would acquire new value and other qualities ... Then architecture somehow becomes up-to-date, connects with everyday life, with its expansions and its crises; becomes conjunctural, accompanying their growth, morality or age, to catch up with a chart of the generational balance.

In this way, it would be easy to come to an architecture that serves society ... that adapts to habits, tribal or social features in order to penetrate them with the discipline and the accuracy of their forms in order to start conducting them ... And if the natural possibilities of life are aimed at catching up with an ideal, surely architecture is its first mediator.¹¹

2. THE SOCIALIST REALISM DURING THE SECOND HALF OF 20TH CENTURY

During the communist era (1947-1989), the buildings of private banks, rent offices, industrial enterprises and even family lodgings, were nationalized, and later sold or leased. Gradually, the original owners were displaced, due to political reasons or due to biological laws. The new tenants or buyers were changing frequently. They rarely kept the memory of the place as former owners' family story or history of construction. In most cases, they did not care about the state of the buildings, and even less about the dying atmosphere of the neighbourhood in which they resided.

At the same time, at the propaganda level, Modernism as aesthetics and practice was stigmatized. The militant ideology against pre-war realities, called 'reactionary bourgeois regimes' and 'fascist dictatorship', was transferred to architects who graduated in Western Europe before the war and worked in this style. Most often they were being declared fascists, their creativity was deemed reactionary, and their opportunities for professional expression - limited in favour for those accepted for progressive influences from Soviet Russia. Privileges were enjoyed by architects who were devoted to the communist ideology and power. The style of so-called 'Socialist Realism', an eclectic of fleshy Neo-renaissance with widely applied decorations of communist symbols and National-Romantic quotations of architectural elements from the Balkan vernacular architecture of the 19th century, was being pushed forward. This symbolic "nationalist stratum" cemented communist ideas with the period of the Bulgarian struggles for religious and political liberation, called the National Revival. The style of Modernism was also ideologically transformed. Its horizontally elongated windows were discarded and in

contrast windows with vertically elongated proportions were being used. The war between the 'socialist' against the 'capitalist' window began.¹²

Thus, the interwar Modern architecture lost its social significance, and the memory of old pre-WWII urban landscapes faded away. The ideological clichés, which had been ingrained in the mass consciousness for more than a decade, continued to work after Stalin's death, even though the end of the cult era was officially proclaimed. For a short period in the 1960s, the aesthetics of Modernism returned to the professional stage until the next stagnation triggered by the Prague Spring of 1968. The "raster architecture" wave of office buildings and hotels with steel skeleton and large glazed facade panels at the Seagram Building (1958 Ludwig Mies van der Rohe) or Lever House (SOM) are a professional offset of the recent creative stigma and the natural pursuit of architects to catch up with current trends. However, the criticism of these etheric symbols of change due to extraordinary technicism, cosmopolitanism / ambiguity, which also rely on similar criticism behind the iron curtain, were not delayed.

Easily and more durably the ideas of organic architecture fitted into the local nationalistic-ideological narrative by searching the spirit of the place in a natural or traditional architectural environment.

With the vocabulary of modernism, large healthcare and resort complexes were initiated along the Black Sea coast and in mountain areas. In an ideological aspect - the rationale lied in the development of syndicated recreation of the working people; the prospects for international tourism were a state policy with a clear economic justification, according to a special decision of the Council of Ministers of the People's Republic of Bulgaria of December 1955.¹³ Thus, the design in the field of recreation and tourism opened a new door for creative experiments of romantic expressionism and organic architecture to brutalist variations of exposed concrete. Specialised design teams were involved in 'building a rehabilitation network of sanatoriums, balneo sanatoriums, nursing homes, prophylaxis, youth camps, tourist bases, recreational and cultural parks, etc.'¹⁴

The participation of many designers is a prerequisite for the wide variety of architectural forms and solutions of individual hotels in unified ensemble compositions with intriguing interpretations of local traditions and radical innovation.¹⁵ Immediately after their completion, the resorts were considered as the highest success of the Bulgarian socialist architecture, "....a recognition of the high professionalism of Bulgarian architects and the qualities of this architecture, which integrate

into the contemporary European and world architectural achievements." (L. Tonev)¹⁶

A number of small seaside and mountain resorts, as well as newly developed modern high mountain complexes exploit familiar technologies and local building materials (plaster, stone, wood), in modern spatial models, various volumetric compositions and silhouette.¹⁷

Behind the iron curtain, architects were looking for ways to keep track of the current world trends - through limited imports of books and magazines from abroad, or through Bulgarian specialists working in Third World countries. In terms of the ideological doctrine, artists rarely relied on internationally established authorities. Creative discussions were packed in the complex dialectics of national/international, specific/universal. The term 'Modernism' was replaced with the terms 'realism' and 'rationalism' and opposed by the socialist realism.¹⁸ A certain loosening of ideological stigma came with the development of numerous regional branches of the international style. The deepening interest in the local specifics of the late 1950s in the works of E.L. Wright, Alvar Aalto, Oscar Niemeyer, Kenzo Tange was popularized in the professional press in Bulgaria during the 1960s and 1970s.¹⁹ On the pretext of keeping the local tradition, in the late 1960s and 1970s parallels of brutalism, structuralism, and Japanese metabolism were being derived. For searches of the spirit of the place, defined as contextualism, they were more freely interpreted in the 1980s.

Separate examples were the symbols of representative state and party power. Special design teams were selected and granted creative freedom and generous budgets. The results of their work were subsequently praised as professional achievements and milestones of the architectural development under the conditions of socialism, however, in reality these were the product of the totalitarian party-state directives.

Unlike the limited number of unique architectural sites, the vast majority of architectural and construction practice, was being developed almost entirely as part of large state-owned design organizations, - a practice hardly synchronized with the world's leading architectural fashion. Designers were limited by industrialised construction methods. These guaranteed fast and inexpensive construction; and were applied in large peripheral areas of cities and villages, but had questionable aesthetic qualities. Gradually, the distinction between unique and mass architecture deepened; which resulted in tensions between specialists in different spheres, between designers and builders, between professionals and large groups

of citizens. The mass dissatisfaction with the gray, inhumane material environment was directed against the profession of the architect and indirectly concentrated public dissatisfaction with the power to which the guild served in one way or another.

The processes described above also affected the preservation of the cultural heritage. On the one hand, the attitude towards the not so distant past of the interwar period, and respectively the architecture of Modernism, were seriously neglected. Immediately after WWII, the old city centers became the victims of the pursuit of rapid establishment of the new social order through large-scale urban and architectural activities according to Soviet specimens.

Changes following the fall of the pro-Stalinist regime and ambitions to modernise city centers in major cities since the late 1960s led to the further elimination of old urban neighborhoods with a traditional outbuilding. Until then, the policy of preserving immovable cultural heritage was limited to documentation and juridical protection of individual objects categorised by value. Since the mid-1970s, the focus shifted to old urban areas. Massive documentation and legal inclusion in registers of immovable cultural monuments had begun. The concept of preserving group and ensemble monuments of culture in selected fragments of the city with specific atmosphere (except for besides the individual sites), was also developing. The law charged the state with the obligations to exercise control and provide financial support. Other old urban neighbourhoods were undeservedly neglected and progressively declined being left only to the care of local population.

3. ON THE WAY OF DEMOCRATISATION

The 1989 change of the socio-political paradigm resulted in the necessity of total re-evaluation of the recent past.

Among the first steps was the adoption of a law on the restitution of nationalized properties, and the privatization of previously nationalized buildings and plots. Some buildings were plunging into bad decay - owners and tenants were unable or unwilling to maintain and repair. Deliberate fires and floods destroyed many abandoned properties. The lack of owners' concern was fueled by the decreased state control and rapidly growing appetites of property developers in historical urban areas - once the free terrains were exhausted, the plots of old ruined family houses proved to be an easy prey. Consequently, new structures gradually replaced early 20th-century sites. The large-scale construction in vast areas of the big cities

led to a new redistribution of ownership. The low-storey neighbourhoods from the past rose to a height of at least 5-8 levels. Rough renovations and reconstructions irreparably transformed typical inter-war examples [see Figure 4²⁰]. Post-WWII residential and industrial complexes negatively charged with totalitarian ideology and psychological refusal of the past are still lacking legal protection and undergo even worse modifications. [see Figure 5].

Due to the economic crisis of 2007, a number of plots of already demolished buildings are pending in anticipation of more favourable times for investment. Important industrial sites of the first half of the 20th century are abandoned in self-destruction to make use of their sites for new construction. The appetites for extensive economic development in the tourism sector result in total change of existing seaside resorts from the 1950s-1970s and an enormous growth in territory, height and scale.

If, in the 1970s, the idea of preserving the typical atmosphere in individual fragments of the city dominated the declaration and proclamation of the individual and ensemble monuments of culture, in the 1990s items were being removed from the registers.

While in the 1970s-1980s the legal status of monuments of culture prevented them from significant modifications, since the 1990s, the conservation process has been distorted by the removal of sites from the registers with hardly any new additions. These metamorphoses are accompanied by the shift of society's cultural values and relevant safeguarding priorities from the 19th-century National Revival towards the Antiquity and Middle Ages.

In fact, disintegrating urban structures are valuable not only to the unique architecture (as far as it exists) but also to its belong-

ing to different stages of urban development - as their different faces in the course of time. Contemporary conservation concepts support the equal safeguarding approach to different and all stages of cultural development, including the 20th century. Over the last decade, the respect for Modern Movement creations is gradually increasing in Bulgaria.²¹

Through publications and expositions the safeguarding activities of DOCOMOMO International and ICOMOS were introduced to practicing architects. Student projects on cultural heritage protection and papers on the problems of the late Modern architectural heritage in the country appealed for urgent re-evaluation and documentation of the relevant immovable cultural heritage in Bulgaria according to internationally approved criteria.²²

Further goal should be the creation of a systematic and accessible public digital database. Such nationally significant mission would require the involvement of the entire local expertise, especially of young people, as well as cooperation with relevant international networks.

In order to clarify the guidelines and the possibilities for intervention, urgent but also thorough updating of the registers for cultural values is required.

As a first step in this direction, it is necessary to compile an inventory and digitise available archival funds. By providing remote access to archives with information about the period of modernity, scattered in different places, virtual integrity can be obtained. Due to long periods of inadequate care and unsatisfactory financing of their activity, it is necessary to conduct a systematic restoration and differentiated regime for the safekeeping of diverse archival units.

Due to continuous changes and negligible monitoring of registered immovable monuments of culture after 1989, updat-

Figure 5. Alexander BAROV, Ivan TATAROV, Ivan IVANCHEV, Doncho VLADISHKI, Universiada Sports Hall, Shipchenski prohod B/d, Sofia, 1961-63. **5a.** Photo, ca. 1970 – copy from Tsapenko 1970, 159-271, 234); **5b.** Current condition: renovation with partial change of the lateral facade, 2004 (photo – L. Stoilova, 2004).



ing of the database in archives requires a large amount of corrections – from street names and numbering of buildings to specification of changes in ownership and construction interventions, if any.

Afterwards, the territories of immovable cultural treasures must be walked thoroughly around in order to assess the physical condition of individual buildings, ensembles and neighborhoods, to photograph all of them; as well as to supplement historical references and descriptions. For the relatively rapid implementation of such an ambitious task, it is necessary to attract students from the respective academic specialties – history, sociology, architecture, fine arts, photography, cultural studies – for which participation in such a project would be part of their practical training.

All this requires time, expert capacity and the efforts of many people.

The next step is to structure the objects in the registers according to their actual state, as follows: 1. with changed function; 2. partially or completely lost authenticity; 3. partially or completely destroyed; 4. dropped Modernist creations from the first half of the 20th century; 5. valuable works of Modern Movement from the second half of 20th century, which deserve of registration.

An additional group of experts should draw up the most important part, i.e. an updated final assessment of the common cultural value of the sites by crossing all collected data from different disciplinary areas.

Over the past 20 years, officials have repeatedly emphasized the unsatisfactory protection of Modernist objects, with insufficiently clear criteria for their assessment as cultural heritage, especially for sites from the second half of the 20th century. In fact, the criteria are of common validity for all historical stages.

The assessment of the artistic value of an immovable monument of culture should be based on appraisal of the interaction with the environment and society, of its functional, technical, aesthetic, historical and social significance at the time of its creation.

An important point is the so-called comparative importance, i.e. stating if the object has served as exemplary model being followed at local, national or international level; or it itself is related to previous samples. Next, an assessment of its importance to the present cultural situation which aims at justifying the value of a given monument of culture according to its authenticity and its degree of preservation, but it also at estimating the place of the object in the value scale of contemporary society, which results in the assessment of its common cultural value and the corresponding degree of legal protection.

Another significant obstacle to the listing of modern sites worth mentioning, is the requirement of a historical distance of at least 50 years. This excessive delay has led to the premature loss of emblematic and important individual objects and entire complexes of Modernism, such as parts of Black Sea shore and mountain resorts. The lack of public appreciation and juridical protection has promoted partial damage to other individual examples, as well.

DOCOMOMO International has developed its criteria with international validity and they are sufficient to select objects of the Modern Movement from all sub-stages of the 20th century. Similar are the criteria of the ICOMOS International Scientific Committee on the 20th century heritage, and of the International Union of Architects.

The World Heritage List has already attributed the highest significance to more than 80 objects of the 20th century. The same criteria, in fact even more specific, are included in the already valid register fiche of the National Institute for Immovable Cultural Heritage in Bulgaria. And yet, the registration of sites from the second half of the 20th century is hardly being carried out. With the exception of a limited number of samples, which have been the most representative designs of the totalitarian party-state, the entire spectrum of urban and architectural sites is not included in the registers.

Only after systematic evaluation it would be possible to fill in the register fiches and structure the archive units into inventories, to develop structured digital database that would be compatible with other digital systems. Then it should provide direct access at different levels – for administration officers, experts and the stakeholders, such as institutions, corporations and individual citizens. In this way, gradually will be build a system for monitoring and preservation of the immovable cultural heritage of the Modern Movement or of the entire 20th century for whole cities and regions of the country and thereafter with opportunities for remote use on national scale.

Except for conservation purposes, the digital database would also contribute to the training of students at different educational profiles, for postgraduate qualification of professionally related conservation engineers, architects, restorers, builders. It will also serve to owners and potential clients in commercial property transactions. Ensuring transparency of the system, the possibility of verification and tracking of files would significantly increase confidence in institutions and experts from the safeguarding system.

A first (unsuccessful) attempt to fund such a project with international participation was made in 2010.²³ The feasibility of

this outlined system of preliminary investigation actions was verified in 2012 with a reduced project for part of Sofia's historical centre by students and professors of sociology. Its sustainability has been proven by the publication of some results in a book and on the Internet, where the work continues.²⁴

Ideas for preserving the cultural heritage of the Modern Movement are gaining more connoisseurs and supporters among citizens. Increasingly, they draw the attention of institutions and the general public, organize public demonstrations. In practice, they are the ones who carry out effective monitoring to protect endangered monuments of culture.

These phenomena once again convince that effective safeguarding policy can be achieved only through a transparent system of monitoring by all stakeholders, i.e. officials, corporations and citizens.

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- 3 TONEV, Luben, „Gradoustroystveni planove (1878-1944)”, TONEV, Luben (Ed.), *Arhitektura v Balgaria sled 1944 godina* (Architecture in Bulgaria after 1944), Sofia, Ed. of BAS, 1954 (in Bulgarian), 18-30, 253-283.
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13 TSAPENKO, Mihail, „Arhitektura administrativnih I obshchestvennih zdaniy” (Architecture of Office and Public Buildings), GREKOV, Panteley et al., *Arhitektura sotsialisticheskoy Bolgarii* (Architecture of socialist Bulgaria), Moscow, 1970, 159-271 (in Russian).

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15 EVREV, Petko, Ir. Phaetongieva, V. Beloeva, „Monuments of Modern Architecture in the Black Sea Cost Resorts”, *Arhitektura* (Architecture), No. 2, 2000, 62-66 (in Bulgarian).

16 EVREV 2000, *Ibid.*

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21 Since its has been founded in 1994 the Bulgarian WP of DOCOMOMO started popularizing the ideas of Modern Movement with publications about the history of its development in Bulgaria in line with contemporary international trends. On the occasion of its 10th anniversary the DOCOMOMO group reviewed its scholar and safeguarding activities towards the local Modern Movement with the exhibition „Architectural Environment of the 20th Century” at the rooms of the Union of Architects in Bulgaria (2004).

22 In commemoration of the 20th anniversary of DOCOMOMO International an entire issue of *Arhitektura* (journal of the Union of Architects in Bulgaria) was entirely devoted to the Modern architecture. The stages of the 20th century modern development were traced back situating Bulgarian architecture within the history of the Modern Movement abroad. STOILOVA, Ljubinka (guest editor of the issue), „Modernism - Yesterday, Today, Tomorrow”, *Arhitektura* (Journal of the Union of Architects in Bulgaria), No. 1, 2010 (in Bulgarian, accessed on January 30, 2018, <https://bularch.eu/bg/broy-1-2010>).

Recently a small team of art historians from the New Bulgarian University (Vasil Makarinov and Theodor Karakolev) conducts investigations on the 20th century architecture along the entire country. A travelling exposition

with a catalogue shows selected Modernist examples from different cities. At each place accompanying cultural routes are organized for the local population. The team has compiled a big collection of photos in Facebook (<https://www.facebook.com/BGarch203040/>), which helps the popularizing of the Modern Movement in Bulgaria among young people predominantly.

23 Proposal for funding of a research project for digitization of an archive of immovable cultural heritage in Sofia as an instrument of the system for safeguarding of the cultural layer of Modernism, made by a team of museum workers, university lecturers, members of non-governmental organizations engaged in the preservation of the cultural inheritance. Co-operation with experts from international organizations was planned to share experience and refine the evaluation criteria. Unfortunately, the proposal did not receive state financial support.

24 Project of the Center of Urban Studies to the Chair of Sociology, Sofia University. Students have investigated and photographed over 200 old buildings in the western and northern parts of the Sofia city centre. The work resulted with 11 essays in a published book, entitled "Portraits of disappearing Sofia" and developed further in an internet site 'Fading Sofia' [<http://fadingsofia.rcss.eu/>].

* Ljubinka Stoilova is legal heir of Petar Iokimov (1935-2014), respectively she has inherited his archive.

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BIOGRAPHY

Ljubinka Stoilova has worked as M.A.-designer of industrial, public and residential buildings since 1977. In 1989 she has become Ph.D. in theory and history of 19th-20th century at the Institute of Theory and History of Urban Planning and Architecture, Bulgarian Academy of Sciences. Her later scholarly interests spread towards safeguarding of 19th-20th century immovable cultural heritage. She is author of numerous papers, co-author in several monographs, and co-compiler of over 10 documentary exhibitions in Bulgaria and abroad. Member of DOCOMOMO International since 1994. Chief expert at the Sofia History Museum (2007-2015). Part-time lecturer in theory of architecture and urbanism at the Sofia University (since 2009); consultant to 'Fading Sofia' research project of the Center of Urban Research, Sofia University [<http://www.fadingsofia.rcss.eu/>]. Since 2007 Stoilova maintains two internet blogs devoted to the 20th century architecture and to Sofia. Her detailed CV and publications are uploaded on <https://independent.academia.edu/LjubinkaStoilova>.

CARBONIA PROJECT: THE REINVENTION OF THE URBAN LANDSCAPE

Antonello Sanna, Paolo Sanjust (Italy)

ABSTRACT

The foundation of Carbonia in 1937 was structurally based on the chosen site connection with its landscape and with its coal resources. Carbonia, emblem of Sardinia's industrial modernization in the 1930s, passed from becoming the region's third largest city during the first years of its life, to a crisis that undermined not only the city's original identity but also the social and cultural ties.

For a decade the municipality, with the collaboration of the University of Cagliari's Architecture Department, has promoted a complex program of material actions, economic and educational promotional activity seeking to create a virtuous merger of the area's historical and industrial vocation with a more contemporary model of sustainable territory. These strategies have been highly effective in rehabilitating, recovering and renewing Carbonia's "mining landscape". In fact, the actions undertaken within the framework of Project Carbonia have focused on Carbonia and its satellite villages principal public spaces and civic monuments.

Piazza Roma is the symbol of Carbonia's landscape recovery program. Reduced, over the years, to a shapeless space, the square was returned to the city in a bold project that restored its role as urban center to become the symbol of renewed social cohesion; the main buildings overlooking the square, the Piazza S. Barbara in the satellite town of Bacu Abis were also restored. Therefore, the paper aims at studying in deep and updating the analysis dedicated to "Carbonia Landscape Machine", at the conclusion of the work that led to the award of the Council of Europe's Landscape Prize in 2012.

1. INTRODUCTION

Carbonia, an emblem of the industrial modernisation of the thirties in Sardinia, has gone from an incredibly rapid growth during the first two decades of its life, a growth that made it the third largest city of the island, to a crisis that undermined the initial identity of its context as well as the social and cultural bonds that held the community together. It was, and still is, a

terrifying crisis that has progressively reduced the coal district to nothing more than a site of industrial archaeology¹.

Carbonia Project had on one side the purpose of continuing over time the historic city and its architectures but, above all, gave itself the task of re-creating the sense of belonging and identity of the population to their city and its heritage. And this is particularly complex and risky when working on a fascist new town. In these cases, as shown by the recent discussions that followed the New Yorker article by Ruth Ben-Ghiat, there is the risk of recovering, in addition to the architecture, also resurgences of anachronistic political identities, which unfortunately are still smoldering under the ashes. "Often identity is misunderstood and conceived as something static and retrospective-nostalgic, forgetting that every historical identity worthy of memory has been characterized by the cultivation of what has been inherited, but in view of assimilation and conquest of other people's good. The identity itself does not exist. An identity can be developed by nourishing it, defending it, constructing it. A collective identity is that ideal place where concord can occur about what is worthy of memory, unity in what is worthy of being hoped for, collaboration in what can be designed."²

The population of Carbonia was originally quite heterogeneous; contrary to what happened in the other fascist new towns, for example in the Pontine countryside and, in Sardinia itself, in Mussolinia (today Arborea), where homogeneous populations were imported, coming mainly from Veneto. "In addition to numerous Sardinians, people from Abruzzo, Calabria, Emilia, Friuli, Basilicata, Marche, Puglia, Sicily, Tuscany, Umbria, Veneto arrived to Carbonia."³ The original heterogeneity of the population makes Giangiacomo Ortu say: "The humanity that founds Carbonia is a mass, not a collectivity. The workers who crowd the new city have various origins and are miners, farmers, shepherds, artisans, social outcasts."⁴ Afterwards the great mobility of the population due to the hardness of the mine work is testified by a prefectural report of 1943 that says: "we are witnessing with pain the departure

of thousands of demobilized workers who in other times were difficult to hiring and who with difficulty grew fond of Carbonia". The phenomenon of depopulation and loss of identity continues in the post-war period due to the alternation of serious employment crises and moments of reintroduction of the mining activity.

And thus, we return to the starting point: *An identity can be developed by nourishing it, defending it, constructing it.* This is what we tried to do with a broad and articulated program of interventions ranging from urban planning, to the design and implementation of restoration interventions of representative buildings and public spaces, museum and artistic interventions, historical research and communication of the preconditions and results of the work done.

The project is essentially based on a model idea of development aimed at continuity and innovation, on the recovery of their modern heritage, on an urban and territorial scale and on 'reinventing' itself as a third millennium landscape. In particular it rests on a conversion of that heritage into a contemporary cultural identity based on the relationship between the community and the landscape, through modern museum formats such as the eco-museum, science and mining technology museum-labs, the city and landscape of the mines themselves and through the CIAM, a 'museum' made up of a series of open-air itineraries. It is integrated, in those places where mines have been recovered and reused, with an advanced research and industry field project regarding construction and environmental sustainability and renewable energy. Finally, it operates in a context that is also striving towards innovation, research and higher education, as evidenced by the local renewable energy research center (SOTA-CARBO, the laboratory of Sardinia Research - University of Cagliari - which studies materials and energy efficiency) and higher education initiatives, such as in the field of Industrial Archaeology (international master's degree in Recovery and Preservation of Modern Architecture promoted with the Department of Architecture, the DOCOMOMO Italia and the University of Tor Vergata).

2. CARBONIA AND A NEW LANDSCAPE OF MODERNITY

In 1937, when the massive coal deposits in Serbariu were discovered, the project for the new city really began to take shape. Inaugurated in 1938 following a first-phase project designed to serve a population of some 12,000 inhabitants, the city soon grew as it predicted a population growth that

would reach 50,000. The 1937 zoning plan called for the construction of two-story four-family dwellings, for which seven different architectural solutions were designed. Alongside the extensive construction activity, large collective buildings also arose as lodgings for unmarried workers.

However, the construction of the city clashed with the increasing need for more housing units. Between 1938 and 1940 new houses based on a single four-family design and new complexes for larger numbers of families began to be built. In 1940 the mining village of Bacu Abis, the new worker's village of Cortoghiana of Saverio Muratori, and the Portofino urban plan of Giuseppe Pagano - a fine example of new urban planning in Italy - were expanded to make room for the increase in housing demand. Carbonia and its satellite towns are the hubs of a huge project that remained uncompleted and which after the war, the increase in demographics and mining prospects notwithstanding, ended with the demise of the coal district of Sardinia. The industrial crisis in Europe, which brought about the closure of a huge number of factories and to the emptying of the vast buildings that housed them, also affected the Sardinian mining industry. In the early 1970s, after a lengthy period of strained survival, the great island's coal mining industry and everything that went with it came to a complete halt.

The renovation of the public spaces of Carbonia has assumed a central role in the strategy of redefining the city's identity. The city and the mines were, in fact, for the inhabitants, places of historical common memory on which the community was self-centered. Since the end of World War II, the community of Carbonia had been characterized by a strong political consciousness that allowed her to take possession of places and spaces marked by fascist "original sin", without feeling the need to rethink about the past. So the public spaces and buildings that had become "everyday objects", which were not recognized of special interest or architectural value, have been subject to transformations of use and formal changes, lacking of that particular care and attention that you need to dedicate to cultural heritage.

The rehabilitation of spaces and buildings of Carbonia took place simultaneously to an extensive research that has allowed us to rewrite most of the events relating to the founding of the cities in Sulcis; a considerable amount of archival material, found in recent years, has allowed us to see in a new light processes and projects, designers and their responsibilities, and to clarify roles and meanings of the original architectures.⁵

3. PIAZZA ROMA IN CARBONIA (FIG.1)

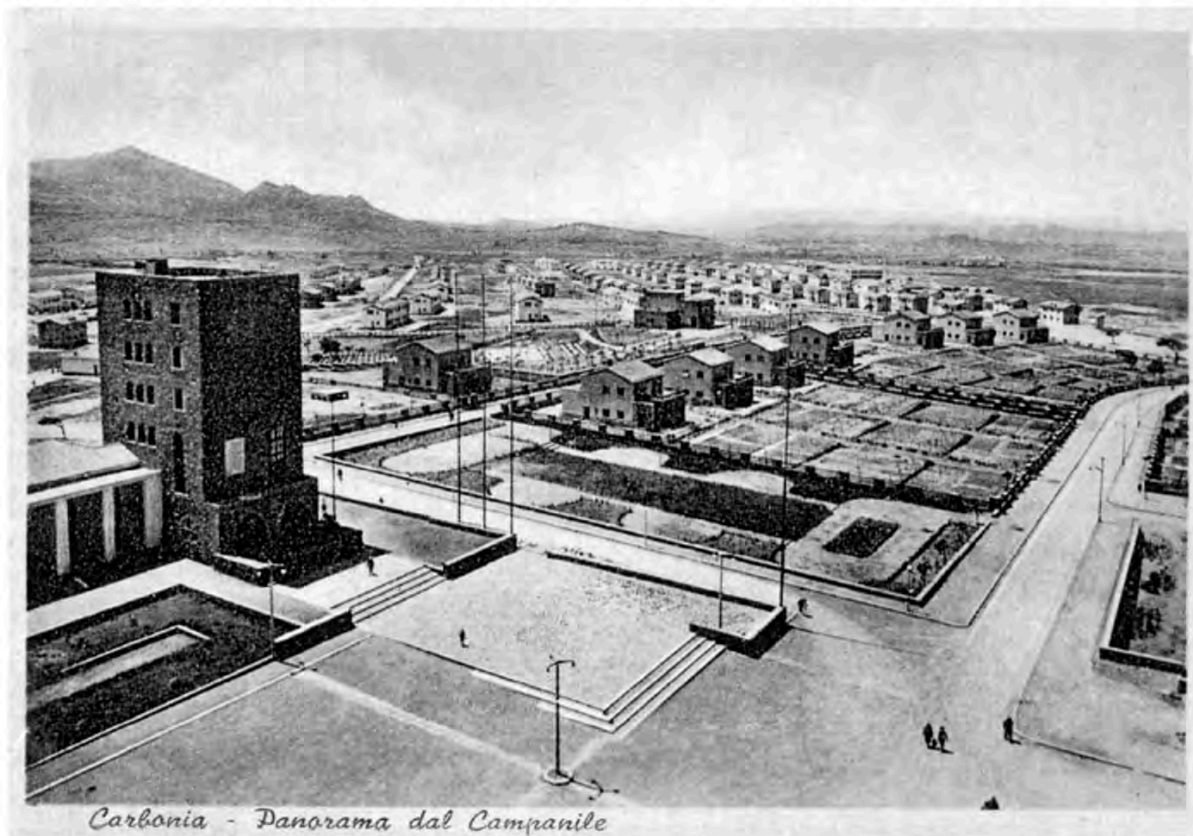
Piazza Roma has been the subject of a restoration based on the new knowledge, learned through historical research, which allowed us to look at its history with renewed perspective; the “piazza”, often detracted by critics as the site of the fascist parades, actually it is the result of architectural thought and practice of Gustavo Pulitzer Finali. He was more sensible to the genius loci and to an urban culture that had its influence in the theories of Camillo Sitte, rather than in the political pressure from the regime: “one side of the square toward the plain and the sea was left free from buildings to accentuate his panoramic character ... the size of the square were contained within the limits proportioned to the masses of the buildings that were located on it”⁶.

In fact, one of the recurring and founding motifs of the square, but also in the design of its main buildings, seems to

be an attitude that avoid monumentality, or at least that aims to dilute hierarchical items: the composition seems to be based on sliding, tipping and rotation of the axes of the buildings, looking for a dynamism that could anyhow express a “modern language” in a situation where the lack of economic resources limited architecture and its language⁷.

A careful examination revealed a plot based on the application of square geometry that underlies many of the relations between the parts. A more detailed analysis shows the dynamic character of the composition, which recognizes to each of the buildings and institutions that overlook it, its own relatively autonomous sphere of relevance. From this point of view, Piazza Roma can be read as the result of the juxtaposition of different systems of buildings and squares - more precisely four: the town hall with the fountain, the church with

Fig. 1 G.Pulitzer, C.Valle, I.Guidi, piazza Roma, Carbonia, 1938, view towards the tower and the landscape. (Carbonia, IACP Archive)



Antonello Sanna, Paolo Sanjust Carbonia Project

the churchyard, the Cinema and the OND⁸, and the tower with two panoramic terraces. This interpretation has enabled us to recognize, in the perceivable asymmetries of the square, a rigorous criterion, with whom the designer, avoiding monumental temptations, designed an organized and articulated modern urban space.

The delicate balance of the composition is highlighted by the demolition of two elements, apparently not too important - the fountain in the square of the town hall and the terrace in front of the tower - and the inclusion of the road in front of the tower, the OND building and the church. This was sufficient to alter totally the original relationship between the buildings, the space of the square, the landscape.

In the drafting of the guidelines of the project we have taken a cue from the historical analysis, which was the reference

point for the force that takes the original design of the plaza as the centerpiece of the whole city. However, historical analysis did not result in the proposition of a simple philological reconstruction of the original design; contemporary attitude requires, indeed, to interpret historical data and their relations in a critical way. First of all the restoration project has realized the rejoining of the four sites into which the square had been divided, diverting the traffic crossing the site, so as to bring back the Piazza to its original unity. In this way the urban space has been reunified making possible the reconstruction of the terrace/belvedere at the feet of the tower (Fig.1), according to the original geometry reconstructed through historical analysis, re-using the same materials with the prudence of adopting surface treatments to distinguish them from the original ones. On one hand, the reconstruc-

Fig. 2 Carbonia, piazza Roma after restoration: in the foreground the sculptur by Giò Pomodoro, in the background the tower and the OND building (Photo by P.Sanjut)



tion of the terrace as a Belvedere transforms the city skyline in the background, that becomes the “fourth side” of the square, and on the other hand its wall-fence made of trachyte distinguishes it from the street, defining the main entrance. A “point of water” was also built, in front of the town hall that is also a point of condensation of symbolic value, of the archetypes that the square virtually contains. To bring out these values, the design of this sector was completed with the sculptural work of great size, made by Giò Pomodoro in Carrara marble on a pedestal of the same material. The work is essentially the centerpiece of the new square (Fig.2).

From the compositional point of view the large terrace and sculpture are the elements that define perceptually, without closing it, the south side of the square open to the landscape, as well as expected the “guiding principle” of the project Pülitzer.

The square was paved with large stone slabs of gray Sardinian granite put in parallel stripes according to the larger dimension of the square, in order to accentuate the effect of uniformity of its surface, and at the same time, emphasize the inclined plane towards the facade of the church.

4. PIAZZA SANTA BARBARA IN BACU ABIS

The construction of the OND building and of Santa Barbara square in Bacu Abis is worth a deeper insight study, for it contributed decisively to define the restoration project. In the first project proposal in 1940, the Santa Barbara square was opened towards Santa Barbara avenue and it would have, therefore, connected organically the various parts of the village; of this proposal remain the general plans drawings, the architectural plans and elevations of the OND building (found in the archive of architect Eugenio Montuori in Rome), two cross sections and the architectural details of the cinema (found in the archives of the municipality of Carbonia); in detailed cross sections, we found a hand written note, indicating a major change to be implemented during construction: “Please note that at the time of building, this drawing must be considered reversed”. In another set of architectural drawings (dimensioned plans and elevations from the Archive of the Municipality of Carbonia) the building is actually reversed.

Something very special and difficult to understand took place at the time of construction: the building was reversed and realized in a different position from the original plans: as a results, the square is presently open to the north and no longer on the avenue Santa Barbara. In the Final Report of



Fig. 3 Bacu Abis, restoration project of piazza S.Barbara

the construction of the OND building⁹, the “reversal of the entire building from the first project” was justified “for aesthetic reasons and for the utility of the city”; the reasons for such a peculiar and drastic choice appear rather weak, we can advance the hypothesis that a material error might have occurred: the drawings, on transparent paper, not yet dimensioned, have been used and dimensioned on the reverse side of the sheet.

This solution, combined with the partial realization of other parts of the city has determined the real problem of Bacu Abis: the absence of a real center. The OND building, in fact, opposite and marginal with respect to the principal road, is not perceived as a place of relations, in spite of the undoubted quality of the urban space that it generated. Other archive drawings show us the attempts to structure more strongly the square, realizing a school building, a post office building, a grocery shop and green open spaces in order to define the boundaries of the new square: an L-shaped square whose outer boundaries had not been formerly defined. The lacking the school, the Post office and the factory outlet buildings, this led to a labile definition of Santa Barbara square, bounded only on two sides by the cinema building and by the OND building. Several private buildings, of low architectural quality, will be added, after the war, around the square: this fact, instead of contributing to a better organization of the public space, weakened the architectural composition of the square.

Based on these assumptions, the main issue of the restoration project takes on a special connotation: how should we interpret the main square of a founded town, transfigured by an error in the phase of realization, that conditioned deeply the architectural results? Should we consider the square as a L shaped space that hugs the OND building or the square is instead, just the part that faces the fascist tower?

The restoration project proposed gives to the square of S. Barbara the unity that it has never had, so that it can perform its essential role of "piazza", through the definition of its never built boundaries (Fig. 3). The aim of the project was to value the square in its relationship with the OND building, the cinema and the former "Casa del fascio"; redesigning the accesses was just as relevant to make explicit the centrality of the square with respect to the town.

The tools that have been adopted are the placement of a stage in barycentric position with respect to the whole L-shaped square, the definition of the margins with a curtains of trees. The definition of the unfinished fronts, north and west of the square, was realized with a combination of olive and laurel trees, and with the concentration of some tall cypress trees on the western edge of the square. The new stage has a double orientation so as to be accessible and usable by both the areas of the L-shaped square, and to constitute a background scene for both areas. The connections to the streets around the square are situated on the outer limits of the new stage, at a lower level; the height differences are overcome both by steps

or through ramps, accessible to people with disabilities. The whole square is paved in white limestone laid in large areas, interspersed with "carpets" of red trachyte, which frame the entrances to the OND building and to sitting areas. The great sculpture, a site specific work created by Mauro Staccioli for the square, becomes the new fulcrum, changing the perception of space and giving symbolic meanings to the architecture (Fig. 4).

NOTES

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3 S.Musso (edited by), *Tra fabbrica e società - Mondi operai nell'Italia del Novecento*, Milano, Feltrinelli, 1999, pg.321.

4 G.G.Ortu, "Carbonia dalle origini agli anni settanta", *Le miniere e i minatori della Sardegna*, edited by F.Manconi, Consiglio regionale della Sardegna, 1986.

5 P.Sanjust, "Restoration of the public spaces in Carbonia - Italy", *REHAB 2014 - International Conference on Preservation, Maintenance and Rehabilitation of Historic Buildings and Structures*, Porto, Green Lines Institute, 2014; G.Peghin, A.Sanna, *Carbonia città del Novecento*, Milano, Skira, 2009.

6 Taken from the Report to Regulatory Plan of the city of Carbonia, signed by Gustavo Pulitzer Finali architect in 1937, preserved in the IACP Archive in Carbonia.

7 Id.: "for buildings of collective character projects have eliminated those architectural elements that provide for the importation of iron, referring to the traditional elements of Italian and regional architecture; bold structures have been almost totally abolished".

Fig.4 Bacu Abis, Piazza Santa Barbara after restoration works; on the right the sculpture by Mauro Staccioli (Photo by P.Sanjust)



8 OND is the acronym of Opera Nazionale Dopolavoro, the fascist institution that was in charge sport and military education of youth.

9 Final Report of the construction of the OND building, point 5, titled "Changes and Additions made to the project"; preserved in the IACP Archive in Carbonia.

BIOGRAPHIES

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Among his research fields is the conservation project, both in the context of "modern" architecture and as the historical-traditional settlements are concerned, and the themes of the sustainability of the contemporary project. He supervised the Conservation handbooks of the Historical Centers of Sardinia and was the coordinator of the "Carbonia - Città del Novecento" project that won the 2011 Council of Europe Landscape Award.

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MODERN HERITAGE AND THE CHALLENGES OF URBAN CONSERVATION: BETWEEN SINGULAR BUILDINGS AND THE METAMORPHOSIS OF URBAN FABRIC

Horacio Torrent (Chile)

ABSTRACT

During the 20th century, a significant number of small and mid-size cities establish their development with a series of public works, facilities, and housing projects that identified and shaped them in a particular way. Modern architecture played a key role in such development, giving these cities a meaningful structure by means of singular buildings, but also characterizing commercial areas in the city's center and building urban fabric through residential complexes of remarkable quality.

The following paper is an approach on the subject, by exploring the possibility of combining conservation at the level of unique buildings with those of reuse at the level of residential fabric through a singular case study: the city of Arica in Chile. Consolidated between 1950's and 1970's, its modern heritage comprises a number of remarkable buildings together with a large number of housing projects. Considering that buildings can effectively renew their urban role through conservation actions, at residential neighborhoods super-blocks have been preserved, while single houses have undergone a metamorphosis process – i.e., altered given their light materials and the need to adapt to contemporary life.

Urban conservation calls for a mixed strategy, considering the protection of singular buildings and the preservation and renewal of the urban fabric. The case shows different forms of protection derived from the physical conditions that heritage assumes in the urban environment. Heritage's identity and legibility within the urban project are key factors to determine which modern buildings and neighborhoods should be preserved at a new stage of the city

INTRODUCTION

During the 20th century, a significant number of small and mid-size cities established their development with a series of public works, facilities, and housing projects that identified and shaped them in a particular manner. Modern architecture played a key role in such development, giving these cities

a meaningful structure by means of singular buildings, but also characterizing commercial areas in the city's center and building urban fabric through residential complexes of remarkable quality.

Nowadays, cities acknowledge the value of their modern heritage and consider its preservation; but although some unique buildings have maintained their original features, a significant part of them and – especially – modern urban fabric itself have undergone a metamorphosis process encouraged by the pressures behind their own development. Most of the instruments available for conservation at the urban level come from already consolidated actions on historical centers and do not reflect its modern features or, still, the possibilities offered by adaptive reuse strategies. The following paper is an approach on the subject through a singular case study: the city of Arica in Chile,¹ meant to acknowledge the possibilities of integrating in urban conservation as a whole, both unique buildings – providing meaning to the urban structure – with those of residential fabric that have undergone strong metamorphosis processes and are now available for adaptive reuse at a large scale.

ARICA, THE MODERN CITY

Arica was founded on the Pacific coast in 1536 and declared city in 1570. Its urban structure is based on the traditional Spanish grid, but adapted to a terraced undulating terrain that makes the streets descend towards the sea. It is located on the seaside, in a desert area, with a pleasant climate and an average temperature of about 20° Celsius. Part of the Chilean territory since 1883 – after the war with Peru – and finally incorporated to the country in 1929, the city has suffered earthquakes, sea exits and cyclones that transformed its original physiognomy. In 1953, the Chilean state proposed a series of development strategies for the northern region incorporated to national territory after the 1929's Treaty of Lima, and which had since then been relegated from national development (Arrau, 1953). That same year Arica's free port was

created, together with the establishment of a tax exemption regime that activated the city in economic terms.

In 1958, a decentralized public institution called “Junta de Adelanto de Arica” – JAA, Arica’s Development Board – was created, lasting until 1978 and playing a leading role in regional development and urban growth. The Board was a “developmentalist” organization whose purpose was to maintain within the region those economic resources generated by the free port. It promoted the development of the city and the region in an extraordinary way; population settled in the city multiplied by three and economic activity had a similar growth, changing profoundly the demands of housing and equipment and raising the need for urban planning (Balcarce, 2008).

The city had remained relatively relentless for thirty years: in 1920 it had 12,463 inhabitants, 15,912 in 1930, 16,627 in 1940, reaching in 1952 23,033 inhabitants. From that moment on, it would begin a process of huge population growth, almost doubling it in a decade, with 46,686 inhabitants by 1960; in 1970 it reached 87,726, again almost doubling its previous decade population, and quadrupling it in only two decades. Between 1952 and 1970 it grew at a rate of 9.16% per year. Arica’s Advancement Board assumed urban and regional

management with the funds provided by the port, which were reinvested in the city. Their work was on various fronts, with a number of actions meant to encourage local industry; to promote and develop port activity and transport, by installing the airport; and to develop tourism, while considering also cultural and scientific aspects, with the incorporation of universities and centers for advanced knowledge and research.

The urban transformation operated by Arica’s Advancement Board included the renovation of central areas by means of several new buildings, the incorporation of a series of parks, the strategic location of the university’s institutions, the construction of tourist’s infrastructure – with hotels and hostels – and the incorporation of facilities in nearby beaches, among others.

Demographic explosion provoked by the new development state led necessarily to the challenge of building large-scale housing, which at the same time implied unprecedented urban extension. (Fig 1.)

In Arica, urban planning was related to the regional dimension, and a decentralized organization’s management resulted in an urban form featuring modern architecture and an urban culture based on the future of the city. In the sequence of

Figure 1: Arica, urban growth comparasion between aerial photos 1956-2016. Source: IGM Hycon flight, 1955 and Geoportal de Chile - Catálogo Nacional de Información Geoespacial, 2016



urban plans developed during the 50s and 60s, land availability for urban extension and roads became the keys to a strategy that extended urban boundaries (Pérez, 1967). On the other hand, urban renewal implied the realization of two sectional plans, one for the “assemblage of the new seaport with the city and the entire coastal area at the foot of the historical Morro” (González, 1961) and a second one for the Civic District, intended to renew the sector and to orient growth towards the north. Years later, the study developed by Emilio Duhart (1968) consolidated the relationship between the city and the region and reaffirmed the features of the plan. Here, the action through strategic points – defined mainly in the plan – gave rise to remarkable architectural sequences in housing complexes as well as paradigmatic buildings that qualified the urban fabric, configuring the city’s park structure and – especially – the seaside border.

Arica’s Advancement Board developed intensively, constructing buildings that rapidly changed the urban image: “(...) above the average levels of the gray flat roofs of the old construction, several new buildings are erected, with striking colors and different forms” (González, 1961).

MODERN ARCHITECTURE, SINGULAR BUILDINGS AND THE URBAN SIGNIFICANCE SYSTEM

Modern architecture was the main character in this urban transformation, both because of the novelty meaning that it conveyed – aesthetically, but also in a progressive way, meant to change social circumstances – and because of the possibilities it could develop in the tropical environment, oasis-like condition of the city. An open plan, its free form, a special relationship between interiors and exteriors, its porosity and liberty as regards structural configuration, were design strategies that brought architecture closer to the “eternal-spring city,” as Arica had already been called for many decades.

Shortly before, but especially after the Board’s work, modern architecture was fully associated with the development of the city. Consolidated between 1950’s and 1970’s, local modern heritage comprises several remarkable buildings together with a large number of housing projects.

Modern architecture became an expressive system capable of identifying the new actions undertaken by the JAA. The progressive, developmentalist ideology of the organism was clearly associated with the possibilities of that modern life architecture represented. At the same time, the architectural projects and designs made use of the key features of modern ar-

chitecture. A group of the most notable Chilean architects was in charge of developing a unique experience, given its architectural possibilities as well as its urban effect. Interaction between exteriors and interiors was the key, for both dwellings and public facilities. Formal and structural inquiries appear still today with their original audacity. It was a huge architectural laboratory that left its trace within the city. The main buildings were arranged to enhance expression of the supporting structure, so that they oriented urban growth following the recommendations of different and successive urban plans. On the other hand, a process of consolidation and renovation of the urban center allowed the construction of a significant number of private buildings around commercial streets –markets and hotels mainly – as well as some institutional buildings facing the main square – among them, LAN Chile headquarters and the JAA itself. The Public Services Building (DA, MOR, 1968 **Fig 2.**) and the headquarters for the Port Authority (MOR, 1970) were built between the center and the immediate port area.

The Casino (BVCH, 1960-61..) was originally designed to serve as cultural center. It is a magnificent building, conceived as an interaction between two juxtaposed large boxes, which left intermediate spaces orienting the views towards the sea. It was set in a large plot, which considered a park – in relation to the urban park system – and configured a new civic area on the coast, next to other buildings. Among the latter was the building for the University of Chile local headquarters (1966), for which its architect, Mauricio Despouy, investigated climate and formal options of the *brise-soleil* and mat-building configuration.

Inwards, on one of the most important road axes, several public buildings were established. The regional hospital is a magnificently designed building, with a long public balcony on the top floor that allows direct access from the street. The new stadium, which would host the 1962 World Cup, was designed by BVCH, with its exposed structure composed of thin plates that seem to levitate above the ground. Another center comprised the new headquarters of the – by then – Catholic Northern University (Garretón and Calvo, 1966-1967), with a set of buildings traversed by urban public space. Along the coast to the south, a tourist area was formed, including the Regional Hostel (Martín Lira, 1959), and the completion of La Lisera beach (Saint Jean, 1964) with an interesting landscaping design, that included an artificial island in reinforced concrete for public use. Years later, a space for public parks and beaches was inaugurated up north, featuring



Figure 2: Public Services Bldg. Direction of Architecture. Ministry of Publics Works. 1966. Arica. Archivo Histórico Vicente Dagnino, Universidad de Tarapacá.

the visible structure and the slight access ramp of the Olympic Pool (Mesa, Bertelohn, Román, 1969-72), built for the Pan American Games of 1972.

The multiple buildings constructed by the JAA constitute an heritage legacy of excellence that acts upon the urban dimension through strategic points, characterizing and promoting urban expression as a system that grants readability and identity to the current city.

THE HOUSING DEVELOPMENT AND THE METAMORPHOSIS OF THE URBAN FABRIC.

To cope with demographic explosion, a large number of housing projects were designed and built during the period. This way, urban expansion was encouraged on land owned by the state, which enabled the single-family dwelling model. Between 1953 and 1965 the most emblematic projects of archi-

tectural quality were developed. The Chinchorro Neighbourhood (1955-56), and the Estadio housing complex (1957), marked the initial actions on housing with a formal and urban approach of high quality, which would be continued in the Lastarria Neighbourhood (1963). Many of the housing units built later reduced their architectural quality and were mainly based on the generation of a continuous fabric, through individual houses with limited facilities and services.

The Chinchorro Neighbourhood (**Fig. 3**) was designed by Bresciani, Valdés, Castillo and Huidobro (BVCH) between 1953 and 54, and located in the northern part of the city, next to the sea. Was configured by the repetition of elementary units that alternate on a regular layout, albeit biased according to circulation routes. The units were small houses with four bedrooms, a bathroom, kitchen and a living and dining room, organized around a central courtyard. The patio

was the central core of domestic activity; an entrance space, continuing in a second small patio – less formal – that could serve as an orchard. The houses were built inwards, with a closed perimeter only opened to the street by a window. The alterations suffered by the complex have been many. In most cases the courtyards were closed in order to expand interior spaces or because they did not always function as temperature regulators – probably given their size and central arrangement (**Fig. 4**). In a few cases the patio structure itself has enabled the construction of an upper floor as a perimeter ring. Although the disposition of the boxes remains, formal definitions have been altered (**Fig. 5**). Almost all doors have been changed, adding intermediate entrance spaces, while only a few original windows are still standing. In every case, the pro-

jecting bricks that characterized the facades have been eliminated due to the belief that they would allow people to climb and invade the property. Also, the monochromatic condition with white predominance has changed to a profusion of colors individualizing singular houses, contrary to the original idea of unity.

The Estadio housing complex (BVCH, 1956-57), occupied the land left by the old soccer field and stadium, which was to be built in another plot at the time. The site's slope guided some of the design decisions and proximity to the city center defined the possibility of greater height and density. Thus, a series of blocks were arranged slanted to the site and oriented towards the sea and the sun, defining a central area. The blocks assumed the topography, and through their elevated

Figure 3: Chinchorro Housing Complex. Arica. Bresciani, Valdés, Castillo, Huidobro Architects. 1953-54. Photo Rene Combeau. 1957. Archivo de Originales Sergio Larraín García-Moreno. FADEU. Pontificia Universidad Católica de Chile





Figure 4: Chinchorro Housing Complex and its metamorphosis: comparison between original and current state, (from the roofs of the houses). Photo Rene Combeau. 1957. Archivo de Originales Sergio Larraín García-Moreno. FADEU. Pontificia Universidad Católica de Chile. Photo Horacio Torrent, 2015.

streets were connected to public street levels. The blocks alternated with individual dwellings arranged on the upper edge of the site and in the center – these were never built. Those of the upper edge, in addition, were articulated in different levels, interconnecting each other and with the surrounding blocks. (**Fig. 6**) Houses were also organized around a central court, which assumed spatial and functional relations. Blocks have remained mostly unchanged, with minor interventions on windows and enclosures in some of the public passages.

Individual homes have been largely transformed, with the addition of new floors and interventions in their formal language. Although little intervened, public space has been occupied for parking, destroying all the original landscaping – hard to maintain due to local climate's aridity.

The Lastarria Neighborhood -designed by Saint Jean, Moraga and Vallejo in 1962-, it was intended for the officials and employees of the JAA. It is a clear example of Chilean tradition on modern housing, accompanying a super-block with a

Figure 5: Chinchorro Housing Complex and its metamorphosis: comparison between original and current state, (from the street and public space). Photo Rene Combeau. 1957. Archivo de Originales Sergio Larraín García-Moreno. FADEU. Pontificia Universidad Católica de Chile. Photo Horacio Torrent, 2015.





Figure 6: Stadium Housing Complex. Single houses and their topographical disposition. Arica. Bresciani, Valdés, Castillo, Huidobro Architects. 1956-57. Archivo de Originales Sergio Larraín García-Moreno. FADEU. Pontificia Universidad Católica de Chile

set of single houses: 21 houses and a block built on a site with access to two avenues. The houses were overlapped, with the aim of providing more interesting perspectives that at the same time emphasized their individuality. The houses were made of exposed bricks, with a flat concrete roof. They were quite spacious – 94 square meters on a plot of 220 square meters – organized around an open courtyard. Despite its recent declaration, some of the houses have undergone a process of metamorphosis, by closing their inner courtyards and altering part of the facades. The block (Fig. 7) is six stories high and covers almost the entire side of the terrain – about 100 meters long – organized in several types of units among which are duplexes. The block generates an interesting spatiality in each entrance, where ramps shine in a vacuum space. The facades show the difference in levels, in some cases with total openings and in others with the use of openwork bricks. The block is in good condition and with very few alterations. Juan Noé Housing unit was design in 1960 by Gloria Re-

bolledo and Hernán Rivera at the studio of the Housing Corporation (CORVI). A large plot of 25 hectares was subdivided by a linear layout perpendicular to the large avenues, to give rise to 1.056 houses in horizontal. The urban blocks were generated by the repetition of units, leaving in the center an area for facilities and services. The house type consisted of two linear pavilions, one with an antechamber containing the kitchen and bathroom, next to the living room, then a patio and the bottom pavilion with the bedrooms. The predominance of the economic reasoning in building prevails over disposition and form. The pavilions at the back of the site are paired with their neighbors, and the construction was made of bricks and concrete slab for the roof. Most of the units are almost unrecognizable, basically due to alterations in height and facades; it is probable that both its relatively poor material definition and its linear block separation model made such great transformation possible.

The Noé Housing project announced an important change in the definition of the urban form, leaving aside the aspects that had characterized the other three previous housing complexes. Identical formats would be assumed in the projects for the neighborhoods units of Taxistas, O'Higgins and others. This model was in fact the one that mostly assumed the conformation of the extension of the city. It is likely that its metamorphosis process is also typical in the same sense.

URBAN CONSERVATION AND THE CHALLENGE OF THE URBAN PROJECT.

Urban conservation requires a mixed strategy, considering the protection of singular buildings and the preservation and renewal of the urban fabric. The cases show strongly differentiated forms of protection arising from the physical conditions that heritage assumes in the urban environment. Heritage's identity and legibility or readability in the urban project are key factors to determine which modern buildings and neighborhoods should be preserved to take part in the city's new condition.

Singular buildings can renew their presence in the urban environment through preservation actions – through traditional forms of heritage conservation – as they maintain their original image and meaning. The University Building has been partially occupied by the new institutional headquarters at a regional level, being re-signified. The Casino faces a new process to be conserved and turned into the cultural center for which it was originally thought. The Olympic pool resists some alteration and there is a great consensus for its conservation and restoration. Citizenship recognizes in these build-

ings the importance of modern architecture values in the configuration of the city.

In housing complexes, the situation seems to be different, however one of them -the Lastarria neighborhood – has been declared typical zone, one of the protection categories corresponding to a national monument. Metamorphosis processes have largely disfigured housing units, but the assemblies still maintain some homogeneous parts and most of the units maintain their relationship with the street, layout and urban form.

Marina Waisman (1980) proposed – over three decades ago – the category of “unconsolidated historic centers,” which she defined as those that present “monuments, buildings of value or historically defined parts dispersed in a fabric without volumetric or stylistic coherence, which undergoes a process of per-

manent renewal”. The historical reading of urban dynamics appears here as determinant for the conformation of those areas to be preserved, rejecting any possibility of constructing a historical environment that was never consolidated, but intending “the contrary, it should be that of correct the present disharmonies guiding the development of the city of the future”. She proposed an essentially dynamic preservation action where the preservation “of the past can be carried out in very limited areas”, in a small scale, and in the rest it is guiding the growth, so that some instruments could be heights and volumes, but also the quality of the building and the ability of the architects to harmonize the new works with the environment. Oriol Bohigas (1999) proposed ten points for an urban methodology; three of them are key in the relationship be-

Figure 7: Lastarria Housing Complex. Superblock. Gastón Saint Jean, Patricio Moraga, Jorge Vallejo, Architects. Junta de Adelanto de Arica, 1964. Archivo Histórico Vicente Dagnino, Universidad de Tarapacá.



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between heritage and urban project. The first one, that public space is the city, that “in physical terms, the city is the conjunction of its public spaces”; and that “for the public space to play the role that corresponds to it, there are two issues that need to be solved: identity and readability”. It is clear that both are founding subjects of any design action on the city. Identity, according to Bohigas, corresponds not to the consideration of the city as a total unit, but instead composed of relatively autonomous systems. Identity refers to identifiable fragments of the urban space, corresponding to the smaller scale of the city, basically due to the coherence of its form, its function and its image. On the other hand, readability is a necessary condition for public space: to be easily readable and understandable. In this sense he states that: “To establish a comprehensible language it is necessary to reuse the semantics and syntax that the citizen has already assimilated through the accumulation and superposition of the terms of traditional grammar. It is not simply a matter of reproducing historical morphologies, but of reinterpreting what is readable and is anthropologically inserted in the street, the square, the garden, the monument, the block, etc.”

Following these two approaches, preservation actions to consolidate the urban form would correspond to the conservation of areas that maintain the characteristics of modern heritage. As for the areas that have undergone a greater process of metamorphosis, possibilities would be in the consolidation of the urban layout; a recognizable identity on small scale fragments, and readability of public space in a way that is understandable for contemporary life, which compromises mainly the new architectural works to be incorporated.

A comprehensive urban project does not mean merely maintaining the features present in heritage, but the establishment of a new urban quality where heritage pieces play a new role. Undoubtedly, any patrimonial consideration responds to a prior conceptualization following a process of historical research, as well as the verification of its absolute – historical – and relative – current – values in relation to the urban form. Identity and readability are keys when determining which urban project will dominate the future of the city.

In the case of Arica, as in many other young cities with a high quality modern heritage concentration, urban form could be a constant reference to determine the value of heritage, its possibilities of intervention, to take advantage of the metamorphosis process even through the incorporation of new architectures so as to develop a sustainable built environment, based on Modern Movement past experiences.

NOTES AND QUOTATIONS

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BIOGRAPHY

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DIRTY REALISM RELOADED: HOW CAN THE REALITY OF A CONTEMPORARY CITY, DEVELOPED OUT A (POST-WAR) MODERNISM RESIST SPECULATIVE APPROPRIATION NOWADAYS?

Elena Markus (Germany)

THE MODERN CITY HAS FAILED

Since the 1950s, one crisis has followed the next: the last CIAM Congress in Otterlo in 1959 devoted to a critical renewal of the modern city, only sped up the crisis of architectural modernism. In response to the unregulated urban growth around 1900, the modernists invented the concept of functional zones: dwelling, work, recreation, and transport is intended by the modernists. In the Declaration of La Sarras in 1928 postulated principles of the *Functional City*¹ reflected in the same time the tayloristic organisation of capitalist production: "The problem of architecture in the modern sense demands, in the first place, an intensive connection of its task with general economic tasks."² Here, the technical-productive aspect of "economic efficiency" moved to the forefront: "The consequences of the most efficient economic production are rationalization and standardization."³

The concept of an antimemorial, unrepresentative modern cityscape ultimately led to its downfall: The refusal to build monuments⁴ was subsequently an impossibility for community building too. The rationalization of all life spheres resulted in a loss of the sense of community.⁵ *The Heart of the City* (8th CIAM conference in 1951) paradigmatic was this loss since the key issue of the conference – "the heart" – symbolized this void. Consequently, the two subsequent conferences focused on *Habitat* –, on urban cityscapes as natural environments for the human species.⁶

LEARNING FROM: ARCHITECTURE AND EVERYDAY LIFE

Since the 1950s both in the humanities and contemporary art, the notion of *everyday life* has become a socially critical dimension.⁷ The interrogation of everyday life formed the backbone of an anthropological architectural perspective on the modern city in the post-war era. Alison and Peter Smithson applied the term "as found" to the structures of urban everyday life as a design principle for their art and architecture explorations.⁸ However, the everyday life of the post-war

consumer society was central to Pop Art which in turn served as a model for architectural experiments of that time.

The leaden modernist seriousness was faced with a joyfulness of the postmodern avant-garde: the young architects strip-tease show on the roof of Le Corbusiers Unité in Marseille on the occasion of the 9th CIAM meeting slightly shocked the establishment, and mirrored the Bakemas claim at the conference, that in particular the eye is "a sure measure of human scale."⁹ Robert Venturi and Denise Scott Brown made a final break with the utopian element of modernism with their survey on the Las Vegas Strip¹⁰ creating a new architectural benchmark. The banality and ugliness of the everyday building environment was used by Venturi and Scott Brown as a source for their design projects. Furthermore, the anthropological architectural approach suggested a dissolution of the established connection between architecture and the architect as an author.¹¹ Nonetheless, the banality considered by Venturi did not signify the end of the modern era. The architects still attempted a synthesis of postmodern project with the project of modernity. The use of popular urban vocabulary should connect a hitherto abstract and "silent" modernist architecture with real life. Paradoxically the *raison d'être* of urban landscapes only gave a seal of approval to the modernist city by declaring it to a natural environment.¹²

NEOLIBERAL CITYSCAPES

An attempted reconciliation between modernity and the avant-garde phase of postmodernism had to fail. One dramatic consequence of functionalism criticisms was (at least in Europe) a reinvention of the so-called "European city model". A return to the city planning categories of the late 19th century such as compact block developments and public squares was expected to solve the problems raised with the post-war modernism: segregation, lack of public space, and an oversized planning scale. In fact, the return to the speculative urban planning and block developments of the previous times corresponded with the logic of capitalist condition.¹³

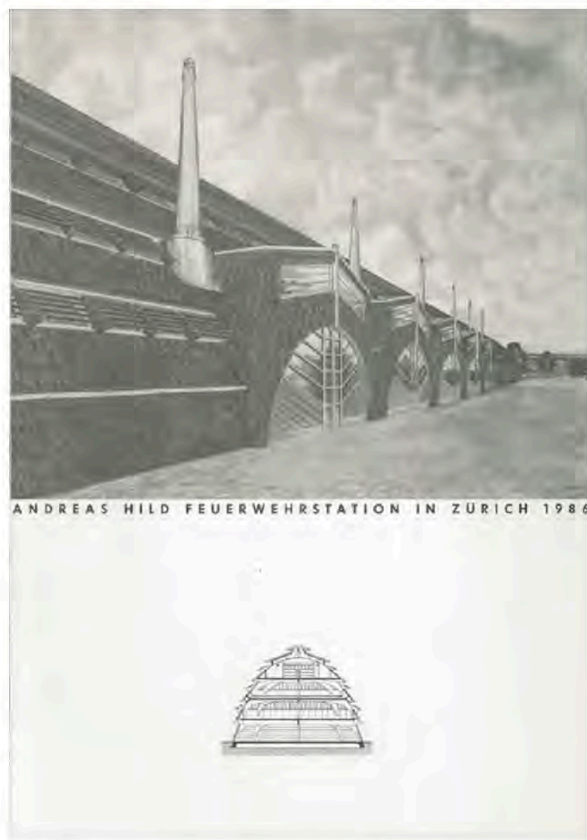
The urban density concept emerged at second glance as consistent with the renewed neoliberal interests. A “homogenized and fragmented” urban space¹⁴ was indeed better suited for the purposes of real estate market than the unappealing spaces of a modernist city.

In the post-industrial, post-taylorist society the concept of the Functional City anyway became obsolete. In the times of the neoliberal market economy the mass culture is dominated by apocalyptic images: dystopia instead of utopia in the age of surfaces.¹⁵ A resumption of the *everyday life* concept into the architectural vocabulary was a reaction to this development. Meanwhile, a continuing transformation within the discipline took place: from the architecture as object to an understanding of architecture as an ongoing project. The subversive strategy of the 1980s responded to the postmodern condition with the attempt not to overcome but to embrace the homogenized and fragmented urban space. The everyday life in the spirit of Venturi or Smithsons was then no longer of interest. Rather, a correlation between architecture and everyday life regarding the *realism* discourse in 1970s¹⁶ appeared to be a new productive approach.

DIRTY REALISM

After the modern planning obsession resulted in the chaotically distorted landscapes, the architectural aspirations of the 1980s reflected a new architectural trend. The upcoming movement,¹⁷ the *Dirty Realism*, sought to learn from the abandoned industrial spaces and ugly outskirts. Liane Le-faivre conveyed the original literature term: “a fiction of a different scope – devoted to the local details, the nuances, the little disturbances in language and gesture”¹⁸ in 1988 into architecture.¹⁹ In contrast to the optimistic or rather ironic postmodern movement, the protagonists of the latter did not want to improve the existing “hard” reality. In the same time their attitude was not affirmative. The applied method can be called in relation to Viktor Schklovskys term *alienation* (*otstranenie*). The critical visualization of the found reality was manifested through a “lyrical presence of a *heavy metal* avant-garde”.²⁰

However, recourse to the everyday practice should be distinguished from the concepts in the earlier decades.²¹ The intellectual attitude exemplified in the field of architecture by Bernard Tschumi’s “Advertisements for Architecture” was abandoned by the next generation in favor of the “dirty” reality. The new architectural realism referred to the black and white aesthetics in the films by Wim Wenders or Jim Jar-



01. Andreas Hild, Fire station, 1986 ETH Zurich.

musch; and within the architectural discourse to the dichotomy between architecture materiality and representation of the material, or to the question of contemporary meaning of the socialist realism; to the exact meaning of realism for architecture which should either be understood as a self-referential aesthetic system or as a social product.

ARCHITECTURE AS TECHNIQUE

In the postindustrial, antiproduktivist economy,²² the discourse focus shifted away from the objective reality. The agony of *Real* meant an emergence of countless simulations. If there is no more difference between the real and the simulation, the hyperreality will take place of the former reality: a “hyperspace without atmosphere.”²³

At this point, distinctive architectural groups started around

the 1980s with the experiments mattering until today. On the one hand, because, despite the postmodern spirit the “most architects seem only to fix on square footage and marble curtain walls.”²⁴ As well as “Malcolm McLaren was the first person to bring life-style politics into the language of music” Nigel Coates and the group Narrative Architecture felt obliged to transfer the contemporary music and fashion subcultures attitude to the retrogressive architecture discipline. For the *Albion* annual project at the AA School, Coates led Unit 10 was being developed conversion scenarios for a former industrial site in London as an alternative to the city’s official urban development plan. The drawings produced for the project were mostly perspectives and views with action scenes and buildings parts. Illustrations of possible locations rather than usual building plans were described by the architects as “a scribble, an attack, a transfer from factual form and back again. Drawing, but still real”.²⁵ Drawings, or rather coloured pictures by Nigel Coates, emphasised a simultaneity of different temporal and spatial conditions. Events and the space framework were merging into a one fragile unity. It is probably no coincidence that the Schklovsky’s *Text Art as Technique* was placed by Coates as a key reading for the unit’s students.²⁶

In the paper architectures of the “professional pessimists”²⁷ Alexander Brodsky and Ilia Utkin form also played a secondary role. The monochrome etchings inspired by Piranesi’s *Carceri* represented archetypical moments²⁸ of the present. In *A Glass Tower*, the cristalline “Tower of Babel” was considered to be an allegory to the modernity as “a skeleton of a gigantic animal that became instinct in prehistoric times”. The ruins of this “dead city” remained unnoticed by the people living around – an another methaphor for subconsciousness, an inseparable part of the modernity.²⁹

The design method of the Swiss protagonists of *Analogue Architecture*³⁰ was equivalent to the hyperrealistic art. The work on the projects was – once again – a work on the images: on the oversized drawings the hypertrophic architectural elements are depicted in gloomy tones. The drawn buildings refuse to present themselves as uniform shapes; they remain “containers” filled with diffuse analogies and metaphors produced by the self-confessed epigones.³¹ However, the core of the analogue method was not only the fragmentary character of the assembled elements but also a selection of references revealing all the painful (anti)modernistic topics and taboos. All of the previously discussed design approaches followed the maxim of a deautomation of perception according to Schklovsky:³² “With the process (...) of the automatization of



02. Alexander Brodsky, Ilia Utkin, *A Glass Tower*, 1984-1990.

an issue, the greatest economy of the perception powers is attained; actions (...) are being performed, as it were, according to a formula, without ever appearing in consciousness.”³³ It was probably as well strength as weakness of those project strategies that none of them was intended to be realised. The desired effect was a perception shift through a self-assurance about the status quo of the earlier suppressed reality. The aesthetics of ugliness, of the peripheral and abandoned industrial landscapes was appropriated timely by the commercial culture. Punk became pop and DIY aesthetics came to the department stores and on advertising posters.³⁴ The valorization of “ugly” spaces proved to be extremely short-lived critical mechanism. For this reason, it is necessary to resume the *Dirty Realism* project once again considering the question dedicated to the transformation of the contemporary cities from today’s perspective.

REALISM: ONCE AGAIN?

The very idea of *Dirty Realism* was to make visible the city “substance” through an alienation by the architectural visualisation techniques. Although the design experiments of the 1980s have been appropriated by the market-oriented urban policies quite quickly, a redefinition of the “emptied modernist city” fabric presented an alternative to the common architectural practice. A tight modern planning corset was nevertheless bound to the emancipation from the hierarchical space constraints of pre-modern times. This productive opposition was brought to the surface by deliberate confusion of spatial and temporal organization in the projects of dirty realists.

The question still is, what should be a connotation by the demand for more realism (in architecture) nowadays? When the concept of realism was synonymous with the political and social criticism in the 1970s, it is today not necessarily the case anymore. It is of significance that in the *Manifesto of New Realism* by Maurizio Ferrari³⁵ “deobjectification” appears as a central point of criticism and Robert Venturi is named as one of the originators of the intricate postmodern condition.³⁶ An ontological turn to a “real world” by Ferrari leads back to the “silent things”, a turnabout that serves rather contemporary phobias than brings into the present the once progressive realism concept. According to Neil Brenner in his critique of tactical urbanism,³⁷ the acupuncture interventions are mostly unable to bring a change into the neoliberal system of privatization and commercialization. For this reason, the specific tactical interventions should be embedded in a broader political context: the reality of today.

The taboo breaks by the architectural “punks” around 1980s were painful but instructive. The architectural provocation not only caused a boundaries shift but, in particular, revealed the original borders. At the same time, this awareness process stimulated not only appreciation but also gentrification of the revealed spaces. The inevitable economic profit undermined the emancipatory intention. What remained is the idea to enable architecture to a critical rather than affirmative position towards society through the ongoing determination of the *Real*. In this respect, a demand for realism: as criticism and productive change at the same time, is still valid today.

NOTES

- 1 Cp. Hilpert 2000.
- 2 Hilpert 2000: 103.
- 3 Hilpert 2000: 103.
- 4 Ibid: 104.
- 5 Cp. Giedion (1956).
- 6 Cp. Tönnies (2001[1887]).
- 7 The title of the 9th as well as of the 10th CIAM conference is “Habitat”.
- 8 The popularity of the everyday life term within the humanities, e.g. the emerging Cultural Studies focusing on the popular culture or in sociology, by Barthes, Elias, Lefebvre a.o.
- 9 Cp. “Urban Reidentification” grid by Alison and Peter Smithson for the 9th CIAM: Mumford (2000): 232; note also similar art terms such as *Objet trouvé* or *Ready-made*.
- 10 Mumford (2000): 237.
- 11 Cp. Venturi, Scott Brown (1972).
- 12 Cp. the exhibition and accompanying publication by Bernhard Rudofsky named *Architecture without architects*. A note from the press-release in 1964: “Far from being accidental, this non-pedigreed architecture gives tangible evidence of more humane, more intelligent ways of living (...) What we take to be archaic buildings are often models of true functionalism and timeless modernity (as distinct from architectural fashions)”; the discourse to the *The Death of the Author* is of highly importance in this context.
- 13 The contemporary critics of the Learning from Las Vegas concept questioned its affirmative approach towards the modern capitalistic city planning represented by Las Vegas.
- 14 Cp. Tafuri (1976 [1973]).
- 15 Cp. Lefebvre (2000[1974]).
- 16 Cp. Foster (2013).
- 17 Cp. Szeemann (1972).
- 18 One can speak of Dirty Realism only partially as of a one movement, rather than of a time-typical tendency.
- 19 Buford (1983): 4.
- 20 Cp. Lefebvre (1989) and Lefebvre (1990): *Quaterns* (1988).
- 21 Lefebvre (1990): 15.
- 22 Cp. Lefebvre (1971).
- 23 Lefebvre (1990): 15.
- 24 Baudrillard (2016 [1978]): 9.
- 25 Cp. Coates (1983).
- 26 Jamison (2017): 75.
- 27 Ibid: 98.
- 28 Belov, Mikhail/ Rappaport, A.G./ Hatton, Brian/Cooke, Catherine (1988): 15. <?> Archetypes of Brodsky and Utkin can be seen in relation to the idea of tipo of Italian rationalists. However, when Rossi transferred the term into archetypal geometric forms, the meaning of Brodsky and Utkin archetype remained more open for interpretations.
- 29 Cp. Herding (2006).
- 30 A design studio at the ETH in Zurich between 1983 and 1991 which was led by the Professor Fabio Reichlin and his assistants Miroslav Sik and Luca Ortelli. The Analogue Architecture concept was presented first in the exhibition accompanied by the catalogue in Zurich in 1987.
- 31 »Wir sind im Grunde alle Epigonen und Genies«: in the project task booklet in 1984/85 by Prof. Fabio Reinhart, ETH Zurich.
- 32 Liane Lefebvre also referred to the importance of the alienation concept by Shklovsky in her article “Dirty Realism in der Architektur”.

- 33 Sklovskij, Viktor (1971[1917]): 13.
 34 Cp. Heller/Marendaz (1988).
 35 Cp. Ferraris (2015 [2012]); the exhibition *Bungalow Germania* in the German Pavilion at the Architecture Biennale in Venice in 2014 is dedicated to the *Realism*. By the German-speaking architecture magazine Arch+ produced catalogue issue *Get Real* discussed different approaches toward the contemporary reality postulating the realism more or less as accumulation of the "hard facts".
 36 Ferraris (2015 [2012]): 1.
 37 Brenner (2017).

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BIOGRAPHY

Elena Markus (b. Kossovskaja) studied architecture at the UdK, Berlin University of the Arts between 2000-2007, and subsequently worked as an architect in Berlin, and architecture journalist for the Swiss architecture magazine *archithese*. Between 2011 and 2014, she was a curator at the SAM Swiss Architecture Museum in Basel, and initiated the exhibition series "Spatial Positions", in which she presented radical artistic and architectural projects. Further she co-curated the exhibition on contemporary Swiss architectural photography "Building Images. Photography focusing on Swiss Architecture". Since 2014, Elena Markus has been a Research Associate at the Professorship of Architectural and Cultural Theory at the Technical University of Munich and is working on her PhD on the political and social effect of the architectural movement *Analogue Architecture*.

Session 03 EUROPEAN HOUSING STRATEGIES

Session Chair: Miles Glendinning (Scotland)



The difficulty posed by post-war mass housing for a Modernist architectural-heritage grouping such as DOCOMOMO partly stems from the fact that it concerns a building type afflicted by large-scale redundancy and unpopularity, and partly from the fact that, unlike traditional heritage, post-war mass housing mixes together 'design', 'production' and 'reception'. Unlike traditional preservation societies, DOCOMOMO is concerned exclusively with a relatively recent architectural movement, which jettisoned the old Vitruvian framework of separate 'beauty' and 'practical function' in architecture for an all-embracing utopian vision. Architects believed that architecture was indivisible from an ever-changing range of social, economic, technological or psychological factors – and that, because of that, they had the right and the duty to intervene in areas they had previously avoided, such as structural engineering, or which had been newly invented, such as 'user studies'. Often, they invoked the help of the powerful mid-20th-century state to help them in these efforts. At the core of all these efforts, especially in Europe and the wider socialist bloc, was the new area of mass social housing. This was a field of existential political concern to 20th-century European regimes of all kinds, and at the same time a central focus of the efforts of the socially-minded intelligentsia, including architects, city planners, sociologists and public health reformists. Within this world, modernist designers tried to establish and enlarge their position through theories of community that appropriated chunks of adjoining disciplines, especially that of city and regional planning. Yet the outcome of those efforts was sometimes very different from the grandiose aspirations, owing both to architects' often distinctly marginal position within the establishment – by comparison (for example) with powerful industrial contractor organisations and local politicians dedicated to maximum output – and also to their lack of interest in communicating with and influencing these groups, rather than pursuing their own elite debates. The partisan, contentious status of architectural modernism within mass housing was only reinforced when the phase of

creation shaded into that of reception. In some places, such as Western Europe and North America, that reception soon took the form of a violent rejection by 'public opinion' of mass housing as a whole – a rejection that saw all its creators, architects and mass-producers alike, as equally blameworthy, and that also left the complexes themselves increasingly tainted by the stigmatisation and residualisation of public housing, consequent on the hegemony of market systems. This rejection, and the consequent radical demolitions and re-stylings, have today left the often still substantial built legacy stranded in a fog of incomprehension or hostility, on the part both of the general public and of the new professional groups charged with the fate of that legacy. By contrast, in the former socialist countries – which predominate in the content of this session – the chief problem is not so much public rejection and social residualisation as a more subtle process of individualistic, laissez-faire degradation of the open-space planning of the vast expanses of 'socialist extensive urbanism', many of which are now choked with anarchic privatised divisions and clutter.

The papers in this session vary in the balance they strike between coverage of the original context and creation of housing projects and present-day challenges and strategies of regeneration, and also between 'architectural' and 'historical' analyses; selected Western examples provide a counterpoint to the preponderantly post-socialist case studies, but almost all the examples are drawn from formerly authoritarian regimes, left or right, in a striking demonstration of the disconnection between architectural/urbanist creativity and political 'freedom'.

Among the Western examples, Gisela Lameira and Luciana Rocha's contribution is almost exclusively concerned with the original process of creation of Portuguese state-supported housing in the later years of the right-wing Salazar regime, and combines a very useful explanatory overview of the various rather confusingly overlapping housing programmes, all structured by the country's governing ethos of authoritarian

Catholicism, together with an in-depth exploration of the highly varied modern movement concepts and typologies applied in their architecture and urban design. At the other extreme, Melinda Benkő's paper focuses predominantly on a contemporary issue - the threat posed to open-plan modernist complexes by the contemporary preoccupation with spatial subdivision in the interests of 'security' – and singles out three ex-socialist regeneration examples (Magdeburg, Riga, Budapest) and one western (Lyon-La Duchère) for in-depth analysis. The other two papers, also concerned with socialist legacies, follow something of a middle course between these extremes, combining extensive historical contextual introductions with detailed analyses of the areas' contemporary problems. In the case of Sandra Treija, Uģis Bratuškins and Alisa Korojova, the focus is a single housing development of 'rayon' scale, Imanta, while Kaja Lipnik Vehovar provides an overview of a wide range of 1960s-80s housing developments in Ljubljana. Although the organisational frameworks described in the two papers are rather different – Soviet centralism in Riga, 'self-management socialism' in Tito's Yugoslavia – the eventual problems faced today, such as makeshift car parking, degradation of public spaces and tenurial uncertainty, are much the same in all post-socialist societies.

However, whether in western or post-socialist contexts, these challenged legacies of post-war European mass housing all without exception serve to remind us that there once existed, on both sides of the 'Iron Curtain', an approach to city building that actively tried to reconcile the 20th-century forces of collectivism and individualism, within a landscape that combined open-ended freedom with a restrained urban monumentality.

BIOGRAPHY

Miles Glendinning is Professor of Architectural Conservation at the University of Edinburgh. He has published widely on modernist and contemporary architecture and housing, and is Convener of Docomomo's International Specialist Committee on Urbanism and Landscape: his books include 'Tower Block' (with Stefan Muthesius), 'Modern Architect', on the work of Sir Robert Matthew, and an international history of architectural preservation, 'The Conservation Movement', published January 2013 by Routledge. Current research projects include an in-depth historical investigation of mass housing, both globally and in Hong Kong in particular: a global overview monograph will be published in 2020 by Bloomsbury Academic Press.

MODERN NEIGHBOURHOODS IN LJUBLJANA - THE SPLENDOUR AND MISERY OF THEIR EXISTENCE AND DEVELOPMENT

Kaja Lipnik Vehovar (Slovenia)

ABSTRACT

Almost half of the 288,000 inhabitants of Ljubljana, the capital of Slovenia, live in Modernist residential neighbourhoods built between 1960 and 1990, after the Housing Reform was implemented and before Slovenia became an independent state. The basic organising principle of urban planning policy was defined by the General Urban Plan of Ljubljana, and subsequent major developments in the city were carried out in accordance with it. After Slovenia's independence in 1991, changes in the political system and society have also been reflected in environmental policy and legislation. Large-scale reforms in the housing sector have resulted in the privatization of public housing. Even though neighbourhoods were designed so as to permit future development and adaptation, changes in the social system, redefined ownership relations, and new requirements for energy efficiency, along with increasingly vague spatial and building legislation, have led to unfavourable transformation of residential areas. Uncontrolled interventions have had a negative impact on their appearance, and the inappropriate use of open spaces adversely affects their functionality. All of this caused the quality of life in neighbourhoods to diminish, and prevented the residents from being aware of the quality of their living environment.

How can modernist neighbourhoods be transformed into desirable places to live? Can they be adapted to the new situation while at the same time maintaining their original appearance, authenticity and integrity, and how can this be achieved?

HISTORICAL BACKGROUND

Ljubljana has over 288,000 inhabitants today, with almost half living in modern neighbourhoods built between 1960 and 1990. Due to their exceptional architectural and urban features, some of them have been identified as 'characteristic' heritage areas of the city, and as important building blocks of its identity.

After the end of WW2, Slovenia became a part of the new

state of Yugoslavia, a federation of six equal-ranking socialist republics. After the "Yugoslav - Soviet (Tito - Stalin) split" in 1948 Yugoslavia, later a founding member of the Non-Aligned Movement, set its own independent path to socialism between the capitalist West (US) and communist East (Soviet Union). Yugoslavia's new social political system, with its combination of 'market-socialism' and 'workers' self-management socialism', was based on the concepts of social ownership and social equality. Companies, though owned by the state, were collectively managed by the employees themselves. The post-war reconstruction began with the nationalization of private property and the simultaneous "construction" of the new state. Architecture became one of the most progressive forces of cultural engagement. Architects were to retain a high level of autonomy while still contributing to the goals of socialist society. They combined their own modernist expressions and interventions into original solutions, comparable to their contemporaries elsewhere in Modernist Europe.

The renovation of the housing stock and the improvement of living conditions was one of the priorities of Yugoslavia's socialist social programme. The planners began to seek and develop new urban and architectural solutions for the organisation of residential development in a revised version of Modernism with the goal of providing apartments for the wider public, while still observing the regional historical and social context of the region.

IDEAL NEIGHBOURHOOD

In Ljubljana, the key projects of renovation and city development were taken on by the young generation of architects led by Edvard Ravnikar, a student of Jože Plečnik, who worked in Le Corbusier's studio shortly before WW2.

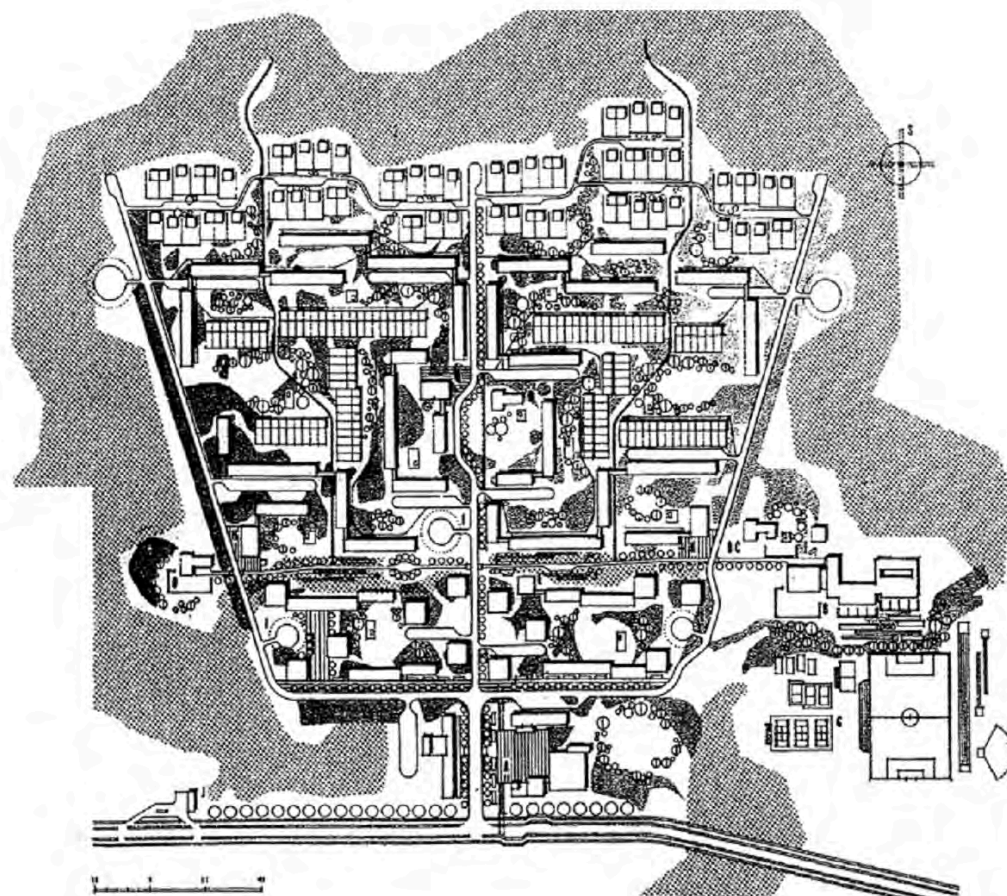
As early as 1955, Ravnikar's seminar produced a study of a radial development of Ljubljana based on its geography and including breakthroughs in urbanism from Scandinavian countries, which were leaders in the fields of urbanism and architecture at the time. The study, which proposed a series of

tall residential developments along the city arteries while retaining long tongues of green areas between the radials extending all the way to the city centre, became the basis for the General Urban Plan of Ljubljana in 1965.

Prof. Ravnikar's seminar also began to develop the concept of a residential neighbourhood as a sociological and physical grouping that would enable better organisation of a city's spatial development. Ravnikar's students upgraded the basic model of the neighbourhood unit - a residential area with 5,000 inhabitants planned on the basis of criteria of pedestrian streets and

paths with the primary school in the centre (pioneered by American planner Clarence Perry in 1920, and published in the book *Housing for the Machine Age*) - by organising space according to function, including areas of residential buildings, public buildings, a transport network, and recreational and green space. The neighbourhood was divided into residential quarters for 300 to 1,000 inhabitants, and further subdivided into smaller units, in which the inhabitants were supposed to be more interconnected. The neighbourhood model included different housing typologies, from high-rise apartment build-

Fig. 1 _ Arch. Jernejec Mitja, Dobravec Majda, Lap Janja, "ideal neighbourhood for 5000 residents", exhibition "Family and Households" Zagreb, 1958



ings to individual houses, in order to foster diversity in the population structure. Within the boundaries of the neighbourhood, all the functions essential for the everyday life of the inhabitants were planned; in addition to housing, the model included social, educational, cultural, and service programmes such as schools, cultural institutions, and shops. Special attention was devoted to the creation of spacious open public places with an emphasis on providing optimum footpaths and large green areas. The centre of the neighbourhood was emphasised by skyscrapers (to build up the identity of the area) and located along the main road on the outer edge of the neighbourhood with a bus stop nearby. The traffic routes, differentiated according to their function, were completely separated from the pedestrian areas, no transit motor traffic was permitted within the estate, and car traffic was limited to secondary roads.

This concept was presented as the model of an “ideal neighbourhood” for 5,000 inhabitants at the exhibition “Family and Households” in Zagreb in 1958.

The later General Urban Plan of Ljubljana defined the neighbourhood unit as the basic organising principle of urban planning policy. In 1965, a Housing Reform was implemented, which triggered the beginning of the construction of housing for the market and prompted the first built realisations of the concept of the neighbourhood unit. A further wave of developments was implemented in the years up until the end of the 1980s, including intensive construction of housing estates.

LJUBLJANA'S NEIGHBOURHOODS

The creation of new residential neighbourhoods included all key principles of the “ideal neighbourhood”, always imple-

Fig. 2 _ Arch. Šarec Aleš, Vovk Janez, Arnautović Ilija and Peršin Aleksander, neighbourhood ŠS 6, Ljubljana-Šiška, Slovenia, 1964-1972, spacious open public places with large green areas, foto: Kaja Lipnik Vehovar, 2018



mented in an interesting and innovative way, with great commitment to exploring and developing new housing concepts adapted to the modern way of life. The final form of buildings was dictated by the use of construction principles, building techniques, and materials, and was always the result of a carefully elaborated idea and logical construction. The focus was on unifying the functional design of a space, the construction, and the expressive potential of a building. (webcitation.org) The creation of high-quality open public spaces in the area was as important as the design of buildings.

The first realised self-contained urban residential unit in Ljubljana was neighbourhood ŠS-6 (1964-1972). The wedge-like design of the neighbourhood, conceived by urbanists Aleš Šarec and Janez Vovk, is defined by a hierarchically-structured development, a grid of paths and elements reminiscent

of a traditional city. It thus already represents an important deviation from Functionalist urbanism. The architects, Ilija Arnavtović and Aleksander Peršin, created buildings with emphatic open communications, and realised their vision of a contemporary apartment block as an open, permeable space, instilling the neighbourhood with a new social aspect of collective living.

In neighbourhood of Koseze (1968 - 1974), the straight lines of five-storey buildings define the organisation of the area into a regular grid of green belts and pathways with a public connecting avenue in the centre. For the buildings, which are spaced very densely, Viktor Pust used the typology of a set-back terraced block, which combines the advantages of an apartment block and a single-family home, and makes the neighbourhood's scale more human and pleasant.

Fig. 3 _ Arch. Mušič Vladimir Braco, neighbourhood BS-7 Ruski car, Ljubljana-Bežigrad, Slovenia, 1967-1972, street - platform over garages; in the platform "window" to get some light to the garage level, in the "window" high trees are planted, foto: Kaja Lipnik Vehovar, 2018



Kaja Lipnik Vehovar / Modern Neighbourhoods in Ljubljana

Another interesting example of high-density development in Ljubljana is the Bežigrad residential neighbourhood of Ruski car (1967-1972). The project group for this scheme, under the leadership of architect and urban designer Vladimir Braco Mušič, achieved a clearly legible ground plan by using the street as the basic building element of the neighbourhood's design. Using a dynamic design method, they defined the key guiding points in the surrounding area (terrain relief characteristics, spatial landmarks, views of the nearby mountains) and design elements which tie the neighbourhood together into a whole.

The urban plan of the neighbourhood BS3 (1971 - 1981) was designed by Mitja Jernejec in cooperation with architect Ilija Arnautović as a complex, hyper-urban structure. Urbanism and architecture in the neighbourhood are inextricably linked, as is reflected in the arrangement of the external spaces and the interlacing of longitudinally-arranged blocks with access roads and footpaths running underneath. Two groups of residential skyscrapers crowned by white pointed 'caps' instantly became an icon of Ljubljana's skyline from the moment they were built.

Neighbourhood VS-1 (1972 - 1983), known also as the Trnovo Blocks, was built in the immediate vicinity of the city centre. With these tall apartment structures, the suburb of Trnovo lost its characteristic rural appearance and became a part of the wider city centre. The urbanistic solution, the work of architect Roman Rems, arranged the blocks in lines articulated by the shifting of ground plans against one another, and with a rhythmic sequencing of structures varying in height. With its visual engagement, the Trnovo Blocks (architect Aleksander Peršin) became a characteristic backdrop of this part of Ljubljana.

All the featured neighbourhoods are characterised by strong, distinct, and clear urban and architectural designs, with good integration in the surrounding spaces, and offering quality living conditions. All of them are located near green recreational spaces; they feature contemporary infrastructure, owing to their siting by the city arteries; they have good traffic connections to the city centre and the wider vicinity; and there is good access to public transport.

Unfortunately, most neighbourhoods were not completed in their entirety - between the design and the realisation, the initial projects were changed either in terms of programme or the use of space, mostly on account of political or economic pressures. The neighbourhood was seen primarily as an organised means of residential construction. As the community

aspect was not a priority, the accompanying programme was not of key importance, and it was often realised in a much-reduced way. The consequences of the compromises between expert solutions and political and economic conditions are felt by the present-day inhabitants of the neighbourhoods on a daily basis - notably in a dire lack of parking spaces and in a deficient public programme. A shortage of spaces for inhabitant interaction is reflected in loosely knit communities and a poorly-developed sense of belonging, resulting in an absence of common ground, and of any management and development vision.

METAMORPHOSIS

The collapse of Yugoslavia, and Slovenia's independence in 1991, was logical consequence of many different causes, such as the ever-worsening economic condition of Yugoslavia, the growing problem of foreign debt, the economic inequality between the republics and intensifying tensions between them, the rising nationalism and ethnic conflicts, but also the collapse of communism throughout Eastern Europe, which destroyed the state's ideological base. In the last decade of the existence of Yugoslavia, in the 1980s, with the gap between the capitalist and socialist economies rapidly deepening, the tendency for the reform of the economy and political system became accentuated. People began to believe in the values of the West, capitalist world: private property, efficiency, profit, progress. Accordingly, independent Slovenia directed all its efforts into reforms that would facilitate the transition to the new socio-economic system based on private property. Changes in the political system and the organisation of society have greatly influenced the country's development and they have also been reflected in the environmental policy and legislation. One of the key privatisation laws which set the socio-economic transition from socialism to capitalism in motion was the 1991 Housing Act. It legislated the framework for the relations in multi-apartment buildings and also defined the conditions for the privatisation of state-owned apartments. A direct consequence of the law is very diverse ownership in multi-apartment buildings (90% of apartments are privately owned) and still-unsolved disputes regarding ownership of public areas in neighbourhoods.

The new owners undertook individual facade interventions on what they saw as "their property", including the replacement of exterior fittings with new, more energy-efficient ones (mostly deviating from the original in material, colour and opening style), or the glazing of balconies and awning modi-

fications, severely damaging the external appearance of buildings. Arbitrary interventions into common property, ignorance of legislation, lack of control (inspection), and the absence of sanctions for violations impart a sense of legality to such acts within society.

The disbursement of subsidies for energy efficiency refurbishment by the Ministry of Infrastructure is based only on the expected technical improvement (i.e. reduced heat loss), while other aspects are ignored. Refurbishments are executed primarily in terms of heat insulation and the renovation of the buildings' external envelopes, often with a new choice of vivid facade colours, which disregard the original colour schemes and design characteristics of the existing architecture. The uncoordinated interventions on the structures' exteriors have spoiled the visual appearance of the buildings,

threatened architectural authenticity, and eroded the coherence of entire neighbourhoods, which are being transformed into unrecognisable complexes with a ruined identity.

In the period of privatisation of publicly owned property, the housing stock in neighbourhoods became private property, while public spaces intended for everyone should have been given the status of built public good. In some cases, property relations on public spaces are still unclear, which prevents their proper maintenance and renovation. The poorly maintained, run-down, and functionally unsuitable public space has become unattractive and the residents do not use it. The green public spaces are often used as makeshift parking spaces. Some children's playgrounds have been dismantled due to dilapidation; few receive proper maintenance and remain in use.

Fig. 4 _ Arch. Viktor Pust, neighbourhood Koseze, Ljubljana-Šiška, Slovenia, 1968 - 1974, negative consequences of uncontrolled interventions, foto: Kaja Lipnik Vehovar, 2018



Kaja Lipnik Vehovar Modern Neighbourhoods in Ljubljana

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The procedures for securing the communal spaces in tenement-style buildings with individually-owned flats present a separate problem in neighbourhoods. Under recent legislation (URL RS, št.45/08, št.34/2017), procedures based on tenement flat owners' claims are processed in courts with the professional principles of spatial regulation remaining unobserved. Consequently, public spaces are fragmented and privatised. Significant alterations to the original urban and functional concept of a neighbourhood usually result in an inferior user experience of space as individual zones within a neighbourhood become selectively accessible, areas become less traversable (closed passageways and walkways), lawns are made into fenced-off car parks, etc.

COMPREHENSIVE RENOVATION

Today's unenviable situation in neighbourhoods is not the result of inadequate "socialist" urban architectural concepts, but the sum of many factors: incomplete executions of programmes envisaged in design projects, problematic and unfinished land policy procedures, high fragmentation of ownership, large number of building managers within a neighbourhood, vague and inconsistent legislation, inappropriate attitudes to public space in society, and a lack of awareness on part of the residents about the importance of the visual unity of buildings and the coherence of neighbourhoods as a whole, as an element in the general quality of life.

For these spatial problems to be addressed, Slovenia first needs an effective housing policy which will provide holistic regulation. A strategy of comprehensive renovation of residential neighbourhoods, which will take into account all the specificities and will provide guidelines for sustainable development of neighbourhoods and their renovation, must be prepared. The partition and privatisation of public spaces must be outlawed. Energy efficiency refurbishment must be limited to comprehensive building renovations based on professionally prepared projects with a special emphasis on the preservation of the architecture's authenticity.

Effective management of neighbourhoods, which would ensure the preservation of the coherent appearance of a neighbourhood, the managing of buildings, and a regular maintenance of the public spaces, could be achieved by introducing a unified manager for the entire neighbourhood. There should be a legal protocol, binding for the building's manager and residents, which would include not only the rules on management, use, and maintenance of the building, but also a definition of permitted interventions in the building's architecture.

On the municipal level, every spatial plan should include areas with detailed municipal spatial plans for renovations, individually for each locality, including a long-term strategy for re-establishing the visual uniformity and authenticity of both the buildings and the neighbourhood as a whole. Neighbourhoods also need to be updated through a public programme and common spaces for residents, such as co-working spaces, study rooms, spaces for intergenerational co-operation, exchange of knowledge and experience.

But the first problem to be solved is that of vehicle parking. Today's demands for parking space are much greater than when the neighbourhoods were built, and thus makeshift parking solutions are everywhere, on lawns, footpaths, and emergency accesses. In the neighbourhoods where parking garages were provisioned but not realised (BS-3, BS-7), their construction must be ensured; elsewhere, solutions for additional parking capacities must be found. Parking on public open surfaces intended for other uses must be banned and sanctioned. In line with the trend of fostering sustainable mobility, which includes cycling, secure bicycle vaults must be provided.

Public spaces inside the neighbourhoods must remain the property of the municipality and be given the status of built public good. They must remain whole and available to all users; however, the competences of public utility companies and the local community in these spaces must be agreed upon.

The attitude towards public spaces must be changed. Public areas in neighbourhoods (and in general) should be considered as a common good, "our" space. Anyone who uses it co-creates it with their presence, use, activities. The responsibility (at least moral) for proper maintenance and orderliness of public spaces is the responsibility of the entire community, irrespective of ownership: the users of the space must become its active custodians.

Open spaces in neighbourhoods facilitate the establishment of new relationships between people, so they must be well maintained and purposely used. Taking the pilot project in Ljubljana's Savsko naselje neighbourhood carried out by group Prostoroz as a model, a practice of comprehensive urban renovation of neighbourhoods should be established on the local level, so as to improve their physical, economic and social state. The inclusion of the residents in the process, and a sensible adoption of their suggestions and needs, is crucial. An inclusive process of spatial renovation strengthens the ties between the residents and their sense of belonging to the community; furthermore, the residents use the space more and take better care of it.

EPILOGUE

Modernist neighbourhoods were created with a high degree of technical and technological skill, with a great sense of the aesthetic, and with a lot of empathy for the needs of ordinary people (social responsibility). Residential buildings with well thought-out apartment solutions, carefully positioned within generously-proportioned public green areas, provide an opportunity to identify qualities of built environment that are essential for pleasant living.

Unfortunately, the stigmatising of the life in the former state of Yugoslavia and its social order also negatively affects the attitudes of the general public towards so-called socialist architecture and urban planning, with residential neighbourhoods as their most recognisable form. Effective measures must be prepared for a breakthrough in the current state of affairs, which has been long overdue. Successful renovation of neighbourhoods is possible only through fruitful co-operation of all stakeholders (public institutions (state, municipalities), economic organisations, residents, NGOs and technical experts) from the very outset.

We must endeavour to make sure that the qualities of Modernist neighbourhoods, as recognised by the expert community, can be translated into a higher quality of living. Only then will all the qualities of neighbourhoods be recognised, appreciated, and upheld by their residents.

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BIOGRAPHY

After completing her studies at the Faculty of Architecture in Ljubljana in 1996, **Kaja Lipnik Vehovar** worked in various architectural offices. She has been working as a project manager and a leading architect in the architectural studio Kubusarhitektura since 2002. In 2015 she enrolled in doctoral studies Economics and Techniques for the Conservation of the Architectural and Environmental Heritage, University of Nova Gorica. The subject of her PhD dissertation concerns the built heritage of the 20th century in Ljubljana with an emphasis on urban and architectural planning during the periods of social transformations, particularly the relationship between open spaces and built structures.

PORTUGUESE STATE-SUBSIDIZED MULTIFAMILY HOUSING PROJECTS. EMERGENT MODERNITY DURING THE MID 20TH CENTURY

Gisela Lameira, Luciana Rocha (Portugal)

ABSTRACT

In Portugal, the single-family housing model remained a preference for most initiatives of state-provided housing until very late in the first half of the 20th century. Philanthropic actions (1900-1930), related mainly to an 'industrial paternalism' that sought out inexpensive, simple and rapid investments, saw the model of the single-family as adequate for housing the working classes. With the arrival of the dictatorial regime of the *Estado Novo* (1933), the government passed legislation to advance a new social order, one in which housing was a key element. Although some neighbourhoods incorporated architectural features that enhanced comfort and living conditions, they continued as single-family, single-floor houses, designed in a sort of rural arrangement that was as far from anything resembling the traditional urban fabric on the scale of the modern city.

In the 1940s it became obvious that this housing model would be unable to provide housing for those in need of it. A new programme was then created proposing smaller rental apartments, aggregated in housing blocks. These neighbourhoods changed public housing in many respects: in the architectural language (introducing modern elements and approaches to design), the urban concepts (compliance with the Charter of Athens and, therefore, introducing communal green spaces), the infrastructure of the housing buildings (including well-equipped service areas: kitchen, laundry and sewing rooms, complete bathrooms and the independent living room), and in the social model arising from these urban arrangements. A sense of collectiveness started to emerge, introducing the notion of community as a social unit into the previously held idea of family that was so cherished by the dictatorship.

This paper focuses specifically on state-subsidized multifamily housing initiatives built between 1940 and 1960 and proposes the analysis of a set of urban developments constructed in Portugal. Given this architectural, urban, social and political context, we will approach these housing sets with one

research question in mind: how did these urban developments incorporate Modern Movement influences from foreign contexts?

The proposed paper is an extension of the research project entitled 'Mapping Public Housing: A critical review of the State-subsidized residential architecture in Portugal (1910-1974)', which focused on the role of the State as a provider of housing. [a project co-financed by ERDF and FCT, PTDC/CPC-HAT/1688/2014].

1. INTRODUCTION: A GENERAL APPROACH TO THE STATE-SUBSIDIZED HOUSING PROGRAMMES IN THE PORTUGUESE 20TH CENTURY

This article proposes the analysis of a set of multi-family housing buildings from different state-subsidized housing programmes that were implemented in Portugal during the first three quarters of the 20th century.

The first section will approach the main characteristics of each housing programme and the specific Portuguese context from the 1940s to the 1960s. It is believed that these urban developments incorporated Modern Movement influences from foreign contexts through different approaches and in different degrees: urban concepts, programme, architectural language, materiality, and typologies.

The second section will focus on these Modern Movement signs choosing some examples that were built in several Portuguese cities, disclosing distinct levels of development in terms of urban integration or architectural and construction quality of the buildings.

1.1. State-subsidized housing programmes in Portugal

In Portugal, the single-family housing model remained a preference for most initiatives of state-provided housing until very late in the 20th century. The first experiences in this field were *Philanthropic actions* (1900-1930), related mainly to the 'industrial paternalism' that sought out cheap investments,

and saw the model of the single-floor row house as adequate for accommodating the working classes.

The single-family housing model remained in place with the arrival of the dictatorial regime of the *Estado Novo* in 1933 when the government passed legislation promoting housing as a key element, although it was designed in a sort of rural arrangement. The first 'Affordable Houses Programme' (*Casas Económicas*, decree-law 23.052, dated 23 September 1933) proposed a gradual increase in the houses' scale by adding one story.

In the early 1940s, the instituted housing models proved insufficient in meeting the needs in terms of the dwelling. A new programme was then created, one proposing smaller rental apartments, aggregated in housing blocks. The 'Affordable Rent Houses Programme' (*Casas de Renda Económica*) originated with the intention to build affordable houses with funds from Social Security via *Habitações Económicas - Federação de Caixas de Previdência* (HE-FCP)", in 1947. The 'Affordable Rent Houses Programme' was based on a specific regulation framework, namely Law nº2007, dated 7 May 1945, followed by decree-law 35.611, dated 25 April 1946. Offering the occasion to introduce multifamily buildings, the neighbourhoods built under this specific housing programme created a significant turning point in terms of public housing. This 'political' change allowed for the introduction of new city models and urban arrangements according to the Charter of Athens and the experimentation of different architectural languages. Relevant transformations can also be seen in the design of the typologies, increasingly involved with the 'minimum dwelling' ideals.

The *Ramalhe* Residential Unit (Oporto, 1950-1954), the *Soda Póvoa* Neighbourhood (Vila Franca de Xira, 1953), and the *Caixas de Previdência* Housing Complex (Coimbra, 1965), stand out as relevant residential complexes built under this housing programme, particularly as they concern the incorporation of Modern Movement elements.

In Lisbon, the *Olivaís* Neighbourhood (North and South) were mostly built under this programme, promoted by the Technical municipal office for Housing (GTH) and developed by HE-FCP. This neighbourhood consists of several cells designed by different authors and was one of the largest municipal housing initiatives in Lisbon.

Although the 'Affordable Rent Houses Programme' was the most relevant initiative in terms of construction of multifamily buildings, other state-subsided programmes can be mentioned, namely the 'Houses for Poor Families' (*Casas para Famílias Pobres*, 1945) and the 'Houses with Controlled

Rent' (*Casas de Renda Limitada*, 1947), as some of these initiatives engaged with the implementation of parcelled urban plans in Oporto and Lisbon.

The main objective of the 'Houses for Poor Families Programme' (Decree nº34.486 dated 8 April 1945) was to promote the construction of housing for very low income families within a simplified system with regard to the conditions required for the occupation of 'Affordable Houses'. As a relevant example, we can mention the case of *Rainha Dona Leonor* neighbourhood - 2nd phase (Oporto, 1952).

The Low-income housing unit neighbourhoods of *Pasteleira* (Oporto, 1957-1960), *Bom Sucesso* (Oporto, 1956-1958), and *Carvalhido* (Oporto, 1956-1958) were built under this programme, but specifically under the Improvement Plan for the city of Oporto, from 1956. This plan was supported by the Decree-Law 40.616 of 28 May 1956, implemented by the Municipality and supported by the State, and was intended to simultaneously provide housing solutions for inhabitants of old neighbourhoods in the city centre and to expand the city in a planned way via urbanization actions. Within ten years, from January 1957, the intent was to build 6000 dwellings.

In another line of action, the housing programme entitled 'Houses with Controlled Rent', from the mid-1950s, was centred on the issue of a prior fixing of the maximum total rent to be charged for apartments earmarked for housing. It was supported by Decree-Law 36.212 of 7 April 1947, followed by Decree-Law 41.532 of 18 February 1958 and Law 608 of 14 November 1973. It gave rise to well-known residential complexes in Lisbon, such as the buildings in *Estados Unidos da América* Avenue (1954) and the *Estacas* Neighbourhood (1949-1955).

2. CASE STUDIES: SIGNS OF MODERN MOVEMENT INFLUENCES

The assembled case studies were selected to exemplify some of the characteristics of certain signs of materialized modernity among different grades of architectural quality residential buildings.

The modern residential concept, generally aiming to valorise the domestic space, includes a set of common and unique elements. These contributed to its innovative formal and functional character and can be individualized and identified. Indeed, innovative solutions are observed in the urban context, the conception of façades, the development of new access systems, the articulation of several housing typologies, the organization of the functional programme, and in the experimentation with new materials.

2.1. Urban concepts

The *Ramalde* Residential Unit (early 1950s), built under the 'Affordable Rent Houses Programme' and developed by HE-FCP, is located near *Boavista* Avenue in the western part of the city of Oporto, occupying a lot of considerable size. The Municipal Council proposed a specific plan for the area, called the 'Ramalde Partial Urbanization Plan' (1948), including housing (106 blocks), commercial buildings, schools, and sports buildings. The plan also envisaged the existence of green areas and footpaths. The buildings would enjoy a rational layout so that their façades could benefit from the best solar exposure. The residential complex, very organized and cohesive from a morphological point of view, proposed a sort of autonomous modern garden city, following the principles of the Charter of Athens, which in the late 1940s was a novelty in Oporto.

The plan was organized along two main structuring axes, perpendicular to each other: one perpendicular to *Boavista* Avenue and another crossing the centre of the composition, outlining its centrality.

This plan underwent several adjustments and was reduced to the construction of 26 collective housing buildings, carried out in a two-stage process, with the project being awarded to architect Fernando Távora. The relationship between the exterior space and the height of the buildings was carefully defined, apparently following the studies of Walter Gropius presented at the 3rd Congress of CIAM (*Congrès International d'Architecture Moderne*) in 1930.

The Low-income Housing unit neighbourhoods of *Pasteleira* (1957-1960), *Bom Sucesso* (1956-1958), and *Carvalhido* (1956-1958), commissioned by the Oporto Municipality, were built under the Improvement Plan for the city of Oporto, from 1956. Although being located on different sized lots and in distinct areas of the city, these residential complexes reveal similar underlying logics in terms of urban concept. While the housing blocks do not stand out in terms of architectural quality, they do in fact propose a new residential model, questioning the traditional street and the urban closed block as the structuring principles in the urban system.

The municipal land immediately outside the city limits was the primary option to build, and according to the Improvement Plan, the layout of the surrounding streets or the ones that would serve these residential units was meant to be fully coordinated with the urban fabric and the structure of the adjacent streets (existing or to be opened) defined by the Master Plan of Oporto.

The residential complex in *Estados Unidos da América* Avenue (1954) in Lisbon, a well-known residential set from the architects Pedro Cid and João Barros Vasconcelos Esteves, displays a more radical urban concept. *Estados Unidos da América* Avenue acts as the main axis of a rational composition where large buildings are placed parallel to each other, perpendicular to the main street, and smaller units stand at the back, configuring a U-shaped outdoor area. This complex was commissioned by the Lisbon Municipality, under the 'Houses with Controlled Rent' programme.

2.2. Access system

With respect to the access systems, it is noteworthy to highlight the distribution galleries in multi-family housing buildings for their experimentation and several solutions of exterior or interior galleries are identified. This system reveals its potentiality both for the economy of distribution, allowing the entrance to several apartments through a single vertical communication core, and for the development of more intense human relations.

The *Rainha D. Leonor* neighbourhood was part of the 'Houses for Poor Families' programme. The project was divided into two construction phases, with the second phase, concluded in 1955, consisting of 100 dwellings in 5 blocks of 4 floors with a distribution system with an outer gallery facing east.

This set stands out for its relationship between the access system and the dwellings. The distribution galleries excel both for the significant width, compared to the volume's depth, and for the near relationship to the daytime spaces, mainly the living room and the kitchen. As such, this area takes on multiple functions, such as a living space, storage or laundry area. In addition, it assumes a relevant social value, providing interaction among the inhabitants.

The Housing building designed by architect Nuno Teotónio Pereira at Soda Póvoa neighbourhood, in Póvoa de Santa Iria, was built under the 'Affordable Rent Houses Programme'. The project from 1953 consists of 2 volumes with 4 floors each, with a distribution gallery associating them. Formally, this access system is distinguished by the occasional connections to the buildings and relationship with the autonomous volume of the stairwell. From the functional point of view, it consists of an intermediate space, one of crossing and interaction.

Through the same 'Affordable Rent Houses Programme' the *Caixas de Previdência de Coimbra* neighbourhood (1965, 1st phase) was also built and commissioned by HE-FCP. This set, from Jorge Albuquerque, comprises 9 multi-family housing



Figure 1. *Urban Concepts*

Low-income housing unit neighbourhoods of *Bom Sucesso* (1956-1958), Oporto, Portugal, site plan. ©Oporto Municipal Archives and *Ramalhe* Residential Unit. General Plan. 1st and 2nd phases. ©*Departamento do Património Imobiliário do IGFSS, delegação Norte* (top row)

Low-income housing unit neighbourhoods of *Pateleira* (1957-1960) and *Carvalhido*, Oporto, Portugal, site plan. ©Oporto Municipal Archives (middle row)

Residential complex in *Estados Unidos da América Avenue* (1954), Lisbon, Portugal, site plan. ©"Bloco Avenida dos Estados Unidos da América", *Revista Arquitectura*, N 61, Dez 1957, p.18 (down row)

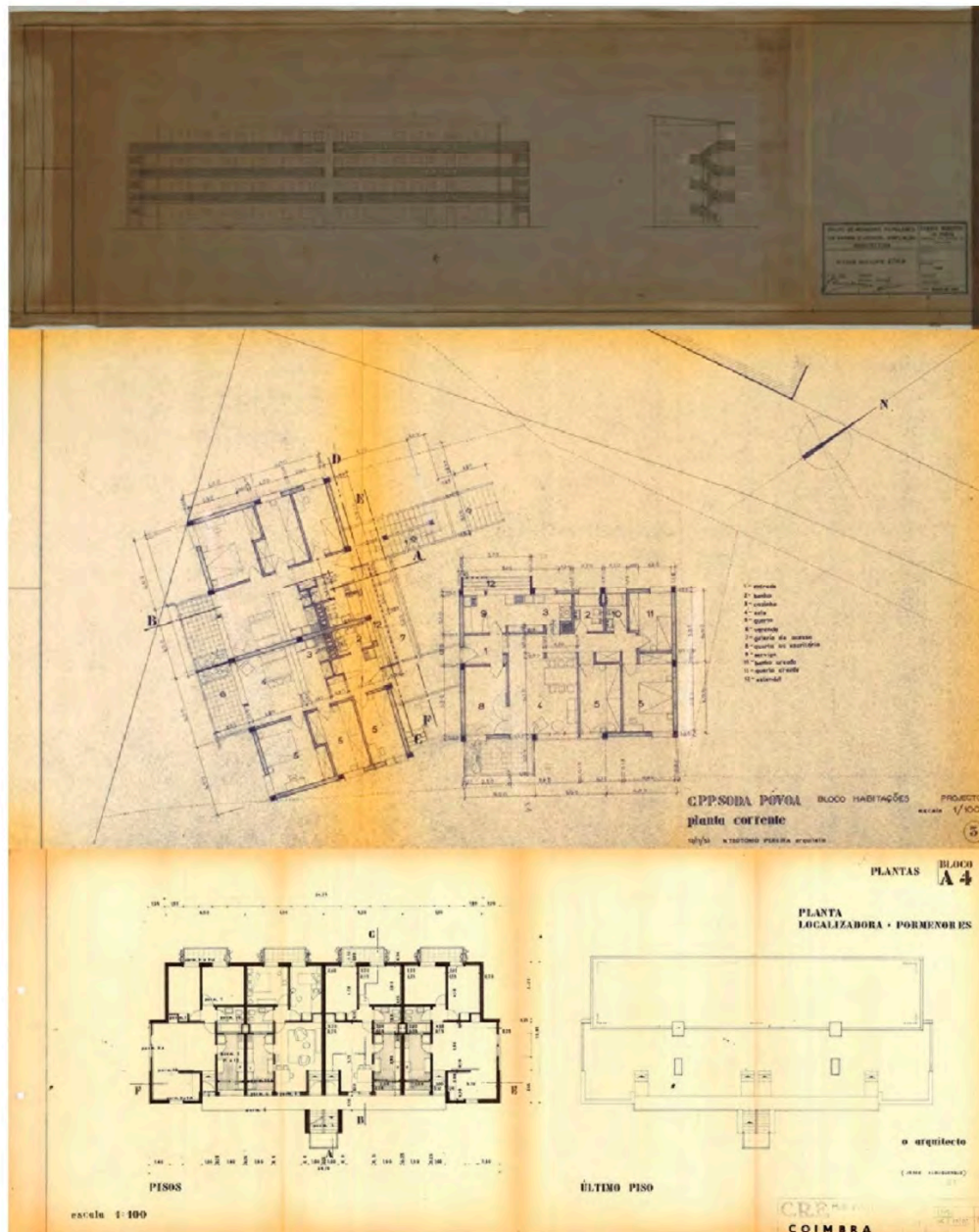


Figure 2. Access system

Rainha Dona Leonor Neighbourhood, 1st and 2nd phases, Porto, Portugal. east and north elevations © Oporto Municipal Archives (top row)
 Soda Póvoa neighbourhood, in Póvoa de Santa Iria, Portugal. Type floor plan © Nuno Teotónio Pereira collection, SIPA/IHRU (middle row)
 Caixas de Previdência de Coimbra neighbourhood, Coimbra, Portugal. Type Floor Plan, Type B © IGFSS Porto archive (down row)

buildings with 4 and 8 floors, combining two distinct access systems: by vertical communication core and by distribution gallery. The larger buildings are composed of two entrance cores consisting of the main staircase on the façade and two interior elevators providing access to 3 dwellings per floor, each. In contrast, the remaining smaller buildings have an outer gallery and a central staircase, which allows the access to 4 dwellings per floor. This case stands out for its difference in height between the gallery and the dwellings, guaranteeing greater privacy in the interior spaces. This is mainly a crossing space, given the size, the configuration and the relationship with the adjacent spaces. However, it also serves as an extension of the interior service spaces.

2.3. Architectural language and materiality

The modern buildings have strong architectural language and materiality mainly resulting from the diversity of materials along with the combination of traditional materials and new application techniques. Also, the “Five points towards a new architecture”, defined in 1926 by Le Corbusier and Pierre Jeanneret, were fundamental for the constitution of a new lexicon.

In a brief approach to the building techniques, of particular note is the intrinsic connection between the structural system and the form/function of the buildings, and the progressive introduction of materials such as reinforced concrete and glass. In the *Caixas de Previdência* housing complex (Coimbra, 1965), signs of modernity can be identified in the language and materiality, both by the diversity of the materials and colours, and by the volumetric composition of the ensemble and the absence of ornaments. In the larger buildings especially noteworthy is the use of elements such as the flat roof, the horizontal windows, the projected balconies and the marking of the floor slabs in the façades. But this demand for modernity is even more evident in the smaller buildings, characterized by the design of the distribution gallery, as well as the volume of the stairwell and the indentation in the side elevations. In addition, the lower finish stands out with a base in stone, whereas the upper finish is notable for its combination of flat and inclined rooftops. Regarding the coating materials, it is important to mention the diversity of textures and materials used in the distribution gallery, in the wall of the common staircase and in the side elevations, highlighting the grille for ventilation in the laundry.

The *Estacas* neighbourhood, located in cell 8 of the *Alvalade* neighbourhood in Lisbon, was designed by Ruy d’Athouguia

and Sebastião Sanchez between 1949 and 1955, under ‘Houses with Controlled Rent’ programme, commissioned by the Lisbon Municipality.

In this case the relationship with the “Five points towards a new architecture” is evident, namely, the supports, the roof garden, the free design of the floor plan, the horizontal window and the free design of the façade, although may not have a direct relation.

The buildings are supported by “pilotis” and present a flat roof as a reference to the roof garden. In addition, it also seems clear the intention to design a “free façade”, by retreating the glazed plan, as well as the attempt to include “windows in length”.

The “free plan” appears here due to the absence of load-bearing partition walls as a part of the structural system.

2.4. Typologies

The spatial organization of most apartments associated to state-subsidised housing developments faces the challenge of reducing and simplifying the programme of the household, mainly through the introduction of multifunctional spaces and the elimination of unnecessary circulation spaces. The modern concept of the common living room, in some cases combining several functions, shows up in most solutions (in some cases including cooking).

The execution of the Low-income housing complex of *Carvalhido* started in June 1957 with the construction of 264 units. This neighbourhood was followed by a much bigger intervention, the building of the *Pasteleira* Housing Complex, which comprised 600 dwellings, whose construction started in April 1958. The *Bom Sucesso* project, for example, contained only 128 units.

The proposed typologies in these three complexes, although sharing the same principles regarding the compactness of the floor plan, reveal some differences in terms of the apartment distribution, resulting from different options in the access systems. In the apartment design of the *Carvalhido* and *Bom Sucesso* units, for example, the living room/kitchen acts as the central distribution area. This solution allows the design of a three-bedroom apartment in only 46 square meters. The same solution can be found at the *Rainha Dona Leonor* Neighbourhood - 2nd phase (Oporto, 1952).

The *Pasteleira* buildings develop a different solution, although being also designed with similar minimum areas. Each floor has two apartments with a kitchen, one bathroom, one common living room, and a varying number of bedrooms. Al-



Figure 3. *Architectural language and materiality*

Caixas de Previdência de Coimbra neighbourhood, Coimbra, Portugal. Details. Type B © Maria Tavares, 2012 (top row)

Estacas Neighbourhood, Lisbon, Portugal. General views, 1958 © Lisbon Municipal archives (down row)

though having roughly the same floor space as the *Carvalhido* and *Bom Sucesso* solutions, these apartments allowed for distinct spatial organization, probably more consistent with Oporto life style habits at the time: an independent kitchen near the entry and a sheltered common living room.

The usable areas of the apartments located in *Estados Unidos da América* Avenue, a 'Houses with Controlled Rent Programme' residential development, are quite distinct, as well as the targeted inhabitants. Each central staircase/elevator opens up to the entrance to two apartments, each with two bedrooms, a com-

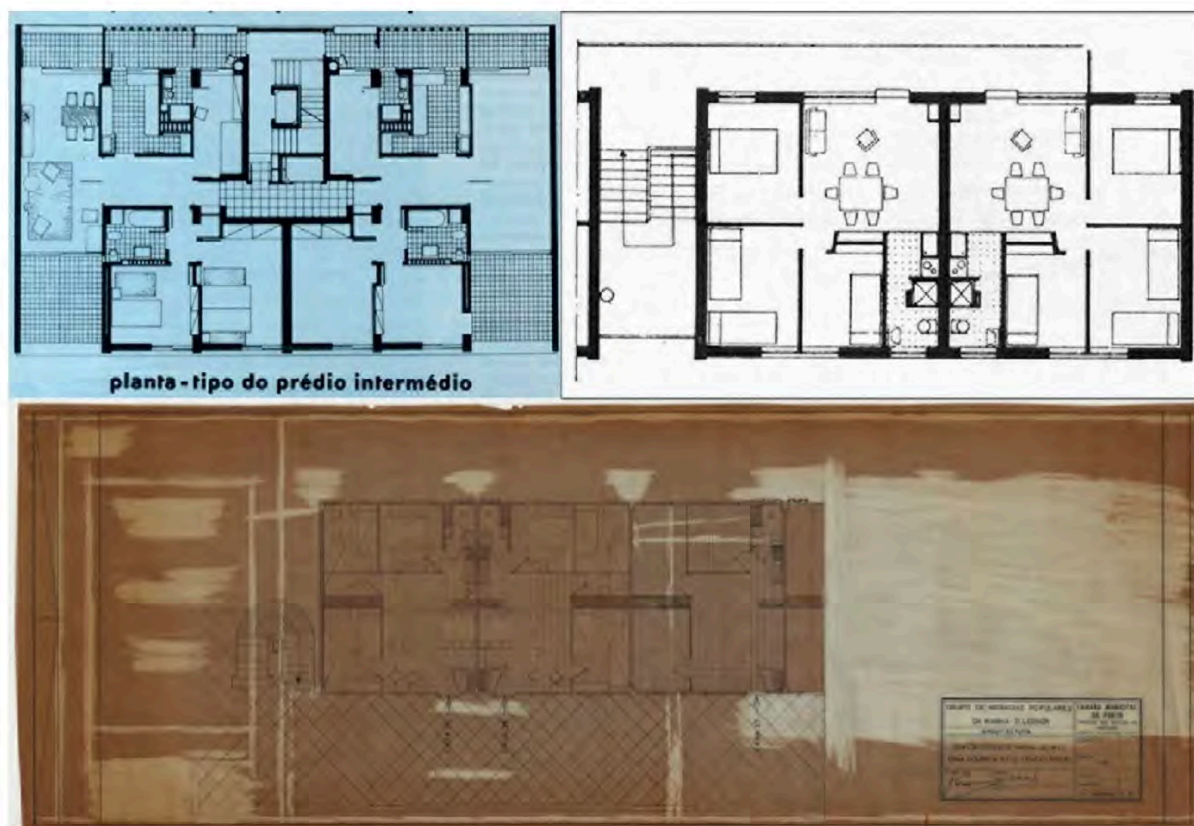


Figure 4. *Typologies*

Residential complex in *Estados Unidos da América* Avenue (1954), Lisbon, Portugal, type floor plan. ©“Bloco Avenida dos Estados Unidos da América”, *Revista Arquitectura*, N 61, Dez 1957, p.18 and Low-income housing complex of *Bom Sucesso* and *Carvalhido* (1956-1958), Oporto, Portugal, type floor plan. © Oporto Municipal Archives (top row)
Rainha Dona Leonor Neighbourhood, 2nd phase (1952), Oporto, Portugal, type floor plan. © Oporto Municipal Archives (down row)

mon living room, bathroom and a generous service area, with kitchen, maid's room and laundry area, similar to the typical bourgeois apartments popular in the 1940s. The common living room is the key compartment in this plan. It connects both façades, articulating large balconies.

These dwellings stand out for their clearly defined division of service, common, and private spaces.

3. CONCLUSION

In most residential solutions associated with state-subsidized housing programmes implemented from the 1940s to the 1960s, we can observe the renewal of the instituted patterns

associated with the promotion of public housing carried out through collective housing, which focused on the building's language and experimentation with a set of typological models. The housing programme was fully reviewed through engagement with international references, namely with those most associated with the Modern Movement paradigm.

The degree of innovation or the overall architecture quality of the built examples appears to be profoundly connected with the authorship of the projects. This is quite remarkable in the solutions found in the 'Affordable Rent Houses Programme', with the involvement of architect Fernando Távora (Ramalde Residential Unit) or architect Nuno Teotónio Pereira (*Soda*

Póvoa neighbourhood), in each case through solutions that bring tradition and modernity together, or more radical examples fully committed with the Modern Movement's ideals, either in terms of urban concept, architecture language or typology design, such as the ones that were proposed under the housing programme 'Houses with Controlled Rent', from the mid-1950s, that originated the buildings in *Estados Unidos da América* Avenue (1954), designed by architects Pedro Cid and João Barros Vasconcelos Esteves, and the *Estacas* Neighbourhood (1949-1955), designed by architects Ruy d'Althouguia and Sebastião Formosinho Sanches, in Lisbon. These last two are considered fine representative examples of the architecture of the Modern Movement in Portugal.

The solutions proposed by the 'Houses for Poor Families Programme', under the Improvement Plan for the city of Oporto are quite interesting because they assimilate the Modern Movement paradigm under fewer resources. With regard to urban concepts, although following some of the Charter of Athens principles, the achieved urban model is not strong enough to promote the articulation with the pre-existent urban fabric. Nevertheless, the typological concept revealed by the apartments is particularly efficient, clearly focused on the minimum dwelling design. Also, the access through distribution gallery seems to be an economic system that adjusts to the specific needs of these programmes, serving as an extension area of the interior spaces.

Therefore, we may conclude that the multi-family residential complexes built under the state-subsidized housing programmes served as an important experimental field in architecture, mainly for a generation of architects who sought to innovate and establish a modern language influenced by international references in the Modern Movement. In fact, some of the most paradigmatic concretizations in Portugal in this field are not isolated cases but are ones that are part of large public programmes whose resulting architectural production is disseminated all over the country.

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UP-TO-DATE INTERVENTIONS AND CHANGING IDENTITY: THE IMANTA HOUSING ESTATE IN RIGA

Sandra Treija, Uģis Bratuškins, Alisa Koroļova (Latvia)

ABSTRACT

Large housing estates represent an important part of the existing housing stock in many Eastern European cities. Their adaptation to today's needs is one of the greatest challenges facing the cities in the region. Being the leading paradigm of residential development in the post-WWII half-century, the shape of large housing estates underwent a certain transformation from decade to decade, differing considerably in size, number and density of population as well as in urban layout and intensity¹¹. This distinction continues today – the social status and level of development of different districts is diverse.

The development of the Imanta estate was launched in 1970 in several stages, and it is still in active use today. Today, Imanta is one of Riga's residential areas with different kinds of contemporary interventions: educational and residential buildings, new commercial and business centres in the converted former industrial area. The most challenging issue is the quality of the existing apartment buildings – their equipment and energy efficiency do not meet current requirements. The good examples of renovated buildings, and the experience accumulated there, can serve as a model for study and inspiration in other cases. The paper examines if present-day processes and interventions have transformed the original structure of the large housing estate of Imanta and assesses their impact on the overall spatial quality.

1. INTRODUCTION

Soviet housing expansion plans influenced massive construction of large-scale housing estates in the second part of the 20th century, stretching from the 1950s until the late 1980s^{14,15}. Large-scale housing schemes were the normative pattern of housing development after WWII, but their form and structure experienced a certain metamorphosis over decades¹. Over the course of time, there changed not only the size, number and density of population, but also the urban layout of these estates. Development of large-scale housing

estates has led to urban sprawl and promoted a wide range of construction approaches, set^{1,15}. Yet regardless of the spatial and structural differences between large-scale housing estates built in different time periods, their comparison still shows many similarities in planning principles. Among their common planning principles is location on the outer perimeter of the city with an easy access to the city centre, well-developed educational and other service infrastructure, as well as good recreation opportunities. These features have made large-scale housing estates popular up to now. However, the popularity of these housing estates raises the question of renovation and adaptation to the wishes and needs of modern society.

2. THE IMPLEMENTATION OF THE HOUSING ESTATE CONCEPT IN RIGA

In Riga, Latvia, large-scale housing estates were first built in the 1950s and the early 1960s. Industrialization during the Soviet rule compelled the outward spread of the city, and promoted development of the housing estates in the course of five decades⁴. In the 1970s, housing development experienced massive expansion, as the construction industry stabilized and new districts welcomed thousands of new inhabitants. Nowadays 60% of residents live in this type of housing, which forms more than 40% of the building stock³. There are, overall, 13 large-scale housing estates in Riga³. The number of residents differs in each neighbourhood from 10 000 up to 60 000 people. In spite of all shortcomings in terms of the socialist process of development of housing, these estates originally operated very well, providing a variety of services to support people's everyday needs. Large natural green spaces were part of the master plan and so positively shaped the outdoor environment. Educational, health care and retail facilities were incorporated in each estate.

Public transport, such as buses, trams and trolley-buses played a crucial role in ensuring everyday mobility. The idea of a subway line in Riga failed to come to realisation; however, many large-scale housing estate plans also took into ac-

count this possible type of transportation. Nowadays, with the growing amount of private cars, these neighbourhoods cannot meet the needs of car owners, and the outdoor environment is experiencing dramatic transformations. Originally neighbourhoods were defined by major roads, with service and access roads inside the neighbourhood. The traditional street as a form of public space was replaced with spacious green areas and so the inner space was primarily meant for pedestrians. The outdoor environment was intended to support the everyday needs of the major inhabitant group – families with children⁵. The courtyard environment included children's playgrounds, and was meant to support active recreation and socialisation². Educational facilities such as schools and kindergartens were also designed with the idea of supporting community life. Thus each school included stadiums and sports pitches for football and basketball. These facilities survive in the courtyards even today; however, their condition is often unsatisfactory.

The most frequent housing type in large-scale housing estates comprises apartments in staircase-access houses, but also corridor-access buildings^{14,15}. The most common structure is a 5-storey and 9-storey slab; higher buildings appear to be less common. The capabilities of architects and planners at that time were limited, because of the strict tasks and tight deadlines; quantity was more important than quality. Latvia's recovery of independence in 1991 was followed by privatisation of housing stock, which now results in high ownership rates¹³. Currently almost every household residing in a large-scale housing estate also owns that apartment. Apartments in these neighbourhoods have become the only affordable option for the majority of inhabitants, which also means this type of housing stock remains active, rather than 'residualised' as in many Western countries.

Figure 1. Detailed plan of Imanta developed by "Pilsētprojekts" in 1967, Riga, Latvia. © Scientific Collection of Latvian Museum of Architecture, Fund 26.



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3. THE IMANTA HOUSING ESTATE: INITIAL CONCEPT AND REALISATION

Imanta is one of the largest housing estates in Riga, which, despite significant changes in the socio-political, economic and demographic aspect in the previous decades, is still active and popular. In 1967 architects from “Pilsētprojekts” (R. Lelis, R. Paikune, R. Dzene, L. Stipnieks)⁹ developed a detailed plan for the district, estimated to host 60 000 inhabitants (Fig. 1), it comprises approx. 19,000 apartments. The detailed plan was commissioned by the Department of Construction and Architecture of Riga City Executive Committee (*Otdel po delam stroitel'stva i Arhitektury Rīzhskogo Gorispolkoma*)⁹. Construction was produced by the Large-panel Building Construction factory (standard type 602) and the 3rd Reinforced Concrete Construction factory (standard type 467)⁹. Construction works started in 1965 and continued till 1975; however, some works were performed also after that time.

Nowadays Imanta has about 50 000 inhabitants. The district is located on the eastern bank of the Daugava and was previously characterized by gardens, small allotments and forests. The borders of the district were mostly determined by natural and cultural features of the existing landscape and so a variety of previous land-uses have been preserved. Various allotments and historical roads are still present within the urban fabric of Imanta.

The structure of the district is based on a clear semi-circular scheme, the core of which is a vast green zone. It consists of 5 smaller urban units (*microrajons*)¹³, in which mostly residential, but also some public buildings were planned. Each *mikrorajons* comprises groups of 5–6 apartment buildings placed around an inner courtyard with a slightly different layout⁵. Some courtyards originally contained volleyball and basketball courts, and others hosted everyday functions, such as laundry stands and benches.

Consumer services are arranged along the main streets of the crescent both in separate buildings and in the ground floor spaces of apartment houses. Large and significant industrial areas have been developed nearby to provide job opportunities for inhabitants. Currently, the large factory, which used to produce consumer electronics, is no longer operating.

The standard design for buildings with small-scale apartments (464 and 467 standard building type) was developed from 1957 until 1965. The first to appear was building type 464. This type, formed by 5-storey panel buildings, was widely introduced in Imanta. However, the spatial character and image of the district is mainly formed by type 602, compris-

ing 9-storey white building blocks, with balconies extending from the façade^{14, 15}. The outdoor environment is formed by large green territories, planned to accommodate various activities, but not all of them were realised. As a result of extensive development of Imanta, the borders of Riga expanded and were officially changed in 1974.

The original idea of Imanta conformed to the concept of an ideal neighbourhood, with green and natural territories both inside the courtyards and also surrounding the whole neighbourhood, from the inner and from the outer border.

4. CONTEMPORARY INTERVENTIONS - CHANGING THE QUALITY OF THE LIVING ENVIRONMENT AND CHANGING VALUES

4.1. New housing development

The 21st century has been marked by a new residential development in Imanta (*Dammes Liepas, Metropolia, Imantas Ozoli etc.*). According to the architect, Zane Kalinka, who worked on the Imanta housing development in the 1980s, the original plan was not fully realized, which leaves scope for infilling of the existing housing estate. Having a good existing infrastructure with a variety of educational, culture, health care and retail facilities, makes it easier for developers to ensure good quality of life and meet the needs of different people.

The new infill development varies in scale and attracts various inhabitant groups. So, for example, *Dammes Liepas* (8-storey blocks, project by architectural practice “DEPO projekts”, author of the project I. Bruzgule, construction by SIA “Arčers”)¹⁶ and *Metropolia* (18-storey buildings, project by SIA “Kubs”, led by architect Z. Kalinka)¹⁷ include new residential buildings with a variety of supplementary features such as new children's playgrounds, sports grounds, and allocate one personal parking place for each apartment (Fig. 2 and 3). Some of those new projects have a private fenced outdoor space, on-site security and even car speed-limit design measures.

According to an inhabitant survey conducted in 2013, nature and green territories were chosen as the qualities which best characterise Imanta the best. But a certain number of respondents (7%) mentioned new high-rise housing development as a characteristic of the identity of Imanta¹⁰.

4.2. Functional adjustments

Together with new housing development, Imanta faces an increase in new non-residential developments. New restaurants (McDonalds), entertainment centres (“Lido”, “Imanta”) and even night clubs (Truba) appear in the neighbourhood and are

attracting not only local residents, but also people from the other parts of the city. In 2005, the culture centre opened a prayer cell, and the group is functioning to this day, offering courses for married couples and organizing parish camps.

In 2014 the construction of the largest new social housing complex in Riga was finished. The project was commissioned by the City of Riga “*Rīgas pilsēt būvnieks*”, and the construction works were realised by “*RE&RE*” and “*Dārti*”¹⁸. This new complex includes 287 new apartments and a health centre. The buildings’ design allows comfortable accommodation of elderly people with their specific needs, and of disabled people, too. This project incorporated landscaping of the surrounding outdoor environment, construction of access

and pedestrian roads, parking for 80 cars as well as bicycle stands. The territory includes also several green areas for residents and also children’s playgrounds.

Inhabitant surveys showed that 54% of residents think that Imanta as a district has its own centre, and 47% considered the culture and amusement centre “Imanta” to be the centre of the housing estate¹⁰.

4.3. Renovation

Following privatization of the apartments, residents are now responsible for maintenance of the building and for financial resources to initiate renovation of their homes. Poor thermal insulation and high energy consumption of non-renovated

Figure 2. Spatial composition of new tower residential buildings and old building blocks in the background, Riga, Latvia, 2016 © S. Treija



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old residential buildings, makes the maintenance expenses grow dramatically.

In most European countries, an average of 70% of all housing was built before 1980. In Eastern Europe these numbers are even higher and improvements here come very slowly. The building sector accounts for about 40% of total total energy consumption, and, significantly, up to 75% of heating energy is consumed by residential buildings⁷. Heating in old non-renovated buildings shows up to four times higher energy consumption than in new residential housing. Thus, to avoid degradation of a large part of the housing stock, building renovation that especially focuses on thermal insulation is of particular interest nowadays.

Currently the European Regional Development Fund (2014-2020) is supporting renovation of apartment blocks, and so there are already 46 renovated residential buildings in Riga (2016). In Imanta, four buildings have been renovated so far (2016) (**Fig. 4**).

The existing examples prove that particular attention must be paid to proper installation of ventilation systems, and the right choice of insulation material and its thickness, as well as proper balancing of heating systems. Also important is the question of the aesthetics of renovated buildings and their appearance when considering the whole ensemble.

Figure 3. Infill development offering a new quality of public outdoor environment, Riga, Latvia, 2016 © S. Treija



5. CONCLUSION

The analysis of new infill development showed that in general, both, new residential buildings and public buildings have followed the original spatial planning principles of Imanta. New residential development in most cases is harmoniously integrated into the surrounding environment. However, the better quality of the outdoor environment attached to the new residential housing has not led to improvements in the courtyards of old buildings.

The distribution of new public buildings also follows the original layout concept, but as larger and more popular companies are entering the neighbourhood, the old entertainment and shopping centres are becoming less popular.

Renovation of the old housing stock plays a crucial role when aiming at a better quality of the living environment. As renovation directly affects the façade of the building, visual aesthetics should also be considered when choosing materials and colours.

Despite the fact that new development does not bring essential changes into the neighbourhood's structure, those new buildings change people's perception of the neighbourhood. Local residents already identify Imanta not only with green and nature territories, but also with new high-rise residential development and a certain part of inhabitants identify the new culture and entertainment complex as the centre of the whole neighbourhood.

Figure 4. Housing renovation on Bebru Street, Riga, Latvia, 2017 © S. Treija



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THE EFFECTS OF SECURITY-BASED CONTEMPORARY URBAN DEVELOPMENT ON EUROPEAN MODERN MASS HOUSING LANDSCAPES

Melinda Benkő (Hungary)

ABSTRACT

In the 21st century European city, spatial and social configurations are changing quickly. Architecture, urban design and planning are classified as economic components of sustainability, because the market is the primary motor of planned urban developments and renewal. In the contemporary marketing process of investment, the promised safe and clean environment becomes fundamental. The paper focuses on one of the most problematic issues in relation to the topic of security: the transformation of the modern spatiality of mass housing landscape, which was originally planned around an everyday public character, stemming from modern urban and architecture theory about continuous space. As globalised products of 20th century urbanism, these estates have undergone widely different trajectories, thanks to their actual position in economic and human geographies, and even on account of their built-up and natural environments. How, then, is the European modern mass housing urban landscape shaped by security-based contemporary development aspects? What is the role of architecture, urban design and planning in shaping the control-space of the 'society of control'? What is the impact of this on Modernist continuous space? To accentuate the different approaches that have been followed, this research compares some concrete examples analysing their transformation. The comparison of case studies defines common and various problematics of these modern neighbourhood units, discovers and classifies their security-based factors of change and design solutions, and in addition proposes a new visualization method using a 'trilogy' of concepts - 'mass', 'enclosed' and 'void', - to uncover the reality of space usage beyond the solid-void, black-white classical modern representation of the urban fabric.

1. INTRODUCTION

In 1925, Frederick Kiesler, following the presentation of his installation "The city in space" in Paris, published his Manifesto about the new spatial thinking.

*"A system of tension in free space
A change of space into urbanism
No foundation, no walls
Detachment from the earth, suppression of the static axis
In creating new possibilities for living, it creates a new society"*¹

In 2018, more than 100 years later, the theme of the 16th Biennale Architecture in Venice is "freespace". But today, this expression has new meaning: *"Freespace celebrates architecture's capacity to find additional and unexpected generosity in each project - even within the most private, defensive, exclusive or commercially restricted conditions."*²

Thus contemporary 'freespace' can be enclosed, controlled, privatised... How can the evident interdependence between freedom and security be analysed in an urban physical context?³ What about the modern spatial heritage, the continuous space concept the immaterial essence of 20th century urban developments? How does contemporary security-based thinking transform the spatiality of mass housing neighbourhoods?

2. METHODOLOGY

Two branches of data were used for the research. Firstly, the author analysed the available archive and contemporary official design documents (technical plans, texts, photos) of a selection of key European housing estates, and carried out on-site surveys of them, in the form of photo documenting and mapping. In order to visualize this data-based overview of the actual transformation of continuous space, a new graphic method was devised. The resulting maps use not only the internationally well-recognised solid-void, black-white morphologic presentation of urban fabric but also, to uncover the reality of space usage, make use of grey surfaces to represent enclosed land. Primary research sources, as actual inputs, are evaluated according to theoretical knowledge derived from architectural space⁴, security⁵ and environmental crime prevention literature⁶.

2.1. Spatiality of modern housing estate

"A constant fluctuation, sideways and upward, radiating, all-sided, announces that man has taken possession, so far as his human capacities and conceptions allow, of imponderable, invisible and yet omnipresent space."

*"Architecture is the masterly, correct and magnificent play of masses brought together in the light."*⁸

Two fundamental quotes from the beginning of modern architecture both point to omnipresent space and stand-alone masses as the conceptual essence of the theory and practice of the creation of 20th century cities, whose new social and physical environment was based on openness and a public character. This modern space is not only open vertically to the sky, as unbuilt urban land; it is opened also horizontally, and thus continuous everywhere and for everybody. Of course, owing to physical and technological constraints, people were only able in practice to make direct use of the two-dimensional layer of space related to the ground⁹. But in principle, in this abstract modern space, there are no physical, visual and mental boundaries, and mass and void are its main components. How can this dimension of the modern heritage be maintained, evaluated or valorised in the context of 21st century urbanity, whose development processes are based on security?

2.2. Perceptions of security

The usage and the transformation of public space depend on local peculiarities, both physical and social; the cultural, financial and legislative background; and especially the actors involved in the process: politicians, investors, designers, users, etc.¹⁰. The topic of security, or just the subjective feeling of security has become increasingly important in every discussion related to urban life and this phenomenon influences the division and the re-division of space¹¹. The two main models used are 'enclosure' and 'encounter'. Enclosure tries to exclude strangers through physical boundaries and access control, while encounter refers to passive surveillance provided by social interactions¹². Nevertheless, in contemporary urban planning and design the sense of belonging defined by territoriality have become one the key issues, not only in new developments but also in renewal processes¹³. In consequences, the modern space as a continuum, the large public open space of housing estates, has fallen into disrepute, because the mainly negative images related to security-based thinking are associated with this globalised product of modernity¹⁴. In general, their space is still open and continuous, but the estate area is now isolated by mental walls¹⁵.

2.3 The visualisation of spatiality

2.3.1 The duality of Mass and Void

To show the relationship between built and unbuilt space, to highlight the differences between the spatiality of traditional and modern urban form, the figure-ground diagram of a two-dimensional map is a self-evident and straightforward tool¹⁶. But it visualizes only the shape, the ratio of built surface and vertically open space without taking account of the horizontal continuity that determines space usage.

2.3.2 The 'Mass - Enclosed - Void' Trilogy

Nowadays, every intervention whether small renovation or huge regeneration made in housing estates transforms their modern spatiality. In the theory and practice of contemporary urban planning and design based on security aspects, territorialisation, clear separation between public and private, and land re-division all militate against protection of the modern space as a continuum. This phenomenon demands a new, simple visualisation technique, to show not only the urban form by mass-void duality, but also the space usage defined by space limits. The space remains vertically open, but not continuous any more. To represent this changing reality accurately, it is no longer sufficient to use the black and white system. It is here that the new 'mass-enclosed-void' trilogy comes into its own, using grey surfaces for physically enclosed, generally controlled space. Thus, in the presentation of case studies, the first figure uses only the typical modern mass-void / black-white approach, referring to the built-space duality of the original physical environment of the housing estate, which the second one shows not only the actual urban form but also its space usage, with the help of the mass-enclosed-void / black-grey-white trilogy.

3. EUROPEAN CASE STUDIES

The paper presents four housing estate case-studies, focusing in each case on the transformation of original modern continuous space. To understand these differently-scaled contemporary changes the following criteria are important in the comparison: the logic of the original urban form, the actual ownership system, the social and economic background of the intervention, and the goal of the design process, with its requirement for security based on space re-division. The Hungarian example is about a minimal approach, making only small changes in the physical environment. The Latvian case exemplifies a special situation that developed in several former Communist countries just after the privatisation pro-

cess and their EU accession in 2004. The housing estate from the former East Germany is an example of a 'shrinking city', albeit managed through a German method. And finally the French example, drawn from one of the biggest European programmes to revitalise a modern housing estate, summarises contemporary Western European professional practice in relation to security-based development. Alongside the short written description of every case, the visualisation of their space re-division helps facilitate understanding of the changing spatiality of modern housing estates.

3.1. Újpest Centre, Budapest / H (Fig. 1)

This superblock, constructed between 1980-1986, replaced the former urban historic centre of Újpest, in the outskirts of the Hungarian capital, Budapest. The transformation was drastic; after the demolition only 11 storey slabs limit the new large green and car-free interior area of the neighbourhood where public facilities are situated. Nevertheless, the structure of the modern fabric reflects the traditional street network. After the change of the political and economic regime in 1990, the flats were privatised; condominiums on a building-by-building basis were established, and the open space remained uncompromisingly public. Since 2000 a national panel programme tries to facilitate the realisation of exterior insulation of private panel buildings, but the public space renewal as a municipal project started only a few years

ago¹⁷. Good quality sport to EU standards, including facilities for children and pets, generally enclosed by transparent fences, give residents a chance to live in an urban environment made more secure by design.

3.2. Purvciems, Riga / LV (Fig. 2)

Purvciems, one of the largest housing estates of the Latvian capital, Riga, was built between 1965 and 1975. The selected superblock is separated by 15 storey-high slabs and towers from the main streets and, behind them, five-storey residential buildings define smaller units around their green and car-free courtyard¹⁸. The transformation of the former public open space is the consequence of the national privatisation and restitution programme. On the one hand, the panel flats became the property of their occupiers; on the other hand, the surrounding land of the housing estate was restored to its former owners. After the EU enlargement in 2004 and before the economic crises in 2008, property development started on these well located interior plots. There was no clear regulation; the continuous space was re-divided and randomly fragmented by the new property system. Now, private housing blocks have proliferated in the courtyards; their plots have mental and physical fences everywhere. Just as the modern urban form replaced the traditional form of the Purvciems settlement in the 60's, so, too, contemporary developments openly flout the spatial values of the modern housing estate.

Figure 1. North superblock of the "Újpest Centre" Housing Estate in Budapest, Hungary. Construction: 1980-86 / private developments: 2015 onwards (illustrations drawn by author using plans, Google Maps and own photographs of 2017).

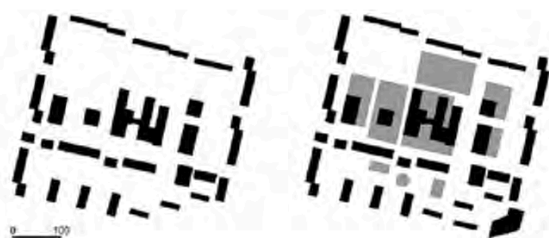


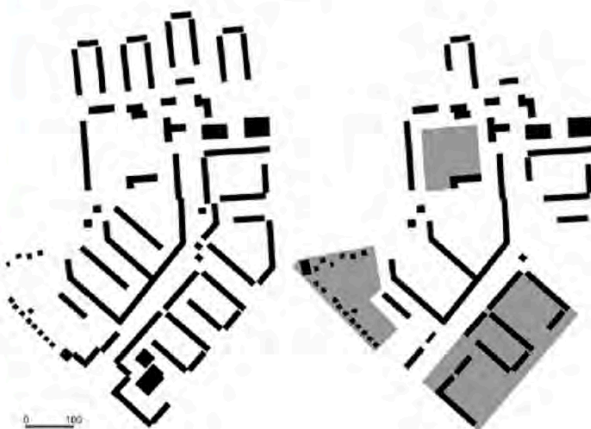
Figure 2. One of the superblocks of the "Purvciems" Housing Estate in Riga, Latvia. Construction: 1965-78 / private developments: 2005-07 (illustrations drawn by author using plans, Google Maps and own photographs of 2015).



3.3. Neu Olvenstedt, Magdeburg / D (Fig. 3)

Neu Olvenstedt, on the Eastern outskirts of Magdeburg is one of the last housing estates of the Soviet 'panel family' constructed before the fall of the Berlin Wall. Rather than massive prefabricated slabs, it features only 3-6 storey blocks of flats forming small, well-identified units around semi-common gardens¹⁹. In 1990, when the GDR became part of the German Federal Republic and adopted the West-German legal and political system, large prefabricated housing estates became privately owned by housing cooperatives, residents remained tenants, and a national programme immediately undertook the technical renovation of the housing stock. But this neighbourhood had bad reputation, and so the shrinkage continued dramatically due to inner migration, with the result that the area lost approximately 70 per cent of its residents during the two last decades. Recognising this phenomenon, the master plan of Neu Olvenstedt, prepared in 2008, identifies five different districts within the neighbourhood, and variously plans total demolition, partial demolition or renovation of buildings. Territorialisation became clear everywhere and transparent fences make property divisions within the open spaces apparent. This former urban unit functions as a contemporary low-density housing development area composed of different private plots.

Figure 3. Eastern superblock of the "Neu Olvenstedt" Housing Estate in Magdeburg, Germany. Construction: 1980-89 / public and private developments: 2008 onwards (illustrations drawn by author using plans, Google Maps and own photographs of 2014).



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3.4. La Duchère, Lyon / F (Fig. 4)

This French housing estate presents one of the most extreme renewal processes based on the principle of security²⁰. In the 60's, the original urban form was sculpted by huge slabs and towers floating in a continuous, non-hierarchized open space network. Since the 80's, La Duchère experienced serious social problems, and small public interventions proved unable to change the situation. A complex regeneration project started in 2004, aiming to create a new neighbourhood combining modern and contemporary urban concepts; to integrate the estate to the city; and to establish a new mixed-used urban area composed of retained slab and towers, new intermediate residential buildings, public facilities and a green urban park. A new street network and land property system were clarified, giving opportunities for public and private investments coordinated by Lyon's urban policy strictly. In the central part of the housing estate, after the demolition of huge slabs containing some 1,000 flats, a typical eco-neighbourhood was realised, through the typology of the transparent contemporary housing block, within which the separation between public and private space is clear, and physical closeness exists everywhere, but the block visually remains open. As result, the modern spatiality of the housing estate is replaced by a more traditional urban structure.

Figure 4. The Tray (Plateau) Quarter at "La Duchère" Housing Estate in Lyon, France. Construction: 1961-72 / public and private developments: 2004 onwards (illustrations drawn by author using plans, Google Maps and own photographs of 2017).



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4. CONCLUSION

The chief trends of contemporary European urban planning and design thus work against the modern principles of spatiality. New housing developments do not use the modern continuous space concept anymore, and different scale transformations of mass housing estates employ territorialisation and space re-division as key components of the renewal process. This phenomenon is related not only to the changing ownership system in the former Communist states, and some Western countries, but also, more fundamentally, to the security-based requirements of contemporary urban development. At the beginning of the 20th century, 'gaseous space'²¹ became fluid and continuous in the urban context, but in the early 21st century the solidification of this fluid modern space began to gather pace - a process of metamorphosis of urban space that still continues today.

NOTES

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BIOGRAPHY

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Session 04_HOUSING IN TRANSLATION

Session Chair: Ana Tostões (Portugal)



The Universal Declaration of Human Rights (1948) stated that “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”. The idea of a house for all, underlined in the Engels’ *Housing Question* (1872) and recalled in the context of Europe’s post-WWII reconstruction within the welfare state, as “*l’habitat pour le plus grand nombre*” has been in danger in last decades.

After the WWII, governments established ambitious social welfare programs in order to improve the citizens living conditions and health standards. Envisaged as holistic creations, these post-war housing estates were organised in such a way as to provide all the necessary facilities, ensuring that residents had access to housing, education, health, work and recreation. Between hate and love discourses, the debate about these housing estates still stands between demolition and renovation. The Robin Hood Gardens (Alison and Peter Smithson, 1969-72), in London, despite all the international protection campaigns, ended up demolished last August 2017, while in the same city the Barbican Estate (Christof Bon, Peter Chamberlin, Geoffry Powell, 1963-82) reveals an extraordinary conservation culture being developed in collaboration with the residents and different entities. Berlin’s Hansaviertel is about to be discussed as World Heritage and Gevene’s Lignon housing complex is under rehabilitation confirming the validity of reuse.

Whether discussing demolition, or the growing phenomenon of heritagization, the debate has been mainly centred on the question of how to keep these structures alive, while meeting contemporary standards of comfort. Characterized by adventurous experiments in the use of new materials and techniques, space creation and gender transformations, the obsolescence of these big complexes is determined on three different levels: the technical one (regarding comfort, such as thermal or acoustic, and the need for mechanical and safety im-

provements, as infrastructures, systems, elevators), the functional one (involving space dimensions, organisation, orientation, and the introduction of new uses), and the social one (usually suffering from social exclusion, poverty, crime, and disconnection from the main urban infrastructures). In addition, these buildings have frequently been intensively used and modified, and renovation projects often need to comply with high regulatory standards.

Following the *3 R’s* discussion undertaken in DOCOMOMO (*Docomomo Journal* n. 52, 2015) and the introduction of the word “reuse” in its updated Constitution (*Eindhoven-Seoul Statement*, 2014), this session aims to debate post-war housing production – its evolution throughout its life cycle and the intervention strategies undertaken in order to respond to contemporary needs.

Anica Dragutinovic, Uta Portgiesser & Els De Vos reveal how, in the framework of the interconnection between urban planning, architecture and politics, “adaptation to changes and administrative models of the socialist system”, connected with the interpretation of the Modern Movement principles, transformed New Belgrade into the capital of Yugoslav modernity. Later in the 1990s, the 95% of socially-owned housing being privatized, allowed to test the reaction of this building stock to the changes of socio-political and economic circumstances: the social resilience prevailed over the technical and functional obsolescence. Concerning those, the authors go deep in explaining the adaptive capacities and expansion potential of its prefabricated systems, in order to contribute for its future preservation connected with the accomplishment of contemporary requirements.

Franz Graf speaks us about change and permanence in the course of time in five iconic examples of *Unités d’Habitation* designed by Le Corbusier and André Wogenscky, both in the time of its original lifespan and in the repair interventions they received along the time: the *Unité d’habitation* in Marseille (1947-1952), *Unité d’habitation* at Rezé-les-Nantes (1953-1955), the *Unité d’habitation* in Berlin (1957-1958) and the

Unité d'habitation at Firminy-Vert (1965-1967). Along its 50 years of use, the five cases were exposed to a lot of different circumstances, ranging from technical obsolescence (malfunctioning of the soundproofing, waterproofing, heating system...) to economic and social hostile conditions (adverse administrative management, apartments being sold and altered, abandonment...). After troubled times of harmful alterations to the buildings, the author reveals some happy endings, where in recent years, listing was used in favor of competent restorations, meaning many times "de-restoration" of former interventions. Some steps behind are the housing estates developed within the *Modèles Innovation*, resulting from *The Plan Construction* undertaken in France, in 1971, with the goal of renewing the French housing stock within the principles of the Modern Movement in connection with a will of future change adaptability. Even being currently endangered by daily transformation and degradation, Richard Klein calls our attention to the qualities of this ambitious program developed to meet diversification, flexibility and typological renewal, while assuring constructive and social resilience.

Through a broad perspective on the complexity of such issues, Cecilia Chu explores the "afterlives" of three modern social housing projects, significantly altered in last years – the Park Hill in Sheffield, the Columbia Point in Boston, and the Hunghom Peninsula Estate in Hong Kong – stressing the importance of the economic and social framework in the way housing buildings were or can be transformed. From China to USA, diverse subjects common to many post-war housing estates are debated, ranging from the welfare state to the "right to buy" policy, from informal appropriation to community strength, from market rules to the social role of architects, from demolition to preservation.

All the papers invite reflection and critical evaluation on the qualities of the post-war housing estates in its transformation capacity through times and into the future, considering that change is a current need to address sustainability.

The need to develop sustainable sites, neighbourhoods and landscapes is one of the main issues for the XXI century. Post-war collective housing remains one of the most significant modern products representing efforts to develop architecture as a vehicle for an egalitarian society and where thousands of people still live today. The proper rehabilitation of these structures, while addressing the demands of the contemporary agenda, can represent a tremendous potential achievement, in an overall context of economic, social and environmental sustainability.

Ana Tostões Housing in Translation

BIOGRAPHY

Ana Tostões. PhD, architect, architecture critic and historian, chair of Docomomo International and editor of the *Docomomo Journal*. Full Professor at Técnico, University of Lisbon, where she is in charge of the Architectural PhD programme. Invited professor at universities worldwide.

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Her research field is the critical history and theory of contemporary architecture, focusing on the relationship between European, Asian, African and American cultures. On this topic, she has published books and essays, curated exhibitions, organised scientific events, coordinated research projects, supervised theses, taken part in juries and committees, and given lectures worldwide.

She coordinated the research project *Exchanging World Visions* published and awarded with the Gulbenkian Prize 2014, and currently coordinates the research project *Cure and Care the rehabilitation*.

(UN-)SUSTAINABILITY OF THE CONCRETE MEGA-BLOCKS IN NEW BELGRADE: POTENTIALS OF PREFABRICATED MODERN STRUCTURES FOR TRANSFORMATION

Anica Dragutinović (Serbia, Belgium), Uta Pottgiesser (Germany, Belgium), Els De Vos (Belgium)

ABSTRACT

In the first post-war years, New Belgrade denoted a concept of a new city on the left bank of the Sava River, opposite to historical Belgrade. Initially, it was planned as a capital of Yugoslavia, a centre of administration, culture and economy. However, its basic purpose changed in the following years. As elsewhere in post-war Europe, affordable housing was high on the agenda. Therefore, New Belgrade was eventually realized as a city of housing mega-blocks, as an answer to the housing needs. In the period that followed, urban development strategies and policies were changing, thus New Belgrade passed through different levels of transformation. Today, the modern blocks are left to decay, while the urban pattern of New Belgrade is being altered once again, now by market-oriented urban practices. This paper investigates the metamorphosis of New Belgrade, and analyses the housing blocks in order to present their values and to contribute to the preservation issue, but also to highlight their current condition and need to be adapted. Furthermore, it aims to rethink the adaptive capacity of applied prefabricated systems: it investigates if their flexibility and modularity can provide adaptability of the structures to today's requirements. The analysis is conducted through a comparison of two buildings in Block 23: two prefabricated systems - panelised and IMS (Institute for testing of materials) skeleton system, layouts and appearance. Their ability to adapt to the contemporary context and needs is recognized as one of the most important criteria in the analysis on how sustainable the mega-blocks are.

1. INTRODUCTION

The concept of sustainability has been increasingly discussed within the framework of the preservation of modern architectural heritage. Additionally, the understanding of the terms and concepts, and their inter-relation, significantly varies, and therefore creates a complex research platform.

The architecture of the Modern Movement, especially modernist post-war large-scale housing areas, is characterized by obsolescence on different levels, and therefore, is being a sub-

ject of different studies on sustainable renewal. The question of sustainability within the renewal strategies is mainly related to efficiency, reduction of materials and energy consumption. However, in a constantly changing context and users' needs, only a renewal that conceives changes is sustainable. Thus, the concepts of flexibility and adaptability are specifically important, besides the conventional sense of sustainability. This paper investigates these concepts, focusing on New Belgrade housing blocks as a specific part of the modernist post-war large-scale housing phenomenon.

2. METAMORPHOSIS OF NEW BELGRADE

New Belgrade is a modern city built on the left bank of the Sava River as a modern extension of Belgrade, the capital city of Serbia, or at the time of construction Socialist Yugoslavia. It is Belgrade's biggest municipality, a city within the city, with around 250.000 inhabitants (Fig. 1).

New Belgrade's urban development strategies were strongly related to the socio-political context that was constantly changing during the XX century. Thus, it caused discontinuity in planning and constructing the modern city, as well as in its further urban development strategies and policies. This chapter aims to analyse different levels of metamorphosis of New Belgrade: conceptual or formative (2.1.), housing policies' changes (2.2.) and urban practices, layout and landscape transformations (2.3.). Understanding the context of New Belgrade and its transformations will support the analysis of the specific case study, Block 23 (A. Stjepanovic, B. Jankovic, B. Karadzic, 1973-76), in terms of its adaptability and potentials for future transformations.

2.1. Conceptual metamorphosis in formative phase

The first plans for New Belgrade emerged already in the inter-war period¹. However, the Old Belgrade Fairground was the only structure built in this period (1937) as the first step of urbanisation of the marshy area of today's New Belgrade². In the post-war period the socio-political context had



Figure 1. Map of Belgrade, Serbia. © Anica Dragutinovic, adapted from <https://www.bing.com/maps>, accessed on 23 January, 2018.

changed, and post-war Belgrade became a capital of Federal People's Republic of Yugoslavia, re-established by the Communist Party and its leader Marshall Josip Broz Tito. Within the plans for rebuilding the devastated country, re-emerged the question of Belgrade's "extra-territory" - the marshy land on the left bank of the Sava River. The area, "completely liberated of history, or absolutely clear space, where has never been formed any urban structure" was a perfect land for "establishing a supra-historical reality and construction of the capital city of 'people's democracy', later, socialism"³. Similar to Chandigarh and Brasilia, in the first post-war years New Belgrade was conceived as a city to symbolize a new beginning, a city on the "tabula rasa" with a nation-building agenda. It was conceived as a centre of administration, culture and economy of the socialist state.

The complex relation between urban planning and politics/ideology in the planning of New Belgrade was additionally present in the following years. After the break with the Soviet-Union in 1948, and the country's decentralisation and democratization of socialism, the idea for New Belgrade as an administrative and economic centre of the state was abandoned, and instead the housing shortage came to the fore-

front. From that moment onwards, the Master plan for New Belgrade passed through several iterations during the next 15 years until the city was eventually built in 1960s and 1970s as a city of housing mega-blocks. Although the residential function was almost completely absent in the initial plans, eventually it became the predominant one.

The new plans for New Belgrade integrated both socialist and modernist concepts of a new city. As architectural historian and theoretician Ljiljana Blagojevic writes, Yugoslavian architects aimed to apply the Athens Charter's principles and "theoretical basis of modern urbanism" in the specific socio-political conditions, "adapting to changes and administrative models of the socialist system"⁴. Although the concept for New Belgrade was changing during the time, nonetheless, it remained the capital of Yugoslav modernity.

2.2. Housing policy: socialist and post-socialist context

Affordable housing was a focus in whole post-war Europe. However, in the East-European countries it had specific consequences in term of ownership and housing policy. As the institution of private developers disappeared, the socialist state became the main investor in housing development. New Bel-

grade was planned as a socially-owned city. Consequently, a flat was a public good, just as a street or a park. In the conclusion of the *First Yugoslav Forum on Housing and Construction* in 1956 the "Right to Residence" was defined as a basic legal institute enabling to the working men one of the most important conditions of life⁵. Thus, New Belgrade's large-scale housing was financed by a social housing found, which later decentralized: further transferred to the state authorities and socially-owned enterprises that became the formal investors. As the socially-owned enterprises were organized according to the workers self-management system⁶, after the construction of a building or a neighbourhood, the enterprise (workers themselves) was responsible for the distribution of flats to the workers according to the ideal of social justice⁷. As a result the flats were not state-owned, instead "the enterprises acted as housing providers for their employees" - socially-owned flats were distributed to the people to use them *for free*. As Petrovic writes "this policy jeopardized the economic efficiency of social/state housing provision and maintenance"⁸.

In the post-socialist context, the housing policy changed and "market mechanisms" were introduced. The privatisation of housing followed, however, it was restricted to the sale of socially-owned flats to sitting tenants and political elite for extremely low prices⁹. This created, as Petrovic writes, "new subventions out of the budget and reproduced privileges in housing". By the end of 1993, 95% of socially-owned housing was privatized in Belgrade. New Belgrade housing was practically shared among the people, and it served as a "shock absorber" in the post-socialist transition¹⁰.

On one hand, the privatisation of New Belgrade housing in the 1990s prevented the social obsolescence - the issue that is very often present in case of large-scale housing estates in Europe and is claimed to be one of the main reasons for their demolition today. However, the failure of the state to create legally clear housing policies and better maintenance regulations led to technical and functional obsolescence of New Belgrade's housing blocks today. Despite it, New Belgrade is a popular residential area, with real estate among the most expensive in Belgrade - mainly because of later urban transformations.

2.3. Urban landscape transformation

The socio-political and economic changes after 1990s, besides the housing privatisation, further affected the formal transformation of New Belgrade's urban pattern. The post-war housing landscape began its metamorphosis into a business centre at the beginning of XXI century. The process was

driven by international capital with companies investing in construction of large retail, leisure and business facilities¹¹. Although the New Belgrade blocks were "far from ever becoming just another monotonous series of high-rise apartment blocks" due to their "lively architectural ambience", the economic unsustainability of the modernist project for the time and context of Socialist Yugoslavia transformed it into a giant residential neighbourhood¹². New Belgrade's lack of urban complexity, lack of other functions besides (mainly) residential, was the main reason for critiques in 1980s and 1990s. The transformation that followed in the beginning of XXI century appeared to be a substitution for completing the unfinished modernist project. The wide open public spaces that were left empty in New Belgrade transformed into shopping malls, offices and business centres. The commercialisation of these spaces did change the role of urban planning "turning its back on participatory, integrated planning"¹³.

The post-socialist transformation, as already discussed, prevented social obsolescence and positively affected the market value of the New Belgrade real estate, however, at the expense of the preservation of modernist urbanism. Furthermore, the modernist residential buildings were excluded from the process of formal transformation and left to decay. Their technical and functional obsolescence emerged as a result of both housing policy issue and the changed focus on the new market-oriented urban practices. Due to their current condition, the residential buildings urge renewal strategies. In further chapters, the ability of the New Belgrade blocks to adapt to the changed context and needs will be analysed.

3. PREFABRICATED BLOCKS: EVALUATION OF ADAPTABILITY

New Belgrade housing blocks, although marginalized within the so far process of transformation, are an inseparable part of the built environment and very important for the identity of the city, as a testimony of the post-war modernist planning and construction in Belgrade. Their obsolescence, on one hand, requires them to be renovated according to the new requirements and users' needs, and on the other hand, their architectural values need to be acknowledged and preserved. As very specific realizations of the Modern Movement, unique in adaptation of the modernist concepts to the specific context, they represent the most important architectural heritage of the XX century in Belgrade, but also have an international significance as a part of a larger cultural phenomenon. However, the modernist housing blocks have not been

considered as heritage and guidelines for their protection (or/and improvement) have not been defined so far. They have been under tentative protection for years due to a very complex process of their evaluation.

As a contribution to the evaluation process, this study aims to analyse one of the aspects: adaptability of the blocks. More specifically, it aims to rethink the potential of the construction systems of the residential buildings for future transformations. Investigation on their adaptive capacity is conducted through a comparative analysis of two residential buildings (two different systems) within Block 23. Criteria for the

evaluation of adaptability are spatial flexibility and potentials for replacement of secondary elements of the structure.

3.1. New Belgrade Block 23

Block 23 is one of the New Belgrade Central Zone Blocks (Fig. 2, Fig. 3). The architectural competition for its design was announced in 1968, and it was constructed in 1973-76 according to the project of the three architects Aleksandar Stjepanovic, Bozidar Jankovic and Branislav Karadzic. Urban and architectural parameters were comprehensively analysed and included in the final design¹⁴.

Figure 2. Map of New Belgrade with the Central zone and Block 23 marked. © Anica Dragutinovic, January 2018.

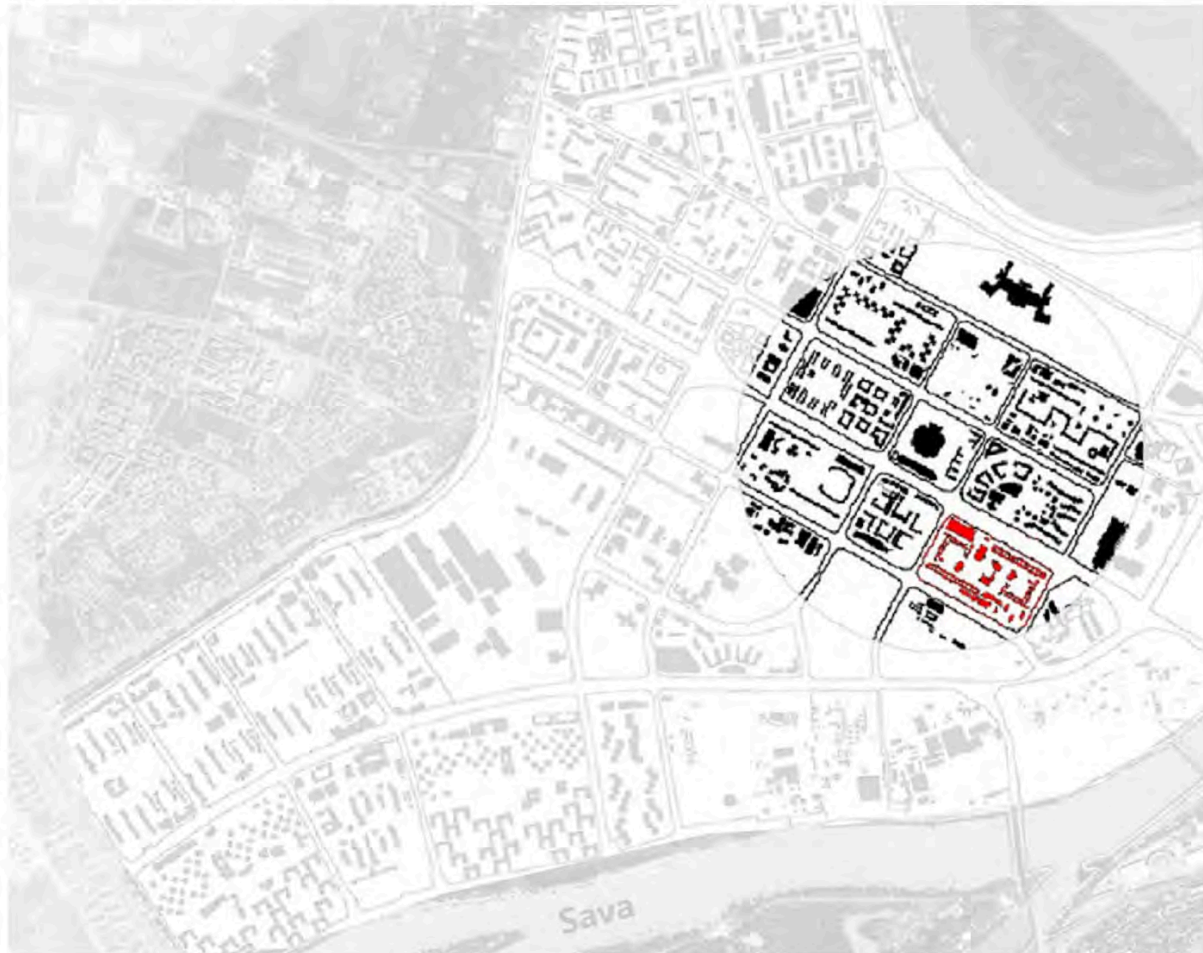




Figure 3. A. Stjepanovic, B. Jankovic, B. Karadzic, Block 23: Building 2, New Belgrade, 1973-76. © Anica Dragutinovic, April 2017.

The construction of the New Belgrade blocks in general was directly related to innovations in prefabrication. Many Yugoslav companies produced prefabricated and semi-prefabricated systems and elements. The production of prefabricated elements for Block 23 was organized in an open space “factory” *in situ*. This solution was very efficient with low costs and fast production of elements. The construction of buildings was organized in phases with the aim of 500 flats per year. In total, Block 23 had approx. 2.100 flats with 7.560 residents¹⁵. It was composed of 8 residential buildings: 4 high-rise (G+22) 2 long linear (G+10, 280m) and 2 meander buildings (G+4) with a school, kindergartens, a community centre, playgrounds and green open spaces in the central part of the block (**Fig. 4**).

Different types of buildings had different spatial organizations and flat layouts, and thus different constructive systems. High-rise buildings had a panelised system, while linear and meander buildings had the IMS skeleton system: prefabricated, modular system developed by Prof. Branko Žeželj at the Institute for testing of materials-IMS in Belgrade.

Figure 4. A. Stjepanovic, B. Jankovic, B. Karadzic, Block 23, New Belgrade, 1973-76, Buildings 2 and 5. © Anica Dragutinovic, adapted from <https://www.bing.com/maps>, accessed on 15 December, 2017.



3.2. Comparative analysis of the two construction systems

Both panelised and skeleton systems were developed with the same aims: efficient construction, flexibility in spatial organization, variety in flat types, openness for different envelope design, however their performances in these terms varies. Nevertheless, both systems provide adaptability of the structures on some levels, as a comparative analysis will show.

Prefabrication did enable efficient construction of the residential buildings, but it also influenced their specific aesthetics and identity. As prefabrication and modularity enabled easy repetition of the elements, both high-rises and linear buildings have had one dimension remarkably enlarged. This quantitative enlargement demanded qualitative changes in the volume design in order to prevent monotony of the huge volumes¹⁶. Therefore, the high-rises were refined with materialization of the construction elements in envelope design and a volume shear in the highest floors; while the volume of the linear buildings was divided into three parts and a rhythm of the facade elements further addressed the issue of monotony and monumentality. The extension potential, as one of the parameters of adaptability, was tested already in the design phase of the prefabricated structures and is a common attribute of the both types. Furthermore, the spatial organization was highly influenced by the construction system type. Building 5, one of the long linear buildings that applied IMS system, was designed as a “double-tract” building with 622 flats in total (Fig. 5).

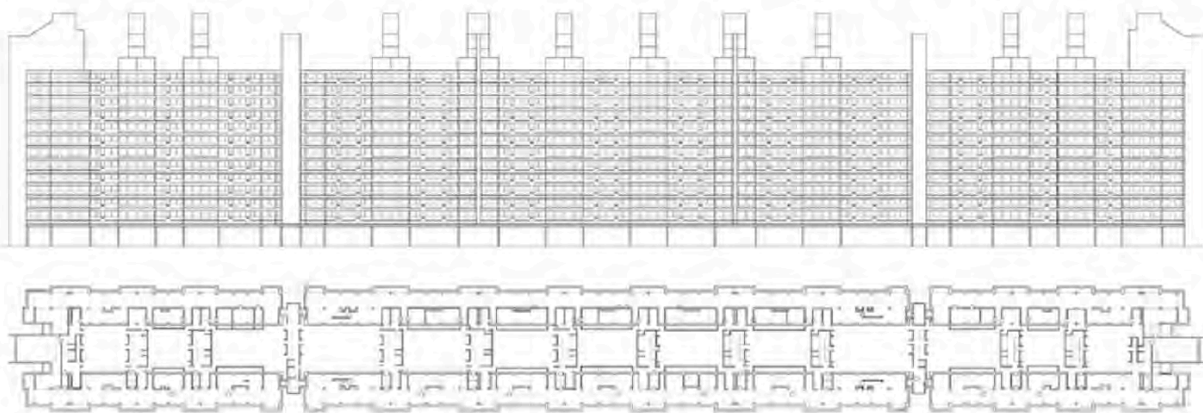
The spatial assembly of the flats into two tracts with an interspace enabled double-orientation of the flats, therefore a possibility for more narrow and long flats, and further more flats within the same length with enlarged depth of the tracts. The flats were more bright and with better spatial qualities. Also, this parted further the volume of Building 5. On the other hand, Building 2 (one of the high-rise buildings), constructed in panelised system, had a less generative layout and was more compact (Fig. 6).

The building envelope was technologically independent from primary construction, both reinforced skeleton and reinforced concrete panels. Therefore, both systems are providing high level of envelope adaptability - facade elements replacement. The openness of the IMS system can provide higher level of adaptability of the structure to today's requirements, especially considering spatial flexibility demand, potential for building layout decomposition, and individualization of residential units (Fig. 7).

4. CONCLUSION

The multiple metamorphosis of New Belgrade strongly influenced the housing blocks. The current state of the blocks is indicating their ability to sustain in different contextual conditions, but also their need to be further adapted. The question of sustainability of the housing blocks has been understood as their ability to adapt to the changed context and needs, and therefore be flexible, upgradable, renewable, redesignable, scalable, refitable. Following these parameters, the analysis of the

Figure 5. A. Stjepanovic, B. Jankovic, B. Karadzic, Block 23, New Belgrade, 1973-76, An elevation and layout of Building 5. © Illustration Anica Dragutinovic, January 2018, according to the original drawings from: HAB, 22, block 23, k.46, and *Izgradnja* 78, Beograd, *Izgradnja*, 1978.



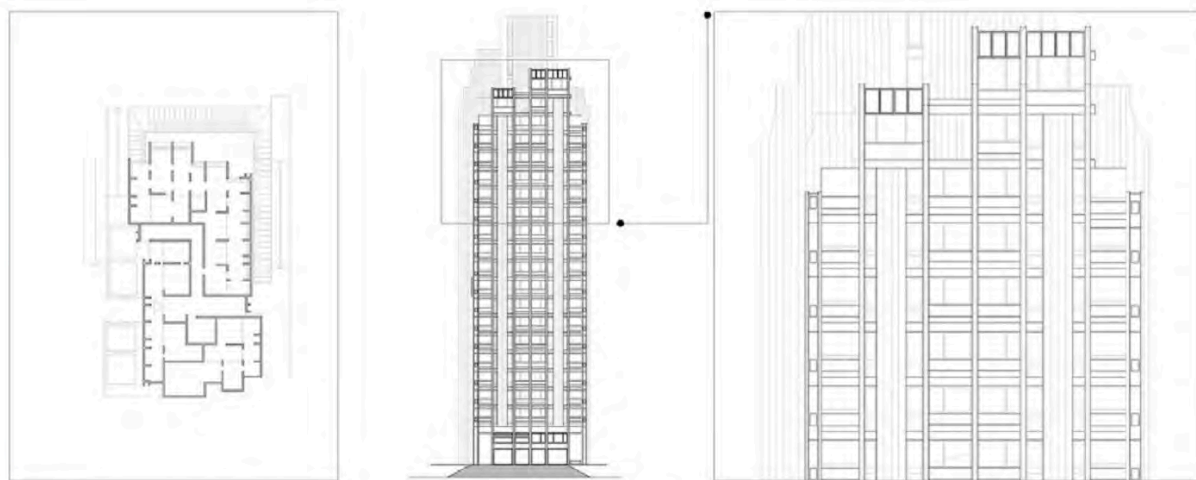
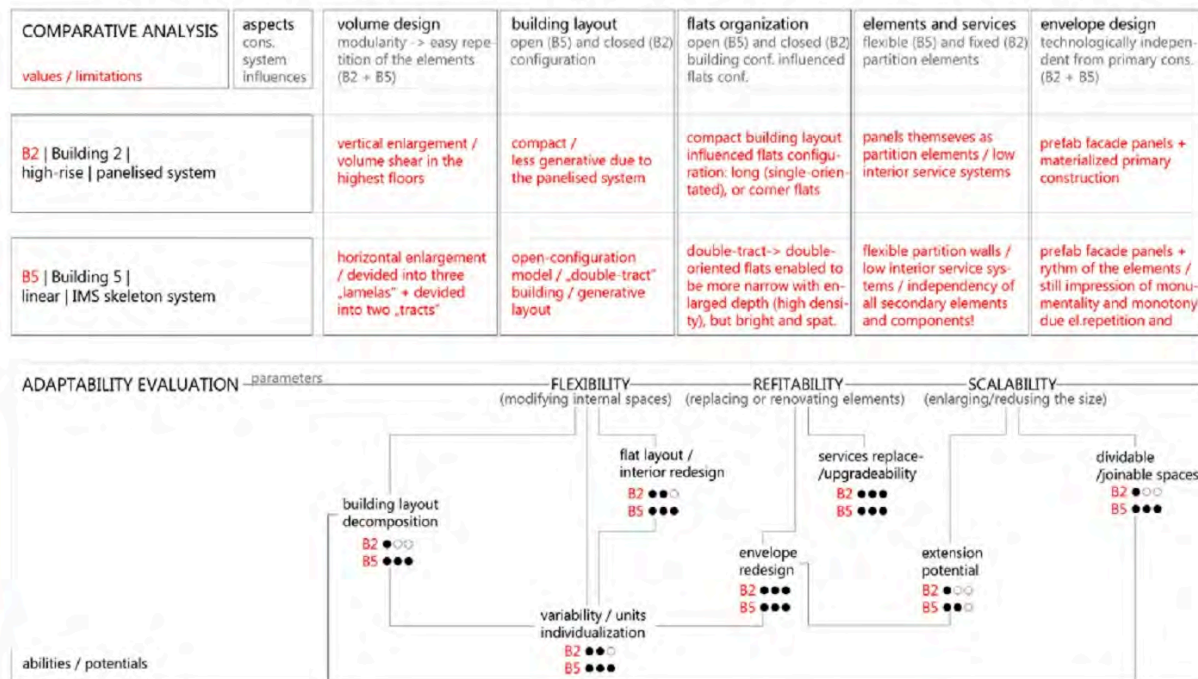


Figure 6. A. Stjepanovic, B. Jankovic, B. Karadzic, Block 23, New Belgrade, 1973-76, Layout, elevation and facade detail of Building 2.
© Illustration Anica Dragutinovic, January 2018, according to the original drawings from HAB, 22, block 23, k. 7.

Figure 7. Diagram: Comparative analysis and adaptability evaluation of two buildings/systems in Block 23. © Anica Dragutinovic, January 2018.



specific case study, Block 23, and comparison of the two buildings has shown: the design of the buildings, and particularly their construction systems, has enabled adaptability of the structures. Especially Building 5, the linear building with the IMS skeleton system, has shown high adaptive capacity on multiple levels. Furthermore, future adaptation/renewal strategies need to consider specific contextual conditions, especially the housing policies' changes. As almost all the flats (95%) are already privately owned, the investors in possible renovation strategies are the owners themselves. Therefore, the solutions need to be users-oriented and adaptive to various needs. This aspect is further increasing importance of the concept of adaptability. Not only ability of the blocks/buildings to adapt is needed, but also adaptability and variability of the solutions themselves. The advantage of this model is individualization of residential units and participative design. Nevertheless, the variability needs to be controlled and in the same architectural language, as it will influence the appearance of the buildings. In addition, conceiving future transformability of the solutions and their upgradeability to different levels of technical and functional performance is enabling the long-term sustainability of the blocks.

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- 3 Ljiljana Blagojevic, *Novi Beograd: Otporeni Modernizam*, Beograd, Zavod za udžbenike i nastavna sredstva, 2007, 21-25.
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- 5 Idem, 134.
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- 9 It was approx. 30% of the market price, later with an additional discount of 30%, and it was further destabilized in the years of inflation.
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- 12 Ibidem.
- 13 Ibidem.
- 14 Bozidar Jankovic, Branislav Karadzic, "Izgradnja blokova 22 i 23 u Novom Beogradu", *Stan i stanovanje*, Beograd, Izgradnja, 1972, 134-147.

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BIOGRAPHIES

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Prof. Dr. **Els De Vos**, engineering architect and spatial planner, is associate professor at the Faculty of Design Sciences at the University of Antwerp. Her PhD dissertation on the architectural, social and gender-differentiated mediation of dwelling in 1960s–1970s Flanders has been published with the University Press Leuven in 2012. She has co-edited with University Press Antwerp several volumes in the field of architecture, including *Theory by Design* (2013). She published in several national and international journals, and is a board member of the new magazine *Inner* (www.innermagazine.org). She participates in the Erasmus+ project *Re-Use of Modernist Buildings*.

THE MULTIPLE LIVES OF THE “UNITÉ D’HABITATION” (1945-1967-2017). REPETITION OF THEIR ICONIC VALUE AND DIFFERENCES IN THE CONSTRUCTION SYSTEMS, FROM THEIR DEVELOPMENT TO THEIR CASE HISTORIES

Franz Graf (Switzerland)

ABSTRACT

The *Unités d’Habitation* designed by Le Corbusier and André Wogenscky represent an exceptional moment in the development of the culture of housing in the 20th century¹. Five examples of them were built – at Marseilles (1945-1952), Rezé (1948-1955), Berlin (1957-1958), Briey-en-Forêt (1953-1961) and Firminy (1959-1967) – and they embodied a remarkable number of technical, constructional, typological, architectural and urbanistic inventions (pilotis, roof terraces, duplex apartments, fitted kitchens, rubbish chutes, *brise-soleils*, *béton brut*, etc.).

They were the culmination of a long and patient reflection on housing and the outcome of a skilful combination of the individual and collective dimensions of dwelling. While the commissions for this new type of building continued for only fifteen years, they do not constitute a series of replicas of a prototype, but constructional systems specific to each development. In the course of their short lifespan, these differences would further be blamed for the process of inevitable erosion and its necessary repairs as well as for the changes, sometimes violent, that they were subjected to, closely connected with their micro-histories and the reception they received.

We will examine the permanence of the image of the Unité d’Habitation suspended outside of time, and the differences in the realisations of the model, especially in their construction systems, on the one hand, and the transformations and degradations of their physical embodiments on the other.

1. PERMANENCE AND DIFFERENCES

The *Unité d’habitation* in Marseille was built between 1947 and 1952². The load-bearing structure has a point-loaded framework: it is a three-dimensional grid made of reinforced concrete cast *in situ*, which constitutes the body of the building (137.18m x 24.41m x 56m, including the *pilotis*). This famous “bottle rack” was intended to hold the industrial components, designed by Jean Prouvé in the form of three-dimensional metal cells, given material form by wooden frames

laid on metal floors, carefully insulated from each other and from the concrete beams. The main body of the home unit, 326 cells of different typologies, rests on an artificial floor, a thick hollow deck consisting of two longitudinal girders that

Fig. 1. The *Unité d’habitation* in Marseille, 2016.
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rest on massive, powerful pilotis at intervals of every second module. The whole is monolithic and rests in a totally unattached way and only by compression on the heads of the piles driven into the not particularly firm ground. The façades, consisting of elements prefabricated in situ – dividing walls and parapets – are attached to the girders and floor plates and enclosed by panes of glass set in four oak frames that open across the whole width of the cell. The highest level of comfort was sought, and this involved the development of the kitchen entrusted to Charlotte Perriand, the bathroom equipment and built-in furniture throughout each apartment. The heating and ventilation, inspired by the amenities in American buildings, were studied in detail. Apart from the use of technology that was quite disproportionate to that commonly used, the architects enhanced it with highly expressive architectural features, such as the monumental rooftop air extraction chimneys or the household rubbish collection point. The *Unité d'habitation* at Rezé-les-Nantes was built between 1953 and 1955, in keeping with the Marseille model. The construction work was done with a classical conception, using a procedure in precast concrete many of which were developed during reconstruction in France³. The main body of the housing, 294 cells of various typologies, was placed directly on the ground, where granite bedrock extended on the surface, with the walls separating the cells being opened out and shaped to become *pilotis*. The load-bearing structure of the building (105.71m x 19.03m x 51.8m including the *pilotis*) was lamellar, a juxtaposition of compression-stabilised reinforced concrete load-bearing walls, which transferred their weight to the ground by the V-shaped and M-shaped *pilotis*. The walls were installed using the BERU system, with reusable metal frames that held the cellular concrete slabs used as permanent formwork, into which lightly reinforced concrete was set. The soundproofing of the building was again a major concern of the project, achieved vertically by the mass and the doubling of the prefabricated beams and hollow-core flooring with a floating slab that also provided underfloor heating. The shear walls and reinforced concrete floors extended into the façade, beyond the glazed or carpentry panels, in some cases polychrome, and were faced with prefabricated slabs of cemented and washed pebble aggregate. If the technical amenities in the building are remarkable, the economy of means did not allow for sophisticated machinery and the architectural gestures were restrained. If the heating was no longer of the kind found in American buildings, the systems engineer André Missenard with his company applied on a large scale a principle of which

he was an ardent supporter, heating by radiation, in this case based on coils in the floating screed⁴.

The *Unité d'habitation* at Briey-en-Forêt (339 home units) was built in 1959 and 1960 in the forest two kilometres from the small town, at the centre of a satellite town that was never built⁵. It repeated the lamellar principle in the plan and alveolar in the section for the body of building (110m x 19m x 56m), but it was built by an industrialised system, the Outilnord process, ensuring extreme rapidity and simplicity of execution. It consisted of shuttering panels, comprising two retractable half-shutters made out of steel panels, which made it possible to make a series of juxtaposed tunnels and so proceed to the simultaneous concreting of the shear walls and the floor-plates

Fig. 2. The *Unité d'habitation* in Rezé-les-Nantes, 2016.
© Photo Stephan Rutishauser.



over a great length. The monolithic structure consisting of transversely vertical walls made of reinforced concrete and floor plates ensured transverse bracing of the structure and sound insulation by the effect of their mass, while rendering obsolete the heavy prefabricated systems widely used until that time. The edges of the concrete “bottle racks” were faced with prefabricated finishing elements in cement; the glass and wooden sections of the façade were set back to make room for the balconies; and the continuity of the structure between interior and exterior was complete. It entailed an optimisation between the architectural and structural type, but it was the latter that was at best identified with the geometry of the former. The radicality of the means of production and the simplicity of the construction are evident in the whole building, as are the technical systems. Missenard again proposed to install underfloor heating, but here it was placed in a coil set on the reinforcing bars and embedded in the slabs.

The Berlin *Unité d'habitation* was built in 1957 and 1958 on the Olympic hill of Charlottenburg⁶. It was part of the international building exhibition, Interbau 1957, but because of its size it could not be fitted into the Hansa Viertel. While this *Unité d'habitation* is already far from a classic HLM (social housing), its upgrading to Baupolizei standards and the project management under the responsibility of a Berlin office, which limited the role of the architects Le Corbusier and André Wogenscky to the mere supervision of the building work, led to divergences between the model and its subsequent construction: the abandonment of the Modulor and adaptation of the rooms to the required dimensions (4 m wide and 2.5 m high), suppression of the *brise-soleils*, construction of a room for the utilities between the *pilotis*, modification of the windows, elimination of the collective amenities on the roof, and much else. Construction was rapidly completed and was the largest apartment building in Europe (141.20m x 22.96m x 52.94m including the *pilotis*), containing 527 home units (Müller-Reppen 1958). It was largely prefabricated, including all the shear walls with one-storey high elements grouted by keying to cement, as well as balconies and their vertical dividers. The *pilotis* were cast *in situ* with metal formwork and based on shallow footings. Steel-framed windows were installed in what looks more like pierced masonry than glazed areas, and Le Corbusier used polychromy and design to divert the eye from the disastrous effect, as he saw it, of the windows installed. As for the technical systems, though the German technology was impressive, the technical utilities room obstructs the *pilotis* and the heating could hardly be more traditional, with radiators beneath the windows. However, its char-

acter, its visible mass and its image is that of a high-quality *Unité d'habitation*, “Typ Berlin”.

The *Unité d'habitation* at Firminy-Vert was built between 1965 and 1967, on the edge of the development of the new “ville verte” and backing onto a hillside, set on the north-south heliothermal axis, in keeping with the prescriptions of the *Ville Radieuse*⁷. The structural principle of Briey’s “house of cards” (*château de cartes*), replacing Marseille’s “bottle rack”, was again adopted at Firminy, where the local contractor Stribick carried out the structural work under the direction of the Présenté design office. The body of the building containing 414 home units (131m x 21m x 50m including *pilotis*) was completely cast in situ with metal formwork in keeping with the “tradi-

Fig. 3. The *Unité d'habitation* in Briey-en-Forêt, 2016.
© Photo Stephan Rutishauser.



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tion evolved" principle, well adapted to the contractor's skills. The client, Eugène Claudius-Petit, would have an important role in this operation to guarantee the architectural quality and the comfort of the inhabitants: *pilotis* at every second shear wall, double height in the cells, complete (simple) glazing of the façade and individual garbage chutes (abandoned for budgetary reasons). The furnishing of the dwelling cells would be an object of particular care, with Pierre Gariche reworking Charlotte Perriand's plans for Marseille. The *pilotis* were poured when Le Corbusier died, and Wogensky continued the project respectfully. With the completion of the construction of the *Unité*, he received a mandate to develop a second *Unité* – and a third was even envisaged in 1968. But an economic crisis in the region brought the work to an abrupt halt at the level of the foundations.

2. CASE HISTORY AND RECEPTION

During the (brief, from 50 to 65 years) lifetimes of these *Unités d'habitation*, such differences would also be made more acute by the inevitable undercutting of erosion and its necessary repairs as well as by the changes, sometimes violent, they were subjected to, closely bound up with their micro-histories and their reception.

The *Unité d'habitation* de grandeur conforme in Marseille was the first of the series. It was favoured by exceptional building conditions because the construction was state-assisted with an open budget and without any planning constraints. Initially envisaged as a rental building, it was changed to commonhold tenure in May 1954 and from the early 1960s it began to be occupied by middle-class residents with a relatively high educational level. The first generation undertook the project of the community life of the *Cité Radieuse* and then gave way to a more affluent population, one that only reluctantly puts up with the daily visits to the building. It must be said that it is a place of pilgrimage, and has been ever since the digging of its foundations, attracting architects from around the world when it was still under construction, and more broadly all those interested in architecture when it was completed. This interest has today been heightened by its addition to the UNESCO World Heritage List in July 2016, after its listing as a historic monument in 1986. Even before completion, the building suffered from problems connected with the waterproofing of its façades and roof terrace, as well as the malfunctioning of the heating system. These led to invasive work, which was later "de-restored" when the building was listed. Then the *Unité* benefited from more respectful and specific operations down to

2008, when this strategy was replaced by more ambitious restoration work, also conforming to the rules for monumental restoration, which had already led to work on the roof and façades. This has now become a permanent worksite in Marseille, which naturally altogether extends the construction of the building.

The *Unité* at Rezé-les-Nantes marked the transition from the model built outside compliance with the standards to the highly regulated status of low-budget social housing, supported, through the difficulties of planning and then its construction, which was exemplary, by a cooperative of residents who collaborated on an equal footing, described as "authentic inhabitants". It was, in a way, a test of the prototype that would provide spa-

Fig. 4. The *Unité d'habitation* in Berlin, 2016.

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cious home units, amenities and distributional qualities of housing for occupants who were leaving dwellings where the conditions of comfort were largely dire and they appreciated its benefits. This social balance was shaken by a national law in 1971. Half of the apartments were sold and profoundly altered typologically. The façades and the roofing of the *Unité* were listed in the supplementary inventory of Historic Monuments in 1965. In the 1980s, work was done with great restraint on the façades, then from 1996 to 1999 almost all the prefabricated elements were replaced “identically” on the basis of a restricted “performative” tender; the window panes were treated superficially, with the original reinforced glass being replaced by screen-printed glass. Today all the work on the elements in the façade is about to be resumed because they are threatening to come adrift, and the façade will have to be refurbished in its entirety less than twenty years after its reconstruction.

If the construction of the *Unité* at Briey was a tour de force in a geographically, economically and sociologically hostile environment, the complex – as André Wogenscky put it – would rapidly become a “shipwreck” caused by multiple fac-

tors, ranging from adverse political and administrative management to the recession in Lorraine, combined with its abandonment by many of the tenants and the lack of maintenance that led to its becoming a derelict ruin. By 1983 the owner, the Conseil Général, was seriously considering its demolition. Thanks to the action of prominent political and architectural figures, this was narrowly avoided, and the nearby Maillot hospital came forward to buy it in 1987 – for the token price of one franc – to house a school and accommodation for nurses in a third of its volume, the rest being rehabilitated, restructured in its typology and sold as housing. The installation of the association “*La première rue*” which has engaged in a major cultural activity with an international impact here since 1991, the renovation of its surroundings and its listing in the supplementary inventory of Historic Monuments in 1993 marked its rebirth and restored lustre to this *Cité Radieuse*. The exposed concrete of the façades, badly decayed, was subjected to respectful renovation from 2006 to 2009, with the paintwork of the outermost layer being chosen by default.

Fig. 5. The *Unité d'habitation* in Firminy, 2016. © Photo Stephan Rutishauser.



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The *Cité Radieuse* in Berlin aroused real popular enthusiasm and was a political success even before it was complete, from its inauguration when only the structural work had been erected on 6 December 1957. Located off-site as part of *Interbau 1957*, the *Corbusier-Haus* would nevertheless be the most widely commented on and celebrated building, also by the administrative authorities of the former German capital, who were anxious to emphasise the architect's participation in a prestigious international building exhibition. Intended rigorously as social housing from the beginning, its status would evolve towards co-ownership in 1979 and today it has become a highly prized dwelling. The *Unité* was listed as a historic monument (*Denkmalschutz*) in 1979. During its sixty years, the first major renovation of its outer shell was carried out in 1993 by coating the exposed concrete with a plastic layer. This was renewed during the current maintenance work and fails to do justice to the heritage value attributed to the building.

The *Unité* at Firminy was built in continuity with the Firminy-Vert district, a highly Corbusian concept, and after the projects for the Civic Centre, the Maison de la Culture et de la Jeunesse, the municipal stadium and the church of Saint-Pierre, a process of modernisation carried out by Claudius-Petit from 1953. A certain antipathy was declared between the inhabitants of the *Unité*, delighted to live as part of a "built utopia", and the political representatives elected in 1971 by a population that was being overwhelmed by the far-reaching changes taking place in the town. This gave rise to a negative attitude on the part of the HLM management, resulting in the gradual isolation of the building. In the long run it would have led its probable demolition. As early as 1983, the vacant apartments outnumbered those that were occupied. The management decided to group all the remaining tenants in the southern part of the building and to close the northern part, which was decaying dangerously. The inhabitants' commitment to ensuring its permanence, its listing as a historic monument in 1993 and a series of studies for its renovation undertaken by the management, strongly supported by the national authorities, resulted in the revitalisation of the whole *Unité*, a profound typological restructuring of the northern part and the "energetic" restoration of the envelope, involving deep-seated renovation of the concrete elements and complete replacement of the woodwork.

3. CONCLUSION

This exploration of the short timespan of the construction and life of these iconic works contrasts with the permanence of the

image suspended out of the time of the *Unité d'habitation* and the differences, on the one hand, between the buildings made to the same model, above all in their constructional system, and on the other the alterations and deterioration of their material forms, as well as the strategies of intervention, which, though applied to a recognised and protected set of buildings, are nevertheless very different from each other, not say strongly contrasting. It is from the discussion of their first fifty years that the history of contemporary architecture and the material history of building, mingling the social history of the work and its reception, the history of construction techniques – from the structural framework to the fittings – the history of housing and of comfort, the history of preservation, whether dealing with a basic resource or a work of monumental value, will reveal the structuring elements of the future of the architectural project for these built utopias, tragic yet somehow familiar, even domestic, in comparison to the architectural carbuncles produced locally by the brutal expansion of the economy on a planetary scale.

NOTES

- 1 Gérard Monnier, *Le Corbusier: les unités d'habitation en France*, Paris, Berlin-Herstcher, 2002.
- 2 Jacques Sbriglio, *L'Unité d'habitation de Marseille*, Marseille, Parenthèses, 1992.
- 3 Pol Abraham, *L'Architecture préfabriquée*, Paris, Dunod, 1946.
- 4 About building environment and interior comfort: Giulia Marino, *Some Like It Hot! Le confort physiologique et ses dispositifs dans l'architecture du XX^e siècle : histoire et devenir d'un enjeu majeur*, PhD, École polytechnique fédérale de Lausanne, 2014.
- 5 Joseph Abram, *Le Corbusier à Briey. Histoire mouvementée d'une Unité d'habitation*, Paris, Jean-Michel Place, 2006.
- 6 Nicolas Clemens, "Le Corbusier et la querelle de Berlin", *Histoire urbaine*, 2006, 131-148.
- 7 Gilles Ragot, *Le Corbusier à Firminy-Vert*, Paris, Éditions du patrimoine, 2011.

BIOGRAPHY

A graduate in architecture of the *École polytechnique fédérale de Lausanne*, **Franz Graf** has worked as a freelance architect in Geneva since 1989. A lecturer in architecture and construction at the University of Geneva (1989-2006), he became Full Professor of Technology at the *Accademia di Architettura di Mendrisio* in 2005 and Associate Professor of Architectural Theory and Design at the *École Polytechnique Fédérale de Lausanne* in 2007, as head of *Laboratory of Techniques and Preservation of Modern Architecture*. Since 2010 he has been President of Docomomo Switzerland and a member of the International Specialist Committee on Technology.

WHAT IS THE LEGACY OF THE ARCHITECTURES OF CHANGE?

Richard Klein (France)

ABSTRACT

The Plan Construction created in 1971 has the ambition to renew the construction of French collective housing and open it to innovation. During the first years of the 70s the organization of *The Plan Construction* set up a laboratory for housing: social housing with an experimental, innovative and qualitative character.

The achievements of this short period which correspond to these objectives are to be situated both in the continuity of the principles of the Modern Movement but also in an objective of change in the face of the ill-controlled developments of the *grands ensembles*. The architects at work in this process are both the direct descendants of the Masters of the Modern Movement such as André Wogenscky (1916-2004) but also come from a new generation aspiring to change. The *Modèles Innovation* built during this period are among the last architectural manifestations that precede the arrival of critical revision and postmodernism. From this point of view, these achievements constitute the material, cultural and historical heritage of a pivotal period whose motto is precisely change. Confronted with transformations, obsolescence, degradation or simply discredit, these architectures often suffer the same fate as the mass architectures on whose criticism they were built. These architectures are thus often disfigured and subjected to external thermal insulation and are also sometimes destroyed on the altar of "urban renewal", a technocratic formula for the massive destruction of collective housing with a social vocation. From the points of view of critical history, architectural analysis and the expertise of heritage values, it is essential to evoke the *Modèles Innovations* and their future by showing how technical and typo-morphological patterns were envisaged, the different transformations that undergo and the preservation perspectives that open for these architectures of change.

By the end of the 1950s, the French solution for mass housing, *les grands ensembles*, was strongly criticized. Barely completed, collective housing projects are being decried while the country is still in the process of building mass housing. In 1973, a ministerial circular limited the size of operations. The same year, the petrol crisis signals the near end of the architecture period of economic growth. The transformations and modifications of the *grands ensembles* will be followed in successive phases until the contemporary period characterized by massive destruction.

At the turn of the years 1960-70, as soon as the French state is confronted with the failure of the urban form of the *grands ensembles*, political power emphasizes the need for change. A reorientation of the policy of construction of collective housing oriented towards renewal and innovation begins. *The Plan Construction* created in 1971, has the ambition to renew the construction and open it to innovation¹. The results of this public policy have renewed the production of housing ac-

Figure 1. Cover of the book *Modèles Innovation 1973 & 1974*. Direction de la Construction. Ministère de l'Aménagement du Territoire de l'Équipement et des Transports, Paris 1974.



cording to two axes: the first is a constructive technical innovation and the second is based on a typological renewal. At the turn of the 1960s and 1970s, the organization of the *Plan Construction* set up a laboratory for housing: social housing with an experimental, innovative and qualitative character. Among a set of more or less experimental procedures and operations, the *Modèles Innovation* represent the most pragmatic version of the attempt of change (fig.1). The teams that compete to have their process selected include designers and producers. Building companies and industry are directly involved in the design of *Modèles Innovation*, many of which rely on technical construction processes.

1. CHANGES, TECHNICAL INNOVATIONS AND TYPOLOGIES

From the point of view of the techniques implemented, the *Modèles Innovation* rely on several construction processes frequently involving prefabrication as the design of standard elements that allow to create a wide variety of constructions from heavy industrialization. The *Sigma* process is based on the complete factory manufacture of cells whose juxtaposition and superposition create the housing and the building. The *Maille* process consists of flat prefabricated pieces assembled as a meccano in a dimensional weft of 90 x 90 cm. The *Modèle Innovation At Home* consists of an assembly of prefabricated components (slabs, triangular slabs or façade panels) structuring sets from hexagonal shapes. The process developed by the architect Henri-Pierre Maillard and the company SAE is based on a structural stool composed of 4 poles, 4 beams and a slab producing polycubik buildings recognizable by the shape of their vertical structure (fig.2). Other processes rely on the principles of light industrialization as the process *Composec* which is made by assembling prefabricated small parts. Another family of processes combines the vertical supporting structure and the circulation of fluids. The process *Structure Accueil* may be the best illustration of that kind.

From a typological point of view, the *Modèles Innovation* propose a change in the definition of the domestic space, carrying an almost systematic reflection on the flexible and poly-functional space, and proposing architectures that adopt the forms of modules and frames whose profiles are associated more generally with proliferating architecture. The urban spaces generated by the *Modèles Innovation* are characterized by the three-dimensional articulation of the volumes, the different types of habitat, by the search for assemblages of the housing complexes and by the study of transition or interme-



Figure 2. Henri-Pierre Maillard architect, booklet cover of the *Modèle Innovation Maillard-SAE*, 1975

mediate spaces between the interior and exterior of housing, typical of the urban context of new French cities.

These typological innovations are intended to participate in the definition of a new habitat adapted to new lifestyles, in response to the repetitive and serial nature of the *grands ensembles*.

2. PLASTIC CHANGES AND QUANTITATIVE REALITIES

Several *Modèles Innovation* have generated singular architectures. They are based on the architectural expression of prefabrication (process *Dm 73*), on the aesthetics of the expression between structure and filling (process *Maillard*), or that of the space proliferation close to projects of the avant-gardes of the late 1960s (process *Structure-accueil*). From constructive systems, stacked and articulated modules, frames that allow to determine closed volumes or terraces, the image of proliferating and flexible housing express the changes that must respond to the desires of habitat evolution while producing a spatial and urban fabric. Several *Modèles Innovation* are, however, to be situated in the more direct filiation of the Modern Movement, including in the definition of interior. The assemblages, polychromy and composition of the *Salamandre* designed by André Wogenscky are clearly in continuity with the Corbusean aesthetic. The construction of social housing from the approval of these *Modèles Innovation* has not remained at an experimental stage. Several *Modèles Innovation* are applied in many realizations which thus represent a significant number of housing: more than 10,000 homes are

built in France with the *Maillard* process, 7,000 with the *Salamandre* process, 6,000 with the process *M+m*, some process have been adopted more favorably by some regions so more than 15 operations of *Maisons Gradins Jardins* (Michel Andrault et Pierre Parat architects) are built in the Hauts-de-France region. The new French cities whose founding corresponds to the moment of the setting up of the contest have almost systematically adopted these *Modèles Innovation* for social housing operations. The aesthetics of these housing developments are often equated with those of new cities. However, a large number of *Modèles Innovation* have been built in medium-sized urban centres or on the outskirts of cities. The French urban landscape is therefore marked by the presence of these dwellings resulting from *Modèles Innovation*². Imagined in a pivotal historical period, the *Modèles Innovation* can be interpreted as a paradoxical architectural manifestation: the expression of the finishing modernism that still relies on the faith in the technique to produce formal and social changes, the *Modèles Innovations* are also caught up by the critical revision of modernism and the post-modern peri-

od. This is likely to explain why the entire operation is the subject of early critical evaluation³ and contradictory commentary by architectural historians. Gérard Monnier situates the achievements of *Plan Construction* as part of a qualitative research that “leads to advocate for the diversification of housing, the improvement of their flexibility, and an offer of services - terraces, for example - which bring together individual houses and apartments built as part of social housing”⁴. Imagining these ensembles as part of the monumentalization of collective housing in the sense of Kenneth Frampton, Gérard Monnier notes that these orientations cut across the very evolution of modern doctrine regenerated by the development of the “X^e CIAM (Dubrovnik, 1956), where notions of growth, evolution and urban continuity produce networked buildings”⁵. But, for Jacques Lucan, the *Modèles Innovation* operation is mainly marked by high doses of realism, simplification and pragmatism. “This simplification can even, for some *Modèles Innovation*, make us doubt any difference with respect to the period of the ‘grands ensembles’: the techniques used by large construction companies can not be

Figure 3. Michel Andrault et Pierre Parat architects, model of the *Maisons gradin jardin Modèle Innovation*, picture Augustin Demange, advertising booklet imprimerie Jarach-La Ruche Paris, 1974, p.3



Richard Klein What is the Legacy of the Architectures of Change?

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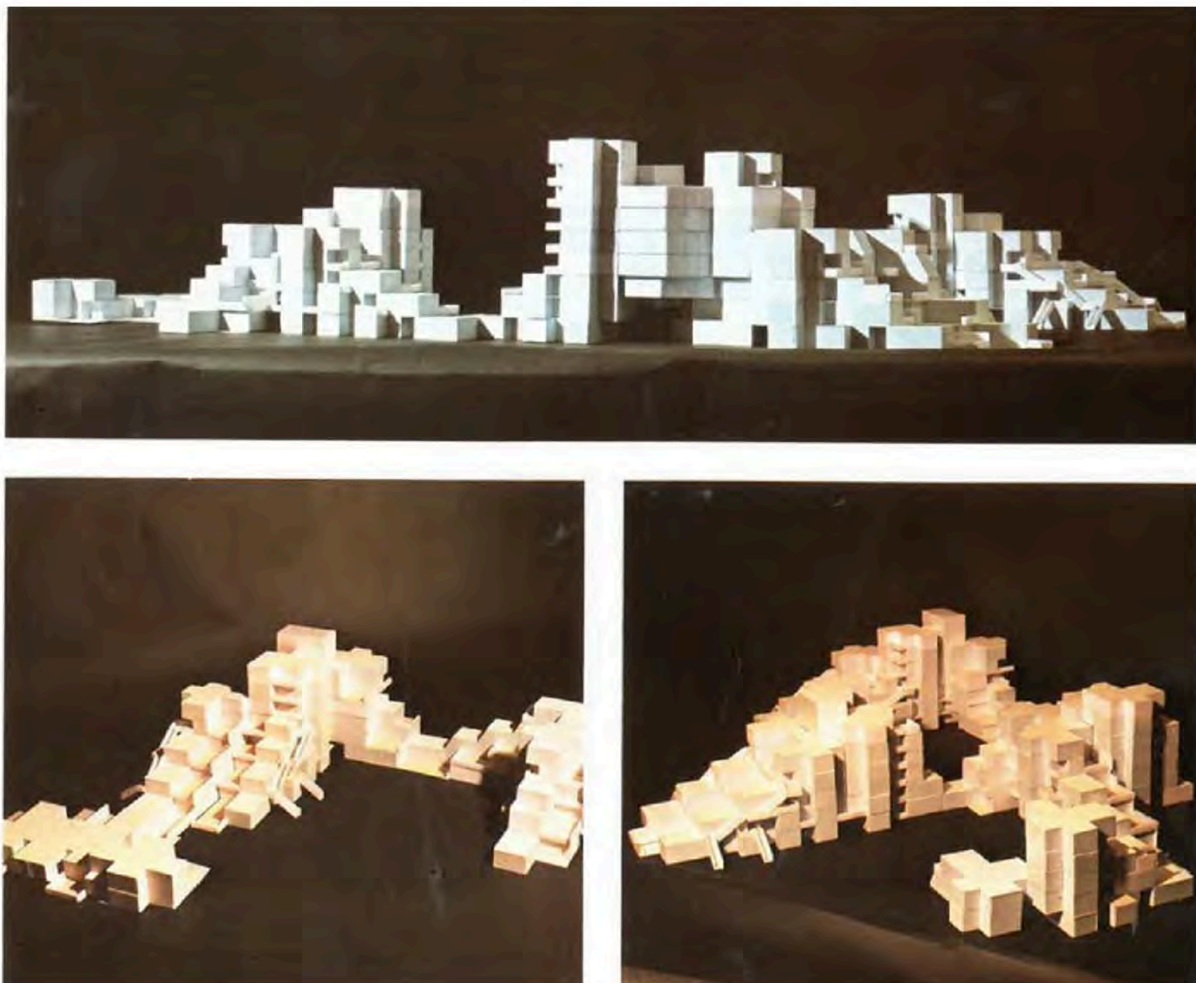
quickly transformed; 'heavy' industrialization is not immediately replaced by 'open' industrialization"⁶.

Anyway, as last architectural manifestations that precede the arrival of critical revision and postmodernism, these *Modèles Innovation* constitute the material, cultural and historical heritage of a pivotal period whose motto is precisely change.

The buildings of this period which correspond to these objectives are to be situated both in the continuity of the principles of the Modern Movement but also in an objective of change in the face of the ill-controlled developments of the *grands ensem-*

bles. The architects at work in this process are both the direct descendants of the Masters of the Modern Movement such as André Wogenscky (1916-2004), but also come from a younger generation aspiring to change as Michel Andrault (born in 1926) et Pierre Parat (born in 1928) who design the *Modèle Maisons Gradin Jardin*, an intermediate habitat of which some pyramidal versions with cruciform plan clear vast terraces for the apartments (**fig.3**). The *Modèles Innovations* are also the last manifestation of renewal of urban forms before a long period of return to traditional urban morphologies.

Figure 4. André-Yves Dupuis & Wladimir Mitrofanoff architects, model of the *M+m Modèle Innovation*, advertising booklet, 1974, p. 3.



3. HERITAGE

These architectures are managed on a daily basis in a strictly utilitarian way, usually without any architectural attention. Confronted with transformations, obsolescence, degradation or simply discredit, these *Modèles Innovations* often suffer the same fate as the mass architectures on whose criticism they were built. These architectures are thus often disfigured and subjected to external insulation and are also sometimes destroyed on the altar of “urban renewal”, a French technocratic formula for the massive destruction of collective housing with a social vocation. From the points of view of critical history, architectural analysis and the expertise of heritage values, we wish to evoke these *Modèles Innovation* and their future by showing how technical and typo-morphological patterns were envisaged, the different transformations that undergo and the preservation perspectives that open for these architectures of change (fig.4).

The achievements of this national policy in the region of Hauts-de-France whose territory is largely devoted to social housing is to consider in a long tradition. It is important to compare the analysis of these architectures with the new legislative provisions that implement the label *Architecture Contemporaine Remarquable*². This label, which replaces the old *Patrimoine XX^e siècle* label, is based on explicit criteria. It is attributed to buildings, architectural ensembles, structures and fittings, among the achievements of less than one hundred years of age, whose design is of sufficient architectural or technical interest. This interest is assessed according to the following criteria: uniqueness of the work; innovative or experimental character of architectural, urban, landscaping or technical design, or its place in the history of technology; notoriety of the work, particularly with regard to the publications of which it has been the subject or mentioning; exemplarity of the work in participation in a public policy; manifest value of the work because of its membership in a recognized architectural movement or ideas; belonging to a group or a work of which the author is the object of a national or local recognition.

There is no doubt that these criteria can be applied to the *Modèles Innovation*, some of which could then be considered with a little more attention. These architectures of change could then be treated from the detailed knowledge of the operations in their material realities and their cultural context so that their future is that of reasoned interventions.

NOTES

1 On this subject : Lambert Guy, “La première décennie du Plan Construction (1971-1982) : Stratégie éditoriale et représentations”. *Histoire de l'art* n°59, octobre 2006, p.141-151.

2 In the Hauts-de-France region there can be counted a hundred operations counting nearly 10,000 housings. This study of the *Modèles Innovation* is conducted with Caroline Bauer and takes place within the larger framework of a research laboratories Lacth (Lille) and Inama (Marseille).

3 Moley Christian, *L'innovation architecturale dans la production du logement social (1972-1978)*, Paris, Plan Construction, ministère de l'Équipement, 1979. Gross Daniel, Abram Joseph, *Bilan des réalisations expérimentales en matière de technologie nouvelle, plan construction 1971-1975, rapport de recherches* du CEMPA, Paris, Plan construction, 1983.

4 Monnier Gérard, *L'architecture moderne en France, tome 3 de la croissance à la compétition 1967-1999*, Paris, Picard p. 19

5 Monnier Gérard, *L'architecture moderne en France, tome 3 de la croissance à la compétition 1967-1999*, Paris, Picard p. 20

6 Lucan Jacques, *Architecture en France (1940-2000), Histoire et théories*, Paris, Le Moniteur, p. 227-228

7 The *Architecture Contemporaine Remarquable* label has been put in place since the decree n° 2017-433 du 28 mars 2017.

BIOGRAPHY

Richard Klein is an architect, historian of architecture, Professor at the University of Lille, Faculty of Architecture and Landscape, Director of the research laboratory LACTH, chairman of Docomomo France. He is the author of numerous articles and several books dealing with the history of contemporary architecture among which : *A quoi sert l'histoire de l'architecture aujourd'hui ?* (2018), *Les maisons de la culture en France* (2018), *La villa Cavrois, Regards* (2015), *Robert Mallet-Stevens. Agir pour l'architecture moderne*, (2014), *La cité de l'Etoile à Bobigny, Candilis, Josic, Woods architectes*, (2014), *Le Corbusier : le Palais des congrès de Strasbourg* (2011), *Dialogues sur l'invention, Roland Simounet* (2005, 2015), *Robert Mallet-Stevens, La villa Cavrois* (2005, 2015), *Les années ZUP, architectures de la croissance 1960-73*, (with Gérard Monnier, Picard, 2002), *Roland Simounet à l'œuvre, architecture 1951-1996* (2000).

THE AFTERLIVES OF SOCIAL HOUSING: THE ADAPTIVE REUSE OF THREE MODERNIST ESTATES

Cecilia Chu (Hong Kong)

Over the last decade, many cities saw a significant growth of investment on the adaptive reuse of postwar housing estates. These include not only buildings with recognized architectural merits, but also mundane built forms ranging from factories to tenements to working class housing. The repurposing of social housing into mixed-used developments, in particular, carries a moral dimension beyond the conservation of material resources. By giving a new life to these buildings that once housed a large number of working population, advocates of this approach argue that it could preserve collective memories of the city whilst allowing a mixed used community to grow in place of a “social housing ghetto.”

This paper will explore the adaptive reuse of three social housing estates that have each undergone significant transformation in recent years. Its attempt is to situate each case within the discourse of modern architecture while linking their development to emergent global narratives of housing. The discussion begins with the Park Hill Estate, whose evolution from an iconic council housing estate to “heritage property” provokes reflection on the changing roles of the state and market in reshaping housing provision in the past two decades. The second case traces the redevelopment of Columbia Point, a 1950s public housing complex in Boston which was transformed into a mixed-use community along the principles of New Urbanism in the 1980s. The final case explores the redevelopment of the Hunghom Peninsula Estate in Hong Kong, a newly built subsidized public housing complex that was transformed into private condominiums after the 1998 Asian financial crisis. By analyzing the rationality behind each case and the critiques that emerged since their redevelopment, the paper invites critical evaluation on the ways in which modernist housing design facilitated new patterns of living in the postwar period, as well as the contested values that became inscribed in these built forms over time. Collectively, the three cases raise further questions concerning the changing relationships between the forms and norms of housing: to what extent has these transformations rendered

void the presumed linkages between the social and aesthetic ideals of modern architecture? What is the role of design in housing production that is no longer predicated on social provision but increasingly subject to the logics of the market? What does the growing appraisal of the estates’ architectural and “heritage” value tell us about the shifting moral claims associated with housing in the 21st century?

BIOGRAPHY

Cecilia L. Chu is Assistant Professor in the Division of Landscape Architecture at the University of Hong Kong, where she teaches urban theory, urban design, and architectural and landscape history. Dr. Chu worked as a professional designer in Canada and Hong Kong and research consultant for several NGOs focusing on urban design and conservation strategies. Her areas of expertise include history and theory of architecture and urbanism, heritage conservation, urban design, and cultural landscapes in Asia. Her articles have been published in a number of leading academic journals, including *Journal of Historical Geography*, *Urban Studies*, *Geoforum*, *Habitat International*, *Planning Perspectives*, *Design Issues*, and *Traditional Dwellings and Settlements Review*. She is Principal Investigator of two Hong Kong Research Grants Council funded projects: *Speculative Urbanism: Modernist Planning and Housing Practices in Colonial Hong Kong, 1912-1939*; and *Shaping a New Moral Topography: Emergent Roles of Landscape Design in the Planning of Chinese Cities, 1912-1949*. Dr. Chu earned her Ph.D. in Architecture from the University of California, Berkeley. She is founding member and current President of Docomomo Hong Kong.

Session 05_HABITAT – REGIONAL BETWEEN GLOBAL AND LOCAL

Session Chair: Zara Ferreira (Portugal)



The Oxford English Dictionary defines *habitat* as “the natural home or environment of an animal, plant, or other organism”. Following this definition, “habitat” and “architecture” could be two concepts as antagonistic as are “global” and “local”. But in fact, the word *habitat* comes back from the Latin *habitare* which means “to live or dwell”, coming itself from *habere* which means “to have or own”. This struggle of finding an equivalent term in English and German was in the basis for CIAM having been unable to reach a consensus about what habitat should be. After two congresses on the topic (Sigtuna, 1952, Aix en Provence, 1953), with the goal of developing a *Charter of Habitat*, the failure would eventually lead to the final breakdown of the organization, in 1959. It comes evident that things evolve and transform itself, either we are speaking about language, architecture or society, especially when it comes to cultural and geographical exchanges. Said that, the “metamorphosis” theme of this 15th *International Docomomo Conference*, is a spot-on field to debate such transformations.

Between desires of universality and attempts to revalidate regional identities, the architecture of the Modern Movement has been revealed not as a linear development, but as a complex process of dialogues and relationships. Until the early 1940s, the literature on modern architecture had been written by Americans (Hitchcock, Johnson, 1932), British / Germans (Pevsner, 1936) and Swiss (Giedion, 1941), who made the apology of the machine age and of abstraction as the primary source of architecture. One of the most central questions in the debate on modernity has been the tension between the phenomenon of universality and the safeguarding of traditional cultures¹. In 1944, to the Johnson & Hitchcock exhibition *The International Style: Architecture Since 1922* (1932), Mock replies with the exhibition *Built in the USA since 1932*, defending the complementarity of modernity and regionalism, and stating that the 1932 exhibition was merely displaying a “badly assimilated European modernism”.

In the southern European countries, by the same time, many

modern architects had already begun to look at the relationships between modern and vernacular architecture, namely Le Corbusier (1931) or Josep Lluís Sert arguing that “modern architecture [was] a return to the pure and traditional forms of the Mediterranean”². In the course of the first half of the 20th century, surveys of rural architecture also exposed modern architects’ interest in vernacular architecture: in Italy, Pagano and Daniel (1936) and Peressutti (1935), in Greece the investigations of Konstantinidis (1947, 1950), in Portugal, the Portuguese Regional Architecture Survey (1955). The Smith’s *Italy Builds: Its Modern Kidder, Architecture and Native Inheritance* (1955) and Rudofsky’s *Architecture Without Architects* exhibition (1964) ends up revealing Anglo-Saxon’s interest on it too.

In the 1980s, the discussion of the relationship between vernacular and modern architecture gave rise to the definition of the concept of critical regionalism³.

Recent studies on modern architecture show that either in the form of a romantic quest for a collective identity, or by a desire to investigate the origins of architecture as well as Le Corbusier revealed with his travels to the East (1911), the vernacular tradition was often at the basis of the development of modern architecture⁴.

This session intends to contribute for the consolidation of this idea through the study of crossed dialogues between modernity and tradition.

Maria Helena Maia, from Portugal, reveals us how there is no dichotomy between modernity and rurality, as one may think at the first glimpse. In the framework of the transnational research project *MODSCAPES – Modernist Rural Landscapes* investigating 11 case studies across Europe and beyond, the author explores some inner colonization schemes built in the Iberian Peninsula during the dictatorships in Portugal and Spain, following State-building policies for modernizing the countryside. *Pueblos* and *colonies* are presented, displaying how modern settlements were able to reinterpret vernacular traditions and – both modernity and local roots – work to-

gether in the metamorphosis of the local identity.

Ola Uduku, from Ghana, and Ilze Wolff, from South Africa, on the other side, exposes the difficulties of appreciating modern architecture in former colonized territories, which is a major situation in African countries. Despite of in many cases, Modern Movement architecture has been developed in deep connection with the local culture, the lack of global awareness concerning this heritage, leads to a long way to be achieved in terms of its protection. Connecting global and local questions with different times – the colonial and the post-colonial – the debate on identity is a key and complex issue on this matter⁵.

David Martín López, from Spain, calls our attention to the mass tourism phenomenon taking place at the Canary Islands, where resorts are being designed and built taking the image of vernacular and modern Canarian architecture as a merely stylistic recourse. As in many other places of our contemporary world, mimesis is used for the development of a fake traditional built environment sold as authentic. “Heritage distortion”, “aesthetical fiction”, “typological promiscuity” are expressions that the author uses to criticise an architectural production that, through an ethical disruption of authenticity, is endangering original buildings, deceiving the understanding of history and nature, and misleading people. Within the so called *Disneyfication* process, this seems to be a case where global phenomenon may destroy the local habitat. Stylianos Giamarelos, from UK, presents what he calls “a transcultural genealogy of critical regionalism” by going deep in the elements that conditioned Greek architects Suzana & Dimitris Antonakakis understanding of the regional in relation to the modern, that was in the basis of Tzonis & Lefaivre’s and later Frampton’s theorizations on critical regionalism. The author argues that in the Antonakakis’ work, the regional became the vehicle for a critical approach of the modern, while the modern a critical approach to the regional. Through an intertwined view of both learnings, “they pursued the ways in which the architectural lessons from the past and the bold visions for the future could be appropriately reconciled and responsibly adjusted to the needs of a changing world”.

In the end, is that what we all within DOCOMOMO, are working on. With this session, we hope to give few steps further to reach that goal.

NOTES

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3 Liane Lefaivre, Alexander Tzonis, “The grid and the pathway. An introduction to the work of Dimitris and Suzana Antonakakis”, *Architecture in Greece*, n. 15, 1981; Kenneth Frampton, “Towards a Critical Regionalism: Six Points for an Architecture of Resistance”, *The Anti-Aesthetic: Essays on Postmodern Culture*, Washington, Bay Press, 1983, 16-30.

4 Zara Ferreira, “The Hassan Fathy’s New Gourni Village in the Crossroads of Modern and Vernacular”, in Joana Cunha Leal, Maria Helena Maia, Begoña Farré Torras, *Southern Modernisms: Critical Stances through Regional Appropriations*, Conference Proceedings, Porto, CESAP-ESAP/FCSH-UNL, 2015.

5 Ana Tostões (ed.), *Modern Architecture in Africa: Angola and Mozambique*, Lisboa, Caleidoscópio, 2014; Ana Tostões, “How to Love Modern [Post-] Colonial Architecture: Rethinking Memory in Angola and Mozambique Cities”, *Architectural Theory Review*, v. 20, n. 3 – Africa Critical, London, Taylor & Francis Group, 2017.

BIOGRAPHY

Zara Ferreira, Architect and master in architecture from Técnico-University of Lisbon (2012), with a dissertation entitled *The Modern and the Climate in the Lusophone Africa. School buildings in Mozambique: the Fernando Mesquita concept (1955-1975)*, developed in the framework of the FCT research project *EWV_ Exchanging Worlds Visions*, where she acted as fellow and researcher (2011-2013). Architect participant in the Portuguese official representation of the *14th Venice Architecture Biennale* and copy editor of the *Journal Homeland-News from Portugal* (2014). Secretary general of Docomomo International and co-editor of *Docomomo Journal* (2014-2017).

Currently doing her PhD, in Técnico-University of Lisbon, on the preservation of post-WWII housing estates, with a FCT doctoral fellowship.

MODERNISM AND AGRARIAN UTOPIA¹

Maria Helena Maia (Portugal)

ABSTRACT

The Iberian Peninsula was mostly rural, poor and archaic until very recently, with only a few cities whose inhabitants lived a substantially different reality from the rest of the population. This provides a background of supposed authenticity of the roots of national architectural identity with direct effects on architectural choices. One of the possible examples to understand this process is the experience of inner colonization, so crucial both in Portugal and in Spain, and the actions taken by the authorities in charge. These parallel experiences provide us with an opportunity to gain a thorough understanding of the relationship between architectural identity and the rural world. In both countries, the 1940s and 1950s were characterized by major infrastructural interventions in the territory. The modernization of Portuguese and Spanish countryside included inner colonization schemes, implementing the “agrarian utopia” purported by both Franco and Salazar. Many modern architects played a part in this process.

Rural settlements across the Iberian Peninsula clearly show different points of balance between elements of modernity and references to vernacular architecture. For this reason, they offer an ideal testing ground to question how the local architectural identity was constructed.

Until second half of 20th century, the Iberian Peninsula was mainly rural, poor and archaic, with very few cities, like Lisbon, Oporto, Madrid or Barcelona, where people lived a completely different reality from their fellow countrymen. The documentary entitled *Las Hurdes, Tierra sin Pan* by Luis Buñuel (1933) depicts those rural settlements in their pervasive misery. Buñuel's documentary was censored, just as the survey on rural housing carried out by Portuguese agronomists in the 1940s², which reported the miserable living conditions of the rural populations. This reality was very hard to face, particularly in those political circumstances, even by a state like the Spain of the time, which was trying to carry out a land reform in line with the rest of Europe.

In Spain and Portugal, however, land reform was to wait a few decades. During the Iberian totalitarian regimes of Franco and Salazar³ – which ended in 1975 in Spain and 1974 in Portugal –, the power of large landowners was a major obstacle to the reform, despite the awareness of its necessity.

Nonetheless, the 1940s and 1950s were characterized by relevant territorial interventions, including major hydraulics works, construction of power stations and road networks which effectively contributed to landscape change in both countries. In Portugal, for example, the Salazar regime promoted a campaign for the creation of woods on non-agricultural lands. The same happened in Spain, where fast-growing or resinous species were planted as a way to exploit the less fertile or easily flooded areas.

These projects led to the establishment of several new institutions, as the Hydroelectric ones. In Spain these also included the Instituto Nacional de Colonización (INC) [National Institute of Colonization] (1940) which was responsible for the hydraulic works required for agricultural development of land associated to inner colonization⁴. In Portugal, such tasks were shared by the *Junta Autónoma das Obras de Hidráulica Agrícola* [Autonomous Board for Agricultural Hydraulics Works] (1931) and the *Junta Nacional de Colonização* (JCI) [Board for Colonization National] (1936).

Even if plans by the Portuguese JCI covered almost the entire region south of river Tejo, only seven colonies⁵ were actually implemented, all located on State-owned or common lands (*baldios*). In the latter case, new settlers sometimes met a strong opposition from local inhabitants, who felt deprived not only of the common land (granted to the newcomers or used for afforestation) but also of ancestral grazing areas. This was a rejection factor which, in some cases, was aggressively extended to the new settlers. In Spain, INC's action was undertaken on a much larger scale, as testified by the ca. 300 existing *pueblos*.

Undoubtedly, despite the many similarities, these processes had a different evolution in each of the two countries.

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In Portugal, most of the colonies were planed during the 1940s and began to received settlers in the first years of the 1950s. Only Boalhosa was built later. Afterwards, new rural settlements came to a halt, as it was preferred to upgrade already existing villages and to support hydraulic works which were to improve agriculture.

In Spain, the 1940s were also characterized by experimental pilot interventions in farms purchased by the State for the purpose; the period from the 1950s until the mid 1960s was characterized by a more pragmatic/technocratic approach, resulting in the construction of new settlements, some of which required expropriation of previous landowners. In the mid 1960s the investment on new settlements tended to be replaced by investment on agricultural improvements, quite similarly to what already happened in Portugal⁶.

In both countries, landowners ended up being the greatest beneficiaries of the construction of new roads and hydraulic infrastructures: their lands became more valuable, while they could also take advantage of the new workforce made available by the settlement of rural workers.

Implying as it did inner colonization, the agricultural policy of both countries, was clearly in line with Franco's and Salazar's rural utopias which brought about a dramatic landscape change.

In Spain, inner colonization may be seen as a land counter-reform, in that it nullified Republican policies with the political and social aim to "ideologically ruralize the proletariat"⁷; settling the population in the countryside meant controlling migration into the city and, consequently, mitigating the danger of proletarianization.

The attempt to transform potential proletarians into *petit-bourgeois*⁸ was an issue also in Portugal, where the distribution of land associated with internal colonization implied "cultivated folklore and an organic view of society as a response to the harmful effects of modernization. However, Salazar's 'ruralism' was imposed via powerful mechanisms of ideological indoctrination within the framework of a nationalist dictatorship"⁹.

In effect, an appropriate profile was required to be settler. In Pegões, for example, they had to be healthy, sturdy, non-alco-

Fig. 1. Carlos Sobrini Marín, civic center square, Rincón de Balasteros, Spain, 1953. © MODSCAPES – Josefina Gonzalez Cubero, 2017.



holic and presenting “conditions of moral suitability and integrity”¹⁰. In addition, they had to go through a control process on a daily basis, this concerned both their agricultural work and social behaviour. All this bears witness to the ideological pressure on the new settlers and to the institutional interference in the settlers’ life.

Agronomists played a crucial role in inner colonization of the Iberian Peninsula.

In the Portuguese case, the JCI acted as a sort of laboratory of the *Instituto Superior de Agronomia* [Institute of Agronomy] which provided JCI with directors and technical staff; moreover, a great number of students developed theses in this context.

If we consider that, in architecture, the rising of a “professional thinking” (in Vieira de Almeida’s words), i.e. that the aspiration of intervening on society in a strictly professional frame, is indissociable of and blends with the Modern Movement starting from CIAM¹¹, we should also accept that if the same attitude is evident in the agronomists’ actions, it should also be considered modernist.

The architects’ task was to design new habitats and, in some cases, they did manage to producing important achievements of surprising modernity.

In Spain, settlements were surrounded by agricultural fields and featured a concentrated layout following a set of predefined rules and programs¹². *Pueblos* and *aldeas* were always equipped with a *centro cívico* [civic centre] surrounded by houses with agricultural annexes and corral.

The civic centre was organized around a square, including several buildings with pre-defined functions. In the *aldea*, these included a mixed school convertible in chapel, a teacher’s house and a small administrative building. In the larger *pueblo*, these included a church with the priest’s house, the town hall, schools, a syndicate’s building, a playground, a cinema, a lodge, a cafe, houses for professionals, doctors, teachers, town hall secretary and around 10% for artisans and shopkeepers¹³.

Besides, the settlements’ layout was to follow the natural topography, trying to find an appropriate orientation of streets and lots, onto which houses and their annexes would be grafted¹⁴.

Fig. 2. Civic center of agricultural colony of Gafanha, Portugal, photographed from the church main door. © MODSCAPES - Maria Helena Maia, 2007.



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Normally, a single architect used to design each settlement, from laying out the general plan to designing the living units, while also being responsible for the architectural expression of civil equipment. This partly explains the formal unity characterizing these settlements.

Another important aspect is the use of a town planning matrix embedding specific solutions concerning the relation between rural housing and the street network, forming urban front. When we consider how the theme of the *civic centre* was interpreted in Spain, we find many references to what had been built in connection with the reclamation of the Pontine Marshes. However, the relationship between the rural house and the centre of the new settlement, as well as the resulting townscape differs from the Italian model.

The situation was rather different in Portugal, where the Italian influence is to be found in implantation of the *casais* (as at Gafanha or Pegões Velhos), featuring tracts of farmland in association with housing, which produces a dispersed layout. All Spanish settlements have well-defined limits, ending with an urban front facing onto the open fields, whereas Portu-

guese villages are often without clearly defined limits, as it happens in the colony of Martim Rei.

In addition, where we find a *civic centre*, as at Gafanha or Pegões, it has much less defined boundaries because of the low density of land occupation. Even if some colonies were equipped with collective facilities – elementary schools, chapel, clinic (in some cases), furnace, fountain, housing for the priest, teachers, and technicians – these were reduced to a minimum and, in most cases, never implemented despite having been designed.

A publication by the *Centro de Estudos de Urbanismo do Ministério das Obras Públicas* [Centre for Urban Studies of the Ministry of Public Works] documents the existence of four main options for the organization of settlements promoted by JCI:

- a) in a dispersed habitat, whose position is subordinated to the working areas of a medium farm (casal agrícola);*
- b) in semi-dispersed habitat, combining reasons for the proximity of both working areas and centres of interest;*
- c) in a pro-concentrado [more concentrated] habitat, materializing neighbourhood and basic facilities needs;*

Fig. 3. Agustín Delgado de Robles y Velasco, Settlers' houses, Barquilla de Pinares, Spain, 1957. @ MODSCAPES – Josefina Gonzalez Cubero, 2017.



d) in a concentrated habitat, accentuating such needs and making them prevail over dispersion factors⁵.

In the case of concentrated settlements, although with a few variations, the layout tended to follow the contour lines, in an axial setting. Aldeia Nova, Lugar de S. Mateus at Barroso Colony and Boalhosa are good examples of such an axial structure. However, we also find more organic solutions, adhering closer to the characteristics of the land, as in Criande at Barroso.

When bringing architecture into focus, we may find some similarities between Spain and Portugal, in their attempt to reinvent the rural house by adapting traditional forms to new hygiene standards, with a clear separation between spaces for people and others destined to animals. This architectural reinvention led to very diverse solutions, all sharing the common denominator of simplicity and functionality, some fully expressing an idea of modernity.

In Portugal, modernity was mainly expressed in the equipment architectural language, whereas in Spain the cubic-shaped houses clearly reflected the architectural trends of the time.

As Rabasco Pozuelo¹⁶ has pointed out when commenting on the Spanish case, this was often an ambiguous form of modernity, expressing the tension between the architects' creativity and the quest for a traditional image of the rural world. The first settlements designed for INC, seem to reference "deformed and preconceived ideas" of Castela-la-Mancha and Andalusia settlements, thus highlighting "a generally recognizable idea of a Spanish settlement prototype"¹⁷. This is why we will find an almost generally white image, even in areas where white was not traditionally used.

In Portugal, the vernacular reference is also evident, resorting to stone in the North (Barroso, Boalhosa) and whitewashed walls in the Center/South (Gafanha, Pegões). Here however, we do not find direct references to traditional rural houses in their design. So, architecture produced in the framework of these colonization projects should perhaps be understood as reinvention of the tradition.

More similarities between Portugal and Spain become clear when we bring into the picture the inner organization of dwellings, namely the functional separation between stables,

Fig. 4. Eugénio Corrêa, school, Pegões Velhos, Portugal, 1951. © MODSCAPES – Vittoria Capresi, 1971.



working areas (agriculture-related) and living units, as well as the simple spatial organization of the interiors, with sleeping spaces separated from living areas. All such features are different from traditional solutions.

In settlements along the Tejo's Valley (Spain), for instance, the house was facing onto the street with agricultural annexes the back, arranged around a central open space. Houses designed by JCI instead integrated living units and agricultural annexes inside a common volume.

As Filipa Guerreiro pointed out, in most Portuguese agricultural colonies the house (either individual or semi-detached) acquired a unitary identity, by joining all functions in a single built-up volume; this can also be understood "as a strategy to dignify the building and its potential of *representation*"¹⁸. From our point of view, this solution shows an attempt to reach the dignified shape of the bourgeois house, in line with ideological desire to project colons into a petit-bourgeoisie lifestyle.

Finally, to conclude, it is worth focusing on the case study of Pegões Velhos, where we find a set of singular modern buildings: the church, two schools, the priest's and the teachers' houses. Dating back to the early 1950s, such buildings – originally conceived as a larger number of buildings (as we can see in the model-to-scale still existing¹⁹) – were located in a fine wooded area, having as an axis the road leading to the church. All these buildings share very singular shapes, inflecting the theme of parabolic vaults, connected to the experiments made in the same period in Spain²⁰, and inevitably reminding the Oscar Niemeyer's work for Pampulha, Brazil.

Currently, many settlements dating back to these colonization schemes have been abandoned, some are still inhabited by farmers, others have been converted into tourist resorts. Their significance lies into their bearing witness to the "possible modernity" at the moment. As such, they offer a privileged field to understand how the Modern Movement has been assimilated in the Iberian Peninsula and adapted at its socio-political and geographical contexts. Besides, these experiences largely contributed to the quest of a local architectural identity, still awaiting our full understanding and, eventually, preservation.

NOTES

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2 The *Survey of Rural Architecture* was planned to be published in three volumes: (1) The Northern Region, from 1942; (2) The Central Region published in 1947; (3) The Southern Region, whose publication was hindered by censorship. This volume only was published in 2013.

3 Francisco Franco (1892-1975) and António de Oliveira Salazar (1889-1970) were, until their death, the dictatorships in power, respectively, in Spain and Portugal.

4 The 20th century internal colonization process is common to all Europe and Beyond. Associated with large scale development and agricultural schemes to modernize the countryside, thousands of settlements were built. In Portugal, those settlements are usually referred as *colónias* [colonies] and in Spain as *pueblos*.

5 Milagres (c.1925/1927; c.1937/1939), Martim Rei (c.1937/1948); Gafanha (c.1942/1952), Pegões (c.1942/1952), Barroso (c.1943/1951), Alvão (c.1945/1954) and Boalhosa (c.1946/1958).

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8 Vd. Elisa Lopes da Silva, *A propriedade e os seus sujeitos: colonização interna e colónias agrícolas durante o Estado Novo*, Master thesis, Lisbon, FCSH-UNL, 2011.

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18 Filipa Guerreiro, *Colónias Agrícolas Portuguesas contruídas pela Junta de Colonização Interna entre 1936 e 1960*, PhD thesis, Porto, FAUP, 2015, 429.

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20 Vd. Rabasco Pozuelo, P. "El nuevo Ctesiphonte. Catenaria invertida en la década de los 50" in *Actas del Cuarto Congreso Nacional de Historia de la Construcción*, ed. S. Huerta, Madrid: I. Juan de Herrera, SEDHC, Arquitectos de Cádiz, COAAT Cádiz, 2005.

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BIOGRAPHY

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CHALLENGING MODERN MOVEMENT HERITAGE CONSERVATION IN AFRICA

Ola Uduku (Ghana), Ilze Wolff (South Africa)

ABSTRACT

This paper seeks to examine what the critical issues are that make heritage conservation in Africa a challenge to achieve. Focusing specifically on the problems associated with the buildings from the post WW2 to the 1980s, particularly difficult to conserve, it identifies key problems through a critical analysis of the issues specific to African built heritage, suggesting a number of key strategies and policies that might help conservation efforts on the continent.

1. INTRODUCTION

The African modernist era has had a contemporary renaissance. There has been a resurgence of research writing which has focused to all aspects of Modernism as it relates specifically to the genre of architecture in Africa. This has been evidenced by the recognition of Asmara as Africa's first modernist UNESCO World Heritage city in 2017. A number of notable exhibitions have also focused on post war Africa such as *African Modernism* (2016), *Africa Big* (2014) and *The AA in Africa* (2002).

Figure 1. Nigerian Vernacular Architecture, Katsina Walls, Katsina City, Nigeria. © Ola Uduku.



These events have been underpinned by a number of critical publications: Fry and Drew's *Building in the Dry and Humid Zone* (1964), Koenigsberger et al's *Manual of Tropical Housing* (1975) and Konya's *Design Primer for Hot Climates* (1980). Since the 1990s this has incorporated contemporary discussions of regionalism and architecture by Frampton (1998), Tzonis & Lefaivre (2003) and others. Since the 2000s publications by Le Roux (2004), Uduku (2004), Jackson & Holland (2016) and J. H-Chang (2016) have further contributed to the discourse.

The foregoing has produced the framework for our viewing and understanding of the African modernist era. This is fine from an exclusively academic perspective but we argue that it remains contextually situated in a neo Western "classical" historic context. This framing of architectural history has worked well with Africa's archaeological and historical-ethnographic monuments; from the cave art and found civilisation to be found across Africa to the documentation of traditional architecture by authors including, amongst others, Denyer (1978), Dmchowski (1989) and Prussin (1969) (Fig. 1).

Historicising the near modernist past proves more problematic. Whilst the records are often extant, they have neither been documented nor curated within the historical frames in the way in which earlier periods have been. Supportive international organisations such as UNESCO and DOCOMOMO have achieved creating a public, international awareness of the challenges of preservation as evidenced by Asmara's UNESCO recognition. The DOCOMOMO campaigns for KNUST campus (2016), in Kumasi, Ghana, and for the Uganda National Theatre (2017), in Kampala, Uganda, are also exceptions to the rule.

This paper seeks to examine these issues, particularly the challenges facing our engagement with modernist architecture in its historical and contemporary African context. It highlights the challenges related to doing this successfully and concludes by offering a few possible ways in which we can begin to address these issues through various strategic initiatives.

2. EXPLORING AND PRESENTING AFRICAN MODERNISM

In the 21st century there are an increasing number of new media through which to encounter African architecture. This has worked well for traditional African architectural history that feeds into normative "pre-renaissance" primitive architectural design narratives. The reviewing of these traditional architectural forms thus depends on our willingness to view



Figure 2. J. Cubitt and K. Scott, KNUST Engineering Building, Kumasi, Ghana. © Ola Uduku.

African vernacular architecture within a Western historical-anthropological frame. The premise being that the architecture of emerging areas in Africa, Asia and Latin America is categorised as static and viewable as being part of an archaeological past.

Modernist-period African architecture cannot be categorised from this vernacular perspective. The socio-cultural and historic context to this post WW2 African architectural style has made it difficult for this new era architecture be accepted as uniquely significant within the cultural narratives of post-independence Africa. This was because these early modernist buildings were designed and built by a succession of expatriate architects, who had either arrived as private architects or emerged from the public works department architecture teams who were redeployed elsewhere as African nations gained their independence and nationalised the colonial civil service.

Despite not all African countries being involved in fighting wars of independence, most Africans viewed the building design activity of these predominantly European architectural practices as being an extension of the colonial architecture building programmes, such as the 1950s Gold Coast (Ghanaian) Schools building programme which incorporated much of the early Fry and Drew school design projects, and therefore was not associated with local African creative identities. Only a few indigenous architecture practices were established before the late 1960s. In Nigeria, Femi Majekodunmi and Alex Ekwueme were amongst the first to do this. In Ghana, Owuso, Addo and Larbi were the national pioneers in the creation of a post Gold-Coast indigenous modern architecture. This is in contrast to the development of a vibrant indigenous cultural arts scene which took place at the same time in the 1960s with the emergence of authors including Achebe, Soy-

inka and Sutherland, and sculptors and artists such as Enwonwu, Iwaka and Onabrakpeya. Africa's musical legacy at the time also gave us versions of highlife, "soukus" and later on "Afrobeat". Early modernist architecture in Africa, particularly West Africa, from the 1950s to 60s was characterised by institutional infrastructure such as schools, housing and higher institutions, designed and built by expatriate architects planners and designers.

The later architecture that did comprise the work of the indigenous architects mentioned and others such as the British-Nigerian Alan Vaughan Richards, the locally based practice Godwin and Hopwood, and other architectural newcomers, did begin to integrate more indigenous character via the use of indigenous materials, shapes and interior artefacts. However, this short-lived phase epitomised by buildings such as Alan Vaughan Richards', Ola Oluwakitan House, Lagos,

Figure 3. J. Owuso Addo, Ceddi Tower Accra, Ghana. © Ola Uduku.



Frank Mbanefo's Enugu residence, both in Nigeria, and Owuso Addo's Accra Cedi Tower (Ghana) (**Fig. 3**) were only recognised by few in Africa but not the African public.

It would not be until the late 1960s when the monumental architectural infrastructure framing the Ghana Remembrance Square, Race Course and the FESTAC Theatre, both in Lagos, that the public would engage with the architecture on view. The infrastructure construction however was largely sub-contracted to foreign firms as design and building contracts. Thus, despite the resulting architecture having some engagement with its local environment, the design and production process was often foreign. More local projects such as the layout, school and staff housing for the University of Lagos did showcase the work of Alan Vaughan Richards, who later teamed with the Nigerian architect Alex Ibru to design future projects.

By the 1980s with the past effects of the global oil crises and ongoing structural adjustment programmes, the transition from the International Style to a more global post-modern style was less clear. However, a few buildings such as the IMB Plaza, in Lagos, UBA Lagos, and the Shell HQ building on Victoria Island Lagos, were designed by local Nigerian architects, including the subsidiary firm James Cubitt and Partners. Buildings from the 90s to the 2000s have been built and developed in similar style, with the last two decades proving the most interesting in indigenous interpretation and change. The residences of Addo and Lokko in Accra are good examples of a broader indigenous African architecture re-emerging as with Kere's Gando schools programme. The experimental is covered with Adeyemi's Floating School. Significant new commercial buildings have also evolved such as the New Lagos Yacht Club, Ecobank HQ (**Fig. 4**) and One Airport Square, both in Accra. Meanwhile the African architect David Adjaye has plans for a national Ghana cathedral.

Whilst this narrative has focused solely on West Africa, the same could be said of any of sub-Saharan Africa's regions. What it seeks to show is that African architecture is not static and indeed is currently emerging as it should into its own.

3. PROBLEMS OF IDENTIFICATION, RELEVANCE AND CONSERVATION

Despite this context, why is it that African architectural heritage and its conservation remains in such a poor state? We can appreciate the economic arguments; most sub-Saharan African countries are poor, and the investment made in building conservation is focused on stereotypical ideas of Africa's indigenous culture. Furthermore, the post-colonial, an-



Figure 4. Augustus Richardson and Mobius Architects, Ecobank Accra, Ghana. © Ola Uduku.

ti-expatriate feelings articulated in the previous section has meant that there is limited local interest in the post-independence period architecture, the foundation of the African modernist architectural building canon.

The other issues which face all urban areas in the emerging as in the developed world, include the rapid speed of urbanisation, high urban land values, and the difficulty of applying conservation orders. African cities such as Accra, Lagos and Luanda, all exhibit these characteristics. These would be common to cities such as San Francisco and Los Angeles in the late 19th century.

This paper argues also however that in the African case, there is the need for indigenous communities and nation states to find ways to recognise and then own this heritage which is currently determined through a global view of heritage, which is not necessarily African or indigenously focused. Despite

UNESCO now re-categorising heritage as being tangible and intangible, this notion remains conceptual and does not respond to the ways in which the public can engage with the very tangible nature of historic buildings.

3.1. Challenges of Recognition and Appreciation of Modernist Heritage

A fundamental issue for built heritage in Africa is creating an awareness of what this means to the general public. Knowledge and educational structure are fundamental for unlocking the local appreciation of modern architecture and understanding the significance of recent built form to history and local culture. This knowledge might also allow new approaches to built form, influenced or better developed from the appreciation of key concepts such as environmental response, sustainability and design programming demonstrated in modernist buildings of the mid-20th century.

There is also a critical evaluation to be made on the more deleterious aspects of Modernism, particularly from a local African viewpoint. The absence of a significant indigenous design network until much later in the 1970s, and the appropriateness of tropical design concepts for the African cultural contexts requires critical analysis.

Local education and publicity channels must be able to engage the public, promoting the awareness of these buildings and their relevance to local meaning and narratives of cultural identity. In Lagos an example which did spark the public imagination was the destruction of Fela Anikulapo Kuti's shrine, or musical performance studio, by the ruling military junta in the 1980s. The "new" shrine was rebuilt about 5 miles away in a different suburb with no remembrance marker of where the "old" shrine had been, despite local Lagosians and Fela aficionados being aware of the neighbourhood of the original building and the significance of Fela's "shrine" to contemporary music culture in Lagos.

3.2. Current Challenges

A number of current building landscape significance and conservation awareness and challenges include the University campus landscapes from Ibadan, Nsukka and Zaria, in Nigeria, Kumasi and Legon, in Ghana, the Fourah Bay, in Sierra Leone. Commercial buildings have also come increasingly under focus as urban areas increase in CBD land values and exchange the generally medium rise landscape of the 60s international style as exemplified by buildings such as the Elder Dempster offices, (Lagos), the Co-Op Bank building (Ibadan)

and the Cedi Bank HQ (Accra) and various tropical design exemplar schools across West Africa.

More serious has been the loss of buildings such as the major market in Dar Es Salaam, and the continuing threat of demolition hanging over Uganda's national theatre in Kampala. The cultural artwork is also under threat in some buildings such as Suzanne Wenger's murals for the Bristol Hotel in Lagos, which has been extensively remodelled although managing to retain its elevational façade logo. Public engagement with the Rex Trueform buildings in Cape Town are an example of another contemporary challenge (Wolff, 2016).

3.3. War and Famine

In many nations in Africa and elsewhere the legacy of civil wars, famine and other natural and man-made conflicts have also not treated built heritage kindly. However, unlike the international funding received for the reconstruction of the Mostar bridge in Sarajevo, few significant buildings if any from war torn areas in Africa have had the funding to enable their reconstruction, assuming in the first instance there had been a recognition of their status. We have no real knowledge for example of what key buildings were lost in the Sierra Leonean and Liberian Civil Wars, although the archaeological significance of Timbuktu has meant that the international community has rallied around and helped with the stabilisation and restoration plans for the historic-archaeological architecture that was damaged during the Islamic insurgents capture of the city in 2012.

4. THE LACUNA

There remain significant gaps in the information and material available on past building in Africa. This is a major problem, as it is difficult to conserve and restore buildings with no physical records of their initial construction. There are already initiatives afoot to redress this. For example, the British Library funded Endangered Archives Project, which is currently funding a project to enable the digitisation and conservation of the extant Accra Metropolitan planning office records of buildings planned and built in "old" Accra from the mid-19th century to the 1960s. There has also been the successful documentation of drawings of the British-Nigerian architect Alan Vaughan Richards, via the British Academy funded Alan Vaughan Richards' Archive project.

Currently work is being done to document the KNUST Kumasi campus drawings and a multinational group of collaborators who were involved in the design of the campus build-

ings and also teaching at the Architecture school, the first in sub-Saharan Africa. As might be expected with the lack of recorded documentary and physical information, the lack of less tangible records, oral histories, and ephemeral artefacts to support the categorisation of the near architectural past is acute. Residual material comprising photographs, old film tapes and other promotional material also exist in dispersed, and usually uncatalogued, collections which are now beginning to be recognised and explored by researchers whose interest has moved from the conventional planners and architects to the unheard voices of other audiences who were engaged and had a stake in this built infrastructure.

Whilst it can be argued that this material simply gives a grounding in the “Western Documentary frame”, the recent incorporation of oral histories and the local experience of post war international style infrastructure as schools, housing or commercial infrastructure, enables us gain a more localised and therefore more “owned” indigenous viewpoint and engagement with historic buildings and infrastructure. This in turn should also provide the grounding and support allow for more local activist and other forms of engagement.

How then can we begin to change attitudes to, and the understanding of, the need to conserve and study recent built culture? We believe that there are a number of key objectives that can help us achieve this.

Firstly, a *critical and comprehensive analysis* and review of the factors and issues that influence the conservation process and the local understanding of what conservation is particularly as relates to historic “near modern” buildings and infrastructure in Africa. Secondly, and most importantly, we need to understand and measure *the socio-economic benefit* of conservation activities to the local indigenous population. There has to be an economic or social gain to be made from the public engaging in building conservation and heritage activities in order that the process to be considered meaningful and indeed useful to the local public. As has been reiterated functional buildings cannot be left as purely heritage buildings to be visited by tourists, they need to have a social function which the public can see the benefits of. This is partly because aside from the African tourist hotspots in southern and eastern Africa, there is a less developed tourism industry in West and Central Africa. Also, where there is an African tourist industry, aside from historic cities such as Mombasa and Cape Town most tourism focuses on Safari-cultures.

The funding of conservation activities in most African states is also limited. As a subset or minor subdivision of the muse-

ums monuments and heritage budget in most formalised government ministries, conservation projects receive limited funding. To enhance the status of building heritage and conservation there needs to be a significant increase in the funding allocated to them. In West Africa there is the added complication of actual ownership. Unlike parts of East and Southern Africa where native land was effectively taken by fair means or foul from indigenous owners much of West Africa's prime land remains in private ownership.

This means that it is difficult to purchase property – using the UK National trust death tax exchange model. Also, the notion of bequests to the nation, as per the USA, by the rich is also hardly likely to take place in much of Africa where families that have wealth are first expected to share the wealth with poorer extended family members or near relatives.

The education of the public and with it the publicity and advertising of nationally important built heritage in Africa is rarely initiated. Aside from South Africa where the historical sites of Apartheid are internationally known and rightly honoured, most other African historical heritage sites as discussed earlier are archaeological, or relate to more recent public spectacles or memorials such as African centopaths, and the symbolic FESTAC national theatre building in Lagos.

Heritage history in West African schools focuses on the described themes, archaeological and contemporary socio-political, the “post-independence” Modern Movement to which much of the international style buildings in Africa belong is covered in African literature and the arts but not in the built form. It is notable that the Asmara heritage listing was driven with significant help from expatriate architectural expertise without which it may have taken much longer to achieve.

To summarise there are a number of significant blocks which have hindered the development of a modern – contemporary built heritage movement. Key issues have to do with the economics, local interest and socio-cultural public context which have generally either actively or implicitly hindered the development of this sector.

Some key suggestions are:

- a: Allocating more funding to heritage issues which are out-with traditional areas of funding.
- b: Embedding heritage history into curriculums and public awareness campaigns from primary school level to local publicity fliers and brochures. With adequate funding and publicity, the case can be made for “saving” and using historic modern buildings in ways that are agreed in consultation with local communities. The transformation of these build-

ings into community assets transforms their public symbolism from buildings that are either just "there" or are associated with a colonial, post-colonial past to buildings that have local meaning purpose and ownership. Embedding heritage education in the educational curriculum would further ensure that its importance would be understood by younger generations of Africans.

At a future level, it would be important to work in collaboration with UNESCO and DOCOMOMO, to compile regional African inventories of modernist legacy buildings with records of their current status and development needs. This could be done in conjunction with architecture, heritage and tourism courses being delivered across Africa. Thus, aside from the recording documentation and fiche creation, development plans and business proposals for buildings at risk could be made in consultation with local communities and businesses to where possible ensure the structures were no longer at risk of dereliction and at worst demolition.

Examples of creative reuse would include the redevelopment of the old Police headquarters in central Lagos as the Freedom park arts and music venue shows a similar creative reuse which has community support.

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HOTEL RESORTS IN THE CANARY ISLANDS: CREATING A VERNACULAR CITY ON THE INSULAR LANDSCAPE. HERITAGE DISTORTION, AESTHETICAL FICTION OF ATLANTICITY OR TOURIST ATTRACTION?

David Martín López (Spain)

ABSTRACT

This paper analyses the architecture and urbanism of new touristic areas in The Canary Islands, Spain, and its particular integration into the insular landscape. The current use of Atlantic vernacular regionalisms as the main stylistic resources for seaside resorts, transmit a false identity of the new coastal landscape, principally at Tenerife and Gran Canaria. At the same time, it promotes an important historical distortion of the notion of heritage in the whole archipelago. This new aesthetic, based on the mimesis and plagiarism of the most important typologies of the Canarian heritage, has extremely disturbed the contemporary landscape perception of these Atlantic Islands, through a process that can be considered unique in the regions of the Atlantic Ocean.

1. INTRODUCTION.

THE REGIONALIST CANARIAN STYLE

The Canary Islands have for decades the major dilemma on how, and under what guidelines, new resorts for mass tourism should be built. On one hand, many insular and foreign principals applied are presented as being part of the Canarian regionalist style – also known as the neo-Canarian –, like a brand. Looking and analysing mimetic recreations of vernacular identity and values seems to be apparently unique and megalomaniac, in this context. Before the currently common aesthetical attraction for resorts, the Canarian regionalist style was developed between the beginning of the 20th century and the end of the Francoist regime (1939–1975), with paradigmatic examples in the architecture of Miguel Martín Fernández de la Torre (1894-1980), Tomás Machado Méndez Fernández de Lugo (1908-2003) or José Enrique Marrero Regalado (1897-1956). It is necessary to appoint that Regionalism in The Canary Islands has an aesthetical concept contrary to the rest of Spain and their ideological meaning: during the Franco's dictatorship, the Canarian regionalist style was declared as the official style for all arts and urbanism in the Islands. This political planning reinforces the image of

an ideal place, traditional, with a strong and unique heritage for the European tourism who visit The Canary Islands even in the Civil War period. That plan not only affected urbanism and architecture but also botanical parks, gardens, viewpoints, etc. The Canarian regionalist style, later called by historiography as neo-Canarian, was in the 80s reinvented as new-neo-Canarian with the exaltation of the region during the first Democracy after the Francoist regime. It was inspired in the traditional architecture of the Archipelago. This traditional Canarian architecture has its origins after the Castilian conquest in 16th century. In this sense, the Mudejar influence, with outstanding roofs of wood, together with typical elements of the architecture of Andalusia and Castile, formed a very peculiar architecture, where the stone is used in the most important part of the façade, and the wood is reserved for doors, guillotine windows and the famous Canarian balconies – at the *piano nobile* of the house and in the patios. The use of the Arab tile – called Canarian tile – is also very significant. This heritage is very syncretic due to its origins linked also to the Flemish, Portuguese and Italian influence among the British one, mainly since the 18th century. All this mix of identities are combined in the neo-Canarian style.

The meaning of the Atlanticity of The Canary Islands and their architecture changed too. Suddenly, with Democracy, some vindication of the insular nationalism and its idea of Atlanticity created a notion of Europeanness in their culture as national or regional identity. With these elements, since the 90s architects and hotel companies have a complete cookbook full of receipts to build the new insular coastal landscape¹.

All of them are far away from the utopian experiences of touristic architecture produced in the 70s and 80s in The Canary Islands, where architects and artists as Vicente Saavedra (1937), Javier Díaz-Llanos (1935), Luis Cabrera (1911-1980) or César Manrique (1919-1992) changed the corseted Canarian regionalist style of the Dictatorship, with the knowledge of the vernacular Nature and heritage, into the contemporary aesthetic languages. Modernity and vanguard were in most of the exam-

ples of touristic areas, currently in the main Islands. Manrique, one of the most important artists of The Canary Islands who warred against urban speculators, changed the direction of the resorts and the image of Lanzarote, the mystical volcanic Island where the Portuguese writer José Saramago (1922-2010) lived until his death. Manrique designed a series of “imaginative public projects built to entertain and educate locals and visitors about the different facets of Lanzarote’s landscape, wildlife and indigenous culture”². *Mirador dell Río* (1978), *Monumento al Campesino* (1968), *Los Jameos del Agua* (1968), *Jardín de Cactus* (1991) and the *Taro de Tabíche* (1968), are some of the paradigmatic examples of an artist who had a deep commitment to Nature and the insular culture, with an extraordinary feeling for the organic, through the understanding of the beauty of the site, the use of local volcanic materials and of vernacular forms. Nowadays, tourism industry and urban planning are increasingly trying to emulate the local genuine towns, by means of simulation and mimesis, copying historical architectonic references. That “local style” [fake] interacts on the public space of tourist coastal cities resorts. “In reverse, the ‘local cities’ are adopting models and leisure infrastructures from the ‘tourist city’ and integrating them into the public space: as in the case of the transformation of industrial harbours into Marinas and parks, as well as the construction of important cultural facilities”³. From this quotation of Herzog & De Meuron one could derive a formula for a global urban trend of development under way which unfolds in two directions: the Touristic Resort wants to become City and the City wants to become Touristic Resort.

Herzog & De Meuron criticised this “vernacularization” of local cities, but when they won the prize for the construction and reform of the main square, *Plaza de España* (2008), at Santa Cruz de Tenerife, they, paradoxically, also selected vernacular parameters to develop their project: pavement similar to volcanic lava, street lamps close to those which were in the folk festivals of the Archipelago, etc. In fact, no one can escape – even foreigners and renowned architects as them – from this process of “vernacularization” of the Canarian culture. It is extremely difficult to avoid it, since it even derives from the aesthetical parameters included in the license of construction, or the style is imposed by the political aspirations of the Canarian nationalism. On the contrary, and due to its logical richness of ideals and legacy, this vernacular identity is also used when the freedom of the artistic inspiration recurred to vernacularism as the best way of dialogue with the landscape, close to César Manrique ideals.

2. THE APPROPRIATION OF ANONYMITY IN THE TOURISTIC URBAN LANDSCAPE

The resorts for mass tourism in The Canary Islands have appropriated an interpretation of some kind of value of anonymity as a stylistic source, in which the architectural inspiration on the vernacular or Atlantic heritage is totally vindicated. There is no importance in the origin of the aesthetical resource, because the promiscuity of its use permits the new utopia. In these terms, a façade of the most important parish church in La Gomera (Our Lady of The Assumption, San Sebastián de La Gomera, 17th century) can be transformed, surrealistically, into a hall or narthex entrance for buses and taxis to a prestigious resort as *Gran Hotel Tacande* (2002). The copy, through this mimesis, even has the necessity to recall rhetorical elements for reinforce its fake notion of “authenticity”: in this case, a crucifix inside the narthex that the original parish didn’t have it. This aesthetical atmosphere has set a symbolical imposition in relation to the touristic resorts of the main important coastal areas in Gran Canaria and Tenerife.

Besides the harms this process promotes related to heritage questions, it also reveals negative aspects in anthropological and ethnographical terms. The recreation of bars and restaurants, halls, receptions, and lobbies with the external and interior appearance of churches, towers which are suites, castles as Spas, Canarian patios in commercial centres designed as interior of old Mansions with some historic distortion, among other examples, confuse the tourist and the insular inhabitant who haven’t visited these resorts. The common areas of public access interacts with the coastal urbanism, doing the visitor believing that all this amount of buildings is historic and not a recreation. The Disneyfication of the resorts not only damage the resort itself but the site and the city where it is situated too.

In The Canary Islands, the hotel chains have been implemented the neo-Canarian style as the formula for winning visitors. It is a vernacular style with deep idealized components, that without a real basis of analysis emphasizes the traditional architectural elements⁴. Actually, there is a notorious danger in the use of this anonymity. This vernacular architecture has the morbid charm, as it is destined to disappear or be weakened to the point of being unrecognizable⁵.

In the 21st century, tourism in the Canaries and hotel companies have sued a globalization of vernacular denaturation of anonyms singularity. It is a mystifying and destructive style, because the new resort doesn’t allow to value the original creations, the importance of the original historic site – its inspi-

ration –, due to excessive use of mimesis and recreation: the architect's authorship wins the ownership of the ancient anonymous legacy.

2.1. The Gran Bahía del Duque, the preconisation of a new aesthetic in urban tourist landscape

The origin of this new vernacular recreation appeared in Tenerife at the beginning of the 90s, when a visionary architect, Andrés Piñeiro (1949-2004), with a magic wand, turned the international styles of the Canarian resorts and created the routes of the neo-Canarian style for the tourist, confusing the real sense of architecture and urbanism in the entire Archipelago. This typology, eclectic and megalomaniac, used an ex-

tensive menu of architectonic types, structures, volumes and colour palettes. His pattern collection had not only traditional heritage elements. It presents a more extensive group of options, ranging from typical solutions of this vernacular identity: noble or traditional the Canarian architecture, regardless the historical use and its typology – mansion, farm, school, casinos, religious chapels and parish, military castle, etc. –, to others aesthetics visible in The Canary Islands which aren't historical. In the specific case of Piñeiro's resort (1990), the author combines some interesting elements of important British Victorian examples of architecture in Tenerife among other architectonic historicist and eclectic buildings. He copied and used the work of the main architects of the 20th cen-

Fig 1. Andrés Piñeiro, Gran Hotel Bahía del Duque, 1990, Costa Adeje, Tenerife. Andrés Piñeiro built in the early 90's this architectonic syncretism based not only in the Canary regionalist style but with expressions of Eclecticism and Modernism of architects like Mariano Estanga and Antonio Pintor. © David Martín López, 2011.



David Martín López Hotel Resorts in The Canary Islands

ture like Antonio Pintor (1862-1946) and Mariano Estanga (1871-1937). The result, *Gran Bahía del Duque* (1990), was a new kind of hospitality concept, of quality and luxury, that still exist over twenty years as the new brand for the coast: Costa Adeje (Adeje, Tenerife), considered as a center of luxury and relaxation alternative to mass tourism of Playa de Las Américas (Adeje, Tenerife). At this first resort of Piñero, the aesthetical references were more syncretic and authentic than the following hotels made by his successors (Fig. 1).

The *Gran Hotel Bahía del Duque* has the privilege of being the first Spanish resort where Disneyfication of the noble, civil, and religious architecture becomes a reality: Pools that appear lakes, lakes that are actually pools of salt water from the sea,

hanging gardens a steep structure of small buildings that make up the entire hotel. Piñero, unconsciously awakens a premeditated utopia that as a megalomaniac recreation, was becoming gradually, and not by his creator, the “only way” a “landscape dictatorship” and the only theoretical formulation of town planning and landscape of Costa Adeje. We can admire every recreation of the significant heritage of Tenerife in the resort: The bell tower resembles the Parish Church Our Lady of the Conception at Santa Cruz de Tenerife (18th century), the English style mansions of La Laguna, the Romantic and Neoclassical mansions of La Orotava, the traditional architecture of some historic villages as Garachico, San Juan de la Rambla and the Icod de Los Vinos, which are combined

Fig. 2. Gestyarq SL. Architects, *Lopesan Costa Meloneras*, in the Coast of Maspalomas, Gran Canaria. It is one of the biggest resort in Europe with 2,500 beds.

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with solutions with even a surreal glass pyramid, like the pyramid of IM Pei at the Louvre Museum (1989), in line with those for the *Pyramids Shopping Centre Martiánez* (1994) at Puerto de la Cruz. Not only the notion of regionalism is the main part of the architecture of the resort; the traditional customs of the Island serves for the employers.

Although undoubtedly, in compositional terms, originality and quality of materials, and the hotel itself, the *Bahía del Duque*, despite their longevity, is still the best resort in The Canary Islands, and one of the highlights of the whole country. Gran Canaria Lopesan firm built two large luxury resorts: the *Lopesan Costa Meloneras* (2002) and *Villa del Conde* (2004). They are designed by GESTYARQ – Carlos Ardanaz

Miranda (1951), Juan Carlos Cabrera Sainz de Medrano (1953) and Lisandro Hernández Montes (1953), now ACH architects –, inspired by the first case in the Canarian and the Spanish Colonial architecture, with some reminiscences of *Hotel Nacional de Cuba* (1930), in Havana, or, in the case of Lopesan's *Villa del Conde* of the historical village of Agüimes, located in the South of Gran Canaria (**Fig. 2**). By implication, this typology of neo-Canarian style resort has converted Meloneras and Costa Adeje in places where the theme of the hotel is the unique attraction. In fact, in Meloneras, the landscape of dunes and the emblematic Lighthouse, which has been the reference during decades of tourism in Maspalomas, are getting less important for the tourist who prefers the spa

Fig 3. Gestyarq S. L. Architects. Partial aspect of Lopesan Villa del Conde, Costa Meloneras, Gran Canaria. It is one of the major resorts with vernacular identity in Canary Islands. The resort becomes an unreal city, that compositionally plagiarizes the village of Agüimes in Gran Canaria. © Juan Ramón Rodríguez Sosa "El Coleccionista de Instantes", 2012, under Creative Commons License.



David Martín López Hotel Resorts in The Canary Islands

and the splendid swimming pool inside the resort. “They came for the set of the hotel and not for the place”⁶. For example, The *Lopesan Costa Meloneras* (2002) offers luxury for the masses, a luxurious resort for 2500 people per night the entire year. The garden-area measures 100,000 square meters with the palm-grove. It’s an imitation of nature with a “river” pool and a “lake” pool surrounded by a sand beach and palms.

Referring to the *Lopesan Villa del Conde* resort (2004) – built by Juan Carlos Piñeiro (1954)⁷ – that plagiarizes and mimics consciously the village of Agüimes, the aesthetic tools used were the same as those ones for the *Gran Hotel Bahía del Duque* (Fig. 3). From the road to Costa Meloneras, the visi-

tor does not know whether that church is an authentic village, a true cathedral, or the lobby of the resort, as it really is. Inside there is any lack of details from gilded domes and capitals to luxurious Murano glass chandeliers to transform the hall and reception into a mystical spiritual space. Therefore, there is a lot of typological promiscuity, which goes against the discipline of architecture itself. It promotes the degeneration of styles, authenticity and, in consequence, of the beauty and the nature of architecture.

At the same time, our society, public in general, tourist and population of the Islands enjoy and like this kind of resort. The architecture works as an attraction, as Disneyland does in Orlando or Paris, some fairy-tale where the customer, visitor

Fig. 4. Village of Agüimes, Gran Canaria. View of the skyline of the historic city with its Neoclassic Parish Church of San Sebastián, plagiarized in the Lopesan Villa del Conde.
© David Martín López, 2016.



or, simply, the insular residents can enjoy the experience. This *Villa del Conde* (2004) was awarded as special part of Lopesan Group resorts, whose president, Eustasio López, has received the National distinction of Tourism Merit Medal in 2009 for his urbanism and hotels in The Canary Islands, mainly in the Costa Meloneras. The *Lopesan Villa del Conde Resort & Coralium Thalasso* (2004) is advertised as a 5-stars hotel of 56,340 square meters, situated close to the Sea in Costa Meloneras, the most exclusive of Southern Gran Canaria. The official website reinforces that the hotel is focused on the construction of the most characteristic features of traditional Canarian architecture and, that it presents a view similar to a cosy insular village with elegant spaces that immerse visitors in the traditional Canarian culture and heritage. The hotel, following the official web, has the architectural elements of the most beautiful villages of The Canary Islands with a central square, its Neoclassical church with a spectacular reception room and strategically located throughout the resort as stately villas. The fact is that they omit that it is an exactly reference to the village of Agüimes, and obviously the clients no longer worth up to visit this small town if they have everything inside, by the sea, with better weather and comfort (Fig. 4).

4. CONCLUSIONS

In conclusion, these great resorts, despite having their authorship, designs, prizes of architecture and urbanism awarded, reflect how vernacular identity has been reviled in the new architecture of the Canarian coast. The danger of this global mimesis of former architecture as the only resource of inspiration for contemporary touristic architecture, endangers the premises of originality, utility, and beauty that architecture had before; something we should look towards the timeless architectonic quality and, therefore, about the wealth around the insular or World heritages.

NOTES

1 The neo-Canarian Style used with certain folklorism by the Francoist regime, was readjusted to a new democratic meaning after 1978. In the 90's it was promoted precisely into the discourse of the Atlantic. In that period, the CAAM, The Atlantic Center for Modern Art was created in Las Palmas de Gran Canaria and some new cultural activities would have this idea of "The Atlantic" as a symbolic way to strengthen the link with Europe. That is why the neo-Canarian style has a sense after the 80's in a certain Europeanizing way.

2 PEARSON, David, *New Organic Architecture: The Breaking Wave*, London, University of California Press, 2001, 44.

3 HERZOG, Jacques and DE MEURON, Pierre, *Canary Islands. Part One. Programme of Studies from ETH Studio Basel*. Basel, Institut Stadt der Gegenwart, 2005, 1.

4 BERNABÉ SALGUEIRO, A., *Arquitectura vernácula diseminada en Constantina (Sevilla): economía, prestigio social y representaciones ideológicas*, Sevilla, Producciones Culturales del Sur, 2008, 20.

5 COYULA, Mario, "Campeando en la ciudad. De cómo se ruraliza el espacio urbano", From *Revolución y Cultura* 3, 2004, 5.

6 FIEDLER, Björn and HELLER, Agnes, *Maspalomas, Costa Canaria. Segregated District*. Basel, ETH Studio Basel, Institut Stadt der Gegenwart, 2006, 68.

7 Now, with his daughter Irma Piñero Doblado (1981) in the enterprise, Arquiestudiojcp has built two very important hotel resorts in Hurghada (Makadi Bay, Egypt): the *Sunwing Waterworld Resort* (2012) with 612 rooms, as a fortified style mixing cities and architecture of Sousse (Tunisia), Samarra (Iraq), Hama (Syria), with the *Qasr Kharana* castle (Jordan), and the *Makadi Spa Hotel* (2011) with 511 rooms, evoking colonial areas of Cairo adding byzantine towers.

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THE FORMATIVE YEARS OF SUZANA AND DIMITRIS ANTONAKAKIS: A TRANSCULTURAL GENEALOGY OF CRITICAL REGIONALISM

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ABSTRACT

In the early 1980s, Kenneth Frampton encompassed Alexander Tzonis & Liane Lefaivre's theorisations of critical regionalism in his attempt to address the crisis of modern architecture. Tzonis & Lefaivre had originally constructed critical regionalism around the architecture of Suzana & Dimitris Antonakakis. The two theorists traced a regional genealogy that combined Aris Konstantinidis's "rationalist grids" with Dimitris Pikionis's "topographically sensitive pathways" to inform the work of the Greek architectural couple. However, it was an outward-looking transcultural genealogy that historically sustained the two Antonakakis' critical regionalism. Focusing on their architectural education at the National Technical University of Athens in the late 1950s, this paper draws out the elements that conditioned the Greek architects' specific understanding of the regional in relation to the modern. While their strong biographical connection with Pikionis sustained his influence on their work, Konstantinidis's impact on their architectural outlook was limited. Apart from Pikionis's teaching, the conducive factors to their architectural formation lay in the theoretical lessons from Panayotis Michelis, the drawing and painting classes of Nikos Hadjikyriakos-Ghika, as well as the teaching of the former disciple of Mies van der Rohe, A. James Speyer. These cosmopolitan mentors enabled the two Antonakakis to rethink the regional in terms of the modern, in the way that rendered their work significant in the critical regionalist framework. The transcultural genealogy proposed here is therefore aligned both with the programmatic aims and principles of critical regionalism, and the two architects' historical formation.

1. INTRODUCTION

In the early 1980s, Kenneth Frampton (b. 1930) proposed critical regionalism as a way out of the crisis of modern architecture. In so doing, the British historian encompassed Alexander Tzonis (b. 1937) and Liane Lefaivre's earlier theorisations. In their seminal essay "The Grid and the Pathway",

Tzonis and Lefaivre had constructed critical regionalism around the work of Suzana (b. 1935) and Dimitris Antonakakis (b. 1933). Tzonis and Lefaivre identified two major design patterns in the work of the Greek architectural couple: the "grid" (defined as "the discipline which is imposed on every space element") and the "pathway" (defined as "the location of place elements in relation to a movement").¹ These two "major patterns" were in turn contextualised, albeit schematically, within the socio-political history of modern Greece. They corresponded to two different phases of Greek regionalism, exemplified in the work of Aris Konstantinidis (1913-1993) and Dimitris Pikionis (1887-1968). In their various projects, from the Archaeological Museum on Chios (in collaboration with Eleni Goussi-Dessyla, 1965) to a private house at Spata (1974-1975), Suzana and Dimitris Antonakakis combined the rationalist "grids" of Konstantinidis with the topographical sensibility of Pikionis's "pathways". The historical embeddedness of these design patterns in the Greek regionalist movements rendered their architecture a cultural intervention in a specific social context.

Their apartment building on 118 Benaki Street in Athens (1973-1974) exemplified Suzana and Dimitris Antonakakis' design principles at work (Fig. 1). In this project, the 'pathway' that traverses the structural 'grid' curates the residents' transition from the street to their apartment as a succession of intermediate meeting points (with varying degrees of privacy and publicity). In so doing, the project embodies a critique of the "anonymous" Athenian apartment building typology, and its commodified modes of production. The bespoke design of each individual apartment, and the social bonds between the four families that resided in the apartment building, were also crucial for the success of the project. It was only through the connective glue of these social relations that the resistant "traditional" ways of life could be retained in the transition from the rural to the urban environment.

Suzana and Dimitris Antonakakis' first steps in the architectural profession coincided with the appearance of Orestis

Doumanis's (1929-2013), François Loyer's (b. 1941), and Dimitris Fatouros's (b. 1928) first histories of architecture in modern Greece.² Their inclusion in these histories situated their architectural concerns in the Greek context of the 1960s. Like their peers, the two Antonakakis also had to address the question of tradition that was central in the cultural debates of the period. In addition, these histories consistently portrayed Suzana and Dimitris Antonakakis as outward-looking practitioners, strongly influenced by the work of Mies van der Rohe and Le Corbusier.³ After the publication of "The Grid and the Pathway" in 1981, however, the interpretation of their work became increasingly inward-looking.⁴ Owing to the celebrated reception of Frampton's, and Tzonis & Lefaivre's writings, this inward-looking genealogy of critical regionalism has not been seriously challenged since. However, it both distorts the actual formation of the Antonakakis' architectural outlook, and obstructs the transcultural aspects of

critical regionalism. To redress this, this paper returns to the formative years of Suzana and Dimitris Antonakakis at the National Technical University of Athens in the late 1950s. In so doing, it recovers the transcultural genealogy that historically sustained their critical regionalism.

2. PIKIONIS'S GRID UNDER THE PATHWAY

Suzana and Dimitris Antonakakis' contact with Konstantinidis was historically limited. His influence on the Antonakakis' architectural outlook emanated from his work, not from the deeper ties of a personal biographical connection. Suzana Antonakaki references Konstantinidis only four times in the 107 articles she wrote for her monthly column on architecture in the popular daily newspaper, *Ta Nea* (1998-2009). By contrast, her substantial references to Le Corbusier, for example, are more than fifteen. Although they did study his built work, Konstantinidis's influence in the forma-

Figure 1. Suzana and Dimitris Antonakakis, apartment building on 118 Benaki Street, Athens, Greece, 1973-1974.
© Suzana and Dimitris Antonakakis' private archive.



tion of the Antonakakis' architectural outlook was not as important as posited by Tzonis and Lefaivre. Three years before the publication of "The Grid and the Pathway" in 1981, Konstantinidis is not even mentioned as an indirect influence by the architects. In the short memorandum booklet for his candidacy at the National Technical University of Athens in 1978, Dimitris Antonakakis considers his lessons from Pikionis and A. James Speyer (1913-1986) as the defining moments of his formative years.⁵

The biographical connection was much stronger in the case of Pikionis. Tzonis and Lefaivre were therefore right to stress the significance of his work, and especially his landscaping project (1957-1958) around the Acropolis in Athens, for Suzana and Dimitris Antonakakis. When their mentor guided his students to a site visit in 1958, Suzana Antonakaki witnessed the poetic world that the architect can build. She understood how this could be done through "selected viewpoints, crucial spots in the trajectory, [...] visual radii, peripheries of circles, [...] proportions... the golden section".⁶ As a student, Dimitris Antonakakis had also worked at the project. He therefore retained a living memory of the "topographically sensitive" ways in which his mentor organised "the pathway" that was to become central in Tzonis and Lefaivre's account. The space around the Acropolis was structured as "a succession of 'critical' points where extended views [we]re possible". The overall design was based on "the particularities of each of the locations [...] combined with [Pikionis's] geometrical ordering preference" (Fig. 2). This ordering preference in turn rested upon Constantinos Doxiadis's theory of viewing segments.⁷ Following Doxiadis, Pikionis used circular segments for the overall organisation of his landscaping project. These circular segments were "gridded up" in golden section divisions (3:5 and 8:13). The points of their intersections were usually denoted by the placement of an object deemed significant. Dimitris Antonakakis therefore concluded that "the entire route is derived from a series of overlaid grids offering the various possibilities and combinations eventually selected on the spot by Pikionis himself".⁸ In other words, Dimitris Antonakakis posited that Pikionis's "pathway" was also underpinned by the "grid". Even if "this type of grid on the ground was a totally different class of grid being used at the time", both the grid and the pathway could be found in Pikionis. It was only because "Pikionis never talked about the grid" that Konstantinidis had to play a part in Tzonis and Lefaivre's interpretation of the Antonakakis' work.⁹ One just had to scratch the "decorative" surface of Pikionis's architecture to

see it defined as an art of precise proportions. As Dimitris Antonakakis asserted when interviewed by Maria Dolka in 2002, in their early work he and Suzana "used the geometrical proportions of the rectangle with the proportions of the numbers to the square root of 3, 5 and of ϕ . This work with these proportions was a requirement of Pikionis's courses".¹⁰

3. REGIONAL MODERNIST TEACHINGS

Pikionis's recourse to harmonic proportions connected his teaching with prevailing modernist design strands, as exemplified in the drawing classes of Nikos Hadjikyriakos-Ghika (1906-1994). Involved in the organisation of the 4th International Congress of Modern Architecture (CIAM) in Greece in 1933, Hadjikyriakos-Ghika was regarded as a living myth by the young students of the late 1950s. His classes started from an analysis of the key elements in a drawing. He then showed how those elements found their place in a specific system of proportions (based on the diagonals of a rectangle and their perpendiculars) and harmonic relations (especially $\sqrt{5}$ and the golden section, among others). Hadjikyriakos-Ghika claimed he had extrapolated these relations from works of art of diverse international origins. Their universal occurrence in turn validated their inner "truth". To prove his theory for themselves, Hadjikyriakos-Ghika asked his fourth-year students to uncover the same underlying proportions in Japanese art works. He also claimed that the artist's sensibility could work towards these relations in an intuitive, unconscious way.¹¹ The "unconscious" applications of the same rules reinforced his argument about the universal validity of these harmonic proportions. It also implied that the best examples of traditional architecture could be adhering to the same rules.

Hadjikyriakos-Ghika's teaching presented the architects with a modernist lens that was complementary to their lessons from Panayotis Michelis's (1903-1969). Michelis's comprehensive theoretical approach addressed the modern and the regional in equal measure. Led by his conviction that architects should also learn to write in academic standard, he initiated the student lecture module in the early 1950s. For Dimitris Antonakakis, these student lectures highlighted the significance of analysing architecture in typological terms.¹² This was more evident in Suzana Antonakaki's student lecture project in 1959. To present the conclusions from her study of the architecture of Makrinita, she devised a typological matrix (Fig. 3). Her analysis of houses extended from plan to section, and from the interior to the courtyard. This multifac-

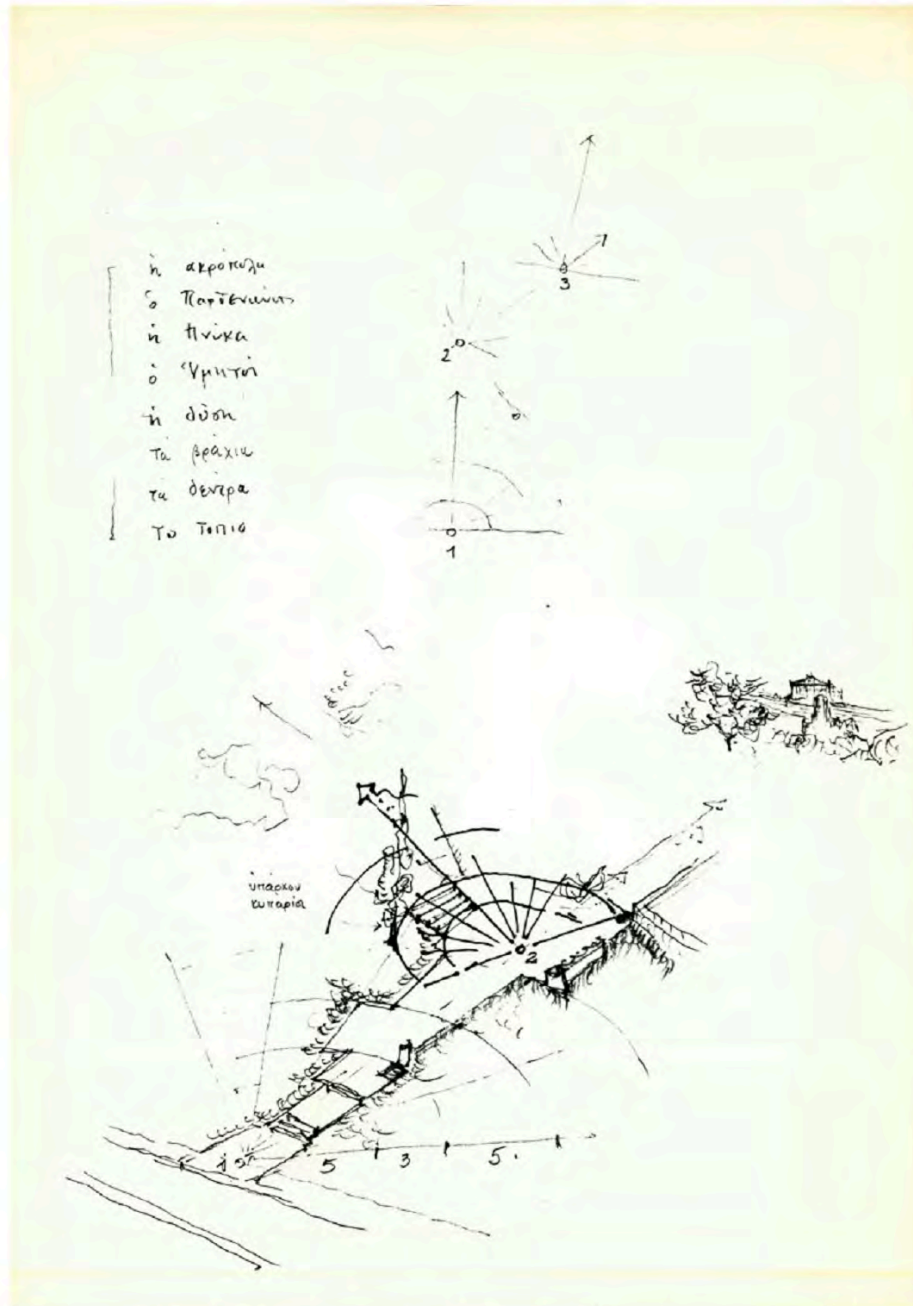


Figure 2. Dimitris Antonakakis, Interpretative sketches of the geometric relations underpinning Dimitris Pikionis's 1958 landscaping project around the Acropolis, Athens, Greece, 1989. © Suzana and Dimitris Antonakakis' private archive.

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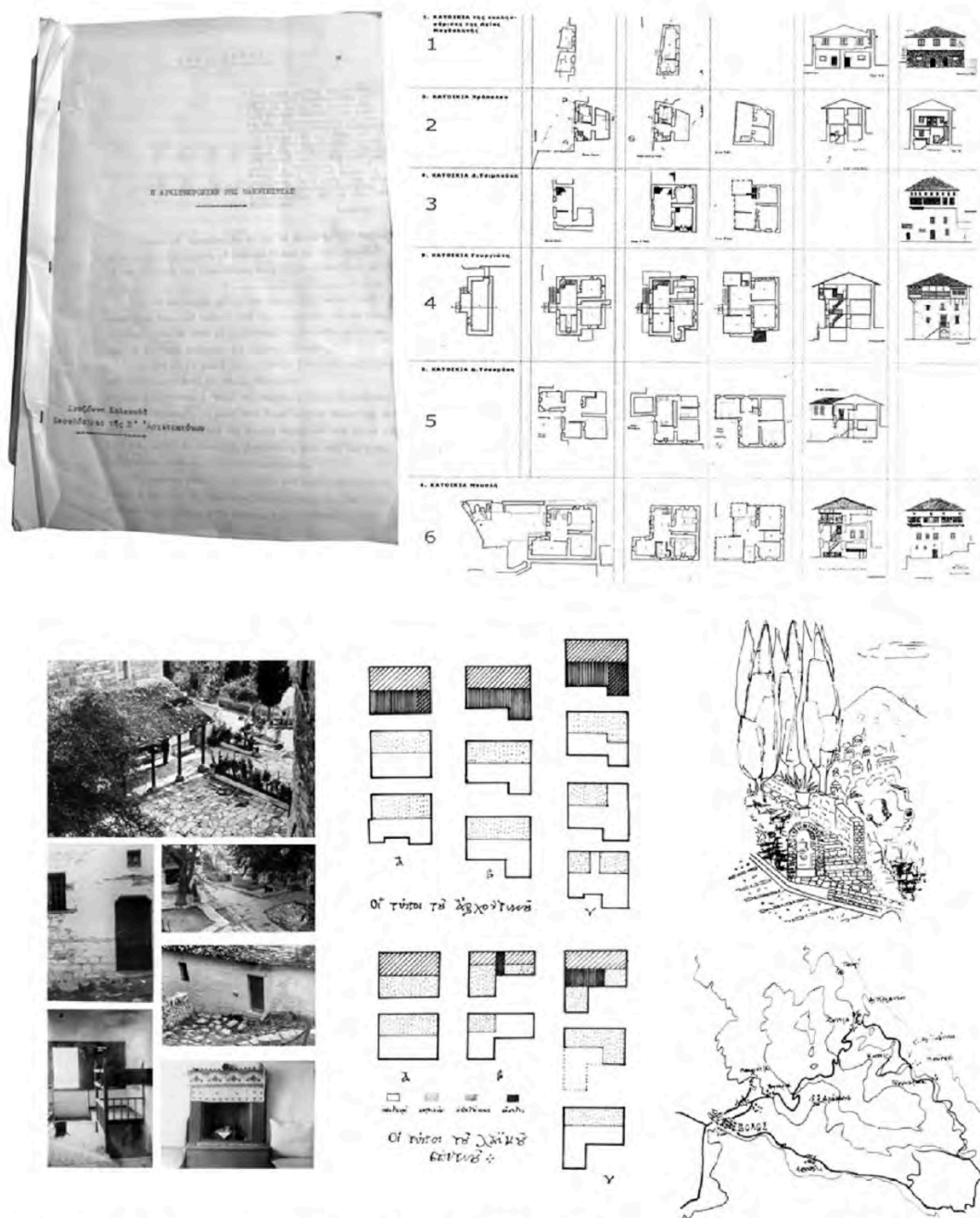


Figure 3. Suzana Antonakaki, typological matrix of traditional architecture, Makrinitsa, Greece, 1959, student lecture project at the National Technical University of Athens supervised by Panayotis Michelis. © Suzana and Dimitris Antonakakis' private archive.

eted three-dimensional approach made her work stand out at the time. It was distinctly architectural when compared with similar output by scholars of folk studies like Georgios Me-gas. Solely based on plan drawings, the crucial third spatial dimension was missing from his typological surveys of “the Greek house”.¹³ In the final instance, Michelis’s teaching offered the two Antonakakis a way to understand traditional architecture through a modern lens.

Suzana and Dimitris Antonakakis belonged to a young archi-tectural generation who aspired to update their role models’ cultural contribution, in pursuit of a modern Greekness. Their aim was to combine their lessons from the native tradi-tion with the tenets of international modernism for the post-war Greek world. Michelis’s teaching equipped them with a systematic way to look at the regional. In their individual studies of Greek island settlements, Suzana and Dimitris An-tonakakis combined Michelis’s lens with Hadjikyriakos-Ghi-ka’s thesis on the “unconscious” prevalence of harmonic pro-portions in works of art.

4. CORBU AND MIES IN GREECE

Through their surveys of traditional settlements in their trav-els across Greece, the young architects tried to define the pro-portions of popular wisdom prevalent in vernacular architec-ture. In a recent interview, Kostis Gartzos, a close friend of Dimitris Antonakakis during their student years, posited that they read the Cycladic settlements with the eyes of Le Cor-busier.¹⁴ They surveyed the vernacular settlements to confirm the Modulor. These settlements were built by anonymous workers whose main concern was to fulfil their immediate practical needs. Uncovering harmonic relations behind their manual work would mean that both Hadjikyriakos-Ghika and Le Corbusier were right. The vernacular tradition of Greece would be demonstrably connected with the major tenets of modernist design. And this would in turn legitimise the “unconscious” wisdom of the regional builder as a source for enriching modern architectural designs.

Through their studies of the traditional built environment, Suzana and Dimitris Antonakakis pursued specific archetypes of dwelling in Greece. These archetypes were in turn expected to lead to a poetic architectural expression of their modern times. It is no coincidence that many of Suzana Antonakaki’s references to Le Corbusier are followed by, and associated with, similar ideas from Pikionis.¹⁵ For the Antonakakis, the questions of the modern and the regional were intertwined. Although “The Grid and the Pathway” offered a historically

misleading account of the Antonakakis’ main influences, the major intuition of Tzonis and Lefaivre was accurate. Through their work, the Antonakakis did attempt to associate Pikion-is’s poetic teaching with modernist tenets.

Speyer’s teaching further promoted the Antonakakis’ critical approach to the modern and the regional. Coming from a former student of Mies van der Rohe, Speyer’s appreciation of Pikionis’s unconventional work was significant for the young architectural couple. It confirmed that Pikionis’s inspiring teaching was not incompatible with a modernist outlook, as implied by the prevailing criticism of his work at the time. It was affinities like these that enabled Suzana and Dimitris An-tonakakis to relate Speyer’s open approach to modernism with the lessons from their other mentors. Speyer was the only visiting professor in the School at the time (1957-1960). For students like Suzana and Dimitris Antonakakis, his inter-national outlook felt like a breath of fresh air in a rather intro-verted school. Speyer offered his Greek students an effective way of organising their diverse, and occasionally divergent, influences into a coherent body of thinking and a systematic method of designing. Speyer’s undeniable admiration for the work of Mies, coupled with his intention to move it further forward, was attuned with the Antonakakis’ own concerns to move modernism forward. They were not interested in a static replication of their lessons from the great “masters”.

Supervised by Speyer, Suzana Antonakaki’s diploma project at the National Technical University of Athens (1959) docu-ments his teaching method (Fig. 4). This was based on ex-ploring alternative solutions to the same brief. The method thus implied that there were no single correct answers to in-herently multifarious architectural questions. Speyer encour-aged his students to account for their design decisions with arguments, sketches and “working models [...] for five or six alternative propositions” for the same brief. His method en-abled Suzana Antonakaki to achieve “a critical distance to-wards [her] own work”. This in turn meant accepting “the ‘stochastic adaptations’ – that so often arise from real condi-tions and specificities – with sobriety”. This “exercise” was valuable for the architects’ subsequent work. Speyer’s method stayed with the couple as a stable point of reference, disci-pline and control of their design and thinking. In the final instance, Speyer provided them with “this disciplined deci-sion that allowed [them] to control what [they] do”.¹⁶

It was owing to Speyer’s teaching that the Antonakakis used the grid as the main organising mechanism of their architec-tural design. He helped them understand it not as a rigid

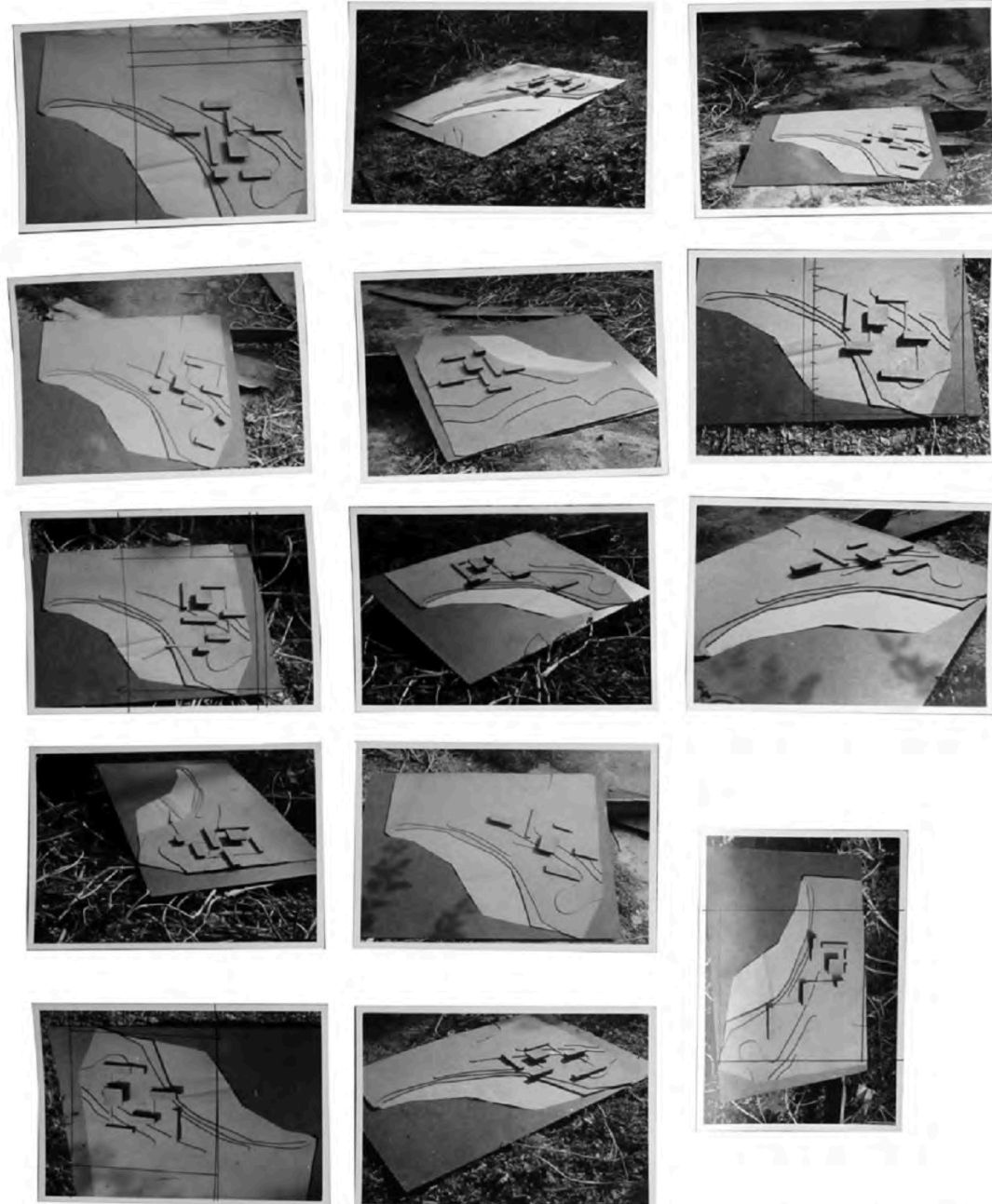


Figure 4. Suzana Antonakaki, School of Fine Arts Workshop, Skyros, Greece, 1959, diploma project at the National Technical University of Athens supervised by A. James Speyer, 1959. © Suzana and Dimitris Antonakakis' private archive.

straitjacket, but as an open-ended design principle. As such, it could be constantly affirmed and occasionally subverted. This enabled the Antonakakis to incorporate the “controlled transgression of given rules” that originated from their lessons from Pikionis, in their architectural designs.¹⁷

5. TRANSCULTURAL REGIONALISM

The diverse lessons from their student years conditioned Suzana and Dimitris Antonakakis' personal understanding of tradition. This approach was clearly removed from parochial nostalgia and ossified historicisms.¹⁸ Understanding tradition in terms of the actual everyday life of modern Greeks was an open question of the present as it moves towards an uncertain future. Tzonis and Lefaivre were right to note that the work of the Antonakakis moved away from escapist understandings of tradition.¹⁹ It was their insistence on the living and evolving aspect of tradition as an actual part of modern life that made the difference. Theirs was an all too modern way to understand the regional.

In the work of Suzana and Dimitris Antonakakis, the modern was used as a critical tool to study the regional. The two architects thus kept their clear distance from the conservative traditionalists of the period. Despite their admiration for the work of the modernist “masters”, however, they were also critical of the placeless architecture of Mies van der Rohe and Le Corbusier.²⁰ In the Antonakakis' work, the regional also became the vehicle for a critical approach of the modern. In other words, the architects' inquiry moved both ways. It constituted both a critique of the regional through the modern, and a critique of the modern through the regional. The questions of the modern and the regional were intertwined. In the final instance, it was this specific regional aspect that enabled the Greek architects to address the prolonged impasse of modern architecture. For Suzana and Dimitris Antonakakis, the study of tradition was meant to confirm the connection of the international (critical) modernist orientation of their work with the Greek (regional) vernacular. It was this dual conciliatory relation of the local with the international that endowed their work with the qualities appreciated by the critical regionalist discourse. For the Antonakakis, the question of the regional became a question of continuity. They pursued the ways in which the architectural lessons from the past and the bold visions for the future could be appropriately reconciled and responsibly adjusted to the needs of a changing world. Owing to the nuanced genealogy of their architectural formation, their critical regionalism was therefore primarily transcultural.

Stylianios Giamarelos The Formative Years of Suzana and Dimitris Antonakakis

NOTES

1 Alexander Tzonis & Liane Lefaivre, “The Grid and the Pathway: An Introduction to the Work of Dimitris and Suzana Antonakakis, with Prolegomena to a History of the Culture of Modern Greek Architecture”, *Architecture in Greece* 15, 1981, 164-178; 164.

2 See Orestis Doumanis, “Εισαγωγή στην ελληνική μεταπολεμική αρχιτεκτονική”, *Αρχιτεκτονική* 48, 1964, 1-11; François Loyer, *L'Architecture de la Grèce Contemporaine*. Unpublished thesis (PhD), Université de Paris, 1966; Dimitris Fatouros, “Greek Art and Architecture 1945-1967: A Brief Survey”, *Balkan Studies* 8(2), 1967, 421-435.

3 See, for instance, Antonis Antoniadis, *Σύγχρονη ελληνική αρχιτεκτονική*, Athens, Karagounis, 1979, 122-127.

4 See, for example, Dimitris Philippidis, *Νεοελληνική αρχιτεκτονική: Αρχιτεκτονική θεωρία και πράξη (1830-1980) σαν αντανάκλαση των ιδεολογικών επιλογών της νεοελληνικής κουλτούρας*, Athens, Melissa, 1984, 374-376.

5 Dimitris Antonakakis, Βιογραφικό Υπόμνημα, National Technical University of Athens School of Architecture, 1978, 7, and 66-67.

6 Suzana Antonakaki, *Κατόφλια: 100 + 7 Χωρογραφήματα*, Athens, futura, 2010, 33.

7 See Kostas Tsiambaos, *From Doxiadis' Theory to Pikionis' Work: Reflections of Antiquity in Modern Architecture*, London, Routledge, 2017.

8 Dimitris Antonakakis, “Landscaping the Athens Acropolis”, *Mega XI, Dimitris Pikionis, Architect 1887-1968: A Sentimental Topography*, London, Architectural Association, 1989, 90.

9 Dimitris Antonakakis cited in Maria Dolka, “The Grid in Pefkakia Elementary School by Pikionis and the Grid in the Rethimno Faculty of Humanities. Are They so Related as They Appear?”, Unpublished thesis (International Baccalaureate extended essay in higher level visual arts), I. M. Panagiotopoulos School, 2002, 5.

10 Antonakakis cited in Dolka, “The Grid in Pefkakia”, 2002, 2.

11 In class, he illustrated his theory through selected examples from modern Western and Japanese art. Suzana and Dimitris Antonakakis, interviewed by Stylianios Giamarelos, 27 May 2014.

12 Suzana and Dimitris Antonakakis, interviewed by Stylianios Giamarelos, 27 May 2014.

13 Suzana and Dimitris Antonakakis, interviewed by Stylianios Giamarelos, 27 May 2014.

14 See Georgios Megas, *The Greek House, its Evolution and its Relation to the Houses of the other Balkan States*, Athens, Ministry of Reconstruction, 1951.

15 Kostis Gartzos, interviewed by Stylianios Giamarelos, 2 July 2014.

16 See Suzana Antonakaki, *Κατόφλια*, 2010, 149-150.

17 Suzana and Dimitris Antonakakis, interviewed by Stylianios Giamarelos, 23 June 2013.

18 Suzana and Dimitris Antonakakis, “Acknowledgements”, *Atelier 66: The Architecture of Dimitris and Suzana Antonakakis*, Athens, futura, 2007, 10-19; 17.

19 See Dimitris Antonakakis, “Προβληματισμοί σχεδιασμού”, *The Journal of the Association of Greek Architects* 21-22, 1989, 65-66, and 77; 65.

20 Tzonis and Lefaivre, “The Grid and the Pathway”, 1981, 178.

21 Dimitris Antonakakis, “Το μοντέρνο και ο τόπος”, *Architecture in Greece* 30, 1996, 134.

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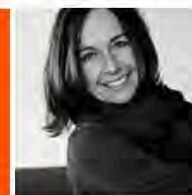
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BIOGRAPHY

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Session 06 DOUBTS ON AUTHENTICITY

Session Chair: Henrieta Moravčíková (Slovak Republic)



Ever since the Nara Document of 1994, authenticity has been the central argument in the protection of heritage. And it is no different even in relation to the architectural legacy of modernity. Yet the idea behind the concept has changed over time and across cultures, making it thus somewhat complex and unclear. Most explicitly, this sense is expressed in Paragraph 11 of the Document, where it states that “it is not possible to base judgements of values and authenticity within fixed criteria. On the contrary, the respect due to all cultures requires that heritage properties must be considered and judged within the cultural contexts to which they belong”.¹ Vice versa, we could equally assert that our method of treating historic built heritage is always an image of our immediate context. Heritage is always a reflection of the current preferences of society, it is an “exponent of the era’s desires (*Zeitwollen*) in the field of art”, as noted as early as 1925 by Hans Tietze.² Similarly, what is authentic is not given a fixed value, but changes under the influence of social discourse. As late as the 1980s, authenticity in the Western cultural sphere was defined most strongly by the physical substance of built heritage. More recently, the sense of a spiritual essence is gaining much greater influence. “If we now acknowledge five different authenticities – form, material, technology, function and place – in itself this implies a certain liberation from the physical basis of authenticity. Yet still it does not imply a major shift from the exclusive binding of authenticity to original substance, which is relatively arbitrarily anchored in the social-cultural historical process and which is contradicted even by the conception of authenticity in other sciences or in modern art”, notes cultural anthropologist Wolfgang Seidenspinner.³ Heritage is founded in a social agreement. Hence authenticity will take a different form when linked to a certain social situation. For instance, if at the end of the 20th century, the source of authenticity for the Brutalist architecture of the social state was seen as the authenticity of its material rendering, what is now much more significant is indeed the social dimension of this architecture. “Authenticity and identity are

subject to change. Each era, each region, each culture and each individual have their own conceptions of history. There is no authentic history, only an authentic desire for it. Built heritage is the location of authentic desires”, notes Seidenspinner.⁴ Hence we could say that the most authentic aspect, in the current context of the neoliberal order, is essentially the socialist aim of the architecture of the postwar European social state. And a specific standpoint towards architectural authenticity is even found in the Nara Document, where paragraph 13 literally states that authenticity can be judged on the basis of a wide range of sources that reflect “form and design; materials and substance; use and function; traditions and techniques; location and setting; spirit and feeling; and other internal and external factors”.⁵

Under such a conception, authenticity on one hand allows for a targeted and locally specific approach to built landmarks, yet also it creates a space for the deliberate modification of universal rules. Many critics of the Nara Document have, for this reason, noted that it could lead to completely arbitrary treatment of architectural heritage, without any need to provide arguments or assume responsibility in a local cultural context for what this document de facto legitimises.⁶ Experience with similarly “arbitrary” treatment of heritage has been a constant since the 1990s in the countries of the former Communist bloc.⁷ Ensuing from the argument of rectifying the wrongs committed by Communist states, it has legitimated the liquidation of entire historic layers of architecture from the 1960s and 1970s.⁸ Yet it is not simply a matter of post-communist countries or post-war Modernism alone. An unclear conception of the idea of authenticity has meant that on one side we find replications of historic structures, intended to serve as a source of patriotism, and the obliteration of other structures that have problematic ideological links. In Bratislava, the Slovak capitol, work has been underway since 2008 on restoration of the city’s castle, to restore it to its lost Baroque form. In this process, the Castle lost an entire layer of its Modernist remodelling from the 1960s. During the restoration of the

former synagogue in Žilina, all traces of built substance were removed from the 1950s and 1960s, when the building was used as a cinema and then as a university auditorium. In Berlin, the GDR's modernist Palast der Republik was demolished, and then on its site a replica of the historic Stadtschloss was recently brought to completion. In London, neo-liberal demands are gradually destroying the residential complex Robin Hood Gardens, a major piece of heritage from the British social state. Limiting authenticity to the physical substance of heritage could even lead to a denial of the original aims of the author, such as e.g. in projects of social housing the desire for emancipation of the individual tenant or a change in wider social conditions, and thus denying the very essence of the building itself. And how can we view from this perspective the massive heritage of mass housing construction? Which is more important for the authenticity of social housing: restoration of the original prefabricated panels, retention of floor layouts – or instead the social aspects such as property relations, communities of users, and the overall inclusiveness of the living space of a modernist housing estate? How far can we regard as “authentic” the restoration of a Functionalist swimming complex which has been returned to its original form and materials, but no longer respects its open, popular character? It seems that in the case of modern architecture, the concept of authenticity will need to assume still further complexity. In addition to originality of material, form or function, attention must be paid to the originality of the social or political dimension of architecture. Modernism had the ambition to change the world through changing architecture. The authenticity of such Modernist projects as social housing lies precisely at the heart of the social dimension. Privatisation of housing stock or privatisation of public spaces has a far more damaging effect on their authenticity than the replacement of part of their material substance.

Differing standpoints and local or cultural specifics for observing the authenticity of modern architectural heritage are to be clarified in the following contributions. All of them, though, agree on one thing: the need for a precise historic analysis that would be the only way to legitimate whatever we wished to say about authenticity. They insist on a permanent reflection of the process of heritage protection and on the careful uncovering of the physical and intellectual basis of authenticity. It is clear that in the process of providing heritage protection to Modernist architecture, it is good to remain always on guard. And as well for the reason that heritage structures are always the places of authentic desires.

NOTE

- 1 “The Nara Document on Authenticity,” in *Nara Conference on Authenticity in Relation to the World Heritage Convention, Nara, 1-6 November, 1994*, ed by Knut Einar Larsen (Trondheim: Tapir Publishers, 1995)
- 2 Hans Tietze, *Lebendige Kunstwissenschaft* (Wien, 1925), 69-73. Cited from Ján Bakoš, *Intelektuál a pamiatka* (Bratislava: Kaligram, 2004), 193.
- 3 Wolfgang Seidenspinner, “Woran ist Authentizität gebunden? Von der Authentizität zu den Authentizitäten des Denkmals,” *E-journal für Kunst- und Bildgeschichte* 3, (2007), 3. <http://dx.doi.org/10.18452/7068> (accessed on March 31, 2019)
- 4 Seidenspinner, “Woran ist Authentizität gebunden, 6.
- 5 “The Nara Document on Authenticity.”
- 6 Herb Stovel, “Origins and Influence of the Nara Document on Authenticity,” *APT Bulletin*, 39, 2/3 (2008), 11.
- 7 Henrieta Moravčíková, “Modern Architecture in Time and Appropriate Conditions for its Sustainability: The Kyjev Hotel and the Former Prior Department Store, 1960 – 2008,” *Architektúra & Urbanizmus* 42, 3/4 (2008), 181-196.
- 8 Rostislav Švácha, “Protection of Post-war Architectural Heritage in the Czech Republic,” *Architektúra & Urbanizmus* 45, 1/2 (2011), 66-75.

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METAMORPHOSIS AND AMBIGUITIES: SOME REMARKS ON MODERN HERITAGE PRESERVATION

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ABSTRACT

The term metamorphosis has been frequently used as a simile, from classics to contemporaneity, from Ovid to Kafka, in philosophy and elsewhere, nature providing an stimulating example of a complete change of shape without loss of identity. However, the challenges of addressing the cultural aspects of Modern architecture as heritage, its transformations and changes are not natural phenomena but design oriented actions, strived with complex ambiguities. As so, the use of the metamorphosis metaphor may not be the best choice to try and enlighten the possibilities and contradictions of preserving, recycling and reviving Modern architecture building. Since metamorphosis denotes an appearance transformation, its metaphorical use to describe modern architecture interventions is inaccurate and probably inadequate. This paper considers some conceptual ideas to try and devise how and when the metamorphosis metaphor may or may not be properly applied, considering a variety of examples of restoration, reconstruction, recycling, reviving and transforming Modern architecture heritage buildings.

1. METAPHOR AND METAMORPHOSIS

The term “metamorphosis” has been frequently used as a metaphor from the classics to contemporaneity, from Ovid to Kafka, in philosophy and genetics. It names a natural wonder: the process of an organism completely changing its appearance without losing its identity. But is the idea of metamorphosis an apt metaphor to understand the possibilities and contradictions of preserving, recycling and reviving Modern architecture buildings? Is it correct to metaphorically address the transformations inflicted on buildings by aging and restoration as “metamorphosis”? Could the diverse biological, philosophical and literary meanings attributed to the term metamorphosis pair and match a possible architectural metaphorical use? Is such metaphor appropriate to be used in all cases, in none whatsoever, or just in some specific situations?

In his book “Changing Ideals in Modern Architecture” Peter Collins dedicates a chapter to discuss “the biological analogy”. He mentions Buffon’s “Natural History”, Linnaeus’ taxonomy, Goethe’s morphology, and after much erudite considerations concludes that, “however heuristically successful analogies might be in scientific investigation, they generally proved misleading and disappointing to the architectural theorists [...] since in fact the only way to reason cogently about architecture is by reference to structures which have actually been built”.¹ Collins pragmatic scepticism should be taken into account; but since metaphors keep on being used, a further examination of their viability is due.

Contemporary entomology manuals define metamorphosis as the process of development of a non-embryo organism involving distinct stages with an abrupt change of appearance between them. The changing of appearance in biological metamorphosis does not imply a change of essence, since the organism’s DNA remains the same. Conversely, when an organism keeps a homologous form through the process of growing up or when it redevelops or regenerates a lost partial part of its body, there is no actual metamorphosis.

But even in biology the term “metamorphosis” is not historically restricted to a single unequivocal definition. The above contemporary definition of metamorphosis follows the taxonomy’s idea of classifying the natural world phenomena by means of the comparison of apparent visual differences among organisms. Whilst anatomist philosophers, like Geoffroy St.Hillaire, tried since the beginning of the 19th century to go beyond the differences by coining the concept of homology, or morphological correspondence, in order to question if, finally, all those differences wouldn’t be cloaking some hidden essential similarity. This line of enquiry also animates Goethe’s biological writings. According to Rudolf Steiner, “Goethe conceived of this Being as subject to continuous changes in time; yet, throughout all the stages of these changes, it is always only one and the same Being that manifests itself, that asserts itself as enduring and stable amid change”.²

Goethe named this process — the blossoming of infinite variety of beings from a basic ur-being — as “metamorphosis”. Contemporary genetics researchers are recently reconsidering Goethe’s biological theories and even his “imaginative” research method is again being given scientific credit.³

It is interesting to notice that Goethe’s studies on “metamorphosis” were crystallized during his first visit to Italy. While he was studying the Mediterranean dwarf palm in Padua’s Botanical garden he was simultaneously reading Palladio’s treatise and visiting his buildings. David Lowe and Simon Sharp study this connection in their book “Goethe & Palladio”, stating that Goethe’s “experience of the architecture of Palladio was later applied in his search for the plant archetype and the metamorphosis sequence”.⁴ According to them, Goethe “notes how Palladio’s work is a metamorphosis of classical architecture”.⁵

On the other side of the spectrum, and for most people, the word metamorphosis would be mostly connected to Kafka’s book where a man is nightmarishly changed into some terrifying creature: “One morning, as Gregor Samsa was waking up from anxious dreams he discovered that in bed he had been changed into a monstrous verminous bug”.⁶ A broad variety of interpretations, from political to psychological, have been assigned to that story. Anyway, its plot is certainly not a complete novelty, but a contemporary reassessment of the etiological myth as modelled through the classical tradition, like in the first century AC Roman poet Ovid’s “Book of Transformations”, or Metamorphoseon.⁷

How could any of these meanings of the word “metamorphosis” be significant – or not – to the field of Modern architecture heritage preservation? Before proceeding into try and verify possible (dis) connections, let’s consider some basic aspects of the term heritage and its use in the realm of theoretical debates on Modern Architecture as cultural heritage.

2. HERITAGES

Heritage is associated with “inheritance”, a set of goods to be transmitted to a subsequent generation following some hierarchical string. To be inherited a possession does not need to have any *a priori* exceptional quality or antiquity. However, both are expected when considering a cultural, artistic or historical heritage, and are sure to influence its symbolic and economic value.

Despite some Classical Antiquity and Renaissance precedents the bundle of concepts and practices amassed into the contemporary idea of “cultural heritage” dates back to the eighteenth

century.⁸ Previously, the “iconographic conservation” – precisely drawn illustrations and the passionate study of the Greco-Roman remains – did not imply any actual efforts against their degradation or demolition.⁹ The past was to be recorded, not saved; that was the implicit meaning of the famous Victor Hugo’s “*ceci tuera cela*” phrase.¹⁰ After the end of the 18th century, “actual preservation” assumed a completely different position. It coined the idea of “historical monument” and strived to establish the guidelines to define which characteristics would be imperative in order to grant a building the status of something worthy of preservation. To assure the continuity of that condition, the building should be maintained and possibly “restored”. The characteristics and methods to circumscribe and to preserve historical monuments had been the object of lengthy debates, but they had inevitably concern the characteristics of the buildings’ materiality. And ultimately, that was what should be protected, preserved and restored.

Examples of exceptional quality and antiquity were chosen as historical monuments – granting status of cultural and architectural “heritage” – and given symbolic connotation and importance. As the ideas on preservation consolidated and expanded, the economic value of an asset became an increasingly more relevant aspect when proposing or demanding the “heritage” status. Accordingly, the materiality of the building to be preserved got increasingly more important both to its reconnaissance as “heritage” as to its preservation.

However, the situation is not quite the same when considering modern architecture “heritage” buildings. In these cases, the materiality and its conservation still remain of paramount importance. But its protagonist role is shared – and sometimes surmounted – by at least two other aspects. One is the possible existence of actual documentation stating the original authors’ design intentions and proposals, which may be consulted and relied, and may be used to guide the restoration efforts, even when the building was partially or totally lost; or, in the most extreme situation, even when the building had never been actually built. The second aspect is the historiographical images and narratives concerning the object and its place in the “accredited” historical narratives about modern architecture, which are always considered as a relevant “data” to guide the restoration. If not for other reasons, because their canonical images and discourses had most probably been of utmost importance to recognize and channel a modern architecture building as a “cultural heritage”.

In some exemplary remarkable restorations of several Modern architecture buildings, like the Zonnestraal Sanatorium, the

Villa Savoye, the Van Nelle Factory and the Schröder House, the study of the actual building materiality was taken into consideration; but it was the consultation of the building's design documentation, read through the lenses provided by the established historiographical images and narratives, that actually oriented the difficult process of design decisions in such restoration cases. All three combined were also the basis of reconstructions like the Barcelona German Pavilion, the Sonsbeek Pavilions and the L'Esprit Nouveau Pavilion; and replications, like the Rietveld Aula.¹¹ In all these examples, the principle of clear distinction between new and old (or "original") parts, stated by Camillo Boito¹², absolutely prevailing in the restoration of pre-modern buildings, was counterpointed and sometimes even overridden by other priorities.

The key word in these modern architecture interventions (or reinventions) is not preserving the material authenticity of building's *status quo* but the "authenticity" of the buildings' authors original "intentions" — as defined by the Docomomo ISC/Registers¹³, which gave importance first to the "idea", then to form, space and appearance, then to construction and details, and then at last, to the materials.

3. AMBIGUITIES

In its current biological use or when it is metaphorically applied to describe an etiological myth the term metamorphosis describes a natural phenomenon, either in a scientific or in a literally way. Instead, constructing and restoring a building are humane actions made by design and thus pervaded with explicit and implicit intentions and contradictions. The "metamorphosis" as a biological concept describes a complete change of appearance without the loss of the being's identity. The assignment of a "heritage" status and the preservation of a Modern architecture building with its possible restoration is a complex and polemical process — but in most of its high-end cases, even when some aspects of the buildings' materiality are changed, the appearance (as designed by the authors and/or as consecrated by the historiography) is not.

Metaphors are figures of speech that are used to describe an object or action in a way that isn't literally true, but helps to explain an idea or make a comparison. Metaphors are useful tools as long as they suggest or rely on a proper term of comparison. When applied to the realm of a restoration, recuperation and/or reconstruction of a modern architecture building there is no proper term of comparison with the metamorphosis process to be found. As so, the use of the metamorphosis metaphor, in this cases, does not shed a clear (or even a figurative)

light into the processes of legitimating a building as heritage, neither it helps to explain the contradictions and possibilities of its restoration process. On the contrary: its imprecision and incompatibility only draws a smoke curtain that impedes, or postpones, a more thorough consideration of some of the core theoretical problems concerning the practical questions and results of any architecture preservation action¹⁴.

The assignment of heritage status and the maintaining, restoring, recycling and reusing processes are stricken with ambiguities. There are no beforehand easy truths orienting any design process in a doubtless way. To design a new building anew or to propose its restoration is an open task with no fully predictable results *a priori*¹⁵. Instability, ambiguity, discreet and continuous or radical transformation would be more appropriate terms other than metamorphosis, while addressing the subject of the changes produced by any intervention on existing (Modern) buildings.

Heritage actions are ambiguous. They revert natural decay, helping to create an apparently ordered cosmos from a disorderly chaos, enabling memory and contemporaneity to inhabit the same building. The case of Modern Architecture heritage restoration is even more ambiguous: in most cases what is preserved, and should be restored, it is not necessarily the original materiality of the building but its original appearance. As so, some materiality renewing may be accepted as long as the plasticity is maintained and the canonical image of the "monument" is (re) established in all its historiographical glory. Such latitude is certain to trigger several debates on the issue of the "authenticity" parameter. Anyway, in such cases (the above mentioned examples), the metamorphosis metaphor is useless: there is no stark change of appearance and the DNA (that may be here metaphorically connected to the authors' intentions explicitly stated by the original design documentation) is maintained.

But there are perhaps other situations where the metamorphosis metaphor would be more adequately (or at least, not completely inadequately) invoked. Among them, when the original building is changed by significant modifications, blunt additions and/or partial demolitions transforming an existing building or ensemble. Such operations are certainly not to be found in high-end Modern examples. But are reasonably frequent in the case of industrial heritage remains interventions. As for example, in the SESC-Pompeia Leisure Center intervention in São Paulo by Lina Bo Bardi and team, or in the Fondazione Prada in Milan by Rem Koolhaas/OMA. In both examples, the original buildings DNA (here,

metaphorically speaking) is maintained, although sometimes partially removed by the demolition of previously existing parts, with or without its “authentically fake” reconstitution; and also, by the “grafting” or inclusion of a new DNA in the ensemble. In the two mentioned cases, although the “new DNA” givers had no problems in inserting bold new buildings to the ensemble, both Bardi and Koolhaas were also quite respectful when treating the existing buildings. Despite some minor liberties that had been taken, their interventions may be considered as a somewhat freely interpretation of the “critical restoration” tenets, and even when some of its main strictures – like the reversibility parameter – are quite (albeit not completely) respected¹⁶.

An actual application of the “metamorphosis metaphor” is only approximately adequate when considering even more radical interventions. As for example, the new (2017) intervention by Paulo Mendes da Rocha + MMBB team over two existing modern buildings in order to create the SESC Downtown São Paulo. Despite its medium-level quality, the corner building, designed in the 1940’s for the Mesbla department store, was not deemed an outstanding modern example (especially when compared with the high quality Brazilian modernist architecture). As so, it was considered acceptable to completely change it, with its partial demolition being followed by heavily new interventions and additions. On the contrary, a neighbour thin brutalist building, the Fasano Vertical Restaurant, designed by Telésforo Cristofani, a respected local modern architect of exactly the same generation as Mendes da Rocha was completely demolished, despite the fact that it had earned a professional quality prize in 1965 and have been considered by local specialists as a most inventive solution perfectly adapted to its minimum parcel. Even so, its life span was quite short, perhaps due to its elite clientele progressive abandonment of the downtown area in the end of the 1960s. Both Fasano and Mesbla were vacant and abandoned for decades, and their complete disappearance and/or radical transformation into a new SESC facility has actually being followed by some outstanding urban and social after effects¹⁷. All considered, here the metamorphosis metaphor may be used as quite an adequate simile.

There are certainly other examples of modern architecture heritage buildings transformations that may correctly allow the use of the “metamorphosis” metaphor – but only when a complete or a significant change of shape and appearance is happening. But not all changes in Modern architecture heritage buildings may be properly compared with a “metamor-

phosis”. This metaphor should be used not at large but with the utmost precaution. A vulgar, un-thoughtful or un-critical use may backfire and just add another layer of confusion to an already complex and complicated realm: that of the modern architecture as heritage, plus the actions that have to be taken to assure its proper preservation.

NOTES

1 Peter Collins. *Changing Ideals in Modern Architecture*. Montreal: McGill-Queen’s University Press, 1967, p.182.

2 Rudolf Steiner. *The Origin of Goethe’s Concept of Metamorphosis: Works 1 to16* (English Edition). Hudson (New York), 2000. E-book version, Loc 124 of 467.

3 As for example, the study of DORNELAS, M.C.; DORNELAS, O. *From leaf to flower: revisiting Goethe’s concepts on the “metamorphosis” of plants*. Brazilian Journal of Plant Physiology, 17(4):335-343, 2005. Consulted in January 17, 2018 at: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1677-04202005000400001

4 David Lowe, Simon Sharp. *Goethe & Palladio. Goethe’s study of the relationship between art and nature, leading through architecture to the discovery of the metamorphosis of plants*. Great Barrington: Lindisfarne books, 2005. E-book version, loc.75 of 1627.

5 Idem, loc. 711 of 1627.

6 Franz Kafka. *The Metamorphosis*. Wilmington: Montecristo Publishing, 2012. E-book version, loc 16 of 880.

7 And that is maybe the bottom line why the metamorphosis metaphor has been invoked into the architecture and preservation realm: not to precisely define but to scenically repel.

8 Cf. Jukka Jokiletho (1999) and Françoise Choay (1992).

9 Choay, idem, p. 91, (authors’ translation).

10 In the statement of the archdeacon Frollo in Notre Dame de Paris: “This [the book] will kill that [the building]”. Victor Hugo, *O Corcunda de Notre-Dame*. São Paulo, Martin Claret, 2006, p. 167, our translation.

11 Barcelona German Pavilion: designed by Mies van der Rohe in 1929 and rebuilt *com’era dov’era* by Ignasi de Solà-Morales, Cristian Cirici e Fernando Ramos, in 1986; Rietveld Sonsbeek Pavilion: designed by Gerrit Rietveld, in 1955, rebuilt by Arnold Renes, in 1966, and rebuilt in the same place, by Bertus Mulder, in 2010; Van Eyck Sonsbeek Pavilion: designed by Aldo van Eyck, in 1966 and Rebuilt by Hannie van Eyck and Abel Blom, in 2006, in the Kröller Müller Museum; L’Esprit Nouveau Pavilion: designed by Le Corbusier in 1925, and rebuilt in Bologna, by Jose Oubrierie and Giuliano Gresleri, in 1977; Rietveld Aula: designed by Gerrit Rietveld, in 1966, for the Wilgenhof Cemetery, in Hoofddorp, and replicated by Bertus Mulder, in 2003, for the Meerterpen Cemetery, in Zwaanshoek.

12 “It is necessary that the completions, if necessary, and the additions, if they can not be avoided, demonstrating not be ancient works, but works of today.” Camillo Boito, *Os Restauradores*, Cotia, Ateliê Editorial, 2004, p. 61, our translation.

13 “Muito embora materiais, construção e detalhes sejam importantes testes de autenticidade para sustentar e realizar a “ideia” do arquiteto, algumas substituições seriam aceitáveis em obras modernas desde que as intenções do arquiteto quanto à forma, espaço e aparência fossem ainda reconhecíveis. Como encaminhamentos, sugerem uma sequência para verificação da possível autenticidade: 1)

a ideia; 2) forma, espaço e aparência; 3) construção e detalhes; 4) materiais". Cf. "Modern Movement and the World Heritage List. Docomomo ISC/Registers to Icomos". Docomomo Journal, Eindhoven (Netherlands), n.17, p.48-53 [APUD] Flavia Brito do Nascimento. Blocos de Memórias. Habitação social, arquitetura moderna e patrimônio cultural. São Paulo: Edusp, 2016, p.51.

14 Here perhaps a better functional myth would be that of the Medusa: such a terrifying being (or situation) that the hero Perseus (or us, the architects, historians and theoreticians) has to use a mirror (or a metaphor) to kill (or to better understand) it.

15 Cf. Comas, Carlos Eduardo, "Ruminações recentes: reforma/ reciclagem/ restauro" *Summa+*, Buenos Aires, 115, 2011, p. 56 – 61.

16 To add another layer of ambiguity it is interesting to notice that the SESC Pompeia - the whole set of the new buildings designed by Lina Bo Bardi plus her interventions in the existing ones - was afterwards appointed to be listed as an institutionally recognized heritage. In other words, its "heritage" status as modern architecture was constituted post-intervention, or more precisely, by the intervention itself.

17 Since its inauguration in August 2017 the SESC-Downtown has received 900.000 visitors. It promotes cultural actions of innovative approach for diverse age groups and social strata, focused on education, health, leisure, and culture. Although its facilities are primarily destined for commerce employees and their families they are also open to local communities, providing very low cost dental and health care, meals, training courses, etc.

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METAMORPHOSIS AS ORDINARY PROCESS OF CHANGE.

IDENTITY, AUTHENTICITY AND SURVIVING MATERIALS

IN THE CASE STUDY OF GIUSEPPE TERRAGNI'S NOVOCOMUM

Carolina Di Biase, Alessia Facchi, Anna Greppi, Camilla Casonato (Italy)

ABSTRACT

The issue of metamorphosis has for centuries been a constant theme in the mythology, literature, art and science of the West. The early twentieth century too saw a focus on the interwoven issues of transformation/innovation, time and memory. By now, even the products of the modern revolution – including its architecture and the cities of the twentieth century – belong to the past. Just as with the places inherited from tradition, the monuments and settings of modern architecture pose the problem of their current role and meaning, and of how one is to manage their transformation. This paper aims to reflect upon the question of authenticity examining a process of ordinary metamorphosis, a sequence of more or less discrete changes to be seen in so many buildings containing private apartments. The example chosen is that of the Novocomum (1927-1930) in Como, an iconic work of Italian Rationalism and the first modern apartment block designed by Giuseppe Terragni. In the case of Novocomum, the changes involved the surface facing and cladding, some communal areas (first changed and then restored back to the origin), the interiors, and the fixtures. The construction, as well as the various modifying interventions, here studied on the basis of archive material and survey, were represented thanks to graphics reconstructing the process. The surviving original materials, located through this sort of 'archaeology of the modern' might present a possible gauge of authenticity.

1. METAMORPHOSIS

In its passage from Greek to Latin this term acquired the meaning of 'transformation', a change in which something remains itself whilst also becoming 'other'. Such a process is often to be seen in the natural world. However, the term 'metamorphosis' is also linked with Greek and Roman myths and their interpretations: their multiple meanings having been repeatedly explored in the visual arts and in music – as well as providing material for philosophical and scientific enquiry. 'Metamorphosis' makes it clear that a change in form

does not erase the identity of a being: when in Apuleius' *Metamorphoses* (post 158 A.D.) the young Lucius is transformed into an ass, he continues to think and reason as a man until, after various trials, he re-acquires his original human form. In Ovid's *Metamorphoses* (circa 8 A.D.), when gods turn defiant humans to plants or animals or adopt various animal forms, nobody changes his/her essential nature. In philosophy, metamorphosis is associated with the process of becoming – a process which Henri Bergson, at the end of the nineteenth century, associated with time, with the *durée*, experienced as a constant flux and thus with memory as the temporal essence of consciousness. This notion of *durée* would then be taken up by Gilles Deleuze (Braidotti, 2003, 84). And more recently still, the idea of becoming has been defined as "a nomadic manner of revisiting and remembering [...] on-going creative processes, like a text by Gertrude Stein set to music by Philip Glass." (Braidotti, 2003, 141-142).

The concept of metamorphosis runs through the whole of the twentieth century. It links timeless symbols and notions with what is specific to twentieth century modernity (Leghissa, Manera, 2015). On the one hand, the twentieth century continued to reinterpret the material and narratives associated with mythology (Ziolkowski, 2005); but at the same time, the idea of metamorphosis also seemed to capture the sense of change operating within the 'work' itself. So, narratives of metamorphosis are reflected for instance in paintings by De Chirico (*Ariadne*, 1912-13, *Metamorphosis*, 1929), Dalí (*The Metamorphosis of Narcissus*, 1936-37); in various accounts of Apollo and Daphne, from the pre-Raphaelite painting of Waterhouse to the music of R. Strauss in his 1937 *Daphne*; in B. Britten 1951 opus 49, *Six Metamorphoses after Ovid* for solo oboe. But we also have Escher's *Metamorphosis I, II and III* (1937, 1939-40 and 1967-68 respectively), breaking down the landscape of Atrani, which nestles in the rocks of the Amalfi coast, and transforms it into ever more precise geometrical forms, then inverting visual perspective; or Strauss's 1946 *Metamorphosen* for 23 string instruments, the compos-

er's response to the destruction of the World War II,¹ a threnody for a world which Zweig, also a librettist with Strauss, famously described as *Die Welt von Gestern* (1942). A later work, inspired by Kafka's novella, is Philip Glass's *Metamorphosis* for solo piano (1989), divided into five movements, where the fifth returns to the opening movement.

As for the issues of identity and change in architecture, in the nineteenth century they were related to the questions posed by the fate of historical monuments, which raised conflicting ideas of 'restoration' and 'preservation', of what was 'true' and what was 'false', that inspired practices of intervention that would be inherited by the twentieth-first century. The nineteenth century would indulge in phantasmagorical transformations, fanciful 'completions' or returns to supposedly original forms. This would then open the way to the numerous controversial cases in which intervention reproduced artifacts "as they were", or to post-war reconstructions on an urban scale: for instance, the old city centre of Warsaw, adopted as World Heritage site some decades later. Indeed, the most recent chapter in this on-going tradition has been the spectacular (and more or less philological) recovery of the masterpieces of the Modern Movement. It is no coincidence that the early examples of this approach included the first in a series of restoration campaigns intended to save Le Corbusier's Villa Savoye, with this building rapidly passing from being the ruin of a modernist prototype to become a historical monument and soon after a veritable icon (Caccia & Olmo, 2016).

The realisation that the buildings, urban areas and entire cities inspired by the modernist revolution can belong to the past, as the artifacts of so-called "other modernity" (Neri, 2015), has been a result of the temporal acceleration, a defining feature of the twentieth century. Undoubtedly, the sheer scale of that century's architectural output has raised new questions regarding the very definition of what we are to classify as new monuments. However, the policies adopted for the protection and use of both material and intangible cultural patrimony seem increasingly to stress their symbolic character. Indeed, the very concept of the intangible heritage has transformed the way we manage the material aspect of our built heritage. Seemingly destined to perpetuate the mythical view of the "creative act", buildings taken as twentieth-century "icons" rise again and again from their ashes, apparently always the same.

2. AUTHENTICITY AND CONTINUITY OF CHANGE: GIUSEPPE TERRAGNI'S NOVOCOMUM

One of the buildings constantly cited in histories of twentieth-

eth-century architecture, Terragni's Novocomum, the first example of Rationalist architecture in Como, has been spared the usual extremes of neglect, decay, abandonment. Instead, its history is marked by the partial and continual changes which are typical of residential buildings belonging to different owners. Though this ordinary metamorphosis is internal to the work itself, the sum of the individual innovations results in a profound change on the building's exterior and a significant alteration to the spaces and materials as intended by the architect. True, one can read these effects as an expression of the permanence of the building's identity through change. Nevertheless, the perception of that process can generate a sense of ageing, decline and fragmentation. Just as with traditional architectural heritage, the modern monuments raise questions with regard to how one is to manage the transformations they are undergoing. While identity might be intimately bound up with change, what might be the limit beyond which alterations to overall form and material components would be such that they created a clear caesura between the architectural whole as originally constructed and the object whose parts and segments have since undergone change?

This is the issue we aimed to investigate with regard to the sample case of the Novocomum. In order to study the timeline, manner and impact of change, we compared the present state of the building and what can be gleaned from the systematic examination of a range of sources (textual, graphic, photographic, oral). The aim was to establish how the building was constructed and then chart the extent and nature of the transformations it had undergone. The idea was to take the data which emerged from public and private archives and render it in visible form using drawings and graphics. For example, letters and site documents revealed that over a eight-month period (February–October 1929) there was a switch from a traditional structural design (from weight-bearing walls to a reinforced concrete framework). This first significant change was highlighted by working in parallel on: the various versions of the design project (Ciucci 1996, pp. 315–321); the documents relating to disputes between the architect and building contractor and the extant photographs of the site during construction (Archive Terragni, Como).

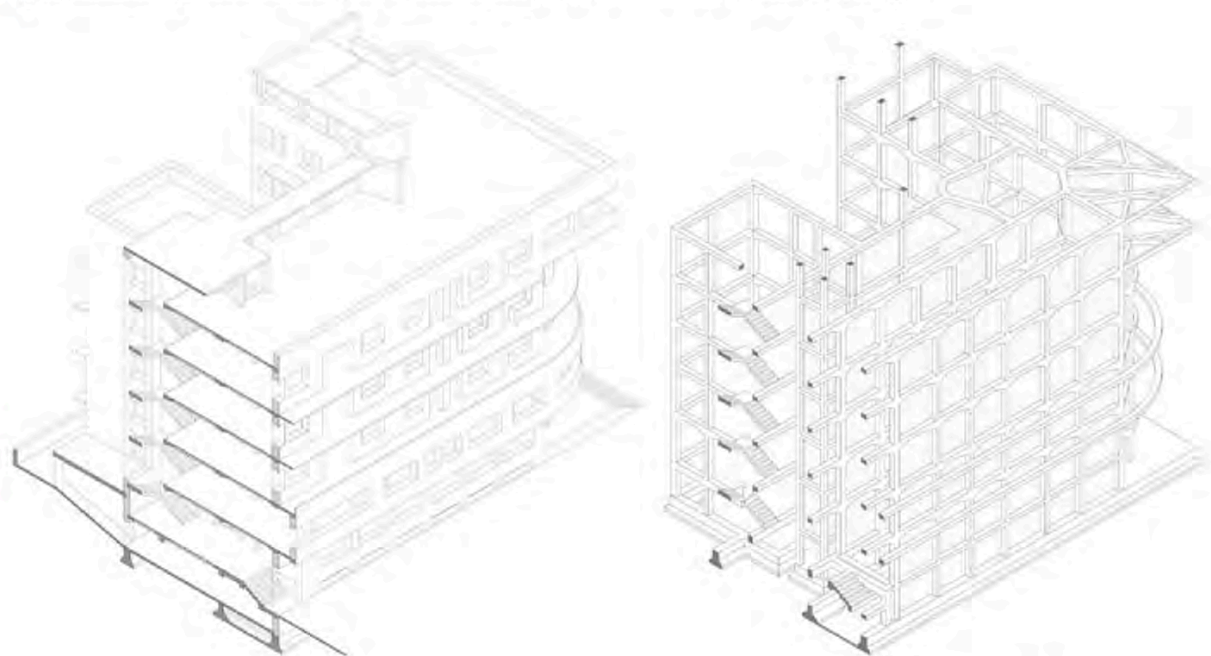
Patient examination of the best ways of depicting and communicating the information allowed us to organise the mass of available data and made it possible to understand the various essential phases in the life of the building and in its material history. From careful study and redrawing of original plans, supplemented with digital image rectification of the

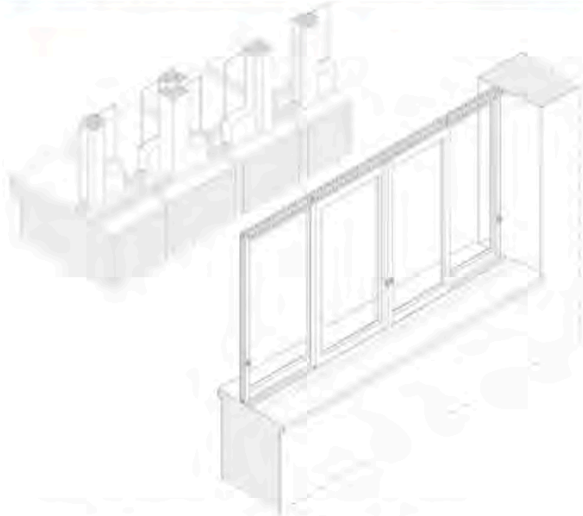
facades, it was possible to produce graphics that depict the key phases in the process of construction and subsequent transformations, then complement these with interpretative schema, summary tables and images of particular features (the atrium, door and window fittings) and a digital model (Autodesk Revit). Compilation of the tables required continual comparison to confirm the coherence of information from the various sources, thus the work of reconstruction stimulated new reflections and interpretations. Furthermore, the use of axonometric renditions (cross-sections and exploded diagrams) were decisively important. This made it possible to extrapolate specific parts or perhaps 'remove' the external walls and study the structure beneath, then re-assemble the whole (fig.1).

The story of the young Terragni's "secret design" for the Novocomum, which was constructed behind fencing in order to protect it from prying eyes; of the outcry that greeted this advent of new architecture within a provincial city in 1930; of the critical praise and brickbats the building received, and the success it would ultimately enjoy – all this is too well-known to be repeated here. What we want to look at is how, in just a

few decades, there was a clear difference between the original building and what it had become. As with other examples of modern architecture, it was probably widespread deterioration in the external fittings that led to the first major changes to the building. In the 1950s, the street facades of the structure were covered by rough-finished pieces of Musso marble², which substituted the surfaces in coloured plaster chosen by Terragni.³ Luigi Zuccoli, who had worked with the architect's studio since November 1927,⁴ had in fact proposed the solution used for the nearby Casa Giuliani Frigerio, which Terragni – by then fighting at the front in the Second World War – agreed with by letter. The adoption of new cladding completely changed the existing colour scheme: the nut-coloured plaster disappeared and the orange-red fixtures and frames were changed to be in keeping with the ivory-white marble (fig.2); at the same time the balconies and projecting features were altered, with the light blue parapets being painted black and white, and the partitions between the balconies (in wire-reinforced glass) being removed. The added wall thickness resulting from the addition of the new cladding meant that the projection of the sills was radically reduced, creating perfect

Fig. 1. Axonometric split of the structural system in reinforced concrete (left) and of the mixed structural system (right).





Photograph and survey of a window as designed by Terragni

conditions for leaks and seepage, whose effects were already quite clear by the end of the 1960s.⁵

At the same time, individual owners made alterations both to the layout and the fixtures of their apartments, and a variable catalogue of different types and systems of windows took place. These changes also affected the famous “corner cylinders”, which were substituted with frames of different design, size and materials, whilst the original sliding windows were replaced by brick closures and undermined the effect of transparent and lightness of the early construction.

As for the communal spaces, Zuccoli would in the 1950s entirely transform the entrance atrium, which had been the fulcrum of the internal layout. The extent of the work is documented by two photographs and by the on-site survey carried out when a restoration project was being drawn up.

It should be pointed out that in 1987 (12 October) – 60 years after Terragni had received the original commission – the Novocomum became a listed building, with more pressing questions being raised as to the disappearance of its distinctive character. The leading figure in an ambitious project to “get back to Terragni”⁶ was Mario Di Salvo. He did oversee the restoration of the atrium in a project (fig.3) which was based upon photographs published just after the completion of the building (only the “luminous ceiling beam” is documented in detailed drawings by engineers Jellinek & Canesi).

It was also Di Salvo who did the preliminary studies for the (subsequently unrealized) project for the facades of the building.⁷ As for the stone cladding, tests showed that its removal would damage the underlying surface, made up of hollow bricks. When, at the beginning of this century, the question of the street facades of the building was again raised, the work carried out on the basis of a new project of intervention was thus limited to: consolidating the cladding added in the 1950s; increasing the projection of the sills; repairing and then repaving the balconies’ slabs.

A partial return to the building’s original appearance⁸ can be seen in the choice of orange for the corner cylinders (fig.4), for their iron window frames and for the underside of the balconies and the lintels.

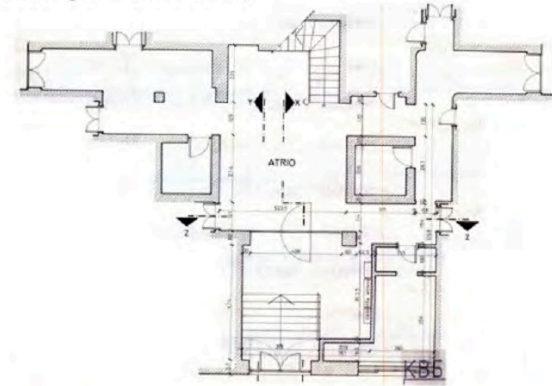
Nowadays those same facades reveal further changes in colour and new forms of deterioration, whilst the stone cladding has happily survived 60+ years; given its undoubted historical interest, according to Italian law, it could now be listed.

Not much of Terragni’s interiors has survived: after the building was listed in 1987, all proposals for modifications made by the owners of individual apartments were approved by the authority responsible for preservation.

The identity of the Novocomum as it now stands is the result of various interwoven processes which makes any attempt to establish ‘authenticity’ a rather difficult matter. It also raises familiar problems: is such ‘authenticity’ to be found in the overall result of these processes, including the work of restoration, repair, maintenance made over the course of time? Or is it to be established through a ‘return to what Terragni intended’ – a return that has, so far, proved impossible? Or is the ‘authentic’ that which Terragni designed and that which is left of the work he himself oversaw? Those physical traces bear fullest witness to the work of the architect, revealing how that architect’s own research found application.

Clearly, it is the last option which prevails for those who see ‘material culture’ as playing a central role in any intervention

Existing conditions survey



Restoration project

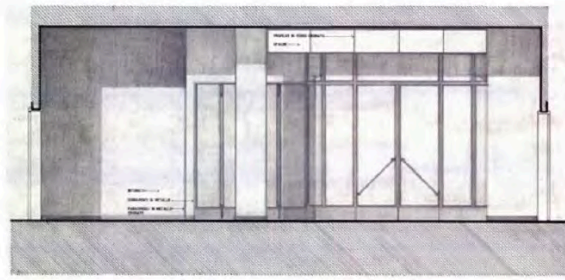
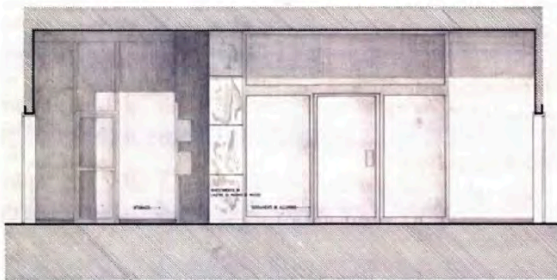
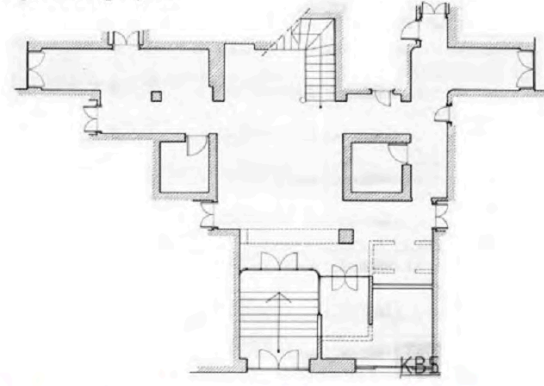


Fig. 3. Survey of entrance atrium (Zuccoli's solution); project to return the entrance hall (M. Di Salvo, March 1992) and related photographs



Axonometric representations of the "corner cylinders": as designed by Terragni (left), as they are at present (right).

upon our architectural heritage. Such a view holds that the surviving original materials located through this 'archaeology of the modern' present a possible gauge of authenticity and offer a precious occasion for safeguarding measure.

NOTES

- 1 "The home of Goethe, the most sacred shrine in the world, destroyed! My beautiful Dresden, Weimar, Munich, all destroyed!" (R. Strauss, March 1945, in N. Del Mar, *Richard Strauss*, Faber&Faber, 3 vols., London-Boston 1972, vol. 3, p. 425).
- 2 The detailed research carried out in 2016-17 by Facchi and Greppi confirmed the gap in documents covering the period 1940-1971.
- 3 On the north façade the plaster with coloured marble powder was protected with Silexore, 'peinture pétroliante'.
- 4 Zuccoli used the same cladding for a third building designed with Pietro Lingeri in 1956.
- 5 "L'Architettura. Cronache e storia", a. XIV, n.153, July 1968, p.161; Archive Roda.
- 6 "An overall plan of intervention [...]. The aim is the gradual recovery of Terragni's original creation, based on a 'filmic' reading of photographic documents". ("Technical Report", s.d., ma. Post 9 May 1987, Archive Di Salvo).
- 7 The façade was analysed in early 90s, comparing its current state with Terragni's designs and model; the survey continued in 2017 under Facchi and Greppi.
- 8 A. Albertini, "Technical Report", 1st May 2001, Archive of Superintendence for Architectural Heritage, Milan; detailed accounts are to be found in "List of work carried out", 15 May 2002, Archive Albertini.

Carolina Di Biase, Alessia Facchi, Anna Greppi, Camilla Casonato *Metamorphosis as Ordinary Process of Change*

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MODERN HERITAGE OR NOT:

A LEGACY OF POST-WAR RESTORATIONS AND MODERN MOVEMENT

Miia Perkkiö (Finland)

ABSTRACT

The examples of historical buildings and monuments restored and transformed applying forms and ideas of Modern Movement are numerous all over the world. In many cases technological solutions, methodologies and materials applied for restoring monuments were new and experimental and actively experimented in small and large scale. Beside the technological solutions the emphasis was given to functionality: the historical monuments were not only evidences of past but they also provided structures and spaces useful for modern society and its needs. In fact a common theme in many restorations was the aim to create modern and useful premises for contemporary uses.

Even if the re-use of old buildings has been common throughout history, it is only since the modern restoration approach of the 19th century that the functionality of historical buildings has been considered important also in their preservation. Today it is unquestionable that to survive the historical buildings – whatever is their origin – must adapt to the new situations and to serve the contemporary society. Often the key to motivate the expensive restorations was to make historical buildings useful – one of the driving forces of Modernism as well.

When discussing re-use and restorations of historical monuments carried out after World War II and their relation to modern heritage, challenges and problems related to restoration and preservation are similar.

Should the modern restorations of historical monuments be examined as modern heritage? Indeed the main issue is the importance to re-evaluate and recognize them as examples of Modern Movement.

1. INTRODUCTION

Can a Medieval castle or a historical site be considered as examples of the development of living and working during the twentieth century and of new building technologies? And further do they share the problems and challenges typical when preserving the Modern Heritage?

The historical buildings and monuments that have been restored or transformed applying forms and ideas of Modern Movement are numerous all over the world. A sequence of modernism technological solutions, methodologies and materials used for restoring monuments – historical buildings, medieval castles, Roman ruins – were new and experimental, forms, detailing and furniture clearly modern, and actively experimented in small and large scale.

Especially the interwar period can be considered crucial what comes to architecture, its spatial layout, technological solutions and aesthetics not to forget its social responses and political aspects.

When discussing restoration and re-use of modern architecture the challenges and problems related to their restoration and preservation are parallel with the historical monuments restored with the “modern manner”: restorations carried out with new materials and technical solutions the functionality being key-word both for the exteriors and for the spatial layout. Shouldn't those restorations be examined as modern heritage, as examples of Modern Movement? Furthermore, could these restorations be considered as an approval that the authenticity is not only related to the original material but also to the buildings ability to respond to the needs of the society? A foundation to clarify the issue is to perceive the discussions and arguments related to modern restoration approach and to the Modern Movement: two phenomena that played the roles when restoring historic monuments.

2. RESTORATION AS PHENOMENA OF MODERNISM

Architecture underwent a radical and thorough change being one of the most visible and concrete outcomes of modernisation in the Western societies. In most cases, a Modernist approach meant wide-scale and irreversible transformations. Still it wasn't only schools, hospitals, and offices, housing areas or industrial premises that were created following the ideology of Modernism. Besides, the restorations of historical buildings

reflected the ideas of the Modern Movement; the theories and recommendations of preservation and restoration were also a part of the development of modernism and modern historical consciousness rejecting the thinking of Enlightenment and its sequences. The modern historical consciousness meant that the reason for restoration was not to be based only on the economical values, but on more profound and stable values related to the history and aesthetics of the building.¹

The modern restoration approach evolved in Italy because of protection and restorations of ancient monuments in the beginning of the 19th century.² In France the revolution awakened the regime to take an interest for cultural heritage. In England, there was an active anti-restoration movement and persons like John Ruskin (1819 - 1900) who criticized the stylistic restorations and enhanced maintaining and conservative repair of buildings. This development included also orders and more policies regarding preservation.³

By the end of the siècle the discussions on why and how to restore historical buildings had spread out around Europe. Additionally, the typologies of buildings to be preserved were broadening: not only monuments – castles, monasteries, churches, palaces – were subjects of restorations but also “architettura minore” and historical towns were considered valuable evidences of past.

Writers, art historians, heritage specialists and architects strengthened the theoretical ground for restoration and for conservation. In his article Alois Riegl (1858–1905) outlined the different values related to monuments to be considered when preserving or restoring them.⁴ Essential was also Gustavo Giovannoni's (1873–1947) alignment that to restore also included the re-use of monuments.⁵

Also the modern architecture was an object for research and architectural ponderings for art-historians and architects. For example Sigfried Giedion (1888–1968) saw the architecture of his time as a fusion of time and space. For him the modern architecture was conditioned by industrialization.⁶ For Louis H. Sullivan “the true function of the architect is to initiate such buildings as shall correspond to the real needs of the people” the human and social aspects being central.⁷

3. THE “THINK TANKS” OF ATHENS AND VENICE

During the 1930's the sequences of the modernization – problems related to cities, encounters and conflicts between history and present – lead to international recommendations. The Athens Charter for the Restoration of Historic Monument, “Carta del Restauro”, was a result of the congress in



Figure 1. Erik Bryggman (1909–2002), Turku, Finland. The castle of Turku was the only Finnish castle damaged in war. Bryggman designed the demolished parts and the space lay-out for the whole complex. Details and furniture were designed by his daughter Karin. Modern were not only forms and materials and furniture but also the reconstructions: the slabs and the vaultings were created with modern building technology.

©-Miia Perkkio, 2016

Athens in 1931⁸. Its fifth resolution states, that “modern techniques and materials may be used in restoration work”.⁹ Crucial was the notion that “when, as the result of decay or destruction, restoration appears to be indispensable, it recommends that the historic and artistic work of the past should be respected, without excluding the style of any given period”. And further it said “that the occupation of buildings, which ensures the continuity of their life, should be maintained but that they should be used for a purpose which respects their historic or artistic character”¹⁰. The charter recommended the use of modern materials and techniques like reinforced concrete for restorations of ancient monuments.

Two years later the IV International Congress of Modern Architecture had as its subject “the functional city”. It seems clear that by then the contrast between the modern ideologies and heritage had become one of the dilemmas of modern architecture. To put it another way, there was a strong confidence that the problems related to living and working could

be resolved by technology and by architects. At the same time the importance of preserving the monuments of the past for the future generations was considered as a significant mission of the mankind.

From the point of view of the intellectual climate of the era, the use of modern forms and new technology in restorations was relevant and logical. Both designing new buildings and restorations solve practical problems in a framework of different stakeholders.¹¹ Eventually, it is about the two sides of the same coin.

The questions escalated after the World War II due to the need to reconstruct the cities and societies and to restore the buildings and structures destroyed and damaged by the war. The vast and often disputable reconstruction operations led to a new international codification of standards for conservation practices related to monuments and sites in Venice in 1964.

One of the most influential authors of the formulation of the Venice Charter was Cesare Brandi (1906–1988) for whom the restorations of the monuments were motivated by their existence. The Venice Charter pointed out that “any extra work which is indispensable must be distinct from the architectural composition and must bear a contemporary stamp”¹². Not only in Finland the Venice Charter was interpreted as a suggestion to use modern forms, new materials, visible and

easy to recognize new parts – clearly differentiated – from the original ones. The 10th article encouraged to apply new technology: “Where traditional techniques prove inadequate, the consolidation of a monument can be achieved using any modern technique for conservation and construction, the efficacy of which has been shown by scientific data and proved by experience”¹³.

4. MONUMENTS WITH A MODERN “TWIST”

When observing the issues related both to architectural heritage and its restoration and to the modern architecture including the change of the urban milieus and historical monuments, common themes are the re-use of monuments, their relationship to the context and the questions related to the style and materials of new parts when restoring historic buildings or areas.

In practice the recommendations of Athens led to use new techniques when restoring old buildings, a solution, which appeared to be fallacious especially in seismic zones like in the case of the Basilica of San Francesco in Assisi, where the wooden beams were substituted by more rigid and heavier reinforced concrete. Anyhow the reinforced concrete was to be one of the most commonly implemented restoration techniques during the following decades.

Figure 2. Antti Nurmesniemi (1927–2003), Savonlinna, Finland. According to the Venice Charter in St. Olaf's Castle the stratifications were respected, the new parts were distinctly modern. Especially the interiors and furniture bear a stamp of the minimalism from early 1970's. Economically the project was justified by a useful function.
© The Finnish National Board of Antiquities, P. O. Welin. 1975



Figure 3. Nils-Erik Wickberg (1909–2002), Hämeenlinna, Finland. The Häme castle was restored during the period 1956–1988. It remained as a prison until 1953 and the castle's bailey building until 1972. Almost all historical stratifications were demolished and the interiors reconstructed in great deal.
© Miia Perkkio, 2016



Beside the technological solutions and aesthetics the emphasis was given to functionality: the historical monuments were not only evidences of past but they also provided structures and spaces useful for modern society and its needs. In fact a common theme in many restorations was the aim to create modern and useful premises for contemporary uses. Even if the re-use of old buildings has been common throughout history, it is only since the modern restoration approach of the 19th century that the functionality of historical buildings has been considered important also in their preservation as pointed out by international recommendations. In fact, the examples where historical buildings and monuments have been restored or transformed applying forms and ideas of Modern Movement are numerous, varying from modest annexes – entrances, canopies, stairs – to large and visible new construc-

tions and infill buildings. Still, often the motivation for the expensive restorations is to make historical buildings useful – one of the driving forces of Modernism as well.

In Finland the most illustrious cases of applying principles of modernism are the restorations of the three still existing medieval castles of Turku, St. Olaf and Häme. (**Fig. 1-3**) An interesting example of how to combine modern structures with historical ones is also the 18th century maritime fortress of Suomenlinna. (**Fig. 4**) These restorations are examples of adaptive re-use, of applying modern and experimental materials, modern forms and technology in historical context. Also their interiors – furniture, detailing and technical systems – were modern. The restorations were carried out during a relatively short span of time, from 1940's to early 1970's.¹⁴

Figure 4. Aulis Blomstedt (1906–1979) and Severi Blomstedt, Restaurant Walhalla, Fortress of Suomenlinna, Helsinki, Finland. Blomstedt designed a restaurant inside the fortress for the Olympic Games in 1952. There have been numerous restorations regarding new and old construction and especially technical installations of the kitchen premises. © The Governing Body of Suomenlinna, Heikki Lahdenmäki, 2001



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5. MODERN HERITAGE VERSUS MODERN RESTORATIONS

The problems related to the preservation and to the restoration of the “modernized” monuments are common with those of modern heritage: the use of reinforced concrete, coatings and insulating materials has in many cases approved to be unsuitable with the historical structures causing damages. The constructions executed with reinforced concrete have a limited lifespan especially outdoors. Inside the problems are related to the statics – the earthquake damages being the most dramatic ones – while a medieval stone construction could last forever if maintained and repaired with original materials and methods. In many cases the modern coatings and insulation solutions have approved to be unsuitable with the historical structure. Often these damages for their part lead to large and complicated restorations.

Again, the “modernized monuments” have already approved to be able to adapt themselves to new functions and requirements – one of the most crucial issues of modern heritage today. Anyhow, there are many cases where the original function or intention of the monument has become obsolete or has been forgotten with new and visible alterations. For example the re-design of Castelvecchio in Verona is known as a masterpiece of Carlo Scarpa (1906–1978), as an example of good design where the balance between new and old is perfect and as a skilful transformation of a fortress to a museum. Still, Castelvecchio for me is an outstanding example of successful transformation process.

6. CONCLUSIONS

It is evident that the modern restorations of historical monuments represent the ideas of the Modern Movement and therefore are significant testimonials of Modernism and of an important socio-historical period. The Finnish examples are considered monuments but not for being partially modern. Albeit they are all protected by the Building Preservation Act, and Suomenlinna holds the status of a World Heritage Site, their cogency as Modernist restorations has not been recognized.¹⁵ It is important and urgent to re-evaluate the post-war restorations from the point of view of Modern Movement.

NOTES

- 1 Jukka Jokilehto, *A History of Architectural Conservation*, Butterworth-Heinemann, Oxford 1999, 101.
- 2 In Italy it was especially Camillo Boito who had effected on the development of restoration both in its practises and as a branch of science.
- 3 Jokilehto, 70-79.
- 4 Alois Riegl, “Der moderne Denkmalkultus, sein Wesen, seine Entstehung”, *Konservieren nicht restaurieren. Streitschriften zur Denkmalpflege um 1900*, Braunschweig/Wiesbaden, 1988, 69-70. The use-value was one of the present-day-values. To keep the building in use, it had to be maintained, repaired and if necessary changed. The use-value and historical-value conflict when the building cannot be used. This conflict is related to the age-value. The use-value permits the restoration and continuation of use.
- 5 Gustavo Giovannoni, “Restauro”, *Enciclopedia italiana*, vol XXIX; 1936, 127.
- 6 Marianna Heikinheimo, *Architecture and technology: Alvar Aalto's Paimio Sanatorium*, Aalto University, Unigrafia, Helsinki, 2016, 14-15.
- 7 Louis Sullivan, *Kindergarten Chats and Other Writings*, New York, Dover Publications, 1979, 139.
- 8 The First International Congress of Architects and Technicians of Historic Monuments, held in Athens in 1931.
- 9 ICOMOS, “The Athens Charter”, <https://www.icomos.org/en/charters-and-texts/179-articles-en-francais/ressources/charters-and-standards/167-the-athens-charter-for-the-restoration-of-historic-monuments>.
- 10 *Ibid.*
- 11 Heikinheimo, 19. Heikinheimo has described the process of planning and construction examining the relationship between architecture and technology.
- 12 ICOMOS, “The Venice Charter 1964”, https://www.icomos.org/charters/venice_e.pdf
- 13 *Ibid.*
- 14 Miia Perkkio, “Modern heritage Doc or integrity disrupted. Observing and evaluating Restorations of Finnish post-war period”, *Modern Heritage – Identifying, assessing and managing its protection and conservation*, Lublin, ICOMOS, Romualdo Del Bianco Foundation, Icomos Poland, 2017, 141-148. The lists and registers of modern heritage in Finland don't include restorations – or rather in most cases modernizations - of historical monuments. In the new register selection of the working party of docomomo Finland of the most representative sites and buildings of the Modern Movement in Finland has only one example of restoration with modern constructions interiors – the City hall of Helsinki.

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BIOGRAPHY

Miia Johanna Perkkiö (b. 1968), graduated in architecture in 1997. Her doctoral thesis *Utilitas in restoration. The re-use of historical building and functional integrity* was approved in Oulu University in 2007. Perkkiö has been working as a researcher at University of Oulu and as a main designer for restoration projects in Helsinki. She was appointed as a Chief Curator of Finnish National Board of Antiquities in 2013 and as a Chief of Restoration Unit of The Governing Body of Suomenlinna World Heritage site in 2016. Perkkiö has been member of several editorial boards of publications.

PRESERVING BY USING.

MUDE MUSEUM AS A CASE STUDY

Bárbara Coutinho (Portugal)

ABSTRACT

In 2009, MUDE museum opened in the former headquarters of the National Overseas Bank. A Pombaline block that underwent two major transformations during the 20th century: in the mid-1920s, when a modern structure of concrete and beam, column and slab construction was introduced; and between 1951 and 1972, when the interiors were ennobled to become a metaphor of the bank's power. In 2004, its interiors were almost entirely demolished, and the building remained derelict until MUDE start developing an exhibition and cultural programme. In 2016, the building was closed for refurbishment to fully accommodate the museum technical needs. This paper focuses on the museum's strategy of "preserving (the building) by using". It also analyses how this principle meets the concept of MUDE as a "museum in progress". The purpose is to see in what way these premises turn out to be a reality through a dialectical practice between both. The paper also analyses the importance of an operative history made in articulation with the architectural project to support its main options. To contribute to the question "How can we select what must be preserved and what can be changed?" the paper presents an example where the heritage preservation happens when it became effectively alive, useful and significant to our contemporary life.

1. INTRODUCTION

The paper results from the author's direct involvement in MUDE definition and development. Individually or in collaboration with other researchers, she has been publishing several papers and tutoring academic research on the subject. The purpose is to understand the relevance of the strategy "preserving by using" to the safeguard of an architectural heritage and the consolidation of MUDE's museological project. The paper first presents MUDE museum, defining its mission and goals. It then summarises the interventions that the building where the museum was installed had in order to conclude that it was a complex, contradictory and fragment-

ed body. After that, the paper intends to evaluate the consequences of this strategy, giving some practical examples and explaining to what extent it was carried out simultaneously an operative history.

2. MUDE MUSEUM: A CATALYTIC FOR CHANGE. MISSION, COLLECTION AND SITE

Inaugurated in 2009, MUDE is a municipal museum dedicated to all expressions of design. Its initial estate is 'Francisco Capelo Collection', acquired seven years earlier by the Municipality of Lisbon. By the authors represented and the relevance of the pieces gathered, this collection shows the evolution of international product and fashion design between 1930 and 2000 (Coutinho 2009). The museum also owns several collections of Portuguese designers, once research, preservation and promotion of the Portuguese design is a priority strategy (Coutinho 2015).

MUDE aims to "debate the role and ethics of design, helping to engender a more informed, critical and creative public, to bring about changes of attitude with regard to material culture and their own lives" (Coutinho 2014a). This goal reflects our vision as its founding director, on the role of the museum. By our words, the promotion of a rapprochement between arts and life, aesthetics and politics must be a priority, which shows the conviction of the major role that arts and culture have for the intellectual, emotional and spiritual development of the human being. That is, the museum is understood as a catalyst for change, which also mirrors the nature of design. A change to promote an active citizenship and the awareness of each one ethical responsibility towards a balanced and humanistic society. This intention is immediately revealed in the museum's name. The result of the contraction of the words "museum" and "design", MUDE is – in Portuguese – the imperative of the verb to change" [mudar]". This fact is of particular significance, since the museum addresses directly and emphatically each person, inviting to a process of self-questioning and transformation. In line with this goal,

MUDE is thought as an active and inclusive cultural centre, with flexible and multipurpose spaces for exhibition, education, creation, meeting, debate and leisure¹.

The site chosen to develop this ambitious program gave an essential contribution to it. In 2008, António Costa, at the time Mayor of Lisbon, comes to a decision². With the intention of its contribution to the cultural revival and urban renewal of the historical centre, MUDE was settled in the block delimited by Rua Augusta, Rua da Prata, Rua de S. Julião and Rua do Comércio, in the heart of the Baixa Pombalina [Downtown Pombaline District] (Coutinho 2014a). This block, once the National Overseas Bank headquarters (from now on BNU), with eight floors and a total area of 15000 square metres, was derelict since 2004 with its interior almost entirely destroyed and an uncertain future. Due to its location, in the city's main avenue, a few yards from Arco da Rua Augusta and Praça do Comércio, this situation represented an urban problem (Coutinho 2014a).

3. BNU HEADQUARTERS: RISE AND FALL (1866-2009).

BNU was founded in 1864 as an issuing institution regulating financial life in the Portuguese colonies³. In 1866, transferred its headquarters to the building formed by the Rua Nova de El-Rei (presently Rua do Comércio) and the Rua Bela da Rainha (presently Rua da Prata). It was one of the first banks to settle in Pombaline downtown, thus contributing to its role as a financial centre. In the following years, BNU acquires plots of the same block, resulting in the successive periods of work. Originally, this block has a Pombaline construction, with cage-like structure and foundations on stakes, containing different plots with distinct functions (residential, trade and banking). In the mid-1920, BNU became the owner of 2/3 of the block and initiated a profound work of expansion and modernisation, inviting the architect Tertuliano de Lacerda Marques (1883-1942). The interiors were almost completely demolished, a basement was built, the Pombaline facades were kept and introduced a modern building reinforced concrete structure featuring the system of beam, column and slab, in a groundbreaking intervention for the time in Portugal. The building had, then, five floors with the main entrance at Rua do Comércio. The second major extension and remodelling occurred between 1951 and 1972, in the scope of the bank's centenary commemoration. BNU was, then, the owner of the entire block, after the acquisition of the final plots on Rua Augusta. Luís Cristino da Silva (1896-



Fig 1. Horácio Novais. Photograph from the former headquarters of the National Overseas Bank, 1964 (© Calouste Gulbenkian Foundation – Arts Library)

1976), a pioneer of the Portuguese Modernism, was the invited architect. The architectural style of the block was standardised, and three more floors were constructed. The building differs from the surrounding by its exterior stonework, the spans framed by ashlar masonry and the opening of a monumental entrance on the facade of Rua Augusta, flanked by two high-relief with the crest of the bank. Maintaining the structure and the spatial rhythm, Cristino da Silva entails the ennoblement of the interiors showing a special concern to create a cohesive and integrated work. This goal is achieved through the unity of architecture and interior design, furniture, utilitarian objects, equipment and lighting fixtures. Equally important is the integration of fine and decorative arts. The two floors for the client attendance (ground floor and first floor) received particular attention. White, green and black marble on the floor, on the outer walls and the massive counter, columns clad in stainless steel, tropical hardwoods and personalised lighting fixtures define these two spaces. On the ground floor, the monumental counter becomes the most striking element in the building, by its dimension and sculptural expression. Following these works, the BNU headquarters became one pillar of Lisbon downtown life until 1989, when the administration and the main services were transferred to new offices in the northern part of the city (Fig1).

Between 1990 and 1991, a small but meaningful work for the future design museum is carried out: a new auditorium with a foyer and a cafeteria by António García and furniture by Daciano da Costa, two groundbreaking designers in Portugal. For its construction, a partial destruction of the second floor was required.

The third and last intervention already dates from 2001. Authored by the studio Dante Macedo e Conceição Macedo, the project embodies the intention of modernising the space to respond to the new banking ideology. This project was not completed, since the works were halted in 2004, in the wake of an intervention by the Portuguese Institute for Architectural Heritage. However, the building ended up without technical infrastructures and with its interiors almost completely demolished.

4. PRESERVING BY USING

Financial constraints led to the development of the concept of a museum in progress, and to the assumption of the ruin as aesthetics and heritage (Coutinho 2014a). The building was far from being a cohesive and coherent architectural space. On the contrary. It presented itself as a fragmented, eclectic and dissonant space. The “stripped” pavements, walls and ceilings made it clear the structural solution adopted by Tertuliano Marques and allowed to identify different materials and techniques of construction. Simultaneously, the remaining coatings showed modern references of both decorative and historicist taste. On the third and four floors, the demolitions of the partition walls left a continuous open space as a legacy, a situation partially repeated on the first and second floors (Coutinho, Santos, Ferreira 2017). The preservation of this complex and contradictory heritage, also including the marks of demolition, is justified by the recognition of the significance, collective memory and authenticity inherent to the space, as stated by Coutinho (2014a):

Restoring or radically transforming this heritage would represent another act of aggression towards the building and a substantial loss of its authenticity, poetry and significance as a living expression of our architectural culture and of the site itself. Its adaptive reuse allows us to comprehend the various architectural styles, historical periods and building technologies. (...) As a result, respect is shown to all that preceded the present time, enabling the present cohabitation of the varied experiences of the past, even if these were acts of demolition.

These two decisions also have a museological and curatorial intentionality. In fact, in architectural terms, the programme of

MUDE considered the search for alternatives to the modern postulate of the white cube as one way to materialise the foundation goal of *change*. Being representative of the contemporary museology, where it is frequent the installation of museums in spaces initially design for other functions, this strategy is original in so far as the preservation is carried out both through the very experience of the building and the programme for its spaces. Through a dynamic process between the curatorial practice and the museological reflection, the pragmatic, culturalistic and adaptive approach to the building gained strength.

4.1. An attitude in line with the strategy of a museum in progress

In conceptual terms, there is a dialectical construction between the preservation of heritage through its use and the strategy of MUDE as a museum in progress. In fact, the two concepts are complementarily deepened, generating a circular movement, increasingly natural and dynamic (Fig.2). In other words, the knowledge and daily experience of the building contributed to the museum formulation, while each new phase of the museum in progress⁴ revealed new spaces and validated its preservation. Furthermore, the building was considered an active ele-

Fig 2. Exhibition Preview. *Flashes of the Collection*, 2009.
(© MUDE/Luís Ferreira)



ment in MUDE's exhibition and cultural programme, while pre-existences gained value as a living, useful and meaningful heritage. The building thus became a laboratory for the research and experimentation of different exhibition design strategies. At the same time, ruin was valued as aesthetic, while the museum took advantage of the expression of materials and worked the phenomenological value of architecture addressing the various senses of the public. In each new exhibition, space was a content (not just a container), in dialogue with the pieces and objects on display, to instigate a meaningful experience of the *self* in a given *place* and *time*, recovering the *here* and *now*. Space and objects mingle together, gaining both other levels of signification. All this process makes the construction of MUDE, in itself, a design project and therefore a privileged matter for a museum dedicated to this discipline.

Here are 3 examples of this strategy³.

In 2010, the exhibition *Seeds, Capital Asset!* showed 500 varieties of traditional seeds from Portugal and Spain. The idea stems from the existence of an ancient vault with safe deposit boxes, one of the few spaces entirely preserved, with great aesthetic unity, world-class materials and space quality. The seeds were displayed in 500 individual safe deposit boxes, where once was money and other values. Addressing the subject of the seeds has made it possible to discuss the relevance of seed banks and the consequence of genetic manipulation or transgenic food, drawing the public's attention to the need to safeguard biodiversity. The strong impact of the exhibition was no doubt due to the unity between the subject and the space.

Two years later, the former administration offices of the BNU (second floor) were in its turn object of study. Decorated and furnished in the sixties by the Decorative Arts and Traditional Crafts Workshops of Ricardo do Espírito Santo Silva Foundation (FRESS), they are an excellent example of the mastery of craftsmanship. The exhibition *National and Overseas* re-constituted the main chamber (Fig. 3). That was possible once the rooms preserve their original materials and decorative elements, the FRESS kept the original drawings of the furniture and decorative details and Caixa Geral de Depósitos has in its possession the original furniture. For the first time, the public was able to visit this space hitherto of restricted. Simultaneously, on the same floor was a presentation where the reverse process was made. The initial idea was to hold an exhibition that presented the history of interior architecture in Portugal. The motto for the exhibition design was found in the building, namely in the Pombaline cage-like original structure, although profoundly altered.

Bárbara Coutinho Preserving by Using



Fig 3. Exhibition *National and Overseas*. BNU and the architecture of power: between ancient and modern, 2012 (© MUDE/Luís Ferreira)

4.2. An operative history to substantiate the architectural project

Inherent to this strategy, an iconographic and documentary survey was held on the building and its architecture. This historical research purpose was to feed the development of the architecture and specialties projects, substantiating the main strategic options for the requalification works. The solution found out for the building structural reinforcement is an example of this complementary between history and project, theory and practice. In the words of the project's author:

The exterior walls, in solid brick and stone mortar do not give an adequate response to tensile stress resulting from a major earthquake. One of the aims of the foundations and structure projects is to solve this problem, and the solution had to be found to guarantee the museological goal of preserving the brick and slab in view. Based on the 'Pombaline cage-like structure', we have found the answer: the introduction of steel frames in the window spans, joined with steel rods placed inside the walls and allowing the tensile stress in their surfaces (Rodrigues in Coutinho 2014a).

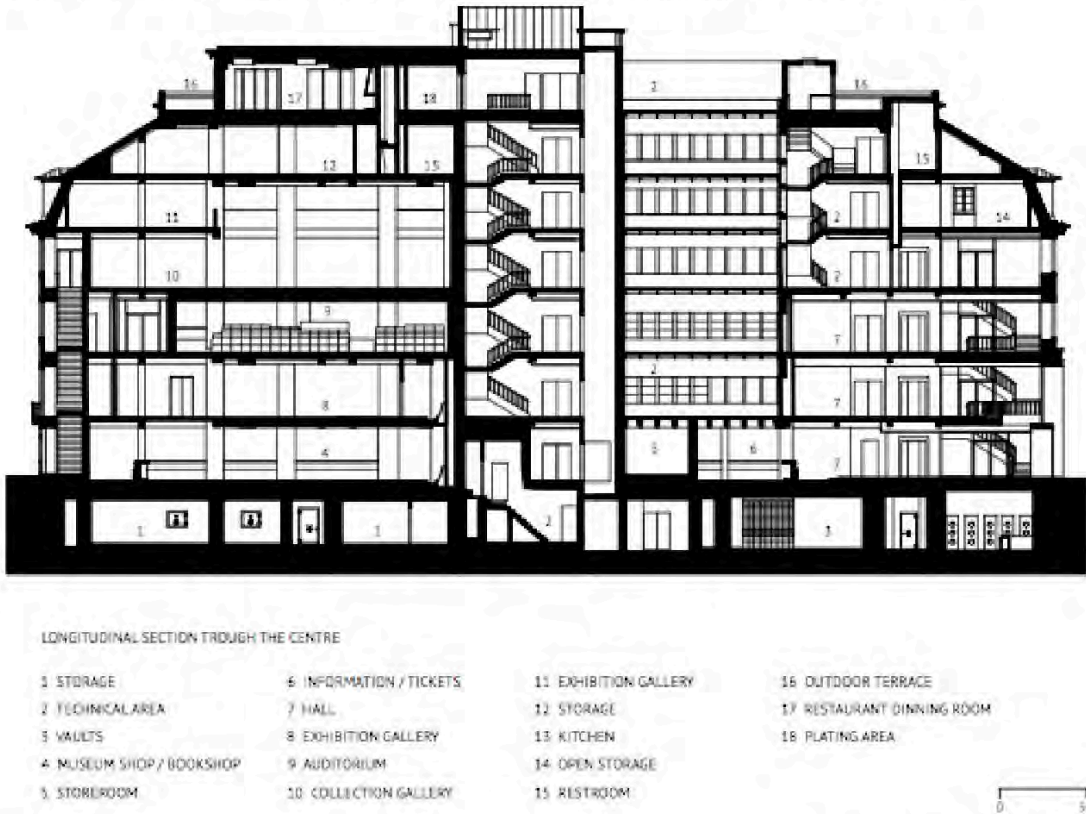
Another example is the future functional organisation of the museum's services (Fig. 4). The goal is to transform a building thought as an enclosed, hierarchical and segregated space that reflected an autocratic culture into a living, inclusive and dynamic place that would foster a full and participatory experience of all its visitors (Coutinho, Santos, Fernandes 2017). To accomplish it, the program defined the opening to the public of most of the bank's restricted access areas, transforming them into spaces for educational activities, designer residences, documentation centre and offices. A flow and multidirec-

tional circulation system has been designed offering multiple choices for each visitor to reach the different public areas. Furthermore, the general guidance was to adjust, whenever possible the museum's new functions to the current spatial configuration or to reactivate its original purpose. Three examples clarify this. On the ground floor, the counter will be again a service area, now the reception, ticket office, shop and the museum bookstore. On the basement, the existing storehouse will store the fashion collection, rather than private property, as in the bank. The former restaurant of the bank administration will become the cafeteria of the museum. Even the most radical gesture of architecture refers to a spatial memory of the building. The project proposes to reopen the slab between the third and the fourth floors, evoking the central octagonal atrium, crowned by a large skylight for natural lighting design by Tertuliano Marques⁶.

5. CONCLUSION

The strategy of preserving by using meant the safeguarding of an architectural heritage at risk of total loss and was relevant to the consolidation of an innovative and daring museological project. The case study presented makes us consider that the criteria and factors that justify the preservation, demolition or adaptation of a pre-existence result from an evaluation that has to be done in a case-by-case basis, always duly registered and based on technical studies, historical background and detailed knowledge of the site. This case study also maintains that the effective preservation of an architectural heritage stems from its real experience and renewed meaning. In the case of MUDE, the building was preserved above all because it could be a living lesson of architecture and design. Its visit allows understanding *in loco* the Pombaline project and the long debate on its preservation, the architectural culture

Fig 4. Project of Requalification of the museum building - Longitudinal Section through the centre, 2016 (© MUDE/Raquel Santos)



and the twentieth-century construction techniques. Indirectly, it enables to understand the different phases of the capital's historical centre, from its tertiarisation to the recent urban revitalisation, and the very history of Portugal.

NOTES

- 1 http://www.mude.pt/mude/missao-estregia_5. (accessed 09.01.2018)
- 2 Several other options were studied, such as Siza Vieira's Portuguese Pavilion at Expo'98, Verride Palace in the old town and a new building with Project of Frank Gehry near Avenida da Liberdade.
- 3 This section was written based on Ferreira, M. (2009). *Short history of the National Overseas Bank. Archive Caixa Geral de Depósitos* (photocopied text), on the interviews conducted by Bárbara Coutinho in November 2012 with former bank employees and on the documentation and drawings available in the Historical Archive of Caixa Geral de Depósitos (documentary fund, National Overseas Bank).
- 4 In 2008, Ricardo Carvalho & Joana Vilhena architects were invited to design the provisional installation of MUDE on the ground floor and first floor. After that, for each exhibition a specific team of architects and designers were involved. Since 2009 Luis Miguel Saraiva architect has been conducting the architectural project and the building requalification works.
- 5 <http://www.mude.pt/exposicoes/passadas> (accessed 09.01.2018)
- 6 More data about the project on http://www.mude.pt/public/uploads/mude/P%20Arq%20MUDE_Ingles.pdf (accessed 09.01.2018)

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BIOGRAPHY

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Session 07 AUTHENTICITY AND REUSE

Session Chair: Louise Noelle Gras (Mexico)



The 13th Docomomo International Conference in Seoul, in 2014, updated the Eindhoven founding statement, 1990, adding to the DOcumentation and COnservation of buildings, sites and neighbourhoods of the MOdern MOvement, the important idea of Reuse. Following this proposal, the 14th International Conference in Lisbon, 2016, took place under the theme *Adaptive Reuse. The Modern Movement Towards the Future*, in order to further research and analyse this idea. On the other hand, the ISC-Registers (International Scientific Committee of Registers) decided that the moment had arrived to rethink the future of its endeavours, adding to the “Do” of Documentation the “Co” of Conservation, proposing a new Fiche on Best Conservation Practices.

The Eindhoven-Seoul statement, declared that amongst its aims, the organization should “Promote the conservation and (re)use of buildings and sites of the Modern Movement”, and to “Foster and disseminate the development of appropriate techniques and methods of conservation and adaptive (re) use”. In addition, various papers and presentations in Lisbon pointed at the quest for the correct approach to “Reuse”, bringing forth the notion of authenticity. It has to be added that in this sense the notion of authenticity, as indicated in The Nara Document on Authenticity (ICOMOS, 1994), will be the notion to take into account; with this document in mind, we have to underline that “The essential contribution made by the consideration of authenticity in conservation practice is to clarify and illuminate the collective memory of humanity”; and “The understanding of authenticity plays a fundamental role in all scientific studies of the cultural heritage, in conservation and restoration planning” adding that “Aspects of the sources (of authenticity) may include form and design, materials and substance, use and function, traditions and techniques, location and setting, and spirit and feeling, and other internal and external factors.”

This session aims to reflect on both ideas, authenticity and reuse, looking into reuse within the central idea of appropriate restoration and conservation. For this endeavour we have

four practical cases from different parts of the world, that will deepen our knowledge and insight into these matters. It is possible to say that in some cases we have a felicitous intervention, but the supplementary notion of the reuse combines particular results, that enter the fields of the cultural and the spiritual, fundamental for the final result. Let’s hope, that the reflexion of these four examples, can be amplified for the advantage of other applications in the future.

Within the suggestions of this 15th Conference, *Metamorphosis. The continuity of change*, we find that: “During the process of restoration or adaptive reuse, the paradigmatic challenge is to adapt the buildings concerned to different functions, users, lifestyles, environmental and safety standards.” Various questions derive from these proposals, like the decision on what to preserve or how, taking into account new technologies facing the authentic and the cultural processes; furthermore, the plans of reuse, that deal with exteriors and interiors, also touch upon the genuine, to arrive to the last major question: “Which are the most informative examples of modern architectural heritage restoration or adaptive reuse, and their successes and failures?” That these papers will attempt to answer.

Joana Gouveia Alves ponders on the “Patterns of Conversion in Obsolete Cinema Theatres”, since these buildings were a key entertainment and cultural activity in the twentieth century, but the new technologies have dismissed their primordial position in the architecture and everyday life of last century. These constructions, that had an urban and social situation are now being reused, with various degrees of success; the presentation will analyse some interesting cases in different parts of Europe.

“The Legacies of the Agricultural Production Cooperatives (LPG) from the former German Democratic Republic. Surviving as Monuments without a Function?”, is an ongoing research by Vittoria Capresi with students of the TUBerlin Habitat-Unit; she proposes to discuss the role of LPG as heritage, introducing a historical perspective and a specific ana-

lysis of the typologies and the materials used. In this sense her conclusions are open, looking for a diverse sustainable reuse of such buildings.

A single building dominates the efforts of Vanessa Fernandez and Catherine Blain in "Continuity through change: the renovation of the Maison des Sciences de l'Homme building in Paris", created with the impulse of Fernand Braudel and the architectural design of Marcel Lods with Paul Depont and Henri Beauclair. Recently, the building was restored by François Chatillon with Michel Rémon, following an official decision to preserve the facades but restructuring and modifying the interiors. Here the debated relates to the technical innovations that characterized the building and should part of the values to be preserved, as the original metal structure.

Moving to America, specifically Venezuela, Hannia Gomez presents "Mutatis mutandis: North American Architects in Caracas in the Twentieth Century", dealing with three buildings from the fifties, designed by architects from the US. These important structures, that represent a time of economic prosperity, in recent times, have suffered a change of use with the actual political situation. The quality of the constructions and their adaptability will be discussed under the concern of authenticity.

Reuse is a growing reality present in every day architectural practice and it should be an acceptable procedure; nevertheless, the interventions to change the function of a building should take into account several aspects. The actual requirements of the legal energy efficiency directives, and the up-to-date technologies and processes of material selection to improve life in modern buildings, need to be taken into consideration. But there is also the concern to address the question of the new technologies and to assess the results, in relation to authenticity, both in the material and the spiritual realms. These four case studies, will bring answers, but probably open more questions in this ongoing debate.

BIOGRAPHY

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PATTERNS OF CONVERSION IN OBSOLETE CINEMA THEATRES

Joana Gouveia Alves (Portugal)

ABSTRACT

As early as its invention, cinema was seen as a curiosity which would last for a limited period of time. People who missed a film at the cinema would never have the chance to see it again. But with the development of video and other reproducing techniques, Cinema lost its audience, not only because of direct competition but also because it was no longer a unique event.

In order to fight cinema closures, innovative technical equipment was launched on the market to offer cinematographic experiences that people could not enjoy at home. Also, the auditoriums were subdivided in smaller ones to offer more screenings and films.

The twenty-first century generation inherited hundreds of decaying and bankrupt cinemas which were hard to maintain and consisted of attractive properties for real-estate developers. This paper focuses on the changes in some iconic examples of cinema theatres in Europe, built until the Second World War. How obsolete cinema theatres are used now? How some of the new uses allow for the preservation of the original building in both tangible and intangible features?

The research is based on a collection of articles featuring about 300 cinemas in selected architectural periodicals. Functional change has been frequently repeated so it may be possible to establish what can be called "conversion patterns". The most prominent new functions for cinema theatres are discussed. For example, the conversion into places of worship, museums, stores, night clubs or venues for live performances such as theatre and concert halls.

INTRODUCTION

Cinema was a key entertainment and cultural activity in the history of the twentieth century with a significant role in the education of unschooled people. Picture Palaces were places of fantasy, the "architectures of pleasure" according to Morton Shand,¹ and played a very important role against the background of two World Wars and many harsh economic periods. But despite the importance of cinema in terms of the education, information

and leisure pursuits of the masses, generally speaking, purpose-built cinemas had a life cycle of about 40-80 years, which is very short in comparison to other building-types such as classical theatres. Apart from some nostalgic appeals denouncing the decay of modernist cinema theatres, there has been very little scientific architectural research into cinema conversions.²

This paper focus only on cinemas built in Europe up to 1939 because, after the Second World War, cinema building changed dramatically³ due to the scarcity of construction materials and the spread of television. In a previous research, the journals *Architectural Review*, *The Builder*, *L'Architecture d'Aujourd'hui*, *La Construction Moderne*, *Deutsche Bauzeitung* and *Casabella* released between 1910-1939 were systematically analysed. All the articles featuring cinemas or related auditoriums were listed, read and analysed. In a total of 300 cinema theatres 60% are in the United Kingdom, about 20% in France, 10% in Germany and the rest in other European countries. The British journals, in particular *The Builder*, frequently featured cinemas due to the innovative construction procedures what justifies the high percentage of British examples. Some projects were published in a number of journals in different countries, which made them widely known in Europe and probably they served as the model for other cinemas.⁴ Even taking all this into consideration as well as some constraints in finding information, it was possible to find sufficient data to observe trends in conversions or, in other words, to be able to affirm that different cinemas share similar stories regarding their conversion and present-day functions in the city.

The first conclusion was that above 40% of the cinemas are not extant. Most of them were demolished recently, some others were bombed during the war or seldom they were demolished after a fire or other accident. Otherwise, about 10% are still dedicated to cinema, most of them by dividing the big auditorium in smaller ones or by combining shops and multiplexes. So about half of the sample of great cinema theatres, featured in architectural periodicals, changed function or was re-used. Apart from the nostalgic perspective, when a building-type is

frequently converted to the same new function this does not happen by chance but because it can be easily adapted to the new use. The identification of the most common destinies of the cinemas are related to the characteristics of the building-type such as: the auditoriums do not have windows or natural light; cinemas usually have larger areas than other commercial facilities; absence of intermediary load-bearing supports, which enables the space to be divided into sections as required; they are already provided with emergency exits, making it suitable for large gatherings of people; façades are

well suited for advertising purposes; in most cases the floor is not flat and consists of a concrete slab, leading to problems in levelling the floor, in particular when there are lateral doors on different levels. All these characteristics influence the conversion procedure and make these spaces more suitable for some functions than others. In this way, it might be possible to identify trends or conversion patterns, which translate a correspondence between the original cinema features and the new use features. Excluding the cases when the cinema was kept in function - as a cinema or multiplex - five main con-

Fig. 1 Photos of the demolition of the Universum cinema in 1982 (top) and ticket booth today (down left), ticket booth designed by E. Mendelsohn (down right). (Sources: Documents of the demolition at the Schaubühne in Berlin, booth today by JGA, 2013, both as it was in Boerger, 1993, p. 111)



version patterns have been identified in relation to the current function: cultural purposes (theatres, concert halls, multipurpose venues); leisure (nightclubs or other entertainment facilities); stores; places of worship; *museumification*.

CULTURE

Going back to live theatre and other unique performances

The return of the theatre to spaces that once belonged to the cinema may be seen as ironic, as cinema replaced theatre in a number of venues in the early 20th Century. However, when everything seems to converge on long distance communication, co-presence is valued and managed more than ever.⁵ People come out of the cinema “in hypnosis” which, according to Barthes, is also due to the atmosphere and the darkness: we lose awareness and cross into the universe of the film, suspending disbelief.⁶ Contrarily, in the theatre there is interaction between the audience and the actors and constant awareness of both. Indeed, television, video and cinema belong to the universe of reproducibility whereas every live performance is unique and, for this reason, highly valued.

In the cinemas, audiences interested in watching the news simply disappeared as television broadcasted information more quickly. Losing its importance as a form of *mass media*, cinema theatres became the place for entertainment and art. The ones already prepared for live performances were able to resist closure, since they were flexible enough to offer a wide variety of events.

Neighbourhood and first-run cinemas were usually designed and equipped with flies, stage lighting, dressing rooms, an orchestra pit, etc. Moreover, acoustical solutions aimed for compatibility between live sound and the “talkies”, through the use of absorbent materials. This kind of intervention may not be considered a conversion, but an adaptation. Usually it conserves the existing building: façades are preserved, the auditorium's proportions and finishes could remain identical to the original. The foyers, auditorium and bars are kept even if they are refurbished and re-decorated in some cases. The stage is enlarged and the equipment updated.

Some of them became specialist theatres featuring cabaret (e.g. the *Lido* ancient *Normandie*, Paris, 1937), black light theatre (e.g. the *Broadway*, Prague, 1938), or musicals (e.g. the *Apollo Victoria*, London, 1930). These venues have large enough audiences to run daily shows. Nevertheless, tourists are a significant part of their target public.

Generally speaking it can be considered a conservative conversion-type, though there are exceptions such as the *Univer-*

*sum*⁷ (Fig. 1, Erich Mendelsohn, Berlin, 1928). Jürgen Sawade was in charge of converting the *Universum* into the *Schaubühne* and to do so he demolished the entire building with the exception of the rounded facade with a fin light.⁸

A theatre may organize a film session or a show that combines both what makes the intervention reversible. Unlike other functions, this new function ensures the continuity of the cinema as a space for culture and entertainment.

LEISURE

Cheap and ever-changing conversions into night clubs, discos and casinos

The conversion of cinemas into places for night-time entertainment is probably connected to the fact that they had already a “festive” memory what made them attractive as new night entertainment venues. Cinemas were associated with places of desire, in the central areas of the city where the neon lighting appealed to a cosmopolitan night-life.

Certain architectural features favour the conversion of cinemas into night-time activities as they do not require natural light and were provided with: ventilation, heating shafts, emergency exits and evacuation routes, and a number of points from which it was possible to visually control the entire space, such as entrances with pay boxes, the projection booth or upper peripheral aisles. These visual control points are required either because of security reasons or to increase visual contact and permeability of the spaces.

In the United Kingdom, an interesting coincidence helped the conversion of cinemas into places for gambling, in particular, bingo. The establishment of television coincided with the passing of the *Gaming and Betting Act in 1960*.⁹ Throughout Europe, a great part of cinemas has been converted into night-clubs or discos. In general, they keep the balcony as a private VIP room or leave it as a space that provides a bird's-eye-view of the main dance floor. Sometimes the stage is left for DJ and VJ performances or concerts, safeguarding the stage-audience relationship. All the *décor* is redone from time to time and the structure of the place may only occasionally suggest that there once used to be an auditorium.

The conversion of cinema into night-clubs, casinos, bingos and other amusement activities, results in the destruction of the existing. For example, the *CINEAC* (Fig. 2, Jan Duiker, Amsterdam, 1934), has statutory protection and the façade with lettering has been preserved, while the interior was completely destroyed to become the *Merkur* Casino. The simplicity of the original Duiker design was replaced by an aggressive



Fig. 2 J. Duiker. CINEAC, Amsterdam, 1934. Facade at night and during the day. (Source: <http://www.merkur-casino.nl/#fotos> (20/062014))

consumption-inducing environment, a collage of fake stone, carpets and golden surfaces.

Night clubs are short-lived trends, they have to be regularly renovated in order to keep seducing clients, so the buildings became supports for temporary décors. To sum up, the function of the place as an entertainment venue is kept at a high cost: demolition of the auditorium and “make-up” alterations.

RELIGION

The problem of programmatic decorum in the conversion of cinemas into places of worship

The expansion of Neo-Pentecostal churches has been remarkable in recent years being the UCKG (United church of Kingdom of God) one of the best-known and rapidly expanding examples. The conversion of cinemas into churches has the advantage of preserving the auditorium and, possibly, its finishes. In the case of the *Astoria* (E. A. Stone. *Astoria*, Finsbury Park, London, 1930) this has resulted in a perfectly well conserved atmospheric cinema. The building can still therefore be used as a cinema and although this rarely happens at the moment, it may be a possibility for the future. Moreover, the case of the *Forum* (W. H. Watkins and E. C. Morgan Willmott, Bath, 1934), today the Bath City Church demonstrates that it is possible to organise cultural events in these churches if the institution in charge permits it. This type of conversion is therefore reversible.

The conversion of a cinema into a place of worship is one of the most advantageous options from the point of view of material conservation. The auditorium is preserved, as well as the stage and some of the buildings may be protected by statutory listing which enforces careful maintenance of the building.

However, the character of the building is completely lost: the darkness of the film theatre is associated with mystery, voyeurism, fetishism and the profane, while the places of worship are places of clarity and redemption. In religious ceremonies, the lights remain on and are bright. Light has been an essential element in religious architecture. Neo-Pentecostal churches work with artificial light: the entire auditorium can be seen and the décor and all the elements in the room are visible. Believers find themselves watching each other, since the reactions of people in churches are part of the religious ritual. Thus, while fiction films explored the interest in the forbidden, dark side and figures of fantasy, lust and vanity, the same premises are now dedicated to exorcizing demons, condemning vanity and lust, and proclaiming the love of Christ. In conclusion, even if this type of intervention favours material authenticity, it is not at all favourable in terms of conceptual authenticity and the preservation of intangible heritage connected to the place.¹⁰

RETAIL SPACE

Taking advantage of appealing facades

A significant number of the old cinemas were converted into stores. Cinemas are attractive properties for large retailers because of their generous surfaces and central locations. This type of conversion takes advantage of the structure of the building but implies the removal of all furniture and decorations. The substantial space and the wide view of the shop enabling a certain area or section to be located are also advantageous. The cinema entrance was usually a space protected by a canopy with a recess in the façade and was slightly elevated, which again are elements perfectly suited to the requirements of a store. In general, the façades are well-preserved, eventual-

ly because some of them are protected by statutory listing. A number of cinemas became fashion stores such as Zara as the *Métropole* in Brussels, (Blomme, 1933) or HM as *Avenida* in Madrid (Salcedo, Mascarua, 1927). No cultural association, cinephile group or theatre company can outbid these major corporations. As the number of admissions was decreasing, cinemas owners (usually private) were put under great pressure by the speculators to sell. Consequently, it was very difficult to counter the trend of converting spaces dedicated to cinema into commercial surfaces.

The conversion into a store implies substantial destruction and, from the point of view of the conservation, it is worthless. It is the most destructive of the conversion types analysed, since not only is the materiality of the building lost but also the character of a public space where people gathered for cultural and social activities.

MUSEUMIFICATION

The fragility of film as a material and the consequences of innovation have led to the need to archive and conserve film from the early days. National institutions for the conservation of film emerged as Film institutes and *cinemathèques*, dedicated not only to preserve films but also the possibility of screening them using the original techniques, in different formats and equipment, as the original work of art. In recent years, the association of film archives with the safeguard of cinema theatres has become part of the strategy for preserving film. So cinema-theatres became parts or extensions of museums.

At the same time, we are witnessing a process of cinema *museumification*, a concept that was defined as the process that gives a urban scape or building the character of heritage, as a place to be preserved by implicitly changing its function, which may or may not have official recognition.¹¹ *Museumifi-*

Fig. 3 A. Bluysen and J. Ebersson. Rex, Paris, 1932. New facilities at the REX: poster advertising visit to the Rex and interactive exhibition and entrance the night club (© Joana Gouveia Alves, 2011)



cation is seen as freezing a place as it was at a specific time, as well as recreating and reconstructing *ambiances* and episodes that happened there, e.g. Venice is frequently given as an example. *Museumification* eventually changes a place by making it a tourist commodity and disregarding the way the locals used to inhabit it.

The initiative to conserve buildings came also from private investors and not only from public institutes. When it opened, the Rex (Fig. 3, A. Bluysen and J. Eberson, Paris, 1932) was neither one of the main nor largest cinemas in Europe but is now a significant example due to its state of conservation. "Les Étoiles du Rex" exhibition (Rex Studios) and the Guided Tour of "Le Grand Rex" had over one million visitors in the period 1998-2010, according to its website.¹² The historical accuracy is dubious and the language exaggerated.¹³ However, conservation may lead to highly destructive processes, as Françoise Choay concluded in *The invention of the historic monument*.¹⁴ The *museumification* of cinemas such as the Rex has transformed them into places of interest, reconstructing replicas of past events and offering interactive experiences to visitors which present the threat of offering new inventions instead of safeguarding the original.

The popular culture now embraces the present-day tourism industry, making the places where films were shot and screened local curiosities. *Museumification* freezes the place as it was at a particular moment and while doing this it actually shifts its function and is, in fact, a re-invention of the place, a set.

CONCLUSION

An inestimable number of cinemas were demolished in order to make way for new buildings. In our sample it represented 40%. A great part of cinemas belonged to private companies. Statutory listing was not effective in the safeguard of this heritage facilities as most of them were converted, regardless of the originality of its interiors. Facades were in general well preserved and some entrance halls. The characteristics of cinema architecture made these buildings attractive for particular investors in retail, leisure and tourism. From all the described conversion patterns the conversion into theatre, church and museum can be categorized into reversible situations. Contrarily, the conversion into stores or nightclubs is irreversible, (only the façades are preserved) and should be discouraged. The establishment of a methodology of analysis based of patterns of conversion could be the subject for further investigation, a tool to compare and design.

NOTES

- 1 Shand, P. Morton. *Modern Theatres and Cinemas, The Architecture of Pleasure*. London: B. T. Batsford, 1930.
- 2 Francis La Roche described new uses of the old cinema theatres and the in the American context there is the work of Joseph M. Valerio and Daniel Friedman, *Movie Palaces Renaissance and Reuse*, ed. Nancy Morison Ambler. New York: Educational Facilities Laboratories Division, 1982.
- 3 Cinemas were incorporated into vacant spaces in cities, in the basements and in the interior of urban blocks, while before a great part were free-standing, purpose-built theatres.
- 4 For detailed information about the table with the entire list of cinemas and the corresponding articles please check Appendix 3, in Alves, Joana Gouveia. *Permanence and Persistence. Conception, Construction and conversion of Modern Cinema Theatres [1910-1939]*. Lausanne, Lisbon: EPFL-IST PhD Thesis, 2014.
- 5 Mitchel, William. *City of Bits: Space, Place, and the Infobahn*. Massachusetts: MIT Press, 1996.
- 6 Barthes, Roland. "En Sortant Du Cinéma." *Communications* no. 23 (1975): 104-107. [doi:10.3406/comm.1975.1353.]
- 7 Boeger, Peter. *Architektur der Lichtspieltheater in Berlin, Bauten und Projekte 1919-1930*. Berlin: Verlag Willmuth Arenhöven, 1993: 111.
- 8 Jürgen Sawade, "Réaménagement Du Cinéma 'Universum' En Théâtre Pour La Schaubühne, Berlin," *L'Architecture d'Aujourd'hui* no. 228 (1983), pp. 50-57.
- 9 "The Betting and Gaming Act, 1960". *The Journal of Criminal Law*, Vol 25, Issue 2, pp. 149 - 155. [First Published April 1, 1961]
- 10 Gouveia Alves, Joana. "Seduction and fantasy in the conversion of cinema theatres". *Proceedings of the 14th International Docomomo Conference - Adaptive Reuse: The Modern Movement Towards the Future*. 2016.
- 11 Dellios, Paulette (2002) "The museumification of the village: cultural subversion in the 21st Century," *Culture Mandala: The Bulletin of the Centre for East-West Cultural and Economic Studies*: Vol. 5: Iss. 1, Article 4. Available at: <http://epublications.bond.edu.au/cm/vol5/iss1/4> [accessed 31-01-2018]
- 12 Le Grand Rex Website. Available at <http://www.legrandrex.com/home.php> [accessed 31-01-2018]
- 13 It claims to be the biggest cinema theatre in Europe, which might be true nowadays but not in the past compared to the Astoria Brixton and Astoria Finsbury Park in London with higher seating capacities. The auditorium is hardly ever used as a cinema but as a theatre and concert hall.
- 14 Choay, Françoise. *A Alegoria Do Património* [1992 1st French edition]. Lisboa: Edições 70, 2000.

BIOGRAPHY

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THE LEGACIES OF THE AGRICULTURAL PRODUCTION COOPERATIVES (LPG) OF THE FORMER GERMAN DEMOCRATIC REPUBLIC. SURVIVING AS MONUMENTS WITHOUT A FUNCTION?¹

Vittoria Capresi (Italy, Germany)

ABSTRACT

How many good ideas are needed to rehabilitate unused buildings? How many positively-intentioned investors are necessary to reactivate spaces with no clearly visible potentials? What if the buildings have an unpleasant political past? The buildings of the LPGs (Agricultural Production Cooperatives) of the former German Democratic Republic stand nowadays in the landscape as silent memorials to a failed economic utopia.

This paper focuses on presenting the former production buildings of the LPGs and discusses their role as heritage and their uncertain future. After a short introduction of the historical moment and a presentation of the reasons why they were built, the building typologies will be briefly introduced. The paper will conclude with a presentation of some of the ideas developed after a semester of research and work with bachelor architecture students of the Design Studio at the Technical University of Berlin.²

The conclusion is open: does it make sense to maintain and reuse these buildings?

1. THE ODERBRUCH: FROM MARSHES TO LPG

From an analysis of the state of the art in research into architecture and town planning during the GDR era it emerges that while much interest has been devoted to the major towns and the living typologies in the cities, the rural areas remain largely understudied. Several researches have been carried out dedicated to ethnographical aspects related to the transition from a Socialist to a Capitalist system, as well as on general historical aspects, but little research has been done in the areas of town planning, architectural impact and the legacies of the cooperative system in rural areas.³

It is also interesting to point out that the legacies of the GDR are still present in the countryside, and that in many cases questions of land ownership are still crucial, also in relation to the phenomenon of land grabbing by many international and local investors which occurred in the post-Socialist era.⁴

In this sense we can affirm that the Agricultural Production Cooperatives live on in the present, and not only in terms of buildings.

The area focus of this research is the south Oderbruch region in Brandenburg, the plane area on the border with Poland along the River Oder. This region was originally marshland but drainage was carried out in the 18th century, at the time of Friedrich II, the Great, by a team of experts headed by the water engineer, Vom Haerlem.⁵ Around 8,000 migrants moved in to populate the region, settling in 40 new settlements. The farmers worked on the commons, plots scattered around the settlements. In order to improve the situation of the farmers and grant them more power, as well as to foster the economic development of the region, at the end of the 18th century all single proprietries were combined and redistributed in lots. On each new parcel of land a "Loosegehöft", a farm for several families, was built.

The next big change in land administration and land policy happened at the end of the Second World War. Because of its position on the front line during the war, almost the entire population of Oderbruch was forced to flee the area, which underwent massive bombing and destruction.

What happened in Oderbruch after the war reflects the story of the whole of the German Democratic Republic.

Germany was devastated by the Second World War and needed a quick solution to bring about economic recovery. In the Soviet-occupied areas, the *Bodenreform* (Agrarian Land Reform) was initiated in 1945. Under the motto: "The land of noblemen belongs in the hands of farmers" any property bigger than 100 hectares and belonging to major landowners or former Nazi affiliates was expropriated, with the biggest part of the land being handed over to the civil society. The land was subdivided into plots of around 10 hectares and distributed to single families, enabling them to become self sufficient by cultivating their own crops.⁶

This step was fundamental both for post-war recovery and to support the reintroduction of German refugee families re-

turning to Germany from the former German Reich and from Soviet-occupied areas.

This process of reintroduction was accompanied by an intensive building programme and many single farmhouses were built: the state provided a variety of centrally-planned typologies, which incorporated stalls for livestock and a living area for the family in one building. Due to a lack of construction materials, locally available materials were mainly used, including bricks and stones and wood salvaged from ruined structures.⁷ Within five years, the Land Reform had “fundamentally transformed the regional agricultural structure of eastern Germany, particularly in the two northern GDR

Länder (provinces) of Mecklenburg and Brandenburg, where *Junker* estates had predominated. Huge estates and large-scale family farms gave way to small family farms.”⁸

The *Bodenreform* aimed on the one hand at facilitating economic recovery by quickly providing a large number of families with the possibility to directly produce their own food. On the other hand, this policy has been interpreted by some scholars as a necessary step towards the planned collectivisation of properties and the agrarian sector as a whole.⁹ The plots of land were in fact too small to provide subsistence, so that people soon started sharing their efforts and manpower, machines and animals.

Figure 1: Building for preparing chemical fertilisers, Gorgast (South Oderbruch). © MODSCAPES, 2017.



Vittoria Capresi The Legacies of the Agricultural Production Cooperatives (LPG) of the former German Democratic Republic

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The *Landwirtschaftliche Produktionsgenossenschaften*, Agricultural Production Cooperatives (LPGs) were first established in 1952. An LPG was a *cooperative*: this meant that people were encouraged to pool their resources in order to share them with the other members, while still remaining the legal owner of these resources. Initially people were simply encouraged to share their land, tools and animals, but from 1960 this was made mandatory: people were forced to “share” everything within the LPGs, so becoming part of the cooperative. In this way formerly self-sufficient farmers were turned into aggregates of employers in the agrarian production process, with regular working hours, holidays and social security. A new lifestyle was also introduced to the rural population,

with people being offered the use facilities provided by the political party. Multi-storey houses were built, and every small town had a cinema, a kindergarten and shopping facilities, as well as a meeting hall for festivities related to the Communist party.¹⁰

2. HOW WAS PRODUCTION ORGANISED?

In East Germany the overall reorganisation of the rural areas was the responsibility of the *Territorialplanung*, Territorial Planning. Territorial planning was based on a theoretical ideology whose aim was to reshape the territory so as to generate the perfect Socialist way of living. This reshaping of the country was meant to optimise productivity and land resources

Figure 2: Heating unit, Gorgast (South Oderbruch). © MODSCAPES, 2018.





Figure 3: Glasshouses, between Gorgast and Golzow (South Oderbruch). © MODSCAPES, 2017.

throughout the GDR, transforming the entire territory and creating a Socialist state without disparities.¹¹ The plan was that this objective would be reached in three main steps: 1) the involvement of all demographic and natural resources in the national economy, 2) the elimination of differences in territorial development, and 3) an increase in the standard of living.

On one hand, territorial planning aimed at the economic reorganisation of the GDR, but on the other hand the main task was the “education” of society in the direction of Socialism, by providing everyone with a good standard of living, guaranteeing that their needs would be met, and so avoiding mass migrations to big cities or an uneven distribution of the people within the territory.

In order to reshape reality by reorganising production and consumption on the territory, urban nodes were considered as connected groups, in the form of a *Network*.

The fertile Oderbruch region was mainly agricultural land and the decision was made to build a network of towns there whose economies were based on agriculture. Each network was to be composed of a primary town, plus secondary and tertiary urban nodes. In the study area Golzow was selected as the main node, with Zechin, Kietz and Manschnow designated as secondary villages and Buschdorf, Friedrichsaue, Genschmar, Gorgast, Neu-Bleyen, Alt-Bleyen and Neumanschnow on the tertiary level.

In this ideal system each town, or settlement, worked only in direct relation to the others, with each network functioning as a self-sufficient unit.¹²

This subdivision was in fact highly theoretical, and in reality things were very different. The LPG-Golzow was much bigger than the ideal network, and involved a bigger number of smaller villages in the south. Moreover, the structure changed

over time, as did the specialisations of the individual production units.¹³ Still, it is worth pointing out that the networking of crops and villages was absolutely fundamental for the rural economy in the GDR.

3. HOW WAS ALL THIS TRANSLATED INTO URBAN DESIGN?

The LPG-Golzow was the nominal structure under whose administration were a number of units of production with their own functional buildings, such as pigstyes and barns, glass-houses and chicken factories.

The town planning incorporated these buildings into the urban design not only in a functional way, but also as regards

their location, this being "a political opportunity for the Socialist redesigning of the towns"¹⁴. In practical terms this involved literally inserting the new production buildings into the historical core of the villages. This procedure was also perfectly in line with the theoretical idea of saving time and increasing productivity by reducing the distance between living and working areas.

Moreover, many of the LPG industrial buildings made use of 18th and 19th century structures which had survived the war, which meant that the new LPG buildings were very much integrated with the pre-existing architecture of the villages.

In the case of Gorgast, for example, the relationship between the LPG and the core of the village is quite radical and para-

Figure 4: Map of the LPG production buildings in the South Oderbruch. © Irene Feria, Alejandro Suarez Taisma, Aurel Ndoni, Lydia Ymer, Linh Le; TUB Habitat Unit, 2017.





Figure 5: Stables, Golzow (South Oderbruch). © MODSCAPES, 2017.

digmatic of this pragmatic urban planning approach. The LPG was built reusing an older structure dating from the 19th century which had connections to the former castle and the farmland of a pre-war landowner, so that new structures from the GDR era intersect with older buildings, directly in the heart of the settlement.

4. WHICH ARCHITECTURE AND TYPOLOGIES FOR THE LPG?

The history of LPG building typologies is quite complex, because of the many manuals and publications which were produced at the beginning of the GDR era. The principal aim was to centrally produce standard typologies for the whole of the GDR and to provide instructions on how they should be built.

In 1953 the manual of the *Produktionsgenossenschaften wollen bauen* (Want to Build Production Cooperative) was the first attempt to catalogue building typologies.¹⁵ The drawings published were collected from the *Deutsche Bauakademie*, the central institution in Berlin for buildings and architecture, and the *Russian Handbuch für das ländliche Bauwesen*, published in Moscow in 1952. The collected typologies are quite sophisticated, mainly built of wood, though in some cases of brick, and seem to be far from any considerations of industrial prefabrication and standardisation.

On the other hand, the buildings we surveyed in our case study area seem not to strictly follow these indications and schemes, but the forms used for the same function are in fact similar, and are repeated throughout the area.¹⁶

After 1989 and the end of the GDR, around half of the 800 LPGs in the Brandenburg region continued operating in the free market, as GmbHs (companies with limited liability) or as registered cooperative societies [data 2012].¹⁷ Today, the situation in Oderbruch has dramatically changed, with the land now owned or leased by a few big companies which produce goods on a vast scale.¹⁸ The former LPG buildings scattered throughout the area are now obsolete for current needs and are mainly empty and abandoned. They are big, out-of-scale constructions that provide tangible memories of a past time but have no evident future perspectives.

5. WHAT ABOUT THE FUTURE?

What is the future of such buildings? Can we consider them as heritage? And, if so, for whom? Do people really want to remember the GDR era? How can we talk about heritage and avoid nostalgia or the so-called *ost-algia*?

Will these buildings survive as emotional indicators in the landscape?

If we consider their architectural or town planning qualities, we can easily arrive at the conclusion that they are no more

than big containers, built with diverse construction techniques, scattered over the landscape and of no particular interest.

Still, it is exactly their distribution and quantity, the fact that they are repeated all over the area, and their silent presence, which is so impressive. And, of course, the era and ideology that they represent.

Should we maybe consider them as modern experiments of GDR territorial planning ideology?

Considering that most of them no longer have a function, should we think about ways of reusing them in the future?

In spring 2017 we researched and discussed these topics with a group of bachelor students at the Technical University of

Berlin who participated in the “LPG Revisited. Transforming Village Landscape in Brandenburg” design studio. The aim was to explore and analyse the areas around Manschnow and Golzow, elaborating visions for the abandoned LPG buildings in the form of catalysts for the rural future. One interesting result of the studio was the development of content and space allocation through analyses carried out by the teams of students. Another intriguing aspect was related to the enclosed space these buildings offer. The LPG structures could provide space for activities not otherwise catered for in Berlin. The most striking design ideas included: a new university campus, shared living facilities for elderly people, workshops for building furniture and experimenting with materials, and

Figure 6: Stables, Golzow (South Oderbruch). © MODSCAPES, 2017.



a compost station to assist the biological production of fruit and vegetable.¹⁹

Could these ideas be used to prioritise the buildings' use as *white boxes*, completely detaching them from their symbolic messages and original functions?

This research is part of the international EU-funded MODSCAPES project – Modernist Reinvention of the Rural Landscape (2016–2019) www.modscapes.eu

NOTES

1 This paper is a first attempt to resumé data emerging from research started in 2016 within the frame of the EU-financed MODSCAPES project – Modernist Reinvention of the Rural Landscape. I thank Christoph Muth and Emily Bereskin for jointly working on this project.

2 The “LPG Revisited” design studio took place at the Habitat Unit, Chair of International Urbanism and Design in the summer semester 2017, under the supervision of Aine Ryan and Vittoria Capresi, accessed on June 15, 2018 <http://habitat-unit.de/en/teaching/ss-2017-lpg/>

3 A very interesting overall analysis is provided by the PhD research of Barbara Schier, which was started and concluded shortly after the end of the GDR: Barbara Schier, *Alltagsleben im 'sozialistischen Dorf': Merxleben und seine LPG im Spannungsfeld der SED-Agrarpolitik 1945–1990*, Münster, Waxmann, 2001.

4 Related to the issue of property and borders, a *Flurbereinigungsprozess* is still ongoing in the study area. This process, which aims at ameliorating the parcels of lands for automatized production, is not largely accepted by the population and seems to generate a general mistrust. For more information about the process, aims and phases, see: <https://mlul.brandenburg.de/cms/detail.php/bb1.c.215804.de> accessed on June 15, 2018.

5 Erwin Nippert, *Das Oderbruch: zur Geschichte einer deutschen Landschaft*, Berlin, Brandenburgisches Verlagshaus, 1995, 91–96.

6 For a detailed account of agrarian reform in the GDR after the Second World War see: Schöne and Landeszentrale für politische Bildung Thüringen, 10–18. For the full text of the law dated 10th September 1945 relating to land reform in Thüringen and a detailed chronological reconstruction of laws and data, see: Katrin Rohnstock, ed., *LPG: Zwangskollektivierung Oder Zukunftsmodell? Bernd Büttner, Ernst Junghans, Hans Müller*, Rohnstock Biografien, Berlin, edition berolina, 2015, 23–28.

7 For a critical analysis of the period after the war see: Maria Hetzer, Elisabeth Meyer-Renschhausen, and Victoria Müller, *Transitzone Dorf ein Ort zwischen Bodenreform und Kollektivierung*, 2015.

8 Ingolf Vogeler, 'State Hegemony in Transforming the Rural Landscapes of Eastern Germany: 1945–1994', *Annals of the Association of American Geographers* 86, no. 3 (1996): 434.

9 Vogeler, 434–35. Schöne and Landeszentrale für politische Bildung Thüringen, *Die Landwirtschaft der DDR 1945–1990*, 18.

10 Parallel to the LPGs were the VEGs: *Volkseigene Güter* (state farms), where the land was state owned. It is still not possible to identify differences in the typologies of production buildings built for LPGs and VEGs.

11 Rolf Bönisch, *Territorialplanung*, 3., Berlin: Verlag Die Wirtschaft, 1982. For a detailed account of the political origins of the theories and overall planning apparatus in the GDR see the article by Kind “Territorialentwicklung

und Territorialplanung in der DDR: Ergebnisse und Auswirkungen auf die Raumstruktur Deutschlands”, 17–103 and the highly critical article by Grundmann “Territorialplanung in der DDR: Indikatoren zur Analyse regionaler Disparitäten – Die sozial-räumliche Struktur der DDR in den 80er Jahren”, 105–146 in: Annette Becker, *Regionale Strukturen im Wandel*, Opladen: Leske + Budrich, 1997, <https://link.springer.com/book/10.1007/978-3-322-97367-2>.

12 Karl-Heinz Kalisch, *Zur Planungsmethodik ländlicher Gebiete: dargestellt am Beispiel des MTS-Bereiches (RTS) Golzow*, Berlin: Dt. Landwirtschaftsverl., 1961, 36.

13 More research in this direction needs to be done.

14 Kalisch, *Zur Planungsmethodik ländlicher Gebiete*, 108.

15 *Landwirtschaftliche Produktionsgenossenschaften wollen bauen*, Berlin, Deutscher Bauernverl., 1953.

16 The buildings were built by the local “Baubrigade”, applying formal directions probably issued by the Kreis Seelow, the next political administration level. The processes involved in the planning and realisation of the buildings are still not clear, and the variety of materials used is interesting: prefabricated concrete plates, bricks, bricks made out of wood and concrete etc. More research in this direction is needed.

17 Walter Bayer, ‘Gutachten: Die Umwandlung der LPGen im Land Brandenburg’, 2012.

18 The extensive cultivation of canola and maize for the production of energy now marks the landscape. More precise data on this are due to be collected.

19 A big thank-you to the participants: Alejandro Suarez Taisma, Charlotte Herold, Judith Larsen, Irene Fera, Bruno Langle, Elisa Mattioli Lattanzi, Chiara Saluzzo, Nicole Braun, Nico Breitmaier, Lilli Gaigal, Leon Klaffen, Frederick Perchulla, Arwed Mohrmann, Linh Le, Aristotelis Antoniou, Aurel Ndoni, Jonathan Peters, Roberto Marroquin, Dieu Thanh Do, Lydia Yime.

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BIOGRAPHY

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CONTINUITY THROUGH CHANGE: THE RENOVATION OF THE MAISON DES SCIENCES DE L'HOMME BUILDING IN PARIS

Vanessa Fernandez, Catherine Blain (France)

ABSTRACT

One of the most outstanding Modern building restoration of these last few years in Paris was completed recently. The Maison des sciences de l'homme (MSH) or "House of the Human sciences" was originally aimed to host research teams working in the field of social science. This modern icon erected right in the center of a very "bourgeois" district is unique in the capital city. The building was built in 1967-1970 by the architects Lods, Depondt and Beauclair. It was restored by the historic preservation architects François Chatillon and Michel Rémon between 2014 and 2017. Many innovations that were originally implemented in the MSH building had to be addressed by the renovation architects. Firstly, the program. Invented by the historian Fernand Braudel, it comprised several hundred offices and a large library. Today, the need for classrooms, conference hall, coworking spaces and a smaller digital library led to many changes. Those had to comply not only with the desire to keep the building as close to the original as possible, but also with the Paris urban regulations regarding built surfaces and the green space. Secondly the apparent post-and-beam steel structure inspired by Mies van der Rohe had to comply with today fire regulations. So did the post-tensioned steel and concrete floors, also problematic regarding the construction code. Thirdly, the challenge was also to overcome the contradiction between improving the comfort and energy saving and keeping the original façade elements.

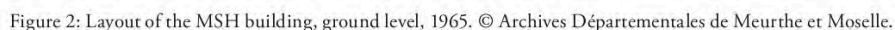
1. INTRODUCTION

In the centre of Paris, very few modern buildings are as striking as the Maison des Sciences de l'Homme (MSH). Its architecture, combining metal and glass, gives it an exceptional status in the stone built environment. Its location, at the corner of Raspail boulevard and Cherche-Midi street, as well as its implementation set back from the alignment, distinguish it some more from its nearby bourgeois buildings. Looking beyond this exterior appearance, which leaves no one indifferent, the

program and the history of the MSH make it also unique. Built between 1968 and 1970, it was originally designed to shelter research teams from different social science disciplines gathered around strategic geographic areas. The Ford American Foundation supported the building construction with significant funding. One of the major actors of the MSH project, and who will be its first director, is Fernand Braudel (1902-1985). He is a renowned and charismatic historian, involved since the middle of the 1950s in the research and educational programs of the l'École pratique des hautes études (created in 1947), a part of which will become in 1975 l'École des Hautes Études en Sciences Sociales (EHESS). Other leading personalities in the field of social sciences are also involved in the project, such as

Figure 1: The MSH building by night in the 1970s. © s.n, Bâir, 1970.





Since the interwar period, Marcel Lods (1891-1978) was recognized for the quality and the modernity of the projects he realised in association with Eugène Beaudouin (1898-1983), such as the Open Air School of Suresnes (1934) or the Maison du Peuple of Clichy (1935-1939). After the war, Lods was appointed Architect of Public Buildings and was therefore entrusted with important State orders, notably for the Ministry of Equipment and Housing and the Ministry of Education. Orders which he often carried out in association with other architects. In 1964, past the respectable age of 70

years, Lods created a new associative structure with two younger colleagues in order to develop his projects: Paul Depondt (1926-2007), who joined his office in 1957 after his architectural studies in America (IIT and Harvard), and Henri Beaclair (born in 1932), who was trained as architect and engineer in Switzerland. With them, Lods also created in 1964 a Research Group, called GEAI (Groupement pour l'Etude d'une Architecture Industrialisée) and aimed on the exploration of new systems of steel construction. The main case studies of the time were the Science Faculty of Reims (1960-1969) and the Social housing project of La Grand'Mare in Rouen (1962-1977). Developed from 1965, the project for the Maison des Sciences de l'Homme was designed in this

dynamic. The trio of architects brought into this metal structure building the very best of the international modern architecture spirit.

Although the MSH building was promptly recognized as a major realization of the 20th century, it was never included on the French historical monuments list. This status became problematic when, in 2010, the building was first evacuated following an alarming assessment of asbestos presence and thus threatened by a necessarily renovation project.

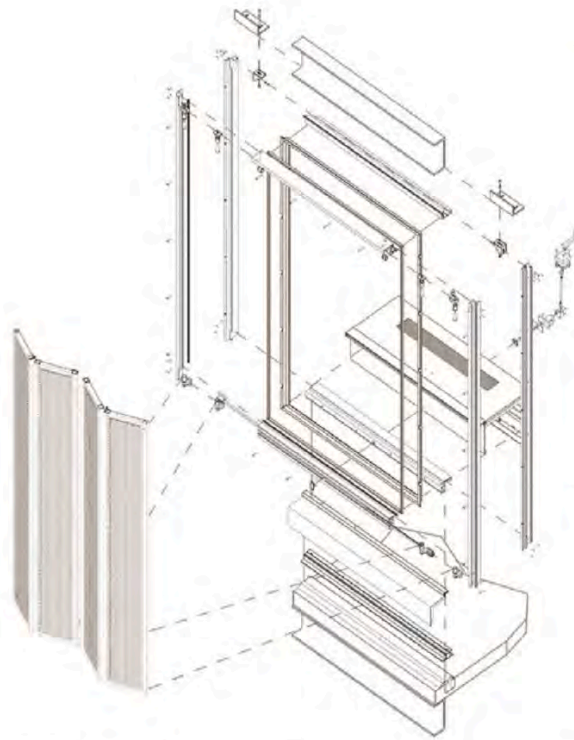
Despite the extensive demolition/reconstruction works and the profound interior transformation which were brought by the renovation project, the building retained its exterior appearance. The renewed MSH also found back its research teams, what was not so obvious. This renovation, certainly one of the most interesting in recent years in Paris, was greeted by French conservation-restoration circles. Indeed, this

project seems to have attained the objective of giving continuity through the change, according to which it is expected that buildings of the 20th century should evolve.

The project was conducted between 2013 and 2017 by the historic preservation architect François Chatillon (born in 1961), associated with Michel Rémon (b. 1949). This team is rather unexpected for a building that is still not protected by the Historical Monument label. But the emotion stirred by the asbestos health danger and the fear that the building could be destroyed or transformed into a hotel, led the public structure in charge of University planning and building in the Ile-de-France region (EPAURIF) to commission an historic preservation team.

But this renovation gives rise to many questions. At the end of what struggles and negotiations, were the researchers able to obtain their return to this building? How was the decision taken to maintain the historical façades, in a context of in-

Figure 3: Left: Axonometric view of a window panel showing all the pieces that were dismantled for cleaning or replacement. © P. Roux, 2015. Right: Aluminium shutters and post-and-beam apparent steel structure. © K. Kramski, 2014.



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creasing thermal and energy performance requirements? How have architects preserved or reinterpreted the very special technical innovations of this building in terms of comfort, construction and fire safety standards? How could the program have been developed with the restrictions imposed by the urban planning by-laws of the city of Paris? And finally, how did the renovation architects choose between contemporary evolution and respect for the historic building?

2. ORGANIZATION AND SCOPE OF THE RENOVATION WORK

Implemented on a trapezoidal shape parcel, the Maison des Sciences de l'Homme consists of two buildings, organized around a central garden and bound by a narrow perpendicular wing. The first building, implanted slightly set back from the alignment of the Raspail boulevard, has 9 levels. It is distanced from the nearby construction by a single storey volume, which shelters a corporate apartment and contain a passage towards the garden. The second building, along Cherche-Midi street, has 5 levels and reaches the nearby construction. Its facade opens widely on a small public garden which occupies the angle of the streets. The major characteristic of this project is its construction system, that combines a metallic structure, expressed in facade, and pre-stressed concrete slabs.

Like most of the metal structure buildings of this period, the MSH contained some asbestos components, that had to be removed. In Paris, the first great example of an asbestos removal operation was the buildings of the Jussieu Faculty (Édouard Albert architect, 1964-1968), decided in 1996 by the Ministry of Education. While the University Paris VII had to leave the campus, a public structure was specially created for the control of the renovation project (that took more than 36 months). Since this moment, any educational building affected by this scourge must necessarily be the object of very expensive cleaning works. When the asbestos diagnostic was confirmed in 2010, the MSH building was closed and all the employees and research teams were relocated in an office building in the 13th district. Everybody wished a temporary relocation and a fast reinstatement in the renovated building. This position differed from the Ministry of Higher Education and Research's ambition, which was to group several Parisian education structures in a new "great campus" located in the suburbs. At the same time, there were rumours on the future destination of the building of the boulevard Raspail: this central location was indeed highly interesting for real estate projects, such as a luxury hotel. Hopefully, the public information campaign led by nu-

merous researchers proved to be successful: while the town planning documents confirmed the educational vocation of the building, it was recognized on the list of heritage construction to be preserved. This status is distinct from that of the Historical Monument label, but it constitutes however a guarantee against demolition and major changes.

The EPAURIF, which led the asbestos-removal operation in Jussieu, was in the best position to conduct the renovation project. In order to respect the building, and after negotiations with the Ile de France Regional Office of Cultural Affairs (who wished to protect the building as a historical monument while the owner did not), François Chatillon was hired as chief architect. With Michel Rémon, he conducted building renovation project while the specific Asbestos removal operation was supervised by another chief architect of the Historical Monuments, Pierre-Antoine Gatier. Another relevant fact has to be mentioned: both teams would rely not only on highly sophisticated technical diagnoses but also on extensive research based on archival documents.

3. THE MAJOR CHOICES OF THE RESTRUCTURING PROGRAM

Prior to the beginning of works, the EPAURIF set up a program for the research teams. Originally, the Maison des Sciences de l'Homme was not supposed to compete with the University: thus its program included only research offices, no classrooms. Besides, the last five levels of the main building were occupied by the initial owner of the land, the Ministry of the Interior. In 1976, these State offices were freed, permitting at last the installation of the newly created École des Hautes Études en Sciences Sociales (EHESS). Endowed with the status of public educational establishment and authorized to deliver doctorates, the EHESS has not only needs of spaces for its research teams, previously spread all over the neighborhood, but also for a large number of rooms for classes, seminars, defense of thesis and conferences. The original system of subdivision allowed, as far as possible, to respond to these needs. But in time, and the appearance of new needs, the building reached the limits of its adaption capacity. The main challenge was, above all, to create large rooms in the building.

How did the team of architects in charge of restoration tackled this issue? They chose the only logical option: that to use the only "land reserve" of the MSH, the two level of basements originally dedicated to parking and storage. However, this idea did not go without its problems. At first, since the urban regulations of the city of Paris ask for parking lots, it was delicate to

change the affectation of these spaces. Besides, the low ceiling height was another obstacle for the reconversion. The architects met the challenge with a play of openings and patios, which allowed the light in – crucial success in the conversion exercise. Concerning the different floors of the building, other questions arose. The initial construction was designed to be easily convertible. The repetitive frame of the facade panels (1.25m wide) and the large spans of the structure (6.25 x 7.50m) allowed a great freedom of partitioning. Moreover, since the services were grouped in the center of the plan, the platforms are clear open spaces. Finally, the flexibility of subdivision was provided by a system of movable walls: re-designing offices according to the needs expressed by the users was therefore no problem. In the renovation project, for acoustic reasons, this original system was replaced by fixed walls. Furthermore, two innovations were introduced: small meeting spaces, conceived as boxes within the box, and co-working spaces, displayed at stair landings. These arrangements mainly benefited doctoral students who had no devoted space in the former system.

Furthermore, following the conclusions of an economical study, the EPAURIF decided to maintain an important disposition for the esthetics of the building: the original window frames and their aluminum shutters. These perforated panels, which play the role of a canopy and can be withdrawn in accordance (in the chink between the posts and the windows), were designed by the architects and fabricated by the Cegebat company. The conservation of this kind of elements is very uncommon: generally, they are thrown away and replaced by contemporary devices. The permanence of this historical material will not only preserve the emblematic image of the building but it will also allow the renovation team to demonstrate that the mid-20th century facades could be repaired and reused. It is, according to us, an important challenge for the preservation of the built heritage of the second half of the 20th century.

4. HOW TO PRESERVE TECHNICAL INNOVATIONS IN A CONTEXT OF UPGRADING?

There are several elements to this question. Technical innovations characterized the building and were part of the values to be preserved. The first innovation was the metal structure. Although the concrete industry generally prevailed in the French 20th century constructions, some interesting metal structures were experienced and implemented after 1945, mainly for administrative buildings. These researches used the know-how of engineers like Leon-Karol Wilenko who, in the mid-sixties, de-

veloped a system of metal frame and post-tensioned concrete flooring for an administrative building designed by Atelier de Montrouge in Orléans-la-Source (EDF SITI n°3, 1966-1969). Wilenko reused and perfected this constructive system in the MSH project. Allowing a reduction of floor thickness to 14cm, and combined with ceiling height of 2.50m, it permits to create 9 levels in the gauge of the 8-storeyed surrounding buildings.

In order to preserve the original aesthetic of the MSH, it seemed essential to preserve the exposed metal posts and beams in the entrance hall and outside. This desire was not in phase with the fire resistance requirements for public buildings, which ask for 1hour fire poof protection around metal structure. In order to maintain the original aesthetic, the architects referred to the initial advice of the firefighter's, authorizing the exposed metal beams. On the other hand, the metal structure has been protected in the levels.

In addition to this, a fine analysis had to be conducted to verify the load-bearing capacity of the existing floors: current standards require 250daN/m² for offices, 350 for teaching rooms and 400 for storage. In the MSH, it was even more important to check this capacity since some deformations of the slabs (a certain creep, caused by post-tensioning) had to be caught up by leveling screeds. Few reinforcements were finally needed.

Other decisions had to be taken regarding the heating and conditioning system. From the very beginning of the design, the architects and Fernand Braudel agreed that the MSH, located on a noisy boulevard, considered unsuitable for concentration, should be hermetically sealed and air-conditioned. This system had to answer the needs of flexibility in floor partitioning. Architects then opted for the installation of individual "Weather-Masters", convectors provided by the American Carrier enterprise, similar to those installed at the United Nations headquarters in New York (1947-1952). Like in this emblematic reference, the air is supplied by holes in the floor reaching the suspended-ceiling of the level below (that has a limited drop-off of 30cm). Despite the advantages of this initial air-conditioning system, it had to be abandoned since, for obvious fire resistance consideration, the floor holes had to be filled. All the air convectors were then removed, enabling therefore to dismantle the original window frames and to send them to repair. A contemporary air-conditioning system was chosen, based on chilled beams installed on the ceiling, coupled with ventilation. The old sheet-metal of the air-conditioning units were preserved because they help to read the facade from the outside and support the manual wheels that activate the aluminum shutters of the windows

– which plays with the regularity of the apparent framework. The restoration of the 1100 glazed frames windows required very complex operations, which aimed at the preservation and the re-use of almost all the elements of origin. The outer frames, without glazing but comprising the aluminum shutters and the sliding system, were sent to the repair shop (SETAL, Montbéliard). All the parts were unsettled and cleaned; almost all the pieces of the sliding mechanisms and hardware were changed. Approximately 20 working hours were needed by frame for reconditioning. Once re-assembled, these outer frames found back their internal frames, which were in the meantime cleaned, and received a new double sheeted glazing.

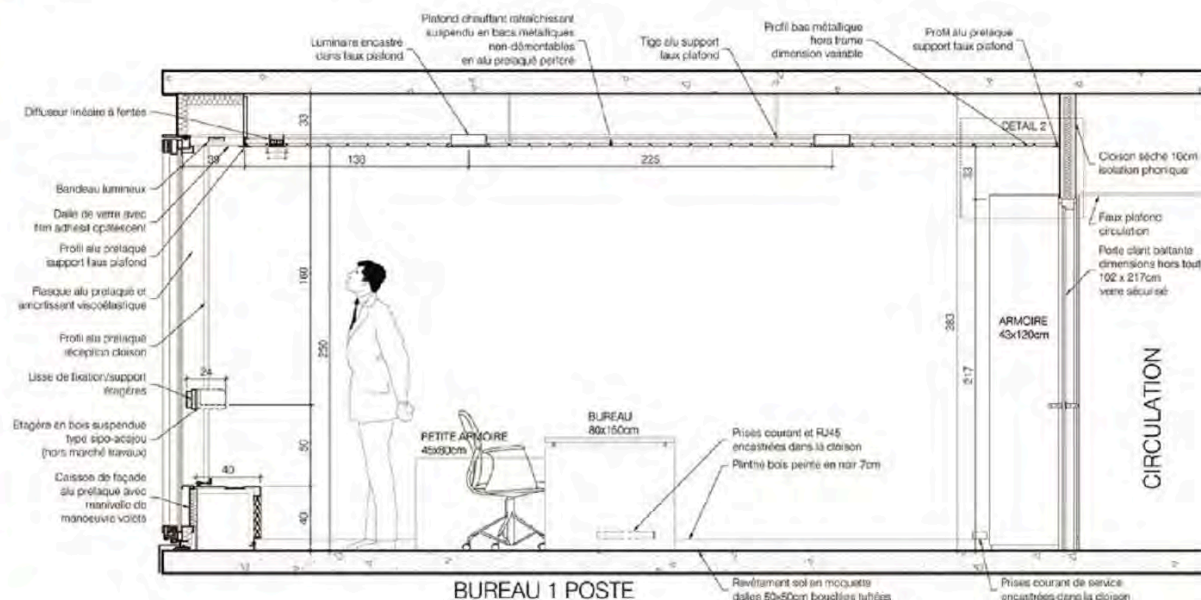
5. CONCLUSION. CONTRADICTIONS BETWEEN COMFORT, ENERGY SAVINGS AND AUTHENTICITY

Besides this true craftsmanship work on the façades, the MSH renovation project also included new devices in various matters, such as smoke extraction, recreation of the interior finishes and light fixtures, reconstruction of the suspended ceiling, etc. Indeed, since the asbestos removal led to the loss of all the original interior finishes, from the prefabricated par-

titions to the flooring, the architects endeavored to recreate the original aspect with contemporary materials. Although this reconstruction was based on interesting researches, its outcome could be discussed. Regrettably, in spite of an in-depth study, the original 1960s furniture was not kept: history was sacrificed for comfort considerations.

Some problems did not find solutions yet – like the treatment of the exterior garden along the Cherche-Midi Street, the parking of the motorcycles near the glass façades and the uses of the interior garden. In many aspects, the decision to restore this airtight envelope was problematic. On one hand, this is a logical approach for historic preservation; but on the other hand, the air-conditioning, the aluminum shutters and the sealed windows never satisfied the users. Some users had expectations that were not addressed, like desire to open windows and to shut down the air-conditioning system. This approach would have been sensible in a context of energy saving and natural comfort. In any event, the most successful point was the recovery of the transparency on the ground floor, which enables an appreciation at a glance of the various spaces as well as the magnificent double staircase that starts in the hall, where users and researchers meet daily with sparks of new ideas.

Figure 4: Section on a renovated office. © Francois Chatillon architecte, 2015.



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BIOGRAPHIES

Vanessa Fernandez, architect and PhD in architecture, research fellow at IPRAUS / UMR AUSser 3329, teaches 20th century historic preservation design studio at the ENSA Paris-Belleville. Her researches focus on the doctrines and practices of the restoration of the lightweight façades in France, construction history and environmental control. She is a member of the expert committee of Le Corbusier Foundation and the Richard Morris Hunt Fellowship Prize Alumni. She recently led renovation survey on the Salvation Army City of refuge and the Maison des Sciences de l'Homme.

Catherine Blain, architect and PhD in urbanism, is research fellow and lecturer at Ensap de Lille (LACTH). Her researches, mainly focused on the French post-War period, develop different lines of investigation such as the CIAM and Team 10 debates or the history of new towns. Author of several books and articles, she was the curator of the *exhibition L'Atelier de Montrouge, la modernité à l'œuvre (1958-1981)* (CAPA, 2008), accompanied by a monograph.

MUTATIS MUTANDIS:**NORTH AMERICAN ARCHITECTS IN CARACAS IN THE TWENTIETH CENTURY**

Hannia Gómez (Venezuela)

ABSTRACT

Since 1936, with the beginning of oil exploitation in Venezuela, much of the urbanization and major public works began to be built according to the codes of modernity. This was to show first of all in the capital city.

In a few years, Caracas became spectacularly modern, full of new architectural typologies and a new building scale, as the country experienced a fast transformation. By the mid-century it had a brand new architectural landscape.

International architectural languages began to blossom everywhere, at a time when very few Venezuelan architects were practicing (the first school of architecture started in 1953). One of the major influences on Caracas identity -now a significant part of its modern heritage-, came from the United States. As the economical interchange with the US increased with the growth of the oil industry, the necessity of making more efficient the urban infrastructures also grew. North American architects, planners, and artists re-shaped the cities. Their buildings were all characterized by the clearness of their plans, the power of their urban presence, the functionality of their programs, their innovative structures, their enduring construction materials and details. Also, by their emphasis in interior design and lighting. In a word, by their strong architectural quality.

Times have changed now in Venezuela. The country is living the worst crisis of its history, which has heavily impacted all of its urban fabric. We will present here a survey of the metamorphosis lived by three major North American architectural works in Caracas since their opening to today.

1. THE AMERICAN WAY OF BUILDING

"I Hear America Singing".

Leaves of Grass. Walt Whitman (1900).¹

In 2017, Docomomo Venezuela, with the support of the US Embassy in Venezuela, Docomomo US and the academic collaboration of the Historic Preservation Program of the

Graduate School of Architecture, Planning and Preservation of Columbia University and of the Facultad de Arquitectura of the Universidad Central de Venezuela, decided to showcase these works together for the first time, organizing a major research and exhibition: *Our Architects: North American Architecture in Caracas 1925-1975*.² The show presented twenty-seven North American authors that did major works in the capital, many of them relevant architects.

Our aim here is to show the array of transformations, alterations and changes suffered by three cases selected from this important set of modern buildings in a country like Venezuela, where restoration is scarcely practiced and adaptive reuse is hardly ever well understood. Also, we would like to explore the reasons behind their great architectural resilience in front of change.

In coincidence with the years of the opening and the strengthening of the relations between the United States and Latin America, the blossoming of the North American works happened between 1925 and 1975. Fifty years of intense urban and architectural production of which today Caracas feels proud, conserving it as its own patrimony for the world. A shared heritage with the United States.

It is difficult to discern the North American architecture within the Caracas urban fabric. To hear America sing, we should listen very carefully. It is as if the local modernity, for being so close to the North American models and references, had fused with them in a practically indelible way. This can be explained because of the enormous cultural impact of the North American influence on all aspects of the Caraqueñan life in those years, an also because of the great amount of North American professionals that went to Venezuela to work and also of Venezuelan professionals that were educated in the United States.

In Caracas worked many of the best professionals of the United States. The best artists, like Alexander Calder; the best landscaping firms, like Olmsted Brothers; the best golf-course architects, like Charles Banks, John Van Kleek and Dick Wilson; the best developers, like Robert Moses; the best interior designers,



Fig. 1. Lathrop Smith Douglass, Arthur B. Froehlich and Donald E. Hatch. ©American Institute of Architects Archives, ©LIFE magazine, Frank Scherschel, 1959 and ©Archivo Claudio Creamer, 1950s.

like Sister Parish; the best planners, like Francis Violic and Josep Lluís Sert; the best golf house architects, like Clifford Wendehack; the best movie palace architects, like John & Drew Eberson. And the renowned architects: Harrison, Neutra, Breuer, Goff, Fuller, Embury, Hatch, Webb, Vestuti, Johnson & Burgee, Holabird, Root & Burgee, Badgeley & Bradbury, Shaw, Metz & Dolio, Graven & Mayger, Emery Roth & Sons.

An excellence that can be explained by the presence in Venezuela —and the passion he felt for this country— of a man that, also himself, was striving to be the best in everything he undertook: Nelson Aldrich Rockefeller. In one way or the other, these North American professionals were almost all Rockefeller men, related to his enterprises, his projects and his offices at 30 Rockefeller Plaza, in New York. Which brings along a new revelation: the importance of the influence of New York City architecture on Caracas above all other North American cities.

From the North American architecture in Caracas, we have chosen three examples to illustrate the nature of their resiliency in the face of change and their behaviour against the passing of time. None of them has been restored: two office buildings, the Creole Building (Lathrop Smith Douglass, 1954) and the Sucre Building (Donald E. Hatch, 1959), have changed their use to become educational facilities, and a public building/recreational complex, the La Rinconada Racetrack (Arthur B. Froehlich, 1959), which has partially retained its original use, but has also served as temporary shelter for refugees.

Hannia Gómez Mutatis Mutandis

2. CREOLE PETROLEUM CORPORATION HEADQUARTERS BUILDING (FRED N. SEVERUD-ELSTAD-KKRUEGER STRUCTURAL ENGINEERS AND JOHN W. HARRIS ASSOCIATES INC. CONSTRUCTORS, 1954). LOS CHAGUARAMOS, CARACAS.

One of the great modern North American architects working in Caracas is Lathrop Smith Douglass (Kansas City, Missouri, 1907-Greenwich, Connecticut, 1981). His firm was established in New York at 518 Fifth Avenue in the 1950s, where he designed two paradigmatic office buildings for Caracas: the Creole Building and the Nueva Caracas Building, and where he also finished a magnificent house with a preliminary design by Phillip Johnson, the Los Rodner House.³

He was an architect of commercial centers and a corporate architect *par excellence*, designing “more than thirty department stores and fifty office buildings in his life”.⁴ In his prolific career he worked for many firms and especially oil companies, introducing innovative ideas into the modern office building, particularly for one corporation, the Standard Oil Company, that commissioned Douglass their new Caracas headquarters.⁵ It is with this project that Douglass won in 1956 the first prize at the Festival International d’Architecture, Paris.

The architecture of Douglass is appealing because of the strength of its gestures, its well-tempered monumentality, its clear composition and his structural and technological inno-

variations. By 1955, when Douglass came to Caracas on behalf of the American Institute of Architects for the IX Pan-American Congress of Architects, he presented the recently opened Creole Building, which was already standing as an emblem, a lesson in corporative architecture and a manual of architectural, environmental, structural, functional and even decorative efficiency.⁶ Its beauty was based upon a strong central idea: a great horizontal slab with a marquee linking the curved low volume of the cafeteria, solving the context's morphology with two great strokes, *à la* Douglass.

With the arrival of the Bolivarian Revolution (1999), most of the modern architectural infrastructure belonging to the oil industry (and specially the North American) were consciously stripped off their former meaning and transformed into educational facilities. The Creole Petroleum Corporation Building and the Sucre Building became in 2003 -by presidential decree- new vertical campuses for the Universidad Bolivariana de Venezuela, their actual use.

Touring the Creole Building, we can observe how the new use has adapted to the architecture, and not the contrary. Practically without making any changes, nor doing any works (*sauf* changing to red the original aluminum handrails in all

the stairs -the color of the governments' party-), what once were offices are today classrooms, the oil executive's floors are the university's administrative offices and all the services are kept the same. The good quality of the original materials (the ground floors' marble, the aluminum of the handrails, the elevators, the ironwork of the windows) and the high-quality detailing all keep working well in the new use, without any restoration. It seems that the political victory resided not in the transformation of the building's image, but in its simple occupation. The adaptation and comfort for the new educational use was, therefore, considered a secondary issue, or trivial. The Creole Building, in this way, continues its productive life, unharmed despite the intense use of the great student population.

3. HIPODROMO NACIONAL LA RINCONADA (C.A. VENFROCA CONSTRUCTORS, HENRY LAYNE STRUCTURAL ENGINEER AND ROBERTO BURLE-MARX, 1959). LA RINCONADA, CARACAS.

Judging by the portraits that photographer Frank Scherschel took for *LIFE magazine* on July 5, 1959 (inauguration day of the Hipódromo Nacional de La Rinconada), architect Arthur B. Froehlich (Los Angeles, 1909-1985), with an office at 343 South Robertson Boulevard, Beverly Hills, was radiant with happiness. Froehlich was thus immortalized as the most modern of all architects of his era, or at least as the proudest of what probably was the best project of his life.⁷

The Caracas flamboyant racetrack, "the most modern in all of Latin America" at the time, is absolutely lavish. A monumental equestrian city, rich in spaces and intertwined promenades that because of its dimensions and of its formal, spatial an artistic deployment, could be compared to the Ciudad Universitaria de Caracas (1954), its immediate monumental reference in town.⁸

The racetrack had also an important landscaping ingredient, relating to the other great modern project in Caracas: the Parque del Este (1961). The landscaping of all the green areas—today sadly destroyed—, particularly the large vegetal *tableau* at the center of the tracks, was designed by Brazilian landscape master Roberto Burle-Marx.

Although Arthur Froehlich & Associates was a firm renowned for its movie studios, its supermarkets and its racetracks,⁹ when we observe the Belmont Park Racetrack or the Aqueduct Racetrack,¹⁰ none of these previous projects express the United States East Coast's mid-century's deliriously formal and spatial aesthetics so fully as the Caracas racetrack.¹¹ With

Fig. 2. Lathrop Smith Douglass. Creole Building. Caracas, Venezuela. 1955. On the cover of *Architectural Record*. ©*Architectural Record*, 1949.





Fig. 3. Arthur B. Froehlich. Hipódromo Nacional La Rinconada. Caracas, Venezuela. 1959. The roofs. ©Archivo FMU, 1950s.

its supersonic cantilevers, its aerodynamic ramps, its futuristic murals with galloping horses, its interstellar lamps, its pastel-coloured concrete, its bordered vaults and roofs and the Jockey Club's extraordinary helical stair, suspended from steel rods over an *acqua*-tiled fountain, each form developed its own meaning for modernity.

The complex kept its original use since 1959 until today, at least at its core: the main lobby, the racetracks, the Jockey Club, the paddock, the stables and the stands. Sadly, as the equestrian activities were always seen as an expression of luxe and high-class by the Chávez administration, the complex began its fall into decay since 1999, right after the great Caracas coastline 1999 landslide. Vast areas of the facilities -mainly its public areas- were used from then on as emergency housing to lodge flood victims, even years after the tragedy was over.

With the enduring presence of refugees in the complex, the general state of the place worsened (dirt, insecurity, darkness, change of colours, loss of original lighting fixtures). Luckily, the overall high quality of the architecture resisted very well all abuses.

Additionally, and notwithstanding the Hipódromo Nacional La Rinconada's landmark status, a huge baseball stadium was recently commissioned to Richard Rogers & Partners to be built facing the racetracks as a part of what is called the Gran

Parque de Caracas Hugo Chávez. The huge tropically multi-coloured stadium will intrude in the western side of the racetracks, altering completely the visual, aesthetic and spatial qualities of the listed 1950s elegant complex. This heritage-threatening sport facility is still being built in spite of Docomomo Venezuela's direct complain to architect Rogers in his last visit to Caracas in 2014.

4. SUCRE BUILDING / SOCONY-VACUUM OIL CO. OFFICE BUILDING (CLAUDIO CREAMER, ENGINEER, 1959). LA FLORESTA, CARACAS.

If there is a modern architect that deeply marked Caracas with an *oeuvre* characterized by the elegance and refinement of his designs, was Donald E. Hatch (Tacoma, Washington, 1907-San Francisco, 1977).¹² Although many of his works in Caracas are now gone, those still standing like the old (and disfigured) United States Embassy Building —with its metallic structure and its bright double *Screen* by Italian-American artist Harry Bertoia—;¹³ the delightful Macoroma House at the Valle Arriba Golf Club, with its butterfly roof; the iconic Centro Comercial Las Mercedes; the NCR Building, coated with ceramic tiles depicting the map of South America; the brutalist Boulton Tower, built on a corner site in the Caracas Historic Centre; and the superb Sucre building, signaling

La Floresta neighbourhood's entrance, all are proof of an unforgettable architectural saga.¹⁴

Hatch established his practice in New York City in 1932 as Hatch, White, Hermann & Steinau, working afterwards for two years for the firm Hood & Foulhoux Architects of Raymond Hood, Rockefeller Center's chief architect, and Jacques-André Foulhoux.¹⁵ From here derives his participation in the design of the 1939 New York World Fair and his later linkage with the IBEC (International Basic Economy Corporation), Rockefeller family's company. In 1948, Hatch opened Oficina Don Hatch in Caracas, and in 1951 Hare & Hatch Architects at 125 Broad Street in New York, both opera-

tive in parallel until 1959, when he left Venezuela.¹⁶

Labelled as "Miesian" by many, the so-called "Architect of IBEC" was also a professor in the architecture schools of Yale and Columbia, so it is no surprise that his architecture is so interesting. His is a modern architecture of tropicalized rationalism, spatially rich and finely detailed, introducing pioneering typologies and eclectic versions of local architecture, like the Neocolonial/Modern residence he built on a hill nearby Caracas for Nelson A. Rockefeller, *Monte Sacro*.¹⁷

Hatch also designed interior architecture. From the spaces of the Hotel Avila (Wallace K. Harrison, 1942) to several floors of governmental offices in the towers of the Centro Simón

Fig. 4. Donald E. Hatch. Sucre Building. Caracas, Venezuela. 1959. Façade on Avenida Miranda. ©Archivo Claudio Creamer, 1950s.



Bolívar (Cipriano H. Domínguez, 1954). It is this love for interior design, the other great passion of Don Hatch, which brings a greater dimension to his modern legacy in Caracas.¹⁸ Like Douglass' Creole Building, Hatch's Sucre Building (1959) was formerly the headquarters of a major oil company, Socony-Vacuum Oil Co. And as the Creole Building, it became since 2003 part of the Universidad Bolivariana de Venezuela. In this case, no harm to the building's original architecture is registered and less changes occurred. The new educational use develops inside the 1959 facilities as if nothing had ever changed. Lighting fixtures are in still place, as well as the original delicate aluminium handrails, with their finishes intact, the characteristic blue-glass *brise-soleils* and the expressive green veined marbles finishes on all the elevator lobbies. Only the original modern furniture has disappeared. It seems as if the refined modern interior spaces of this Caracas landmark had bewitched its new users, positively influencing all academic activities since it began to be re-used, for the good. North American modern architecture introduced in Caracas the skills of efficient modern architectural design, deeply impacting local architecture and up-levelling its quality standards. Today, the remarkable design and construction endurance of these buildings is their best shield against decay and alteration, becoming an unexpected tool to prevent their destruction, especially during the actual harsh political times in Venezuela.

NOTES

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- 14 "The architect and his community: Oficina Don Hatch", *Progressive Architecture*, vol. 35, March, 1954, 100-109.
- 15 Pacific Coast Architecture Database (PCAD), © 2005-2015 Alan Michelson, accessed on March, 2017, <http://pcad.lib.washington.edu/person/5802/>
- 16 "Donald Hatch Dead at 69; Architect Designed Work In Latin American Nations", *The New York Times*, New York, 1977, accessed on March, 2017, http://www.nytimes.com/1977/09/09/archives/donald-hatch-dead-at-69-architect-designed-work-in-latin-american.html?_r=0#story-continues-1
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BIOGRAPHY

Hannia Gómez. President, Fundación de la Memoria Urbana (2000) and Director, CENTRO de la Ciudad (2001). Studied Architecture at the FAU Universidad Central de Venezuela in Caracas and Urban Design at the GSAPP Columbia University in New York. Curator of Gio Ponti's Villa Planchart (2002). Author of the texts of exhibition catalogues *Our Architects en Caracas: (1925-1975)* (2017); *Suite Iberia* (2015), *Las Italías de Caracas* (2012) and the book *El Cerrito: Gio Ponti's masterpiece in Caracas* (2009). Writer, curator and architecture and city critic for *El Nacional* since 1992, she is a founder and actual Chair of Docomomo Venezuela (2010).

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Session 08_VISIONS FOR LIVING

Session Chair: Eui-Sung Yi (South Korea, USA)



The scientific papers in Visions for Living are connected through their theses' insertion of progressive social values into Modernism and in turn, through those social values' redefinition of contemporary residential lifestyles. Spanning from residential to urban-scale design, the four papers are not organized around a common typology or a singular defining attribute. Instead, they are threaded together by an additional intervening layer of socio-political intent to redefine Modernism. All the projects discussed assume Modernism as the accepted baseline and foundational ethos for future design efforts. However, the four projects approach Modernism from a newly aspirational perspective enhancing and re-calibrating its tenets. These visions involve a more inclusive and enlightened lifestyle and truly test the capacity of Modernism to absorb, transform and mature with contemporary social issues. The four themes of progressive living can be summarized into the following binary combinations: living with nature, communal living, living with cultural identities, and modernism affirmed with modern residential infrastructure. The papers support their claims with studies of well-known architects such as Lina Bo Bardi and I.M. Pei, operating at scales outside of their core expertise.

LIVING WITH NATURE

Lina Bo Bardi's massive and socially empathetic outputs in Sao Paulo re-balance the Brazilian national metabolism defined by Oscar Niemeyer. In her powerful design of the Itamambuca Complex, Bo Bardi engages the most divisive of modernism's residential planning: the suburban tract lots. In doing so, Bo Bardi appropriates and acknowledges standardization as an effective generative basis for economically driven enterprise. Bo Bardi's planning is non-cartesian and her lots are circular. Her notes on the project defend this circular lot design as integrating community life into unspoiled nature. Following Costa Cabral's thesis, Bo Bardi's underlying goal was to explore the capacity of serial repetition to produce the diversity in program needed for a livable suburban environ-

ment. Despite the planimetric self-similarity of these circular lots, Bo Bardi's design pattern results in a high degree of differentiation resulting from extensive repetition of natural laws and the overlay of multiple primitive geometries. Due to their environmentally sensitive orientation, the lots are easily consumed by lush landscape as dense trees blur the boundaries between man and nature. In this way she effectively deconstructed the problem of communal living at Itamambuca so as to satisfy contemporary needs without destroying the natural resources that surround them.

COMMUNAL LIVING

The concept of communal living developed on a wider scale than ever before as a social response to an urban housing crisis in 1929. One constituent project in this flood was taken on by Adolf Rading with his block of flats for the WuWa estate. Urbanik's paper discusses options to renovate the repeatedly modified building according to the former concept intended by the architect. In this particular crisis of authenticity, one is reminded the main motivation for the design was not technology or construction materiality. Its original design impetus was social engineering and programming. Therefore, renovation decisions should not be driven by anything other than spatial, circulatory or daylighting concerns as they connect to reviving the structure for communal living. Given this approach to authentic restoration, it became clear that the building needed to be approached in its constituent parts. Urbanik maintains that reconstruction efforts could best preserve the structure's ability to serve communal living needs by examining the building as a collection of separate community services. In this way elements of the building's present state and its rehabilitation process could be harmonized, producing an authentic preservation of the structure's original goals.

LIVING WITH CULTURAL IDENTITIES

Lynnette Widder, in her paper *Versioning Japanese-American Modernism*, examines an individual's search for authentic rec-

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conciliation of competing social motifs. Kaneji Domoto, a young Japanese-American architect struggled to reconcile his ethnicity amidst the collision of a powerful mentor Frank Lloyd Wright and his own Japanese culture. Mr. Domoto's story falls in the larger arc of mid-modernism; A time where regional signs of culture and language begin to reassert themselves in the face of a functionalism that has dominated our understanding of Modernism. Though Frank Lloyd Wright has enjoyed more public empathy than his functionalist European counterparts, even his work that aimed at serving all demographics couldn't escape Domoto's critical intervention. Domoto's subversive recalibration of both Wright's Usonian language and Japanese architectural types mark these ethno-cultural identity struggles. His efforts resulted in the reconciliation of Western Modernist agendas and new mergers of international 20th Century culture. This paper ultimately incites the question: can one be modern without being Western?

MODERNISM AFFIRMED THROUGH MODERN RESIDENTIAL INFRASTRUCTURE

Kevin A. Yoder and Amanda Gibney Weko put forth their own examination of maintaining authenticity between competing styles and cultural contexts. They did so in an exploration of 3 architectural masters' uses of the residential type to push Modernist concepts to their limit. The 3 international architects discussed, namely Vincent Kling, Louis Kahn, and I.M. Pei, endeavored to extend the context of the detached single-family house. Their use of residential program is of particular interest because of its departure from the larger municipal typologies in which the architects' expertise traditionally manifested. Yoder and Weko interpret this scalar reduction as a desire to fully test the international ubiquity of midcentury modern architecture. However, they still ask whether the residential scale provides a valid battleground or just provides a contextually detached and intimate lens for understanding each architect's broader modernist repertoire. As it interrogates the role of the residence within each architect's oeuvre, the paper also advocates for the necessity of upgrading domestic infrastructure to keep the houses relevant as living entities. This merger of modern technology and traditional program advocates for the possibility of Modernism to evolve, a concept that is didactic of the Kling, Kahn and Pei's residential efforts.

All these papers, read and analyzed in the context of 2018 by this Session Chair, represent a layered amendment to a Modernist foundation. They reconcile the requirements of enhanced living with the timeless requirements of nature, community, competing cultures and technology. In doing so, they give us a valid methodology for mediating our own contemporary issues modern architecture.

BIOGRAPHY

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FROM ICON TO THE ORDINARY AND BACK?

QUESTIONS FOR THE FORTHCOMING RESTORATION

OF ADOLF RADING'S TURMHAUS IN WROCLAW'S WUWA ESTATE OF 1929

Jadwiga Urbanik, Grażyna Hryncewicz-Lamber (Poland)

ABSTRACT

In 1929 Adolf Rading designed a block of flats for the WuWA estate: the building's form comprised two separate, almost cubic sections connected by a narrow staircase, with curved, projecting rooftop section enlivening the facade. Formally the project referred to the ocean liners' style, while proposing a new model of communal living. This utopian notion did not prove feasible: changes to the function, floor plans and elevations started in 1931.

Major alterations, however, were introduced after 1945. Since the 1950's, the building served as a student accommodation of Wrocław University; remodelling, departing from the original forms, continued till 2001, even though the building had been listed since 1979. All of the above mentioned changes have reduced the once highly interesting architecture of Rading's building to a plain and mediocre structure.

Since 2012 the university, have been intending to sell the building to a private developer. The conservation authorities reacted to the first plans for reuse by asserting that the building should be restored to its original state by ridding of all post-war additions, which opened discussion on the values of authenticity and scope of restoration/retrofit project. The building, visible from major road, could serve as a WuWA touristic landmark, if it's architectural form was re-established, this attitude however is hardly in tune with the material authenticity standpoint. The problem has at least three layers: the urban setting and completeness of the WuWA estate's form, the authenticity of the building substance and use, the economic prospects.

1. INTRODUCTION

Imposing a new model of community life was the characteristic of modern movement architecture of the twenties and thirties of the 20. century. The architects envisioned the ideal user of modern architecture. Some even went as far as to develop the concept of communal living in the modern housing estate that may be summed up as "community housing –

housing community". Not only were the residents viewed as the users of the apartments but they were also integrated into the whole system of communal living based on interpersonal relationships and mutual loyalty.

In the Soviet Union, such collective or communal houses would be promoted as New Dwelling Factories. A contemporary commentator asked: "Does anybody really believe in the sense of such forcibly intense communal living? The man's worst enemy is another man, at least when he searches for rest and peace"¹.

2. THE WUWA (WOHNUNG UND WERKRAUM – LIVING AND WORK SPACE) MODEL HOUSING ESTATE

The objective was to present new types of affordable small and medium-sized flats to alleviate acute housing shortages which constituted a major social problem. New types of buildings, constructions, and materials were to be tested in the trying conditions of the idiosyncratic Silesian climate. The furnished homes remained open to the public for three and a half months and then were let out for two years to have the proposed solutions tested in practice².

3. ADOLF RADING APARTMENT BLOCK - DESCRIPTION (AS OF 1929)

In his "collective house" Rading³ proposed a new model of communal living; the inhabitants were to participate in the entire system of household organization.

Originally conceived as an 10 (6?)-storey building to provide model solutions for high-rise apartment blocks, the original plan was abridged⁴. Rading introduced steel skeleton frames (double U-shaped beams, spanning 4 x 3.5 m; infills of Schima aerated concrete blocks - 12 x 30 x 50 cm, insulation of corkboards). The skeleton construction, allowed for considerable flexibility in developing the floor plan so that on each floor there were eight flats of the same size (57 m²; following the RFG guidelines), but with different layouts. The staircase

was located centrally, next to the elevator shaft. The design provided for a number of communal rooms: shops, laundry, storage rooms (for bicycles, baby-carriages, and waste containers) on the ground floor; study and reading rooms, reception rooms and playrooms for children – on two other floors (the rooms were two-storeys high, and there were two on each of the respective floors, one on each side of the corridor); an atelier and terraces with gardens – on the rooftop. The apartments were furnished with lightweight furniture designed by Adolf Rading, Josef Vinecký, mass-produced Thonet furniture and pieces produced at the workshops of the Academy of Fine and Decorative Arts. The colour was used to define forms and even to indicate functions of selected areas within the living space instead of partition walls⁵. He introduced three contrasting colours: white, black and red, his approach

was comprehensive and involved painting the ceiling black⁶. The building comprised of two separate sections connected via a common stairwell which created interesting volumetric effects. The projecting upper section enlivened the facade with a play of light and shadow. The building's architecture referred to the ocean liners' style. The loggias and windows of varied shapes were set off against the plain elevations. "The building was intended as a prototype for large housing estates composed of high-risers"⁷.

3.1. Opinions of Contemporary Critics about the Rading's Apartment Block

In particular, Rading's apartment block was criticized for wrong layouts of the apartments, for inadequate ventilation⁸, glazed partitions that would not slide, no system to drain wa-

Fig. 1, Adolf Rading's Turmhaus, Breslau (now Wrocław), Germany (now Poland), 1929, view from south west, *Architektura i Budownictwo*, 1929, p.324.



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ter condensing on the glazed walls, lack of window sills⁹. Lack of experience with new materials and construction methods resulted in many failures. After the first three years many technical defects appeared. On the one hand, the building was praised for its architectural form¹⁰, but on the other the idea of the high-rise as a solution to the housing problem was rejected for social reasons¹¹. The Housewives' Association was equally negative about Rading's building, emphasizing the poor conditions for child rearing and rest after work and the annoying lack of privacy¹².

3.2. Changes to the Original Design

Major changes to the elevations, floor plan and function were introduced even before the first inhabitants moved in; in 1931 the first floor was remodeled to accommodate Waldorfschule; in 1935 it was converted into three apartments, which resulted in closing of the northern entrance. Changes introduced in the period after World War II: porches on the southern and the northern side removed; open space between the building's two sections walled up on the eastern side; original windows replaced with double-glazed windows; round windows removed; roof terrace and penthouse with the atelier replaced with an added volume, accommodating standard apartments; elements projecting over the façade removed; window stools covered with metal sheets installed. The change from a tenement apartment block to students' accommodation altered the original floor layout: from 8 apartments and 2 communal rooms into 16 rooms, community kitchen and toilet. The ground floor layout changed again to accommodate: showers, study rooms, storage rooms, lobby, dark room, club, laundry, and an apartment for the manager. After 2000, the building underwent yet another remodeling of its interiors. An additional insulating layer of Styrofoam was added and new replacement PVC windows were installed departing from the original forms and placement in relation to the facade surface. The changes have reduced the once interesting architecture of Rading's building to a plain and mediocre structure.

The building, disused from 2012, deteriorates rapidly. After two years on property market¹³ on Oct 5th 2016 the University announced selling of the building for 6.4 billion zloties¹⁴. In fact, local developer Milart signed a letter of intent with the university, and started to prepare documentation for adaptive reuse. At the end of 2017, after almost two years of ineffective dealings with the city conservator's office the developer withdrew from the project.



Fig. 2, Adolf Rading's Turmhaus, Breslau (now Wrocław), Germany (now Poland), 2010, view from the road, south west side, photo. W.Borski.

4. PROPOSALS FOR ADAPTIVE REUSE

Two proposals were made for the adaptive reuse and partial reconstruction of the Rading building, both by architect Anna Kościuk. The designs aimed at effectual reuse of the existing space and adaptation of the Turmhaus for small student apartments. Economy – driven proposals, commissioned by a developer made full use of post-war additions; the schemes differed though in the approach towards values of authenticity and integrity of the historic substance.

First of these schemes, was submitted as the documentation for the conservation permit (proposal one), and the other, to quote its Author, was an intellectual effort to provide and argument for a vertical extension, with a goal of integrating the historic and contemporary design and safeguarding all the existing building substance (proposal two).

4.1. Proposal one

The first scheme entailed clarification of additions and alterations, that were made after 1945, in a manner consistent with other conservation projects in the WuWA estate (which was contrasting additions by darker colour of finishes).

The design proposed reconstruction of balconies and rooftop follies (after well preserved historic documentation), reinstating reconstructed windows in the historic locations and ridding of extensive parapet walls built after 1945. Thanks to introduction of mechanical fire ventilation, the designer was able to keep the original staircase (which is not conformant



Fig.3, Adolf Rading's Turmhaus, view from south east, from left to right: existing state, proposal one, proposal two; renderings courtesy of Archikon, Anna Kościuk.

with fire safety regulations) intact, and to achieve the overall readability of original volumes. The interior was supposed to be refitted for small apartments, following the pattern of existing partitions of student housing. None of the historic details or spatial solutions of the interior, beside the above mentioned staircase, were saved, thus the designer decided to propose a minimal refurbishment scheme, introducing new location for bathrooms in each apartment.

This scheme, having obtained a positive opinion of city of Wrocław conservation authority at a concept level, was rejected at a building permit level by the same authority¹⁵.

Instead, the city conservator's office envisaged a full – scale reconstruction of the building, aiming at the original image and spatiality. The conservator refuted the idea of keeping post-war elements, including additions and (structural) pillars at the ground floor, and opted for reconstruction of windows, balconies, rooftop follies and interiors with partially

exposed steel structure as of 1929 (later referred to as: city conservator's proposal).

Although the post-war additions have no artistic merit, they constitute almost 15 % of usable floor areas.

The idea of partial annihilation of usable floor space is considered not economically viable by the developer, and is not compliant with the current zoning plan¹⁶ of the city. The zoning plan of 2007 imposes strict protection of the existing building, does not allow for any changes apart from restoration and refurbishment, and for any functions beside student housing. Massive rebuilding involving demolition, even scientifically correct, would be only possible after at least two changes within the local law: an amendment of the zoning plan, and a change in the register of listed buildings (in 1979 the building was listed including post-war extension). To add to this already complex problem, the full – scale reconstruction is impossible also because of land ownership: one of the

Fig.4, Adolf Rading's Turmhaus, view from south west, from left to right: existing state, proposal one, proposal two; renderings courtesy of Archikon, Anna Kościuk.



historic porches was located on a land piece, that is not owned by the current owner of the building.

4.2. Proposal two

The proposal two was presented as a design idea only, and was not subject to broader discussion. The intent of this rendering was to reflect Rading's formal ideas and unify the building's outer shell without demolishing the post-war additions. This entailed vertical extension of one floor, conceived as a copy of 1929 top section of the building. The acknowledgement of Rading's design intentions – namely of creating a tall building, visibly divided in two volumes, with a stepped top floor, evoking the ocean liner details is present here. To endorse this concept, A. Kościuk quotes historic data, confirming Rading's intent of designing a 6 floor structure – the first tall housing block in the flatlands. Surprisingly, if viewed from the point of material integrity, this unorthodox project seems to attain not only aesthetic merit, against the before mentioned proposal one.

5. AUTHENTICITY AND INTEGRITY

Future restoration of Adolf Rading's Turmhaus poses problems of authenticity and integrity.

According to Stovel "authenticity may be understood as the ability of a property to convey its significance over time, and integrity understood as the ability of a property to secure or sustain its significance over time"¹⁷.

Integrity, as defined by UNESCO "is a measure of the wholeness and intactness"¹⁸, while authenticity "may include form and design, materials and substance, use and function, traditions and techniques, location and setting, and spirit and feeling, and other internal and external factors"¹⁹. Due to the restrictions of a conference paper we will address very briefly a few authenticity constituents: design, material and setting.

5.1. Form and design

Restoration projects in WuWA estate can be grounded in knowledge of the original design. Historic drawings, photos, written documents about the building form, use and materials are accessible. We have good understanding of Rading's ideas, and well documented history of the building's changes. This knowledge, however does not protect the conservator and developer from attempts at imposing new intentions and values onto the design. Prevailing intention in the city conservator's proposal may be the aesthetic (Brandi's *istanza estetica*) rather than scientific (*istanza della storicita*)²⁰ reading

of heritage values²¹. The developer represents market forces and tries to maximize the financial outcome of the project, while preserving heritage. His wishes are represented in two proposals: one realistic and scientifically well argued for, the other – concentrating more upon aesthetic values. The aesthetization of the building form may be the one common interest. The amount of works at stake makes the project close in scope to reconstruction, and not restoration. Although the political and economy forces are in favor of esthetic unification, and creation of an attractive landmark, we cannot omit to put the question of authenticity as "the real" vs. "fake". Will the esthetic unification in case of Rading's Turmhaus be "real"? Some researchers argue, that behind the reconstruction protagonists' argumentation we may find tourist industry interest, or, even worse, a silent consent for satisfying popular tastes²².

5.2. Materials and substance

The existing building sustains its original steel structure, although, post-war additions were accompanied by introduction of structural pillars. Most of the finishes were lost after WW2, there is no traces of original craftsmanship in detailing, beside one surviving railing, and (arguably) one window. Intervention in the building substance is the largest in city conservator's proposal of purist reconstruction, and smaller in the proposal one, which aims at distinctive dissemination between the original and later additions. The material integrity of Rading's Turmhaus in the proposal one and city conservator's proposal are comparable, both involve destruction of post-war additions, although to a different extent, and partial reconstruction. Proposal one is connected with changes to the original design of windows, introducing enlargements, within the original position of the openings in the curtain wall. Proposal two comprises a comparatively small new volume, while keeping almost all the existing substance of the building, again, the position of windows is not always true to the original, and reconstructed rooftop follies are in an unoriginal location. Assuming that these changes would be reversible, proposal two may fulfill the concept of material integrity to the greatest extent of all three.

5.3. Location and setting

As part of the 1929 WuWA the Turmhaus stood out - at the entrance to the estate form a major road, counterbalancing with its interesting curvilinear form those of its purely functionalist imminent neighbours. Such is the imagery (Fig. 1)

and perhaps, the meaning of its location. The original intent was to build a taller volume, which would be more visible. In its present state the building seems ordinary and insignificant (Fig. 2). The urban whole of the WuWA estate is understood by city patrons as authentic value, worthy of urban revitalisation in a form of individual reconstructions²³. The city policy aims at enlivening the tourist interest in WuWA, and acknowledgment of its importance as European heritage, thus the expected partial reconstruction of the Turmhaus is supported by the city architect²⁴. Today WuWA lacks a visible landmark, as the most renown of its buildings – the Scharoun's Ledigenheim – is located within a park setting. In terms of urban rehabilitation reconstruction is understood as reinstitution of authentic and coherent whole of the estate and a step towards defining its identity. This attitude is contrary to the traditional material authenticity standpoint. Considering restoration from the urban perspective however, it "may be seen as a unity formed of two types of elements: 'elements of state' and 'elements of process'"²⁵. In case of WuWA: individual buildings' conservation is the "static" element, but the more important is the "processual" element – establishment of cultural and architectural identity of the city referencing WuWA²⁶.

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BIOGRAPHIES

Jadwiga Urbanik, PhD, architect and architecture historian. Since 1979 she has worked at the Institute of Architecture, Arts and Technology (Faculty of Architecture, Wrocław University of Technology). Lectures and seminars on town-planning history, garden history, conservation of urban and architectonic heritage and conservation of 20th century architecture. Since 1990 - membership of DOCOMOMO, since 1992 – member of DOCOMOMO ISC/Technology, since 2003 – chair of Polish DOCOMOMO. Since 1992 - conservation supervision of the hotel by H. Scharoun (WuWA). Taking part in Getty grant concerning Centennial Hall by M. Berg. She is the author of many publications on history of architecture and town planning of 20th century.

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MIDCENTURY MODERN DOMESTIC ARCHITECTURE: A CONTINUUM OF LIVEABILITY

Kevin A. Yoder, Amanda Gibney Weko (USA)

ABSTRACT

Within five years from 1959-1964, architects Vincent Kling, Louis Kahn, and I.M. Pei completed residential commissions in or near Philadelphia, Pennsylvania, U.S.A. Kling's Smith Residence (1959), Kahn's Margaret Esherick House (1961), and Pei's Society Hill Townhouses (1964) are classic midcentury modern residences recognized for clean lines, purity of form, and strong materiality. The homes underwent comprehensive renovation and restoration projects in a span from 2010-2015. Each recent project demonstrates that the liveability inherent in the original designs could be preserved and updated for 21st century lifestyles without detriment to the architectural integrity.

Through four case studies, this paper explores the notions of change and constancy in renovating, preserving, and extending the functional liveability of midcentury modern residences. The idea of evolution – a process of change in a certain direction – both distinguishes and challenges renovation architecture. Edits made in any era must contribute to longevity and architectural integrity. Architects must be sensitive to how their interventions contribute to a building's evolution. Often, and especially in residential renovation design, projects require removal of changes made over time. Ideas and design concepts must come full circle. An examination of choices made to determine the appropriateness of change demonstrates the required subtle blend of conservation, restoration, and renovation necessary to bring out the best of each home's original design intent while imbuing it with new vibrancy.

1. INTRODUCTION

Vincent Kling, Louis Kahn, and I.M. Pei were three designers who worked the periphery of residential architecture. All are widely recognized for civic, institutional, and commercial commissions. Yet, each left lasting and meaningful impacts with his domestic works. Within five years from 1959-1964, Kling, Kahn, and Pei completed residential commissions in or near Philadelphia, Pennsylvania. Kling's Smith Residence

(1959), Kahn's Margaret Esherick House (1961), and Pei's Society Hill Townhouses (1964) are classic midcentury modern residences recognized for clean lines, purity of form, and strong materiality. Here, the architects explored concepts, material choices, and paradigms evident in their later and larger works. We see Kahn's concrete structure juxtaposed with wood shutters at the Esherick House informing his use of similar materials at the Salk Institute for Biological Studies. Kling's linear forms and ribbon windows of the Smith House reappear in grander scale on Philadelphia's Municipal Services Building. The dramatic geometries of the Pei townhouses, with ocular skylights and circular stairs, recur throughout his civic work.

Although contemporaries, the architects shared little interaction or collaboration during their overlapping time in Philadelphia. Kahn's denouncement of the automobile precluded him from Philadelphia's more ambitious civic planning projects earned by Kling (Penn Centre) and Pei (Society Hill complex).¹ Their work nevertheless represents their time and context.

The renovations of four homes designed by Kling, Kahn, and Pei demonstrate challenges and complexities of extending the functional liveability of midcentury residences.

2. CASE STUDY I: VINCENT KLING'S SMITH RESIDENCE RENOVATION

Vincent G. Kling (1916-2013) is one of Philadelphia's most prolific architects. His important city planning commissions include Bell Atlantic Tower (one of Philadelphia's tallest structures). While known more for commercial and institutional work, Kling designed several midcentury modern residences characterized by clean lines and spatial purity.²

Kling's 1959 Smith Residence (**Fig. 1**) underwent comprehensive renovation from 2013-2015. Executed by k YODER design with a team of professionals³, the project paid careful attention to craftsmanship and detailing while promoting the liveability of the original design. Most importantly, the renovation endeavoured to maintain the qualities of which the

Smith Family wrote to Kling in 1959, upon moving into their new home:

*There is something about it that seems to enchant everyone—it is so beautiful and restful here. The spaciousness, the attractive angles, the indoor-into-outdoor feeling, the windows over the inside walls, and so many other delightful arrangements that combine to make living in it just plain heavenly.*⁴

2.1 Stewardship, Balance, and Refinement

The renovation preserved the Kling four-square plan, cruciform circulation, and rigor of interior spaces. Eyebrow woodwork details, bay spacing, and sequences of light and dark, glass and partition were upheld, as were the classic modern reveal details, which let each material read individually. To reinstate Kling's original indoor-outdoor connection, the cypress structure was restored to a uniform dark finish. William Whitaker, Chief Curator and Collections Manager for the

University of Pennsylvania Architectural Archives, said "[The] design team took great care to understand the history and qualities of the house before making any design decisions, ultimately yielding, time and again, to Kling's intent."⁵

Exterior work included restoring the white marble chip roof and metal drip edge, both replicated from Kling's drawings. Lack of gutters caused water infiltration into the crawlspace and basement during intense rains. Adding gutters and downspouts would have awkwardly intruded on the clean eave line. Instead, underground drainage pipes were set along the drip line. Existing stone splash blocks and river rocks conceal the pipes, divert rainwater, and avoid impacting the roof. New ribbon windows and doors with improved insulating properties replaced aging aluminium originals. The exterior cypress siding was stripped of its faux "redwood" stain and refinished. Masonry conservators oversaw stone repointing and repair, matching the original grout formula.

Figure 1. Vincent G. Kling, Smith Residence, Gladwyne, Pennsylvania, U.S.A, 1959, front exterior view. © Jeffrey Totaro.



While much of the renovation focused on restoring materiality, careful spatial interventions ensured the house appropriately serves its 21st century inhabitants. Replacing the confined and dated kitchen afforded better connection to the family room, an open concept layout, and a complementary material and colour palette. The design preserved the horizontal eyebrow and light cove, maintained exposure of the stone wall, and accentuated the line of the ribbon windows while improving functionality. Reconfiguring the home's three bathrooms also addressed present storage and functional needs and opened space for a new powder room.

2.2 Impact and Lessons Learned

Completed in September 2015, the project is both about preserving the house and telling its story. Exposure in a January 2016 *Philadelphia* magazine article attracted attention of DOCOMOMO-US and the American Institute of Architects as

a previously uncatalogued example of Kling's residential work. The project earned preservation awards including a 2017 DOCOMOMO-US Modernism in America Citation of Merit. Historian and Professor Emeritus Daniel Vieyra, Ph.D., AIA, "The renovation rises to the challenge of preserving what was then cutting edge, although sometimes naïve and overly optimistic experiments with new materials and methods of construction." He adds that "This work and its recognition does much to raise public awareness of this era's fragile architecture."⁶

3. CASE STUDY II: LOUIS KAHN'S MARGARET ESHERICK HOUSE CONSERVATION

Louis Kahn (1901-1974) departed from the International Style, notably in his use of concrete as both structural and finish material. His significant commissions include the Richards Medical Research Laboratories at the University of

Figure 2. Louis I. Kahn, Margaret Esherick House, Philadelphia, Pennsylvania, U.S.A, 1959-1961, rear exterior view. © Jeffrey Totaro.



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Pennsylvania, the Salk Institute for Biological Studies in La Jolla, California, and the Phillips Exeter Academy Library in Exeter, New Hampshire.⁷

Exemplifying spatial clarity and the hallmarks of pure geometry and materiality that define his larger commissions, Kahn's Margaret Esherick House (1959-1961) represents one of only nine houses built from his designs (**Fig. 2**). Characterized by Kahn's early iteration of servant and served spaces and use of natural concrete and Apitong wood, the house is a 2,500-square-foot jewel box with walls of windows, bookshelves, and reading nooks built for bookseller Margaret Esherick. The residence features the only intact private kitchen by sculptor and woodworker Wharton Esherick, Margaret's uncle.⁸ It is an American Institute of Architects Philadelphia Landmark Building (1992), listed on the Philadelphia Registry of Historic Places.

The owners and a team led by kYODER design collaborated to ensure continued stewardship of the house as an example of Kahn's mature work and to preserve its original purpose as a private home.⁹ New interventions maintain the rigor of servant and served spaces, complement – rather than replicate – aesthetic details, and refine elements not intrinsic to Kahn's vision.

The homeowners are active in Philadelphia's preservation community, regularly hosting tours, events, scholars, and global visitors. According to Paul Savidge, who owns the Esherick House with his husband Daniel Macey:

Our idea is that the house is only going to survive and be viable as a private residence, so we needed to bring the house into the 21st century and let technology and modern advances in mechanics really give the house advantages in its sustainability. We're not doing anything that injures the integrity of the house.¹⁰

3.1 Wharton Esherick Kitchen Conservation

As a singularly complete surviving example of Wharton Esherick's interior woodwork, the kitchen deserved special attention. Paul Eisenhauer, former executive director of the Wharton Esherick Museum, was involved as an expert.

Part of [Wharton] Esherick's genius is in the way he makes individual components communicate with each other while reflecting people's movement through the space as they use these functional pieces of sculpture. Most of Wharton Esherick's interiors have been broken up over the years and the individual pieces dispersed. This kitchen is one of the few intact interiors Esherick created where one can experience the totality of his vision.¹¹

Under guidance from the museum, the kitchen was con-

served and refined to ensure its condition as a secondary but functional kitchen. The process was an exercise in evaluating original components versus later adjustments, and reconciling edits among the two. Later-addition cabinets and an almond-coloured dishwasher were removed. The range was replaced with a new model of similar scale; copper doors and handles complement the original copper sink. Non-original backsplash tiles were replaced with stainless steel chosen for its frequency in Kahn's work. Conservation involved restoration of the original wall finish, forensic identification and restoration of paint colours, and woodwork preservation.

3.2 New Galley Kitchen Insertion

A new galley kitchen was designed within the confines of the former utility room, maintaining Kahn's fundamental spatial division of servant and served spaces. The new kitchen supports and reduces wear on the original kitchen without impacting the spatial rigor of Kahn's architecture or the elegance of Esherick's intact craftsmanship. A conscious design effort juxtaposes the room as a complementary, contemporary counterpart. Soapstone counters, matte aluminium backsplash, pull-less cabinetry, and expert new woodwork honour the home's original materiality and craft. Mechanical equipment and utilities were moved to a crawlspace and wall cavity to create the new galley. The solution balances conservation of Esherick's craftsmanship, intentionality of Kahn's architecture, and present-day functionality.

3.3 Living Area Interventions

Sensitive interventions in the living room resolved issues of visual display and comfort. A new concealed, remote-controlled, ceiling-mounted LED system enables art or video projection on the west wall while preserving the wall surface. Virtually invisible when not in use, the system supports ongoing educational programming.

Kahn's original wood shutters provided little insulation. To reconcile this challenge, fabric-wrapped rigid insulation panels were printed with photorealistic images of each shutter, with variations in wood grain and crossbars. Panels friction-mount into windows by hand without fasteners. They can be removed and stored during warmer months. In recognizing the project, DOCOMOMO-US jurors remarked on the design for "cleverly adapting the spirit of the character-giving shutters during the winter months, allowing a sustainable future for the house."

3.4 Impact

The Esherick House exemplifies stewardship. In 2015, the home was made available for long-term conservation planning by the University of Pennsylvania Graduate Program in Historic Preservation's Wood Conservation Seminar. In 2016, the project earned several preservation awards, including a DOCOMOMO-US Modernism in America Citation of Merit.

4. CASE STUDY III: I.M. PEI'S SOCIETY HILL TOWNHOUSES

Centenarian Chinese-born American architect I.M. Pei, FAIA, RIBA, (1917-) founded I.M. Pei & Associates in 1955; today the international firm operates as Pei Cobb Freed & Partners. Pei's iconic works include the glass pyramid entrance to the Louvre Museum in Paris, France; the starkly geometric National Centre for Atmospheric Research Mesa

Laboratory in Boulder, Colorado; and the East Wing of the National Gallery in Washington, D.C. Among Pei's honours are the Pritzker Architecture Prize (1983) and U.S. Presidential Medal of Freedom (1993).^{12,13}

Philadelphia City Planning Commission Executive Director (1949-1970), Edmund Bacon envisioned and executed some of the city's most dramatic post-World War II urban redevelopments. Bacon advocated restoration and preservation in combination with demolition and reconstruction. The Society Hill neighbourhood, named for the 17th century Free Society of Traders, represents a seminal work.¹⁴ Outlined in the 1947 Better Philadelphia Exhibit co-designed with Louis Kahn and Oskar Stonorov, Society Hill redevelopment called for removing "blighted and incompatible structures and replacing them with modern buildings and parkland that integrated with the neighbourhood's historic context."¹⁵

I.M. Pei's Society Hill Complex was among the new con-

Figure 3. I.M. Pei, Society Hill Townhouse, Philadelphia, Pennsylvania, U.S.A, 1962, interior view to rear garden. © Jeffrey Totaro.



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struction. Encompassing 7.6 acres, the project included three residential towers and 37 townhouses. Each townhouse enjoys a private rear courtyard surrounded by brick and iron fencing. According to Pei Cobb Freed & Partners' narrative: *The challenge was to maintain the scale and enhance the character of the modest buildings in this early settlement area of Philadelphia while achieving a high residential density at the river's edge. The solution, carefully woven into the existing urban fabric, places three-story townhouses in quadrangle patterns amid an historic church and 18th- and 19th-century houses worthy of rehabilitation.*¹⁶

In 2008, kYODER design renovated a Pei townhouse completed in 1962. It would become the first of several renovations within the complex, all designed to respect the clarity of Pei's original floor plan, preserve the iconic central circular stair, and incorporate 21st century technology and amenities. Of the examples, the Society Hill Townhouse projects took the most liberties with spatial reorganization in the context of Pei's architecture.

4.1 Society Hill Townhouse I: 241 South Third Street

The approach avoided period restoration; instead, the house (Fig. 3) was revitalized within its midcentury context. Removing interior partitions created expansive views in keeping with Pei's concept. The enclosed galley kitchen was opened to the rear dining room and front breakfast room to unify the ground floor. Wall-mounted cabinetry and aluminium wall panels visually connect kitchen and dining areas, and durable terrazzo flooring adds continuity. The reinterpreted breakfast room light cove continues the horizontal datum created by the front window and brick garden walls. Reconfiguring the third floor into a master suite highlighted an original ribbon window, while adding modern-day amenities including a walk-through dressing closet.

4.2 Society Hill Townhouse II: 293 Locust Street

A second Society Hill Townhouse renovation reconciled years of incompatible modifications. Much of the original detailing was obscured. The master bath was an incongruous mix of pink marble and brass fixtures out of context with the original aesthetic. The primary design challenge was creating considered interior architecture in the spirit of the midcentury style, yet with amenities desired in 2014. Design solutions involved reorganizing the third floor; using pocket doors, glass partitions, and skylights to make relatively small spaces feel larger; and integrating new custom cabinetry to provide

additional storage. Natural wood, porcelain tile, and marble were chosen for their presence on Pei's original palette and timeless popularity. Owner Paul Trower said, "The design cohesiveness of the end product is better than we could have imagined, with each space flowing seamlessly into the next, while respecting the home's original architectural integrity."¹⁷

5. LIVABILITY AND CHANGE: A SUMMARY

Each of the aforementioned projects demonstrates how modern liveability was considered within the context of midcentury domestic architecture. The desires for open kitchens, spacious and well-appointed baths, additional storage, and improved connectivity between service spaces and living areas were repeated themes that required deft space planning adjustments. In all cases, the rigor of each home's architecture was maintained when adding or subtracting program. Building envelope improvements (e.g. new roofing, insulation, windows, and doors) supported long-term viability; in some cases, envelope work required nonconventional approaches, such as at the Smith Residence, where new insulation was added from above during roof replacement. Updated technology – lighting and electronics, HVAC systems and equipment – presented opportunities to enhance efficiency and comfort, while integrating new systems involved thoughtful, inconspicuous placement of grilles and controls.

When working within historic architecture, midcentury or older, there must be thoughtful balance between retaining and conserving original elements, preserving the authenticity of the original design, and incorporating preferences of current occupants. These examples show that constancy of form, function, and stylistic mien combined with subtle and sensitive change can afford homes continued timelessness and viability.

The idea of evolution – a process of change in a certain direction – both distinguishes and challenges the renovation of modern architecture. Edits made in any era must support longevity and architectural integrity. Architects must be sensitive to how their interventions contribute to a building's evolution; they can do so with the collaborative involvement of historians, archivists, and conservators. Often, and especially in residential renovation, projects require removal of changes made over time. Ideas and design concepts must come full circle. An examination of choices made to determine the appropriateness of change demonstrates the required subtle blend of conservation, restoration, and renovation necessary to bring out the best of each home's original design intent while imbuing it with new vibrancy.

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BIOGRAPHIES

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KANEJI DOMOTO:**VERSIONING JAPANESE-AMERICAN MODERNISM**

Lynnette Widder (USA)

ABSTRACT

Kaneji Domoto's (1912-2002) ninety years spanned much of the so-called 'American Century'. The way he navigated those years communicates much about the country's proudest and least proud moments. In his teens and twenties, he moved effortlessly from laborer to Stanford physics student, from San Francisco to New York, and from itinerant to Taliesin fellow who would fluidly integrate motifs of Japanese architecture into the American suburb. But mid-century America struggled with national identity. Domoto grew up working in his Japanese émigré family's landscaping business; in 1942-43, he like other West Coast Japanese Americans was dispossessed and interned. By 1948, he was among the Taliesin fellows tapped by Wright to collaborate on Usonia, a suburb in Westchester, NY. Between 1948 and 55, Domoto designed and completed five houses on the community's 97 acres. These houses reflect Domoto's development from a Japanese-tinged Wrightian idiom to his own Japanese 'imaginary'. Their superficially consistent appearance, realized in stained cypress, cedar, glass, flagstone and concrete, belies his development. For Domoto, the Usonian projects became a testing ground for experimentation with 'Japanese' motifs couched in low-cost construction, landscape design and environmental responsiveness.

1. INTRODUCTION

The personal and professional biography of Kaneji Domoto (1912-2002) intersects with many of the most important moments in the 'American Century'. His professional identity - "American-Japanese" in his words¹ - was as bound up in his studies with Frank Lloyd Wright at Taliesin West as it was in the implications of his incarceration during World War II. His work as architect and landscape architect after 1945 for an emerging American post-war middle class reflects the role that Modern architecture played in establishing a cultural identity inclusive of new participants. As his oeuvre matured, Domoto's inclination to reference Japanese traditions - or

imaginaries that embodied that tradition for him - became more explicit. Domoto's recently re-discovered and extensive archive of drawings, documents, photographs and artwork bears witness to his vibrant engagement with questions of identity within a Modern architectural idiom.

2. A BIOGRAPHICAL OVERVIEW²

Raised in Northern California in a family of Japanese émigré nursery owners, Domoto's knowledge of traditional Japanese landscape architecture came first-hand. His father and uncle had arrived from Japan in 1894, and founded what was to be the largest plant nursery in the state, known as "Domoto College" for its importance in sponsoring and training new Japanese immigrants to be nursery men.

Domoto found a 1937 *Coronet* magazine article about Wright's Taliesin, and joined Taliesin West in Arizona in 1939, where construction was ongoing. Wright had been an advocate in the US for Japanese culture since the 1910s and Domoto first experienced Japanese fine art and poetry at Taliesin.

Figure 1. Kaneji Domoto, Bier House Model, Pleasantville, NY, USA, ca. 1948-9. Photo by Kaneji Domoto. Courtesy of the Domoto Family.



Domoto was visiting his family when Executive Order 9066 was issued in February of 1942. He, his wife and their two small children were relocated to Amache, Colorado, where more than half the internees were gardeners or farmers from California. In his year there, Domoto worked on construction, which he later credited with solidifying his knowledge of building.

He was finally released in the spring of 1943 on the condition that he move to the East Coast. After time in Baltimore and Washington, DC, he moved to New York City where he worked for such architects and designers as Morris Lapidus, Raymond Loewy and William Lescage, and became licensed as both an architect and landscape architect in New York State. His first independent projects came through Wright's introduction to a group of young New Yorkers who were starting a housing cooperative in Westchester County designed by Wright. Domoto would build five houses in this community, named 'Usonia' after Wright's 1933 term for affordable and environmentally responsive housing built in locally appropriate materials.

3. JAPANESE DESIGN TRADITIONS IN THE UNITED STATES

3.1. The Domoto Family and Japanese Botany in the US at the Turn of the Century

The first of the four Domoto brothers to emigrate from Wakayama prefecture arrived in San Francisco in 1894, a year after the first traditional Japanese Garden in the US had opened at the 1893 Chicago World Exposition. By 1902, the Domoto Brothers Nursery of Oakland issued a hand-painted catalogue offered 320 varieties of chrysanthemums and 80 varieties of roses not available elsewhere. The business played a central role in expanding the Japanese influence on regional landscape design and horticulture.³

Domoto's relationship to the family business was complex. On the one hand, the experience offered him immediate, first-hand contact with Japanese traditions of plant husbandry, aesthetics and landscape design that would underpin his oeuvre; on the other, his older brother's take-over of the business led him to look beyond that tradition for his professional career.⁴

3.2. Transposing the Japanese Garden Tradition

Even while earning his living by constructing traditional Japanese gardens, Domoto collected books that indicate his active interest in extrapolating from that tradition rather than repro-

ducing it.⁵ For example, *Pleasures and Problems of a Rock Garden* by Louise Beebe Wilder, of which Domoto owned a 1938 reissue of the 1924 original, considers the Japanese rock garden tradition and its potentials within an American idiom. Relieved of its traditional cultural specificity, the rock garden would offer Domoto a connection between his Japanese émigré milieu experience and his affinity for American Modern design.

The same is true of Domoto's transposition of the principles he mastered in Bonsai to pruning of full size trees.⁶ Illinois nursery owner George Kay recruited Domoto to teach the technique, and the two co-authored *Bonsai and the Japanese garden: Applying the ancient Bonsai art and Japanese landscaping to America's gardens* in 1974, a book whose title reflects Domoto's interest in transposing traditional Bonsai. Through the end of his career, he returned to his clients' homes to prune full-sized trees according to Bonsai formal principles.⁷

4. WRIGHT AND NOT WRIGHT

4.1. Frank Lloyd Wright and the Introduction of Japanese Idioms into American Modern Architecture

Wright's role in forming America's Japanese cultural imaginary during the first half of the 20th century in the US was significant. His first woodcut exhibition in 1906 at Chicago's Art Institute galvanized interest; his sales to the Metropolitan Museum of Art in New York alone totalled nearly 400 prints between 1918 and 22.⁸

Wright had a tactical interest in advocating for Japanese visual culture and architecture, expressed in his 1932 autobiography. He presented Japanese architecture as proto-modern, a precedent for the new American architecture he advocated:

"Becoming more closely acquainted with things Japanese, I saw the native home in Japan as a supreme study of elimination—not only of dirt but the elimination of the insignificant. So the Japanese house naturally fascinated me and I would spend hours taking it all to pieces and putting it together again . . . At last I had found one country on earth where simplicity, as natural, is supreme."⁹

4.2. Japanese Culture and the Taliesin experience

At Taliesin, Wright regularly invited the Fellows to "Japanese evenings," at which he would show selections from his prints and present readings of Japanese poetry in translation. By Domoto's account, these aspects of Japanese culture were new to him. When asked whether Wright recognized Domoto's expertise on the culture in which he'd been raised, Domoto

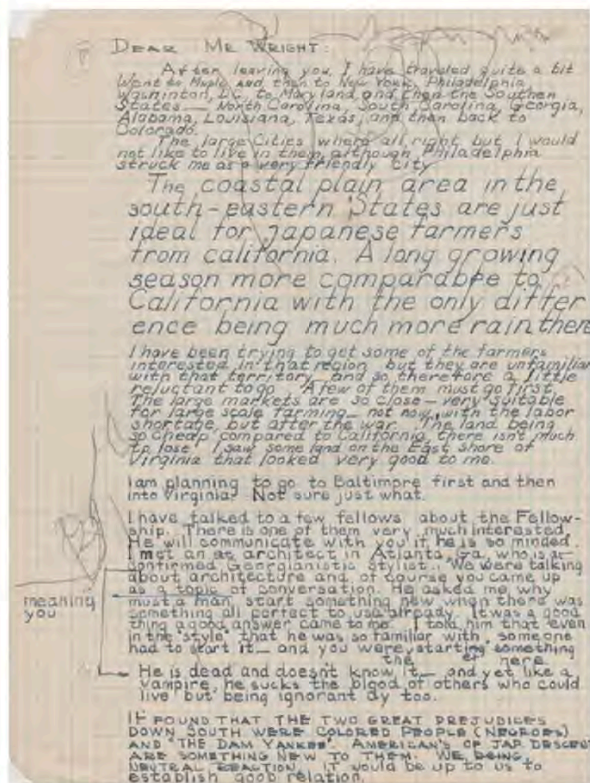


Figure 2. Kaneji Domoto, Letter to Frank Lloyd Wright ca. 1944.
Courtesy of the Domoto Family.

demurred, saying that Wright “knew better than to ask” him to translate poetry.¹⁰

Wright’s assimilation of Japanese precedent insinuated itself in many of his seminal works. Specific timber construction types – the deep overhanging eaves, intercut wood joinery, roof structures – and light screens explicitly reference both formal and domestic Japanese architecture.¹¹ Wright’s Japanese imaginary, a proto-Modern idiom characterized by transparent walls, tectonic timber construction and spatial ambiguity, was a clear referent for Domoto’s early Wright-inspired houses.

5. EAST OF THE MISSISSIPPI

5.1. Incarceration of the Domoto Family

Domoto described his experience of wartime incarceration pragmatically:

“When the war came, we had to dispose of everything. But at that time I just got married. I had very little, a car to drive, that was the only part of my property. My father had a nursery and my brother had a nursery. So when they lost those things, they felt very badly about it. But I didn’t lose much, and the experience I had in camp helped me quite a bit, because I worked in the architectural and landscape department in these relocation camps. There was a lot of building to be done, so I got a lot of practical experience at ten dollars a month, or whatever they gave you on that thing.”¹²

Domoto’s lifelong embrace of his heritage,¹³ and his ongoing pursuit of ways to integrate it into his creative life, speak volumes that his terse description of the camp experience omits. For a young man recently embedded in daily life at Taliesin, which included farming, construction, cooking and housework in addition to the hours spent in Wright’s studio, the conviction that “camp helped me quite a bit, because I worked in the architectural and landscape department” is understandable, but does not fully capture the cultural interchange characteristic of life during incarceration.

5.2. Japanese- American Designers during Incarceration

The professional repercussions of incarceration, especially for questions of cultural identity in Domoto’s postwar work, should be seen in a broader context. As the architectural and cultural historian Alexandra Lange wrote in 2017,

“Once you start to look at postwar American design through the lens of Japanese-American history, you realize that the two are inextricable. you know at least some of these names: Minoru Yamasaki, Gyo Obata, Ray Komai, Larry Shinoda, Willie Ito, S. Neil Fujita, Tomoko Miho, George Nakashima, Kay Sekimachi, Ruth Asawa, Hideo Sasaki, Isamu Noguchi. Most spent part of their teens and twenties in one of 10 War Relocation Centers... Some grew up speaking Japanese, practicing calligraphy and kendo, while others were first exposed to origami, painting, or weaving in the camps, where skilled artists and artisans made work to document and mentally survive incarceration.”¹⁴

Lange’s research details the intensity of cultural life during the period of incarceration. Recently discovered Domoto family photos show a marionette show Kaneji staged during internment, for example; the annual holiday cards he made for his family beginning in the late 40s were *origami* and *kirigami* originals, whose techniques might have been cultivated in that period. The extent to which the potential for exchange of cultural knowledge was recognized and to which it carried

over to the creative work of the Japanese-Americans who experience incarceration remains understudied, but cannot be underestimated.

6. USONIA AND THE USONIA HOUSES

The association of Wright's work with a uniquely American style in the popular and architectural imagination is perhaps most true of Usonia, his 1930s vision for the exurban communities he hoped would populate Middle America. The community of Usonia in Pleasantville, 35 miles north of New York City, is a unique example of what it meant to design, and to live, within Wright's milieu. Two of its founders were Taliesin Fellows, David and Priscilla Henken. In 1947-8, Wright designed the site plan, the only fully realized example of the circular plots, curved roads and shared amenities he evangelized. In 1948, Wright included Domoto, who by then lived in the New York area, along with five other Fellows on the list of pre-approved architects given to potential Usonians.

6.1. Usonia and Japanese Motifs

In his five Usonia house, Domoto evolved different modes through which to translate his Japanese American identity into his work. Initially working with Wright-inspired 'Japanese' references, he used mullioned, translucent soffit screens and suspended cabinetry in his three earliest houses to reference abstractly the traditional Japanese *shojis*, much as Wright had. In 1950, Wright fell out with Domoto over plans for a house Wright deemed "derivative." Domoto's sense of betrayal is clear in his letter to Wright: "An idea is never born full grown. You have given me an Idea but at the same time would kill it before it can grow."¹⁵ Domoto's two final houses in Usonia, built in 1954 and 55, refer to a Japanese architectural imaginary he had constructed for himself rather than the idiom he had assimilated from Wright.

6.2. Bier, Lurie and Harris Houses, 1948-50

The Bier House was the first and largest of Domoto's houses. Set into a sloping site, the house and its landscape were conceived together. An original model from 1948-9 depicts exterior stone retaining walls that continue into the house. Its ornately mullioned enclosed porch, a 1953 addition, reference *shoji* screens in a Wrightian manner. A pipe-stringer stair with cypress treads leads from the living room down to an inglenook, then onto the slope below, a sequence that recalls Wright's 1935 Falling Water. Like the Bier House, the Harris



Figure 3. Kaneji Domoto, Lurie House, Pleasantville, NY, USA, 1949-50. Renovation by Lynnette Widder. © Thad Russell, 2017

House has an L-shaped plan. Still visible from the kitchen, an eight-foot-wide corridor between the small bedrooms – a Wrightian tenet – provided a separate living space for the four children. An indoor planter integrated into the hearth continues the proximate landscaping as was done at Taliesin West. The Lurie House is the most modest of Domoto's three early buildings. A single-shed roof spans above the simple rectangular plan, which is punctuated by a weighty fieldstone hearth. Large south-facing glazing fronts the living room, which is separated from the kitchen by a suspended translucent cabinet.

All three houses include some variation on the Wrightian light screen surface. In the Lurie House, for example, illuminated panels mark the entry area in the living room and light the kitchen; a large skylight that bisects the house provides daylight for the kitchen, bathrooms and utility area. High clerestory windows provide primary illumination for the Bier and Harris living rooms; in the Bier House, corrugated fiberglass, then a new material, is backlit to provide lighting throughout the house. In each case, Domoto's compositional approach to the cabinetry and light screen's surfaces was largely subdued, unlike Wright's more elaborate ornamentations.

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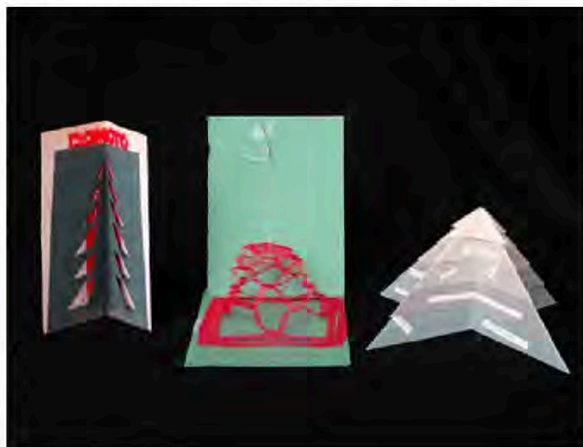
All three of these first houses were built in cypress and cedar woods. While most of the houses at Usonia have cypress siding, a wood that Wright also used extensively, Domoto's are the only that pair the cypress with cedar on the houses' interior. These two aromatic woods are still used in Japan for the chopsticks used at formal meals. This subtle reflection on Japanese culture can come only from first hand experience with the original referent.

6.3. Silson and Siegel Houses, 1954 and 55

There is a clear stylistic shift in Domoto's two later houses in Usonia. They are different in construction from those first three: although both use wood extensively, their primary structures are concrete and steel respectively. The trabeated concrete construction in the Silson House (1954) creates an expressive structural hierarchy evocative of Japanese joinery, and the free-spanning steel bents are infilled with the woven partitions familiar from Japanese garden architecture and pavilions in the Siegel House (1955).

The Silson House is a simple rectangle, uninflected to its steep site. The house is built on a grid of concrete columns and beams, which protrude beyond the house's eaves. The overhanging dark wood framing capped in copper sheathing, oxbow roof figure at entry and heavy symmetry in plan are evocative of Japanese temple architecture as seen in photographs, rather than the more abstract, domestic-scale Japanese references that Domoto's earlier, more Wrightian work used.

Figure 4. Kaneji Domoto, Holiday cards, 1955, 1962, undated



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The Siegel house is supported on a series of steel bents enclosed to the north by a continuous fieldstone wall. Although superficially similar in profile and construction to Taliesin West, its surface finishes and referents are quite different. Originally, the entire roof was clad in corrugated fiberglass, and the ceiling below, in irregular wooden lathe, a rusticated glowing surface that was intended to support plant life on its exterior, more garden partition than conventional enclosure. The sliding shades along the houses' two south and west facing fronts are direct *shoji* reproductions. Grass paper-covered walls reference traditional woven partitions. In the 1970s, Domoto added a fieldstone koi pond with large vertical stones, a composition he used extensively in his prolific landscape work.

7. CODA: 'AMERICAN-JAPANESE'

Domoto, a keen photographer, used his camera to document his landscape projects as well as the ways he realized them. The images of Domoto directing the placement of stones, suspended by winches, cranes or strong backs, over the course of decades are remarkable. He distinguished himself from Noguchi "who gets stone and sculpture and gets \$30,000 for it. I get a feeling. I've done enough of this rock work to have a feeling that all these rocks have a place in the universe... when I get a truckload of stone coming off and I start arranging them, they all fit...in the composition."¹⁶ Especially in the context of post-war land art practice and its fantasies about sculpting with landmovers – Smithson and Heizer eventually would – Domoto's stone sculptures mark an unpretentious intersection of pre-Modern Japanese landscape practice and the most contemporary of art practice. They are both intuitive/compositional and technical/industrialized, Japanese-American and American-Japanese simultaneously. Domoto's hand was equally present in the holiday cards he made every year for family friends. As a point of intersection between traditional Japanese techniques such as origami, kirigami and block print, and the fully assimilated mid-20th century "holiday card", his little objects are telling about how Domoto constructed for himself an identity that internalized multiple, complex experiences. Abstract Christmas trees look like kirigami pagodas; origami folds are used to create mail-able, three-dimensional tree ornaments. With each, he celebrated his integration of a Japanese culture he experienced first-hand through landscape and art making, and one – an 'imaginary' – he had constructed through books and photographs. Not until the 1970s did he visit Japan.

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He articulated this relationship clearly. In a 1994 interview conducted by his friend and former client Robert Siegel, he summarized:

"In landscaping I have a distinct style of using big rocks and waterfalls. I am an American Japanese. The Japanese in their culture have borrowed tremendously from the Chinese. I borrow from the Japanese, but it is not quite the same as Japanese landscaping or architecture because I am American."¹⁷

NOTES

1 Interview with Domoto by Robert Siegel, 1994. Domoto family collection.

2 Interviews by the author with the Domoto family, 2017; interview with Kaneji Domoto by the Japanese American Citizens League Oral History Project, June 12, 1999.

3 Gary Kawaguchi, *Living with Flowers. History of the California Flower Market*. (San Francisco, 1993: California Flower Market)

4 Interview with Kaneji Domoto, June 12, 1999.

5 Among the forty or so books from Domoto's library still in his son's possession are more than twenty about the Japanese landscape tradition, including several in Japanese. Thanks to Anyo Domoto.

6 Starting in 1958, Domoto taught traditional bonsai at the D. Hill Nursery in Illinois and later in New York State. Correspondence and promotional announcement in the Domoto family archive.

7 Interview by author with Peter Siegel, August 2017.

8(<https://www.metmuseum.org/pubs/bulletins/1/pdf/3258756.pdf>. bannered.pdf). Referenced October, 2017.

9 Frank Lloyd Wright, *Frank Lloyd Wright: An Autobiography*. (reprint) (Petaluma, CA, 2005: Pomegranate Communications) p. 196

10 Indira Berndtson for the Frank Lloyd Wright Archives, Interview with Kaneji Domoto, February 26, 1996. Domoto family archive.

11 Wright referred to the way he adapted this tradition in his leaded windows and translucent lit ceilings "light screens," (<https://www.ocma.net/exhibition/light-screens-leaded-glass-frank-lloyd-wright>) a term that also evoked the precedent of the Shoji wall.

12 Interview with Kaneji Domoto, June 12, 1999.

13 It is important to know that Domoto was a strong supporter from early days of the New York chapter of the JACL that interviewed him, and that his wife Sally Fuji Domoto was deeply involved in the reparations movement and the ultimate passage of the Civil Liberties Act of 1988.

14 (<https://www.curbed.com/2017/1/31/14445484/japanese-designers-wwii-internment>) referenced October, 2017.

15 Letter from Domoto to Wright, July 1950. Domoto family collection.

16 Interview with Kaneji Domoto, June 12, 1999.

17 Interview with Domoto by Robert Siegel, 1994. Domoto family collection.

YL: 3 way identity struggle: us, japan, wright. / usonian architecture could have resolved it

BIOGRAPHY

Lynnette Widder (M.Arch, Columbia University, 1990; Sc.D., ETHZ, 2016) serves on the full-time faculty of the Masters of Sustainability Management Masters Program at the Earth Institute, Columbia University. Her articles on architectural history and sustainable building have appeared in *Daidalos*, *Bauwelt*, *architecture*, *Manifest*, *Kritische Berichte* among other publications. She is co-author of two books, *Ira Rakatansky: As Modern as Tomorrow* (William Stout, 2010) and *Architecture Live Projects: Pedagogy into Practice* (Taylor and Francis, 2014); and curator of *Kaneji Domoto at Frank Lloyd Wright's Usonia* (AIA Center for Architecture, 2017). Her professional work with aardvarchitecture has been published in the US, Europe, China and Australia. From 1994-98, she was editor of the bilingual architecture quarterly *Daidalos*. Her current research focuses on sustainable building construction; urban resource flows; and the material culture of building construction in post-war Germany and the US.

TELLURIC LANDSCAPE: LINA BO BARDI AND SUBURBIA

Cláudia Costa Cabral (Brazil)

ABSTRACT

An ever-growing body of scholarship on suburbia has largely focused on the adverse effects of suburbanization. However, suburbia was also a fruitful experimental field for modern architecture. Lina Bo Bardi built her masterful Glass House (1951) in the São Paulo's suburb of Morumbi, as well as the Valeria Cirell House (1958). A few years later, Bo Bardi had the opportunity to design a suburb. In 1965, she developed a proposal for the Itamambuca Complex, a new urbanization located in Ubatuba, a resort town on the north coast of the state of São Paulo, in Brazil. The paper wishes to shed light on how Bo Bardi explored serial repetition and homogeneity, suburbia's most defining (and blamed) features, allied to primitive figuration, in the design of the Itamambuca complex.

1. INTRODUCTION

Lina Bo Bardi (1914-1992) did not author many urbanistic projects. In fact, they can be easily counted: the Itamambuca Complex (1965); the entry to the competition for the renovation of downtown Santiago de Chile (1972); the cooperative community of Camurupim (1975); the entry to the competition for the Anhangabaú Valley in São Paulo (1981); the rehabilitation plan for the historic district of Salvador (1986). As well as the Salvador's plan, the competition entries for Santiago and São Paulo were both studies for central areas of capital cities. On the other hand, Itamambuca and Camurupim were proposals for suburban and rural environments.

The Itamambuca Complex, Lina's early incursion into urban scale planning, though never built, raises still relevant questions. We can find there the emblematic symbols of suburban life, such as the series of detached houses surrounded by plants and grass, or the (implicit) private-car mobility. But Lina was as full of surprises as ever on suburbia.

According to her plan, the land was to be subdivided into unconventional circular lots, combined to each other by a system of winding paths (Fig. 1). It formed a pattern of circles, similar to the one she would later pursue in her design

for the community of Camurupim in Sergipe, and perhaps comparable to Team 10's search for structuring patterns in the fifties, or to the earlier Frank Lloyd Wright's original layouts for Parkwyn Village and Pleasantville (1947).

Lina's drawings for the Itamambuca complex depicted a natural, rural environment, limited by a streamlet. A few sparse handwritten notes defended the circular lots as a strategy to conserve the agrestic appearance of this natural setting. But, on the other hand, one should be aware of the strictly geometrical order of the proposed morphological structure, and its homogeneous, methodical recurring patterns. The paper wishes to shed light on how Bo Bardi explored serial repetition and homogeneity, suburbia's most defining (and blamed) features, allied to the possibilities of primitive figuration.¹

2. THE CIRCULAR LOTS

The Itamambuca Complex was to be a new housing development located in Ubatuba, a resort town crossed by the Tropic of Capricorn, on the north coast of the state of São Paulo, in Brazil. Ubatuba spreads between the mountains and the sea, bordered by the Serra do Mar, a chain of ridges covered by the Brazilian Atlantic Forest, one of the most threatened ecosystems in Brazil. A former important port city, Ubatuba faced economic decay and isolation before the turn of the twentieth century. During the thirties, the construction of a highway connecting the city and the Paraíba Valley strengthened its tourist vocation and led the region towards economic recovery.

There are not too many reachable records concerning Bo Bardi's design for the Itamambuca Complex. Apparently, she wrote no organised explanatory text about the project. The available sources consist of a sequence of separate drawings, showing the parallel progress of her ideas on the subdivision of the land and on the building of the housing units, as the two interlinked dimensions of the task. Just a few of these drawings are actually accompanied by some scattered notes.² Nevertheless, looking over these records, it seems that Lina



Fig. 1. Lina Bo Bardi, Itamambuca Complex, Ubatuba, São Paulo, Brazil, 1965. Partial plan of lots and sketch. India ink, graphite and colour pencil on paper, 49,2 x 34,0 cm. © Collection of the Institute Lina Bo and P.M. Bardi.

has devoted so much thought to the problem of the subdivision as to the design of the houses to be constructed. The proposed site for the complex was a strip of land stretched along the right bank of the Itamambuca River, one of the many streamlets descending from the mountains and reaching the city's region. Through a coloured panoramic sketch, Lina depicted the site as a piece of unspoiled nature, where the ground surface seems entirely covered by green plants, bordered by the blue stripe of the river. Next to this drawing she wrote: "Preservation of the 'natural' configuration of the place".³ However, the word natural, not by chance placed be-

tween quotation marks, has a particular meaning to her. It refers less to a pristine, existing condition, than to a pursued quality, to be achieved through the project.

At the right bottom of the page, under the title "subdivision", she introduced two little diagrams, which represented two opposed strategies for addressing the issue of land parcelling for the construction of individual homes. One diagram, criss-crossed with a red x-shape mark, showed what should not be done: the use of a rectangular grid, identified as the "traditional geometric" way. The other diagram offered a sample of a new suburban tissue, to be formed by a series of circular lots, linked to each other through winding paths. The word "natural", associated to this diagram, was meant to describe not the absence of a plan, but a contrasting alternative to the rectangular grid.

The morphological structure of this alternative tissue appears to have evolved in parallel with the form of the houses. When examined together, rather than separately, Lina's drawings for Itamambuca reveal that circular shaped lots were considered from the very beginning, though the ways in which they could be combined varied. An early sketch shows a group of circular lots of unlike diameters (her notes refers to 18, 22 and 25 meters) loosely arranged along winding tracks, and with square houses placed at the centre of each one.⁴ A following sketch also shows a cluster of circular lots of various different sizes, where the larger lots are randomly combined with the small ones.⁵

Lina's first schemes for Itamambuca clearly resemble Wright's original Usonian communities' layouts from 1947. Wright's site plan for Parkwyn Village, in Kalamazoo, Michigan, introduced forty circular or semi-circular house lots, which were laid around a lake and linked by winding roads. The project assumed that the individual ownerships of the lots were to be accompanied by the common ownership of the spaces between circles, to be let natural. Wright's layout for Pleasantville, next to New York, also featured winding roads and fifty circular house lots, with interstitial spaces between circles collectively shared and maintained as green areas. Wright worked on larger lots than the ones pursued by Bo Bardi, with diameters ranging from about 60 meters in Pleasantville to 70 meters in Parkwyn Village.⁶ Despite the homogeneity of the lots, both of Wright layouts form loosely controlled organisations, where the circles appear to glide freely over each other. Even the houses would be allowed to slide from the centre to the edges of the circles, occupying different positions within the lots.

However, Lina gradually departed from Wright's proposals, giving up the relaxed configuration presented on her earlier drafts and moving towards a more structured pattern of organisation. The circular shaped lots were reduced to just two sizes (with diameters about 12 and 23 meters) and disciplined by regulatory lines, a feature rather absent in Wright's freely arranged plans. The following sketches show how the position of the circular lots is actually controlled by a regular grid (Fig. 1). Each group of four larger circles are virtually inscribed in a square with side lengths of no more than fifty meters, more or less equivalent in size to one of Wright's lots. Smaller circular lots occupy the space left between them. This logic is reproduced throughout the site, giving shape to a mesh of larger and smaller circles, crossed diagonally by continuous winding paths, working around the circles and following the river direction.

Lina's move in search of a structured pattern, growing out of the more regulated association of the circular lots, brings her work perhaps closer to some of Team 10's coeval investigations

on visual groups and structuring principles, than to Wright's usonian experiences. As reminded by Tom Avermaete, in the context of a discussion on Team 10's reinvention of the urban tissue, Alison Smithson considered that "apparent sameness" could be "the carrying order".⁷ We can find in Lina's Itamambuca such a struggle for a hidden order, able to visually structure architecture and territory, nature and city.

3. THE SQUARE HOUSES

According to Priscilla Henken's comments on Wright's plan for Pleasantville, houses should be all different. "That follows naturally from Mr. Wright's principles of organic architecture which demand that each house be suited to the needs and personalities of the owners", she explained, being each house "the only one of its kind, a work of art with the artist's signature."⁸ Lina did exactly the opposite. Like so many other suburbs, Itamambuca would be populated by the replication of almost identical homes, always placed in the same fixed position within the lots. None of Lina's houses would be the only one

Fig. 2. Lina Bo Bardi, Valeria Cirell House, 1958, Morumbi, São Paulo. Photo by the author, 2017.



of its kind, though all of them might be the work of an artist. As Zeuler Lima has pointed out, the Itamambuca Complex “confirmed the formal palette Bo Bardi had begun to develop in the late 1950s”.⁹ In fact, houses were depicted as cube-like volumes with green rooftops, porches with thatched roofs, and exterior walls covered by little plants, suggesting a sort of primitive figuration that resembled Bo Bardi’s earlier Valeria Cirell House (1958), built in the suburb of Morumbi, in São Paulo (Fig. 2).

Nevertheless, despite the round shape of the lots, she used none of the Circular Houses she had developed in 1962, as it could be possibly expected, since these were likewise suburban houses, with porches, courtyards and green roofs. Instead, she designed square-plan houses. Lina proposed two types of houses, one for the larger lots, and one for the smaller ones. According to the available records, the study of the houses comprised plans, sections and façades, presented as hand made coloured drawings, and a few exterior and interior perspectives.

Both types of houses are based on symmetrical plans, geometrically constructed by the rotation of a smaller square inside a bigger one, having a centralized staircase as the starting point. The floor plan of the larger house fits in a square-framework with side lengths of about 9 meters. The inside square circumscribes a double height space around the circular wooden staircase, introducing a centripetal configuration. As well as

the kitchen in the ground floor, the four tiny bedrooms and bathrooms on the second floor are pushed to the four corners of the larger square. A peripheral porch, supported by rustic wooden pillars and covered by a thatched roof, enlarges the ground floor living area with an exterior wooden deck.¹⁰ The section reveals the wooden mezzanine floor structure and a tile roof hidden behind the masonry walls.¹¹

The smaller type of house could be virtually inscribed inside the bigger one. The floor plan, with side lengths of about 6 meters, matches the inner square of the larger house, and is also organised around a centralised staircase. Nevertheless, this house has no inner rotated square, but an outside one, which forms four exterior porches at its corners, with wooden pillars and thatched roofs (Fig. 3).¹² If the plans seem to be almost over regulated by a geometrical, therefore intellectual and artificial order, the outward appearance of the houses appears to come from an antithetical primitivistic attitude. Childlike drawings portray unassuming, almost shy façades, evoking a sense of innocence, with their uncertain windows, lattice doors and uncultivated plants randomly sprouting from the walls (Fig. 4).¹³

4. THE “WONDERFUL PRIMITIVISM”

A little sketch next to the partial plan of the lots shows a canoe and its occupants by the river, maybe alluding to the origins of the name of the city – Ubatuba, which means “gath-

Fig. 3. Lina Bo Bardi, Itamambuca Complex, Ubatuba, São Paulo, Brazil, 1965. Model of the small house. Collection of the Institute Lina Bo and P.M. Bardi. Photo by the author, 2013.



Cláudia Costa Cabral Telluric Landscape

Fig. 4. Lina Bo Bardi, Itamambuca Complex, Ubatuba, São Paulo, Brazil, 1965. Façade. India ink on paper, 19,7 x 25,9 cm. © Collection of the Institute Lina Bo and P.M. Bardi.



ering of canoes" in Tupi – and the former indigenous occupation of the region, or perhaps calling forth the memory of old telluric forces. The bond between men, architecture and nature was a recurring subject in Lina Bo Bardi's work. In 1943, in her *Domus*' magazine days, we can find Lina Bo declaring that modern world "brought to architecture the relationship ground, climate, environment, life, a relationship that, with a wonderful primitivism, we see spring from the most spontaneous of the architectural forms: the rural architecture."¹⁴

Bo Bardi's interest in ecological matters resurfaced in *Contribuição propedêutica ao ensino da arquitetura* (Propedeutic contribution to the teaching of architecture), written in 1957, where she expressed a well-informed awareness of the vulnerability of the environment, based on biologists and conservationists' opinions.¹⁵ Yet, she condemned "deviations of the type Organic architecture," and what she called a "romantic" attitude before planning.¹⁶ Instead of that, she defended a rational, "Illuminist reconsideration" of the binomial architecture-nature.¹⁷ Furthermore, as suggested in the following paragraph, she was especially concerned with the relationship between city and country:

*Man, according to the well-known concept of Le Corbusier, eats, drinks, sleeps, works and lives in a way that is different from yesterday, since the phenomenon of velocity, as if precipitating the material well-being, recompose the life of the cities, while that of the countryside is constituting itself according to the former.*¹⁸

The erasure of the distinction between the city and the country has been one of the negative environmental consequences of suburbanisation. Lina's perspective on suburbia, although facing this problem, is less Arcadian and conservative than it might seem. It is not a reaction against planning, but the conscious construction of a new landscape. Instead of claiming for an uncontrolled organic freedom, she proposed a geometrical pattern, based on gentle, but recurring curves, which could be mechanically repeated. But she does not refuse to expose ambiguity, perhaps as a way of addressing this complex situation. Her design for the Itamambuca Complex is consciously paradoxical, exposing an undisguised opposition between generic features like repetition and seriality (that the suburb so much embodies), and a specific figurativeness, which arises from rounded lots and primitivistic houses in green scenery.

NOTES

1 The present work was supported by CNPq, National Council of Scientific and Technological Development – Brazil.

2 Lina Bo Bardi, *Conjunto Itamambuca*, 1965. Collection of the Institute Lina Bo e P.M. Bardi (<http://www.institutobardi.com.br>).

3 Lina Bo Bardi, *Conjunto Itamambuca*, 1965. Perspective (067ARQd0045). Collection of the Institute Lina Bo e P.M. Bardi.

4 Lina Bo Bardi, *Conjunto Itamambuca*, 1965. Partial plan of the lots with notes (067ARQd0023). Collection of the Institute Lina Bo e P.M. Bardi.

5 Lina Bo Bardi, *Conjunto Itamambuca*, 1965. Plan of the house; Main plan of the land lots (067ARQd0029). Collection of the Institute Lina Bo e P.M. Bardi.

6 Wright's plans were eventually revised, due to the difficulties in obtaining building permits for circular lots. See: Priscilla Henken, "A 'Broad-Acre' Project", *Realizations of Usonia: Frank Lloyd Wright in Westchester*, New York, The Hudson River Museum, 1985, pp. 6-13; Robert Twombly, *Frank Lloyd Wright. His life and his architecture*, New York, Wiley, 1987, pp. 265-268.

7 Tom Avermaete, "Mat-building. Team 10's reinvention of the critical capacity of the urban tissue", in: Max Risselada and Dirk van den Heuvel, eds., *Team 10, 1953-81, in search of a Utopia of the present*, Rotterdam, NAi Publishers, 2005, p. 309.

8 Priscilla was married to David Henken, a Taliesin apprentice of Wright who formed the cooperative for the construction of Pleasantville. Henken, op. cit., p. 8.

9 Zeuler Lima, *Lina Bo Bardi*, New Haven and London, Yale University Press, 2013, p. 119.

10 Lina Bo Bardi, *Conjunto Itamambuca*, 1965. Plans (067ARQd0051; 067ARQd0052). Collection of the Institute Lina Bo e P.M. Bardi.

11 Lina Bo Bardi, *Conjunto Itamambuca*, 1965. Section (067ARQd0055). Collection of the Institute Lina Bo e P.M. Bardi.

12 Lina Bo Bardi, *Conjunto Itamambuca*, 1965. Plans (067ARQd0049; 067ARQd0050). Collection of the Institute Lina Bo e P.M. Bardi.

13 Lina Bo Bardi, *Conjunto Itamambuca*, 1965. *Façades* (067ARQd0048; 067ARQd0056). Collection of the Institute Lina Bo e P.M. Bardi.

14 Lina Bo Bardi, *Arquitetura e natureza: a casa na paisagem* [*Domus*, 1943], in: Silvana Rubino and Marina Grinover, eds., *Lina por escrito. Textos escolhidos de Lina Bo Bardi*, São Paulo, Cosac Naify, 2009, pp. 47.

15 She makes references to the Meeting of the International Union for Conservation of Nature and Natural Resources in Caracas, 1952; to the Congress of the Pacific Science Association in Manila, 1953, and to biologists Julian Huxley and Harold Coolidge. Lina Bo Bardi, *Contribuição propedêutica ao ensino da teoria da arquitetura*, São Paulo, Instituto Lina Bo e P.M. Bardi, 2002, p. 15.

16 Bo Bardi, op. cit., 2002, p. 46.

17 Bo Bardi, op. cit., 2002, p. 16.

18 Bo Bardi, op. cit., 2002, p. 18.

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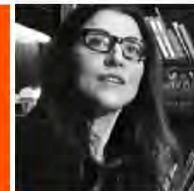
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BIOGRAPHY

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Session 09_SHIFTING IDENTITIES - ET IN ARCADIA EGO¹

Session Chair: Nataša Koselj (Slovenia)



The syntagm Shifting Identities has been highlighting current questions for at least the last two decades in psychology and gender studies (Shifting Identities Shifting Racisms: A Feminism & Psychology Reader, 1994), art (Shifting Identities (Swiss) Art Now / (Schweizer) Kunst heute, 2008), sport (Africa, Fandom, and Shifting Identities: An Introduction to Football and Identity, 2014), politics (Shifting Identities: Changes in the Social, Political, and Religious Structures in the Arab World, 2015-16), and, in the recent public dialogue Voyeurism and Digital Identity between Slavoj Žižek and Paul Holdengräber², philosophy. There have been debates on this topic in the field of architecture, anthropology, sociology and phenomenology for even longer through the works of Team X, Claude Lévi-Straus, Christian Norberg-Schulz, Alexander Tzonis, Liane Lefaivre and many others. Martin Heidegger published Identity and Difference in 1957, where he begins by re-questioning the Permenides sentence: "*Thought and Being are the same*". In literature, Franz Kafka wrote in his Metamorphosis (1915): "*As Gregor Samsa awoke one morning from uneasy dreams he found himself transformed in his bed into a gigantic insect*". These identity-shift questions have been at the heart of the Docomomo debates since its very inception as they touch the theory and practice of the MoMo buildings' renovation discussion at its very core.

In 1961 there was a conference in the Metropolitan Museum of Art in New York City entitled "Modern Architecture – Death or Metamorphosis?". This was the time when a deep need to re-evaluate the values and achievements of the early Modern Movement appeared, stressing the importance of a new synthesis of life and art and setting new sustainable values. It was also the time of the Cold War. In the same year, there was the first conference of the Non-Aligned Movement in Belgrade, hosted by the president of Yugoslavia, Josip Broz Tito. In the meantime, Yugoslavia shifted its identity into non-existence. The country became an Arcadia – a utopian land from the past – and Tom Stoppard was writing his seminal play Arcadia (1993)³ almost simultaneously with the

events that drove Yugoslavia apart. Represented on one side of Stoppard's Arcadia is the life which is destroying the past, i.e. shifting its identities (the transformation of an old English garden into a new, prevailing garden style), and on the other side is the life which is being nourished by the past due to its curiosity, melancholy and the scientific prestige.

In the session Shifting Identities we have four very precious papers; in the first one Miloš Kosec brilliantly represents how strong and influential an architectural project can be, in this case the idiosyncratic project of the Slovene National Assembly from 1947 by architect Jože Plečnik named "The Cathedral of Freedom" – despite never being built. It is a discussion about the power of thoughts, ideas and words in connection with the past and recent architectural problems. It is also a presentation of the ambivalence and shifting identities of political and artistic influences varying through the 20th century onwards which put Plečnik's name up and down in history so many times. It is a presentation of the work of the retro-avant-garde collective Neue Slowenische Kunst (NSK), which saved Plečnik's design for "The Cathedral of Freedom" from oblivion, placed it as one of the central iconographic elements of the 1980s and immortalised it.

In the second paper, Teresa Cunha Ferreira presents the conservation approach by one of the most important Portuguese architects alive - Álvaro Siza. The three case studies are Serralves Villa (2001-2004), Boa Nova Tea House (1992; 2011-2014) and The Faculty of Architecture, University of Porto (2006-2018). This unique inside look was achieved by conducting interviews with the architect in which he explained his own conservation theory and practice and on-site building research. The problem of the exposed concrete renovation is also discussed in this paper, as Siza himself sees this as one of the crucial problems.

The paper by Giulia Favaretto is a sophisticated discussion about the tangible metamorphoses and intangible changes - many lives and identities - of the war memorial dedicated to the victims of the Nazi concentration camps in the Monu-

mental Cemetery in Milan by the BBPR studio. As the author states, *"on the one hand, there is the tangible metamorphosis of the monument due to the rapid degeneration of industrially-produced materials; on the other hand, there are the intangible changes of the building due to the transformation of its meanings."* The characteristics and the use of different stones in a modern monument's composition are also presented and described in this paper.

The paper by Sara Di Resta and Roberta Bartolone is an exceptionally current case study of the conservation and adaptive-reuse plan of the Masieri Memorial in Venice, a place of contrasting polyphony, originally designed by Carlo Scarpa. After a precise historical analysis of the site with very interesting commentary by Sara di Resta (by mentioning Frank Lloyd Wright's project for the same site), Roberta Bartolone, the project leader in the preliminary conservation design of the Masieri Memorial as part of Barman architects, describes the in-depth study of the site and the adaptive-reuse project started in 2016. *"The paper illustrates the methods and aims of the design path dedicated both to the conservation and the adaptive-reuse of a significant document of modern architectural heritage. The proposal is focused on cultural issues that deal with the conservation field as a tool able to manage both continuity and change."*

To conclude, Shifting Identities, like the phrase *"Et in Arcadia ego"*, had different understandings, meanings and explanations in history as it was already described in Panofsky's *Meaning in the Visual Art*⁴. The same thing is seen quite differently depending of the point of view, the viewer and its context. We should be able to understand this, respect it and enable the differences to become a blooming orchard and an inspiration in the elegy of our lives and in the context of the Docomomo discussions today and in the future.

NOTES

1 Poussin, Nicolas (1637-38). *Et in Arcadia ego*, painting, Louvre, France.

2 <https://www.youtube.com/watch?v=HAZiFWZpYds>

3 Stoppard, Tom (1993). *Arcadia: A Play in Two Acts*. Faber & Faber.

4 Panofsky, Erwin (1955): *Meaning in the Visual Art, 'Et in Arcadia Ego': Poussin and the Elegiac Tradition*. The University of Chicago Press.

BIOGRAPHY

Nataša Koselj is an architect with a PhD on post-war Slovenian architecture (2003), who studied and worked in Slovenia (University of Ljubljana), Finland (MARCH2002), UK (Oxford Brookes University) and France (Cité de l'architecture at du patrimoine). Docomomo Slovenia Chair since 2004, who has formed the course »20th Century Slovenian Architecture«, at the University of Ljubljana, Faculty of Architecture, which she has been teaching since 2005 as a freelance. She has researched, lectured, edited, exhibited and published extensively on post-war Slovenian architecture, especially on Danilo Fürst and Edvard Ravnikar, whose unpublished diaries she analysed during 2000-2005. She received Plečnik's Medal (2014) for the monograph on Danilo Fürst.

THE CATHEDRAL OF FREEDOM:

SHIFTING POLITICAL IDENTITIES OF AN UNBUILT ARCHITECTURAL PROJECT

Miloš Kosec (Slovenia, UK)

ABSTRACT

The official history of architect Jože Plečnik's (1872-1957) project for the Slovene national assembly from 1947 is brief: after an unsuccessful open competition the by then elderly architect was invited to present his plans out of competition. The imposing and typically idiosyncratic building, crowned by a 110 m cone and given the name »Cathedral of Freedom« by Plečnik, was soon deemed unbuildable; plans were discarded and practically forgotten. But in the 1980s the project resurfaced in public consciousness through the work of the Neue Slowenische Kunst (NSK) retro-avant-garde collective, becoming one of its central iconographic elements. After the independence of Slovenia a rising number of virtual reconstructions of the project became identified with national representation of statehood ranging from art projects to official state use as an emblem of the upper house of the Slovene Parliament and as an image on the 10 cent euro coin, circulating throughout the Euro Zone. The unbuilt and once nearly forgotten Cathedral of Freedom became the most proliferated official image of any Slovene political institution, by far exceeding the use of any "real" building. The paper examines the ways Plečnik's project was rescued from oblivion, taken over and re-contextualised by the art world as well as by the political authority and how this affected the perception of and identification with the unbuilt project, challenging the notions of semantics and authorship of as well as conversation strategy for such a dynamic, ever-changing and unbuilt part of architectural heritage.

KEYWORDS

Identity, Politics, Unrealised Architectural Project, Jože Plečnik, Neue Slowenische Kunst, Republic of Slovenia, Euro.

On first glance the story of Jože Plečnik's 1947 project for Slovene parliament building is a brief one: after an unsuccessful open competition for the assembly of the newly-constituted Socialist Republic of Slovenia the by then elderly architect

was invited by the president of the assembly Ferdo Kozak to present his plans out of competition. Plečnik proposed to build the new parliamentary building in the clearing of the Tivoli Park just off the centre of Slovene capital city Ljubljana. The imposing structure in the architect's idiosyncratic classicism-inspired late style was designed as a perfect square of 90 by 90 meters with the assembly hall in the centre. The hall was to be crowned by a dome and covered by a monu-

Fig. 1. Plečnik's original 1947 section of the Cathedral of Freedom. Plečnik House Archive, Ljubljana



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mental cone, reaching the height of 110 meters above ground (Fig. 1).¹ Not only would the building become the highest structure in Ljubljana, it would tower over the castle hill on the opposite side of the city centre, creating a potent pendant to the ancient symbol of power.²

The preserved plans³ and a wooden scale model of the principal facade with the assembly hall and the cone commissioned by Plečnik himself⁴ enable us to reconstruct the proposed project to a certain level of detail. The overpowering central element of the design is the circular assembly hall in the middle of the building. It is a vast enclosed intersection of three basic geometries: the square of the base, the cylinder of the assembly hall itself and the cone covering it. The double envelop of the hall is formed by the outer curved wall and the inner double-columned colonnade. It is cut through by the unprecedented gigantic leaning columns that protrude from the outer edge of the cylinder through the double envelop of the cylinder into the central hall itself, supporting the low dome and the cone above. The highly complex and dynamic spatial composition with the twelve heavily-ornamented leaning columns, their capitals illuminated by the clerestory windows, creates an a-tectonic impression with an almost threatening quality of a petrified Sword of Damocles, perpetually expressing the sense of urgency while hovering above the deputies. From the suppressed dome upwards the cone takes over complete authority. A leaning spiral ramp within it leads to the top of the cone where a viewing platform seems to be situated.⁵

There is a gap in any available information and documentation with regards to construction of the parliamentary building in between the Plečnik project and the year 1955. An undated letter of Ferdo Kozak to the architect, sent after the end of the competition, suggests a strong degree of official interest of high party echelons for Plečnik project and implies that the project was at least for a time seriously considered for execution.⁶ In 1949 the Prešeren Prize, the recently established highest Slovene cultural award, was awarded to Plečnik explicitly for his plans for the Cathedral of Freedom and the National Liberation Struggle monuments.⁷ It remains unknown when and why the project was discarded.⁸ In 1955, at a time when it was already clear that the Cathedral would not be built, Plečnik published his last and only post-war publication *Napori*, where the parliament project holds a pride of place.⁹ A decade after the competition a new parliament building in a restrained modernist form was built in a different location by Plečnik's disciple Vinko Glanz.¹⁰

In the last decade of his life and in the decades following his

death Plečnik's architecture fell out of favour. Even when in parallel to the rise of postmodernism in the late 1970s and 1980s Plečnik revival had begun plans for Cathedral of Freedom were treated as a late-opus idiosyncrasy and had been all but forgotten. It is at this moment when the already controversial artistic collective Neue Slowenische Kunst (NSK) started to intensively thematize Plečnik's project in their art, music and theatre projects. NSK was formed in 1984 out of three art collectives: band Laibach, Irwin fine arts group and Scipion Nasice Sisters Theatre. In their work citations of Soviet avant-garde intermixed with references from Nazi art, "Heimatkunst", socialist realism and the elements of some

Fig. 2. NSK collage sketches for the proposed scenography of the 1987 Day of Youth inaugural ceremony in the middle of Lake Bohinj. Photo: Moderna galerija, Ljubljana.



of defining imagery of Slovene national identity. The NSK procedure resulted in 'a mystifying demystification,' according to Alexei Monroe, with 'creating distance by approaching too closely the intimate conceptual space of a dominant "thing".'¹¹ It is precisely the by then all-but-forgotten Cathedral of Freedom that is first created into one of such 'things' and then over-identified with by the NSK.

One of the first appearances of Plečnik's project in the work of NSK was the design for the poster and ceremonies of the pan-Yugoslav relay race for the Day of Youth 1987. This was the design that sparked the infamous Poster Affair of 1987. Plečnik's parliament was not featured only on the Day of Youth poster but was used as the basis for the design of the relay baton itself as well as for the gigantic scenography of the festivities' inaugural ceremony (Fig. 2).¹² In the middle of Lake Bohinj a pontoon platform in the form of Malevich's Black Cross was to hold a large-scale model of Cathedral of Freedom with a red star at the top of the cone - a floating scenography for an ambitious and logistically demanding ceremony.¹³ After the 1987 affair cancelled these plans Laibach and Irwin collectives in particular continued to thematize Cathedral of Freedom. Plečnik's parliament was used as a cover for Laibach's album *Slovenska akropola* (Slovene Acropolis, 1987)¹⁴. When after the breakup of Yugoslavia the collectives of NSK proclaimed the NSK State or State in Time (1991) Cathedral of Freedom has remained as one of the central symbols not only of the collective but of official NSK State iconography, appearing on documents and stamps.¹⁵ In Laibach's music video "Final Countdown"¹⁶ accompanying their 1994 album NATO Plečnik's architecture again takes the centre stage. The video starts with a walk through a three-dimensional computer-generated simplified model of the Plečnik parliament. Its interior turns out to be a machine printing NSK State passports. Towards the end of the video the parliament building turns out to be the "NSK Embassy Mars" with its cone acting as a transmitter of signals.¹⁷ It is here that the Plečnik parliament literally becomes the beacon for de-territorialised NSK State and also where what was conceived as a representative national structure is rearticulated into a supranational, in fact, cosmic architecture.

The NSK's intense engagement with Cathedral of Freedom and their transformation of the all-but-forgotten project into what Andrew Herscher terms a Slovene 'Nation-Thing'¹⁸ was since the turbulent late 1980s picked up by artists, activists and civil society groups arguing for construction of the Plečnik parliament (the recent ones include the proposals from 2007¹⁹,



Fig. 3. Republic of Slovenia's first official post-independence stamp (1991), *Vesela šola* < http://www.veselasola.net/veselasola.net/portal/ucne_poti/pil-filatelija-20140106/parlament.jpg > [accessed 6 January 2018]

2009²⁰, 2014²¹ and 2016²²). The Cathedral was the main motif of an unofficial, privately funded speculative currency 'Lipa' during the transition years 1989-1991.²³ But it is in the later official state appropriations of the Cathedral of Freedom where the story reaches a truly unique proportion. The project is a main feature of the very first post-independence Slovene stamp (1991) together with the bilingual inscription 'samostojnost/independence' (Fig. 3). The floor plan of the Cathedral's assembly hall was incorporated into the design of Tolar, the official Slovene currency (1991-2007). The significance of the unbuilt project for the self-representation of the newly-independent state became even more apparent when the upper house of Slovene parliament, the Državni svet (State Council) chose its front façade as its official emblem (Fig. 4) – a somewhat paradoxical gesture since the Council's home is in the very building designed as a replacement of the Plečnik project. When in 2007 Slovenia entered the European Monetary Union and gained the right to mint its own Euro coins, the design chosen for the 10 cent coin was, again, Plečnik's Parliament together with the wording 'Cathedral of Freedom' on the side (Fig. 5), signify the state-sanctioned codification of Plečnik parliament not only as a passing phase of independence and transition process but as by now a permanent and a defining object of Slovene independence and statehood. Once discarded and nearly forgotten Cathedral of Freedom became the most publicly present and officially identified-with building of the Republic of Slovenia, by far exceeding the use of any physically existing

architecture. It is as if (successor of) the original client would re-emerge in this both historical and architectural process as its co-creator.

The fascinating afterlife of the never-built Cathedral of Freedom turns out to be a much more nuanced and complex process than just another fascination with an ideal or unbuilt architectural project. The original project is not only read, cited or virtually recreated; the fascination with it goes beyond merely expressing appreciation with its original substance, transforming, re-contextualising and, through currencies, proliferating the unrealised object *ad absurdum*. It is less of an afterlife and more of a continuous construction process, albeit executed within conceptual, artistic and political 'construction sites'. The original Plečnik design did not, of course, somehow foresee or even incalculable all the subsequent re-articulations. We are not dealing with some sort of a delay-action architecture. I would argue, however, that the way the original project was designed is crucial to its posteriori effect throughout the NSK-inspired resurgence in the 1980s and its subsequent 'renationalisation' by the Slovene State. The Cathedral of the NSK Collective clearly originates in the 1947 project, but is also not identical with it; it is re-contextual-

Fig. 4. Official seal of the second chamber of Slovene Parliament, Državni svet. *Državni svet* webpage < <http://www.ds-rs.si/> > [accessed 6 January 2018]



Miloš Kosec The Cathedral of Freedom



Fig. 5. Slovene version of 10 cent euro coin, designed by Miljenko Licul, Maja Licul and Janez Boljka, minted in 2007 in 42.700.000 pieces. *Fleur-de-coin* < https://www.fleur-de-coin.com/coin-shop/Slovenia-10-cents-2007-Cathedral-Freedom_eur934 > [accessed 6 January 2018]

ised, reconstructed, dissected and re-appropriated not so much into an icon but into an immaterial *spatio*-ideological project with numerous only partially consistent manifestations. And what happens to the authorship of such a project if it is extended from Plečnik and NSK Collective towards even broader group of civil movements and ultimately the Slovene State? At the same time the broadening of Cathedral of Freedom's authorship does not result in broadening the number of the projects; it is not a crowd of ghosts but a single spectre with multitude of apparitions, haunting Slovene state and society considerably more than its architectural community. Monroe writes of NSK and Laibach collectives as being ultimately contextual: 'If the "time" has changed, then LAIBACH (sic) will automatically change, because [they] are "fused to the grid of time".'²⁴ This seems to ring true especially for the Cathedral of Freedom, even outside of its NSK reincarnations. Neither a non- nor post-ideological project, it is precisely the ideologically-charged but at the same time ambivalent original design that is re-appropriated and enhanced by all the subsequent actors in the Cathedral of Freedom continuous transformation process. When we think of the Cathedral of Freedom as a co-authored dynamic process that started in 1947 and is still developing, we are considering an immaterial architecture that is parallel to and intimately intertwined with but not identical to the 1947 Plečnik project. The latter is, however, fully integrated in the former; it is its primal source as well as first stage of its development. Since

the construction of the parliament never went ahead, the idea plan for the Cathedral was never developed into a fully nuanced project otherwise so typical of the architect's work. In all the recent calls for physical construction of the Cathedral this was considered a major obstacle. It is almost as if all the missing phases of project development and nuanced articulation have been superseded by and expressed within the more contemporary adaptations, (re)appropriations and identifications. This seems to imply that the project has entered the extreme phase of collective authorship far exceeding even the collectivism of the NSK or even the borders of the Republic of Slovenia. It has become an all-present but constantly evolving spectre, a collective political and architectural *non-finito*. It is the Plečnik's name of the project that seems the only part of the 1947 original left unchanged throughout. But even the name 'Cathedral of Freedom' might be as ambiguous as the building itself, providing us with a linguistic parallel to its architectural ambivalences. The two highly charged notions constituting the name 'Cathedral of Freedom' seem to retain their relevance not through their stability of meaning but rather through their ability to change. The resonance of the word 'Freedom' just two years after liberation from axis occupation and in the midst of turbulent search for a new national as well as socialist identity in the 1947 is very different to the freedom as understood by the art community and civil society in the liberal thaw of the 1980s. Both have very little in common with the predominant ideological foundation of freedom in the post-independence Republic of Slovenia: the capitalist free market as epitomized by the image of a globally circulating ten-cent Euro coin. Similar ambivalences could be applied to the word 'Cathedral' which in the context of early, still Stalinist communism and its art policy of socialist realism, could be read as a secular competitor with the traditional religion, its symbols and rituals. In contrast, some of the post-1991 political tendencies could be understood as re-sacralisation of the nation state.²⁵ Therefore it is not inconceivable to compare the name of the project with the architectural elements constituting the project itself – the key to their perseverance is in their ambivalent and dynamic juxtapositions, not in their supposed extra-historical or classical "truths". In this light, Plečnik's Cathedral of Freedom becomes something rather different than an idiosyncratic design of the by-then almost forgotten classicist. Instead, the subsequent fascination with and appropriation of the Cathedral of Freedom first by the NSK collective and ultimately by the Slovene State, points to its rather non-classical and very modern constitution of a dynamic, ideologically shifting and ever-changing,

albeit immaterial, construct. The dynamic and ever-changing process is eminently spatial and architectural, even if not built. Viewed from this angle, the 1947-ongoing project for Cathedral of Freedom poses a couple of counterintuitive questions. Is the ambivalent persistence of the Cathedral of Freedom an argument for or against its physical construction? How do the later re-articulations inform the 1947 original and not just vice-versa? And finally – is not the attempt to answer these questions an essential precursor for the debate on a conservation strategy of such a dynamic historic as well as contemporary, spatial as well as immaterial phenomenon? After all, it would be hard to argue that Cathedral of Freedom is not a vital part of Slovene architectural and cultural heritage including all of its post-Plečnik stages, despite (or even because of) these ambivalent shifts, changes and re-articulations.

This complex dialectical *spatio*-historical relationship contained within a single project brings to mind Theodor W. Adorno's 1965 lecture given to Deutsches Werkbund, where he was reconsidering the fate of modern architecture after the disillusionment with the post-war functionalist reconstruction. As perhaps the ultimate modernist, Adorno insisted that '[a] work [of art] must cut through the contradictions and overcome them, not by covering them up, but by pursuing them.'²⁶ The paradoxical contradictory nature of the original project has been addressing and was, in turn, addressed by all the subsequent alternations and appropriations, creating an evolving collective *non finito* that is eminently modern not despite but because of its constituent formally idiosyncratic elements and semantic ambivalences. The persistent lingering of the Cathedral of Freedom stubbornly exhibits its radical modernity in a very Adornian sense of the word, validating its radicalness with eluding any formal codification, un-contextualised instrumentalisation, attribution of authorship and permanent physical manifestation.

NOTES

1 Bogo Zupančič, 'Zbor LRS Ljubljana', in: *Pod skupno streho*, ed. by Matevž Čelik, Maja Vardjan and Bogo Zupančič (Ljubljana: Muzej za arhitekturo in oblikovanje, 2013), p. 80.

2 The highest Ljubljana building at the time was 1930s 'Skyscraper' by architect Vladimir Šubic, reaching the height of 70 meters. Plečnik parliament, if built, would even today (2018) still be the highest structure in Ljubljana by some 20 meters – a fact that perhaps best illustrates the architect's towering scale of ambition in the context of post-war reconstruction period.

3 The remaining original drawings with the date of 23 November 1947 and the stamp of People's assembly from the year 1948 are today at Plečnik House Museum in the Plečnik Archive.

4 The scale model that was commissioned in 1948 is today part of the permanent exhibition in Plečnik House Museum. Only the front façade and assembly hall with the crowning cone are presented, suggesting that at this stage Plečnik viewed the main spatial idea of the project as still not finalised and fully integrated with the more utilitarian demands of the programme.

5 Sources on the materials Plečnik had in mind are unreliable and largely a matter of speculation. But the spatial design of the assembly hall with a public spiral access to the viewing platform directly above it precedes Sir Norman Foster's Reichstag glass dome with its ramp and viewing platform for some 50 years. See: Zupančič, p. 80.

6 Undated letter of Ferdo Kozak to Plečnik at the end of the competition, MGML, 534: LJU; PZ-0014312. Cited in: Zupančič, p. 82.

7 Ibid.

8 Nika Grabar suggests the political turmoil following the Informbiro Crisis, the material scarcity and the tensions between state and federal authorities as possible reasons for discarding the project. Nika Grabar and others, *Parlament - Tri Zgodbe* (Ljubljana: Muzej novejšje zgodovine Slovenije, 2012), pp. 19-23.

9 France Stelè and Jože Plečnik, *Napori* (Ljubljana: Slovenska Akademija Znanosti in Umetnosti, 1955), plates II, III, V-IX.

10 It is interesting to note that Glanz's parliament building, albeit being more modernist in character of the facade than Plečnik building, follows the spatial arrangement of the ceremonial halls and the main assembly hall of the Plečnik plan relatively closely. Despite the obvious absence of the cone above the hall the realised building professes a level of acquaintance and perhaps even certain loyalty to the 1947 version.

11 Alexei Monroe, *Interrogation machine* (Cambridge. Mass.: MIT Press, 2005), pp. 251-253.

12 Jela Krečič, 'Dan mladosti 1987', in *Plakatna afeta 1987*, ed. by Lilijana Stepančič and others (Ljubljana: Muzej novejšje zgodovine Slovenije, 2009), pp. 21-29.

13 The proposed ceremony was to start with the helicopter delivering a naked youth carrying a baton from the top of the Triglav mountain to the Cathedral on the lake. At the same time the members of the League of Socialist Youth would be transported to the Cathedral reconstruction with boats. After the handing over of the baton the carrier would be again transported by helicopter to the shore of lake Bohinj where the relay race across Yugoslavia was to commence. See: Krečič, p. 28.

14 Slovene Acropolis was Plečnik's name for a slightly earlier proposal for the new Slovene parliament building that was planned on the hill above the city, replacing the medieval Ljubljana castle.

15 1st NSK State Congress in Berlin in 2001, for example.

16 According to established Laibach practice this is the cover version or reinterpretation of the 1980s band Europe song of the same name.

17 Laibach video Final Countdown (1994).

18 Andrew Herscher, 'Plečnik avec Laibach', *Assemblage*, 33 (1997), p. 74.

19 Initiative for realisation of Plečnik's Parliament launched by the Slovenian World Congress: 'Pobuda Za Postavitev Plečnikovega Parlamenta - Doma Slovenske Državnosti', *Slokongres.com*, 2007 <http://www.slokongres.com/?option=com_content&view=article&id=74:pobuda-za-postavitev-plecnikovega-parlamenta-doma-slovenske-dravnosti&catid=46:2006&Itemid=31&fontstyle=f-larger> [accessed 12 January 2018].

20 Online petition to the Government of Slovenia: 'Predlagam.Vladi.Si: Katedrala Svobode', *Predlagam.vladi.si*, 2009 <<http://predlagam.vladi.si/webroot/idea/view/138>> [accessed 12 January 2018].

21 Initiative by Gallus Bartholomeus Society which held the presentation of the idea in the rooms of the State Council of all places.

22 Committee for the Erection of Plečnik Parliament.

23 https://sl.wikipedia.org/wiki/Slovenska_lipa

24 Monroe, p. 71.

25 It is not insignificant that the initiative to declare Plečnik a saint of the Catholic church dates to this period.

26 Theodor W. Adorno, 'Functionalism Today', in *Rethinking Architecture*, ed. by Neil Leach (London/New York: Routledge, 1997), p. 19.

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'Pobuda Za Postavitev Plečnikovega Parlamenta - Doma Slovenske Državnosti', *Slokongres.com*, 2007 <http://www.slokongres.com/?option=com_content&view=article&id=74:pobuda-za-postavitev-plecnikovega-parlamenta-doma-slovenske-dravnosti&catid=46:2006&Itemid=31&fontstyle=f-larger> [accessed 12 January 2018]

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BIOGRAPHY

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CONSERVATION OF 20TH-CENTURY ARCHITECTURE IN PORTUGAL. THE LESSON OF ÁLVARO SIZA

Teresa Cunha Ferreira (Portugal)

ABSTRACT

Álvaro Siza (1933-) has built an important architectural heritage recognized in Portugal and abroad, namely in prizes, publications, inventories¹, listing processes², or in the latest proposal by ICOMOS-Portugal for the inscription of a number of his works in the World Heritage List. In recent years, Siza has carried out conservation projects and works of several 20th-century buildings (mostly his former projects), namely at Boa Nova Tea House (1992; 2012-2014), Serralves Villa (2001-2004), Bouça Neighborhood (2000-2006), Faculty of Architecture of the University of Porto (2016-2018) and, more recently, the Swimming Pool at Quinta da Conceição (2016-2018) and the Swimming Pool in Leça (2017-2018).

1. INTRODUCTION

Despite its international recognition, 20th- century architecture in Portugal is a heritage at risk – or “prizewinning ruins”³ – since it belongs to a recent past that has not yet been sufficiently recognized in the country, either by the management and safeguarding organizations⁴ or by the general public opinion. In fact, few buildings are protected and many are threatened, both by the advanced degradation due to lack of use and maintenance, and by interventions of intrusive transformation. Nevertheless, some positive initiatives have been carried out in the form of inventories, such as the ‘Survey on 20th-century architecture’ (IAP20), among others⁵. Moreover, the number of seminars, exhibitions and publications on these subjects has been gradually increasing.

In the international context, 20th- century architecture preservation has been a matter of intense debate over the last three decades, with the consensus achieved in the general recognition that existing philosophical approaches are broadly applicable and should follow an architectural reflection based on a casuistic approach; still, there are some specific technical challenges, which require careful consideration⁶. However, some authors maintain that there has been a prevailing trend (particularly in relation to so-called iconic buildings) to give

special privilege to the formal value by restoring an ‘original’ image and neglecting its material and intangible values (ageing, uses, transformations), as well as its integrity, authenticity and aura. Others defend the concept of ‘progressive authenticity’⁷, referring to some material signs and alterations that can be preserved as part of the history of the building in time. Regarding this subject, the Madrid Document settles some principles for the conservation of 20th-century architecture, namely prior in-depth knowledge of material signs, “including physical location, design, construction systems and technical equipment, fabric, aesthetic quality and use”, as well as of its intangible values, such as “historic, social, scientific or spiritual associations, or creative genius”⁸.

On this matter, Álvaro Siza agrees that in “recovery/conservation works there is a compulsory request which is (...) the absolute integrity. No changes should be performed unless (...) in special or exceptional cases”⁹, resisting to the tendency of leaving the ‘signature’ of the architect in his intervention¹⁰. According to Siza, one of the most challenging issues in the conservation of ‘modern’ architecture is the problem of the repair of industrialized materials and namely of the exposed concrete¹¹. In fact, modernist buildings apply new industrialised technology and materials – which are normally more vulnerable or age faster than pre-industrial construction – and require specific research and knowledge of their condition and deterioration processes¹² as well as the implementation of maintenance plans. Hence, Siza has been calling the attention to the lack of a culture and habits of maintenance as a determinant feature to the conservation of architectural works: “carrying out constant maintenance is also a question of economics”¹³. However, in his opinion, generally, “The passage of time in buildings is part of their quality; it increases the density of the buildings”, except when there is a “a lowering, for economic reasons either of the quality of the materials and the execution or the lack of maintenance”¹⁴.

Siza also refers to the recent tendency of “architecture being ‘partitioned’, being the architect requested to design only the

exterior image, then come the engineers and finally the decorators¹⁵. Instead, he defends of the relation between inside and outside, being architecture necessarily a 'total work', from the setting to the detail.

Moreover, Siza mentions as one of the most threatening issues in the safeguarding of 20th-century architecture the building services installations demanded by current exigencies of comfort, energetic efficiency and building regulations and standards (e.g. accessibility, health and safety, fire safety, earthquakes, and energy efficiency) which may be intrusive or incompatible with the pre-existing structure¹⁶. In Portugal, this problem has recently been minimized by a recent law which refers to the obligation for regulations governing buildings with more than 30 years old (DL 53/2014 of 8 April); nevertheless, on the other hand, this document can be dangerous because of the facilitation that it provides for conducting transformation interventions.

2. RECENT WORKS BY ALVARO SIZA

As aforementioned, in recent years, Siza has been carrying out conservation projects in several 20th- century buildings, mostly his former projects.

Since there is very few published information on this projects, the methodology of this paper is based on archives research, analysis and direct observation of built works, as well as interviews with Álvaro Siza, his Engineers, contractors and collaborators.

Among his recent works, the Bouça Neighbourhood (1st phase 1975-1978; conservation 2000-2006) is an interesting case study because the conservation work is contemporaneous to the construction of the last phase of the initial project, and thus including the adaptation to new comfort exigencies and living standards, such as the introduction of ETICS insulation system in the façades and changes in the kitchen.

Since 2016, Siza has been also developing projects for the conservation of other among his former works: the Quinta da Conceição Swimming Pool (project, 1958-1965; conservation, 2016-2018) and Marés Swimming Pool (project 1961-1966; conservation, 2017-2018) one of his masterpieces listed as National Monument since 2011.

The Marés Swimming Pool poses the problem of the repair of exposed concrete in a maritime position, which, according to Siza, is a complex issue because localized repairs (in his opinion, preferable to integral replacement of existing concrete) are necessarily visible. In his words, he decided to perform "minimum intervention because it's not desirable (and it

wouldn't be possible) to hide what is determined by the passage of time"¹⁷.

In the present article, three conservation works developed by Álvaro Siza in buildings with different characters and uses (Serralves Villa, Boa Nova Tea House and Faculty of Architecture of the University of Porto) are selected for further analysis and considerations. Hence, these examples allow to better illustrate and demonstrate the lesson of Álvaro Siza on the conservation of 20th-century architecture.

2.1. Serralves Villa (2001-2004)

In 2000 Álvaro Siza starts the conservation project at the Serralves Villa, one of the most remarkable examples of an Art Deco detached house in Portugal (later adapted for temporary exhibitions). Constructed between 1925-1944, and listed in 1996 as a Building of Public Interest, it consists in a mixed construction of stonewalls with limestone plaster, concrete slabs, wooden roof structure covered by tiles, steel frame windows, and interior surfaces in limestone stucco or floors in marble and wood. The project had the participation of Charles Siclis and José Marques da Silva, as well as the contributions of Carlos Alberto Cabral, Jacques Émile Ruhlmann, Alfred Porteneuve and Jacques Greber (gardens)¹⁸.

Responding to the owner request of maintaining the building configuration¹⁹, the intervention is circumscribed to punctual and surgical works: introduction of bathrooms and kitchen to support events (in the basement), updating of technical installations and devices (acoustics, lighting, air conditioning, thermal comfort). Hence, the works followed the criterion of maximum preservation of exterior and interior features. Regarding exterior plasters, conservation laboratory tests were performed on the composition and grain size of existing mortars, with the aim of establishing the most compatible solutions for their repair²⁰. These localized repairs are consistent with the accurate conservation of the window extruded steel frames (only where strictly necessary, replaced with a similar design), wooden blinds and opening mechanisms, marble and wooden floors, among other elements that are almost fully preserved. Moreover, in the restoration of the interior conveys the the idea was of never touching the walls (with exhibition displays or other elements) in order to preserve the extreme quality of the interior finishing, except regarding the improvement of the infrastructure networks. At the moment, Siza is studying the introduction of air conditioning in the first floor for the installation of the Juan Miró's collection.



Figure 1. Marques da Silva et al., Serralves Villa, Porto, Portugal, Álvaro Siza conservation, 2000-2004. © Simone Ruivo, 2017.

2.2. Boa Nova Tea House (1992; 2011-2014)

Siza starts this project in 1958-1963²¹ as a young trainee of Fernando Távora, following the setting proposed by his master and the requirements of the first concessionaire, namely the design of furniture, lightening, technical areas and the layout of the kitchen. The building is listed as a National Monument since 2011. In 1991, under a new concessionaire, Siza carries out conservation works which comprised the treatment of surfaces and the updating of technical spaces. After his first intentions of changing the project (namely some wooden surface elements in the interior space) designed by a much younger self, Siza was able to recognize the building's coherence as a whole and therefore, he decided to maintain the integrity of the original design²². In his words, this work changed his perception towards conservation, acknowledging that the interior force of the project should guide the intervention under the criterion of preserving the building's unity and integrity. More recently, in 2011, the building was abandoned, exposed to decay and suffered a series of thefts, including the robbery of all the copper guttering and some pieces of furniture. In 2012,

Álvaro Siza started a conservation project for a new concession for a twenty-year period to a famous Portuguese chef.

The recent intervention comprised the conservation of all the doors and windows, the production of furniture replicas, the localized repair of exposed concrete, the replacement the roof and copper gutters by similar ones, the update of the technical spaces and kitchen, as well as some mechanical elements that now operate with electric motors such as the retractable windows allowing the dining room to be completely open to the outside, creating a continuity between the inside and the surrounding landscape. The concrete was repaired with a protective painting and a formwork. Regarding the concrete dosage, it was as close as possible with Secil's company²³.

In addition, it was also requested the introduction of air conditioning, which, according to the author was dispensable in such an maritime position. In 2014, the building reopened to the public, unfortunately solely as a restaurant without the tea house space (one of the most prominent features of its original concept, use and ambience) which now serves as another dining room.



Figure 2. Álvaro Siza, Boa Nova Tea House, Porto, Portugal, conservation 2012-2014. © Simone Ruivo, 2017.

2.3. Faculty of Architecture, University of Porto (2006-2018)

The building of the Faculty of Architecture of the University of Porto²⁴ (FAUP) was designed by Álvaro Siza and built between 1986-1993. Currently, FAUP and Carlos Ramos Pavilion are listed as buildings with a special interest in the Heritage Charter of the Porto Municipal Master Plan.

The constructive system of the FAUP buildings consists of load-bearing walls and slabs in reinforced concrete. The roofs of the main buildings and the towers are covered with zinc standing seam system, consisting of a light concrete slab, thermal insulation of black cork agglomerate and a zinc sheet cladding. At the Carlos Ramos Pavilion, an inverted flat roof was used, composed of a light concrete slab, an asphalt membrane for waterproofing purposes, thermal insulation in extruded polystyrene sheets, a geotextile blanket and a heavy protective layer of gravel. Recently (2016-2017), works were performed for the recovery of the external envelope of the FAUP buildings (roofs, façades and window frames) funded by the Rectory of the University of Porto²⁵. This work solved some problems in roofs,

walls and exterior window frames, arising from the natural ageing process, since it had not previously been subjected to any conservation/maintenance works since its construction.

In the coverings, the cork agglomerate was rotting and the zinc flashing was becoming deformed, which has led to some infiltrations. The solution was to apply water repellent paint to the light concrete slab, to replace the cork agglomerate with extruded polystyrene and to finish with the application of a studded rubber waterproof membrane, over which new zinc flashing is then insert paragraph the damages in the exterior walls, those were essentially cracks, stains, biological colonisation, detachments of the surface layer, blisters and perforations. The different types of damages were mapped and correspond to four different levels of intervention.

Moreover, the main anomaly identified in the exterior window frames were the wear and tear and detachment of the paint, with some areas presenting signs of iron corrosion. Thus, these elements were freshly painted both on the outside and the inside, including the replacement of the parts that are necessary to ensure the windows' proper functioning.



Figure 3. Álvaro Siza, Faculty of Architecture, Porto, Portugal, conservation 2016-2017. © Simone Ruivo, 2017.

Currently, Siza is developing a conservation project for Carlos Ramos Pavilion in FAUP, which an important and iconic work built in 1986. The intervention will preserve all external and internal features, with exception of the linoleum floor (replaced by a similar one), the sanitary installations and other technical devices, as well as the distribution of luminaires to adapt to a more flexible use of interior spaces.

5. FINAL NOTE: THE LESSON OF SIZA

Álvaro Siza has undoubtedly a relevant contribution in the safeguarding of 20th-century architecture in Portugal, not only because of the important legacy of his own works, but also because of his conservation interventions and for his public contributions for the defense of this recent heritage, namely in newspapers, conferences, interviews and publications.

Through the analysis of the works presented in this paper, it's important to retain some aspects of the lesson of Álvaro Siza in the conservation of 20th- century architecture: the respect for the pre-existing building's integrity and design (even of his former projects), the careful attention to the introduction

of new installations and devices, the accuracy of surgical and localized repair works (namely on coverings and exposed concrete) and the argument for a continuous maintenance as a mean to protect the buildings authenticity and its' transmission for the future generations.

In Portugal, Siza has thus an important influence in architectural conservation defending that "recovering a building means scrupulously restoring and adapting to the (almost always slightly different) needs"²⁶. This pedagogy is very important in the preservation practice in Portugal, where there has been, in some interventions, an excessive affirmation of the new, either because of an exaggerated minimalism related to an architectural trend, or to the use (sometimes uncritically) of contrasting contemporary materials such as glass, iron or corten steel.

Furthermore, considering his international recognition in prizes (Pritzker Prize in 1992, among others) and publications, Siza's influence and pedagogy on theory and practice of preservation goes far beyond the Portuguese borders. Hence, the lesson of Siza on preservation of 20th- century architecture



Figure 4. Interview to Álvaro Siza by Teresa C. Ferreira, Siza's Office in Rua do Aleixo Porto, Portugal, January 2018. © Simone Ruivo, 2018.

presents conservation as a management of change respecting the works integrity and significance, thus demonstrating the relevance of a careful analysis of the preexistence combined with a qualified architectural design.

NOTES

1 Several works by Álvaro Siza are identified in the Architectural Heritage Inventory System (SIPA - www.monumentos.pt), in the 20th Century Architec-

ture Survey (IAPX20 - www.iap20.pt) and in Municipal Heritage Inventories (such as the Porto's PDM Heritage Charter www.mipweb.cm-porto.pt).

2 Boa Nova Tea House, National Monument, DL 16/2011; Marés Swimming Pool, National Monument, DL 16/2011; Casal de Santa Maria / Serralves Park and Museum, National Monument, DL 31-G / 2012; Church of Santa Maria and Parish Centre, Monument of Public Interest, DL 288/2013; Portuguese Pavilion in Expo'98, Monument of Public Interest, DL 240/2010, among others. Cf. www.dgpc.pt.

3 André Tavares, "Prize-winning ruins", accessed on February 09, 2018, <https://www.domusweb.it/en/architecture/2012/03/14/prizewinning-ruins.html>.

4 Very few monuments from the 20th - century are listed as national monument (12 in the beginning of 2013). For further information see Ana Tostões "Património moderno : conservação e reutilização como um recurso", *Revista Património*, 1, Lisboa, DGPC, 2013, 44-53.

5 See among others: Ana Tostões, Annette Becker and Wilfried Wang (coord.), *Arquitectura do Século XX - Portugal* (Catálogo da Exposição), Frankfurt /Lisboa, 1998; Ana Tostões (coord.), *Arquitectura Moderna Portuguesa 1920-1970*, Lisboa, IPPAR, 2004; Ana Tostões (coord.), *IAPXX - Inquérito à Arquitectura do Século XX em Portugal*, Lisboa, Ordem dos Arquitectos, 2006.

6 Susan MacDonald, "Modern Matters: Breaking the Barriers to Conserving Modern Heritage. Conservation Perspectives", *The Getty Conservation Institute Newsletter*, 28, 1, Los Angeles, The Getty Conservation Institute, 2013, 8.

7 Pamela Jerome, "Restoring Frank Lloyd Wright's Solomon R. Guggenheim's Museum", accessed on February 09, 2018, https://www.aicomos.com/wp-content/uploads/2009_Unloved_Modern_Jerome_Pamela_Frank-Lloyd_Paper.pdf.

8 ICOMOS ISCAH20, *Madrid Document: Approaches for the Conservation of Twentieth-Century Architectural Heritage*, 2011, 1.

9 Álvaro Siza, "Conferencia para el CAH2", *Intervention Approaches in the 20th-Century Architectural Heritage*, International Conference CAH20th, Madrid, 2011, 188.

10 Álvaro Siza, "Recuperação e Manutenção", *A intervenção no património. Práticas de conservação e reabilitação*, Porto, FEUP, 2005, 21.

11 Álvaro Siza Interview by Teresa C. Ferreira, *Construção Magazine* 83, 2018, 7.

12 See, among others: Carolina Di Biase (a cura di), *Il degrado del calcestruzzo nell'architettura del Novecento*, Santarcangelo di Romagna, Maggioli, 2009; Susan Macdonald and Gail Ostergren, *Conserving Twentieth-Century Built Heritage: a Bibliography*, Los Angeles, The Getty Conservation Institute, 2011.

13 Álvaro Siza, Interview by Teresa C. Ferreira, in Ferreira, T. C. and Rocha, P. F. *Saber manter os edifícios: pensar, desenhar, construir.e da Universidade do Porto. Faculdade de Engenharia da Universidade do Porto*, Porto, Afrontamento/CEAU-FAUP/CEES-FEUP, 2017, 141.

14 Álvaro Siza, "Entrevista a Álvaro Siza por Teresa C. Ferreira", in Ferreira, Teresa C. and Rocha, Patrícia. *Saber manter os edifícios: pensar, desenhar, construir.e da Universidade do Porto. Faculdade de Engenharia da Universidade do Porto*, Porto, Afrontamento/CEAU-FAUP/CEES-FEUP, 2017, 151.

15 Álvaro Siza, Interview by Teresa Cunha Ferreira, *Construção Magazine* 83, 2018, 7.

16 Álvaro Siza, Interview by Teresa Cunha Ferreira, 14 January 2018, s.p.

17 Álvaro Siza, Interview by Teresa Cunha Ferreira, 14 January 2018, s.p.

18 See André Tavares, *Os fantasmas de Serralves*, Porto, Dafne Editora, 2007.

19 Renovation of the Serralves Villa, Archive of the Serralves Foundation, 2001, PT/FS/ASV/37.

20 See Universidade do Minho – Laboratório de Engenharia Civil, *Caracterização dos rebocos exteriores da Casa de Serralves*, Proc. 241.03, 2003; Vasco Peixoto de Freitas, *Parecer sobre as soluções de revestimento de fachadas previstas na Casa de Serralves*, Relatório HT 2046.03, 2003. Information kindly provided by Filipe Ferreira, AOF.

21 For further detail see, among others, Luís Trigueiros (ed.) *Casa de Chá da Boa Nova*, Lisboa, Ed. BLAU, 1992; about the conservation works see Álvaro Siza, “Conferencia para el CAH20”, *Intervention Approaches in the 20th-Century Architectural Heritage*, International Conference CAH20th, Madrid, 2011; Roberto Cremascoli, “Il maestro torna sui suoi passi. The master retraces his steps”, *Abitare*, 545, 2015, 70-77.

22 Álvaro Siza, “Conferencia para el CAH2”, *Intervention Approaches in the 20th-Century Architectural Heritage*, International Conference CAH20th, Madrid, 2011, 186-188.

23 Álvaro Siza, Interview by Teresa Cunha Ferreira, *Construção Magazine* 83, 2018, 7.

24 See Álvaro Siza and Adalberto Dias, *Edifício da Faculdade de Arquitectura da Universidade do Porto. Percursos do Projecto*. Porto, Publicações Faup, 2003.

25 The work had budget of 395,062.95 euros and was performed under the coordination of Alvaro Siza, Eliseu Gonçalves and José Luis Gomes.

26 Álvaro Siza, “Construção e Recuperação. A Propósito da Defesa de Património e de Arquitectura Moderna em Portugal”, *Vértice*, 452, Coimbra, 1983, 3.

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TANGIBLE METAMORPHOSES, INTANGIBLE CHANGES.

THE WAR MEMORIAL DEDICATED TO THE VICTIMS OF THE NAZI CONCENTRATION CAMPS IN THE MONUMENTAL CEMETERY IN MILAN

Giulia Favaretto (Italy)

ABSTRACT

In the rapid transformation process of the 20th century architecture, there are not only tangible metamorphoses caused by materials' degeneration, but also intangible changes due to meanings' modification. An emblematic example is the *War Memorial dedicated to the victims of the Nazi concentration camps* in the Monumental Cemetery in Milan. Built in a season of trauma due to the horrors of the Second World War, this monument honours the concentration camps' victims. At the same time, it represents the translation in built form of a spirit of continuity related to the results of the figurative experiences developed between the two wars.

Designed by BBPR studio, the *War Memorial* is marked by significant events linked to the metamorphoses of the monument over time. Indeed, three are the versions conceived and realised by the same authors. The continuity of change of the building can have a dual explanation: on the one hand, there is the tangible metamorphosis of the monument due to the rapid degeneration of industrially-produced materials; on the other hand, there are the intangible changes of the building due to the transformation of its meanings. In fact, if the first re-construction is caused by the accelerated ageing process of industrially-produced materials, the transition from the second to the third version is closely related to the desire of replacing a writing and, with it, a message: the monument is not dedicated to the victims of "the German camps" but to those of "the Nazi concentration camps".

1. A MONUMENT IN MEMORY OF THE VICTIMS OF THE CONCENTRATION CAMPS, A TRIBUTE TO THE FIGURATIVE EXPERIENCES OF THE MODERN MOVEMENT

The Second World War had just come to an end when, in the Monumental Cemetery in Milan, a *War Memorial dedicated to the victims of the concentration camps* was erected.

Inaugurated in 1946, this monument was designed by BBPR (Banfi, Belgiojoso, Peressutti, Rogers) studio. As a matter of

fact, the members of the studio were personally linked to the phenomenon of deportation by strong and dramatic events: the Jew, Ernesto Nathan Rogers, was interned in Switzerland, whereas Lodovico Belgiojoso and Gian Luigi Banfi – politically committed personalities of the Italian Resistance – were confined to the Mauthausen-Gusen concentration camp, where Banfi died¹. Thus, the first version of the *Memorial* is attributed to Enrico Peressutti, the sole member still working in the studio around the end of the war².

An emotional and poignant inscription, reported in the magazine *Costruzioni-Casabella* in 1946, revealed Peressutti's intention of dedicating the monument to his friends died due to the horrors of the Second World War – Gian Luigi Banfi, Giuseppe Pagano, Filippo Beltrami, Raffaello Giolli and Giorgio Labò – and to all the victims of the concentration camps³.

At the same time, the *War Memorial* constitutes a tribute to the ferments of Rationalism. As a matter of fact, it represents the translation in built form of a spirit of continuity related to the results of the figurative experiences developed between the two wars. It expresses not only the need to honour the victims of the Second World War, but also the desire to show a profound debt of gratitude towards the artistic and architectural ferments, on which the Modern Movement and the Italian Rationalism works were grounded, which had been fostered by BBPR studio and the protagonists of that time⁴. From this perspective, the reference to the Neoplasticism of the De Stijl Movement contributes to deny "the static condition of the initial enclosed spatial configuration [...] with the aim of transcribing on an iconic level the opposition [...] between constraint and freedom"⁵. However, the reasons for the continuity with the ferments of the Modern Movement are not just the above-mentioned ones. Indeed, the standardised house can be identified as one of the topics for reflection developed in the period between the two wars. Since the well-known case of the Weissenhof estate in Stuttgart (1927), numerous experimentations on this issue are being conducted. As far as Italy is concerned, BBPR studio contributes to the research on the ideal

house, achieving the proposal of clear, rational and cubic solutions⁶. What will be mentioned in the case of the *War Memorial* in Milan are not the dimensions of these suggestions, but rather the shape of architectural objects which represent the result of a revolution in the world of construction (Fig. 1).

The first version of the *Memorial*, designed in 1945, showed a brick base in the shape of a Greek cross, protected by a panel of Carrara white marble. On it, a thin framework made of painted white iron rods reinterpreted the topic of the cube, stressing once more the cross shape. Slabs of Carrara white marble faced the renowned personalities' memorial chapel, while panels of Varenna black marble characterized the other vertical faces. The engravings on stone slabs reported commemorative words: the white marbles showed the inscription "to the dead in the German camps"; on the black ones, instead, it could be read: "from the crematoriums of the German concentration camps a trail of light is reminiscent of our martyrs. During the death penalty, the certainty that tyranny has an end and freedom rises again comforted them". Passages of the Sermon on the Mount from the Gospel of Matthew concluded the commemoration: "blessed are those who hunger and thirst for righteousness", "blessed are those who are persecuted because of righteousness"⁷. In the middle of the monument, the metal framework, open and 'free', but at the same time enclosed and suffering, guards a showcase containing a mess tin which, wrapped up in barbed wire, retains a handful of ground from Mauthausen (Fig. 2).

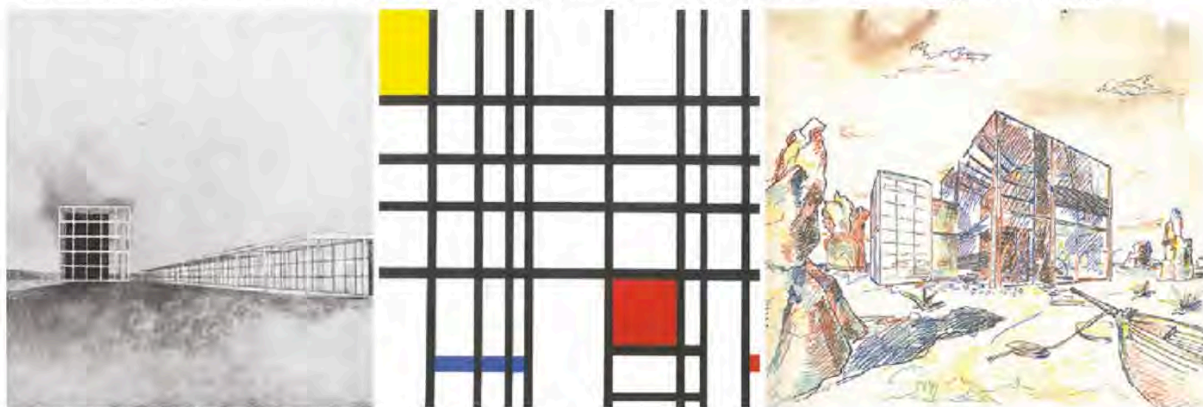
2. TANGIBLE METAMORPHOSES, INTANGIBLE CHANGES

The *War Memorial* in the Monumental Cemetery in Milan helps to demonstrate that, in the rapid transformation process of the 20th century architecture, there are not only tangible metamorphoses caused by materials' degeneration, but also intangible changes due to meanings' modification. Indeed, significant events linked to the metamorphoses of the monument over time mark the history of the *War Memorial*, whose continuity of change can have a dual explanation.

The first reason for its transformations can be attributed to the tangible metamorphosis of the monument caused by the accelerated ageing process of industrially-produced materials. As a matter of fact, their intrinsic rapid degeneration, combined with the action of atmospheric agents, had compromised the non-stainless steel profiles of the metal framework. The very members of BBPR studio, uninterested in the constructed reality of the *War Memorial*, were those who decided to demolish it. Its designers did not attempt to provide a reply in conservative terms to the progressive decay of the monument, but they decided to get rid of it, seizing the opportunity to put into practice the results of a planning growth which was inevitably under development.

The first re-construction of the *War Memorial*, realised in 1950, derived from the different project proposals developed between 1947 and 1949. This second version diverged from the previous one both in material terms and geometric relations. Studies

Figure 1. Franco Albini, Ignazio Gardella, Giancarlo Palanti and Giovanni Romano with Bruno Revel, Palazzo della Civiltà Italiana, E42, Rome, Italy, 1937-1938, no-prize-winner competition project. © "Concorso per il Palazzo della Civiltà Italiana", *Architettura*, December 1938, 862 [left]. Piet Mondrian, Composition with yellow, blue and red, Tate Modern, London, United Kingdom, 1937-1942. © Susanne Deicher, *Piet Mondrian 1872-1944. Costruzione sul vuoto*, Köln, Taschen, 2015, 83 [centre]. Enrico Peressutti, the ideal house. © "La casa e l'ideale", *Domus*, August 1942, 315 [right].



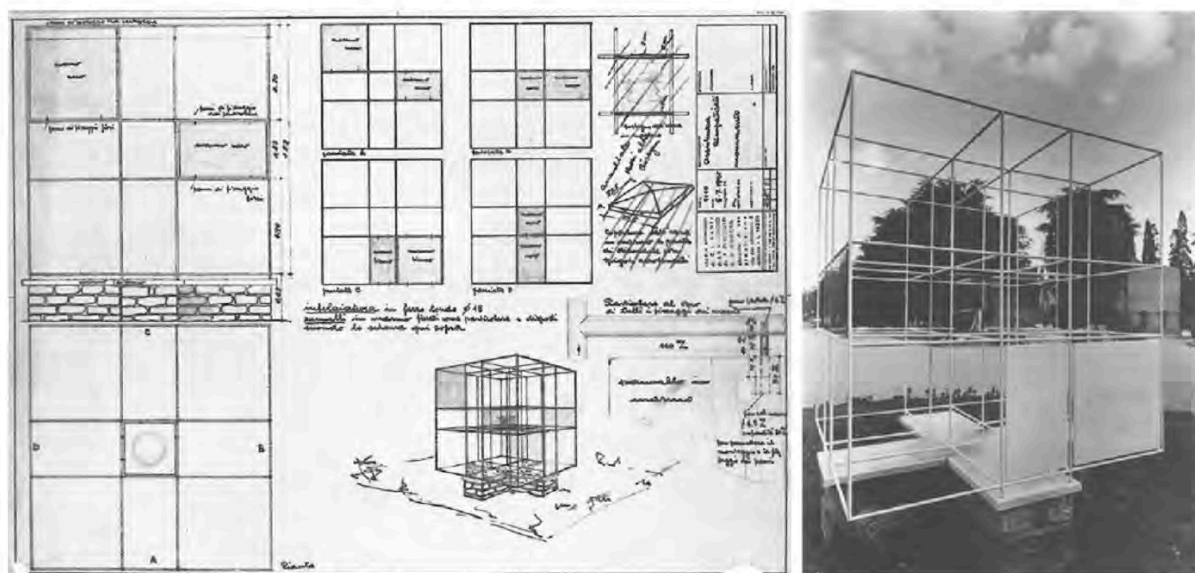


Figure 2. BBPR studio, War Memorial dedicated to the victims of the German camps, Monumental Cemetery, Milan, Italy, 1945-1946, first version. © Marco Pogacnik (ed.), *Il segno della memoria. 1945-1995: BBPR Monumento ai caduti nei campi nazisti*, Milano, Electa, 1995, 16-17.

on the variation of the base's height and on the increase in the cube's dimensions and the rods' diameter were developed by the several projects. Furthermore, as already mentioned, also the material component of the building undergoes significant transformations: the designers did not confine themselves to irrevocably replacing the material substance of the monument, but they redesigned it using different materials. The Greek-cross base substituted the traditional brick for the more valuable Carrara white marble and it took on a monolithic aspect, slightly tapered upwards; the framework of rods replaced iron with bronze; the stone slabs exchanged the white marbles for the black ones and the black marbles for the white ones, which became predominant. Besides, the Belgium black marble replaced the Varenna black marble and the Candoglia white marble, without veins, substituted the Carrara white marble. Finally, whereas in the first version the height of the showcase was considered too low both by architects and visitors, in the second version its arrangement on the horizon line corresponding to the human eyes contributes to boost the *War Memorial's* monumentality and solemnity, already emphasized by the golden ratio of the work (Fig. 3).

Nevertheless, the version which can currently be found in the Monumental Cemetery in Milan is not this one either. In-

deed, three are the versions conceived and realised by the same authors who, 'operating on themselves', decided to destroy the previous version and to re-design and re-build, every time, their own work. By doing so, they changed it every single time. However, it was not the monument which asked for its replacement, but rather project choices which, without contrasting with the initial idea, decided to give precedence to compositional, technical, economic and ideological reasons rather than to the real monument's conservation⁸.

After solely five years, the elegant refinement of the second version was considered exaggerated due to the tragic severity of the topic. However, what influenced in particular the destiny of the monument were the intangible changes of the building, due to the transformation of its meanings. In fact, the passage from the second to the third version was closely related to the desire of replacing a writing and, with it, a message: the monument is not dedicated to the victims of "the German camps" but to those of "the Nazi concentration camps". A simple sentence, but with a deep meaning: the culprit of the horrors of the Second World War was not Germany, but Nazism.

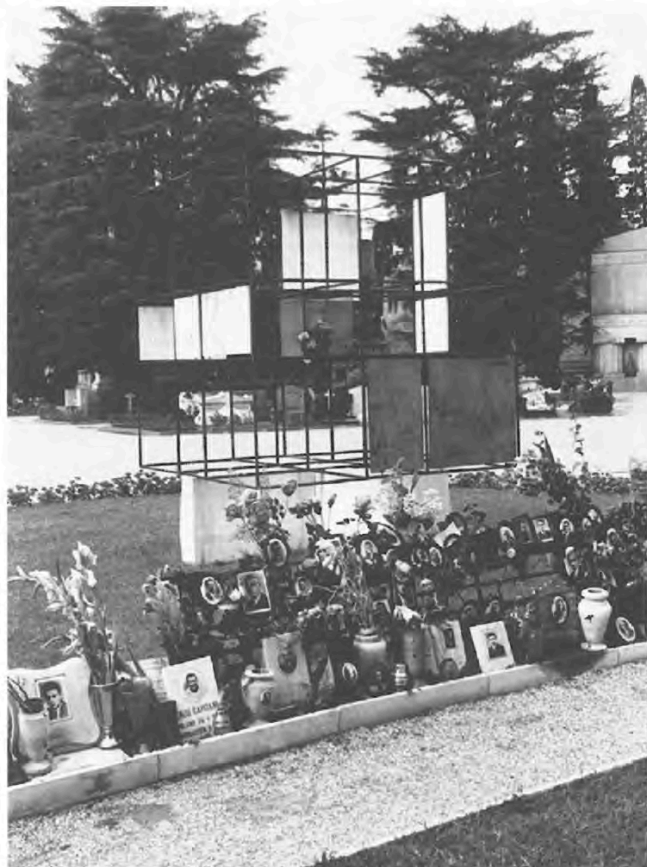
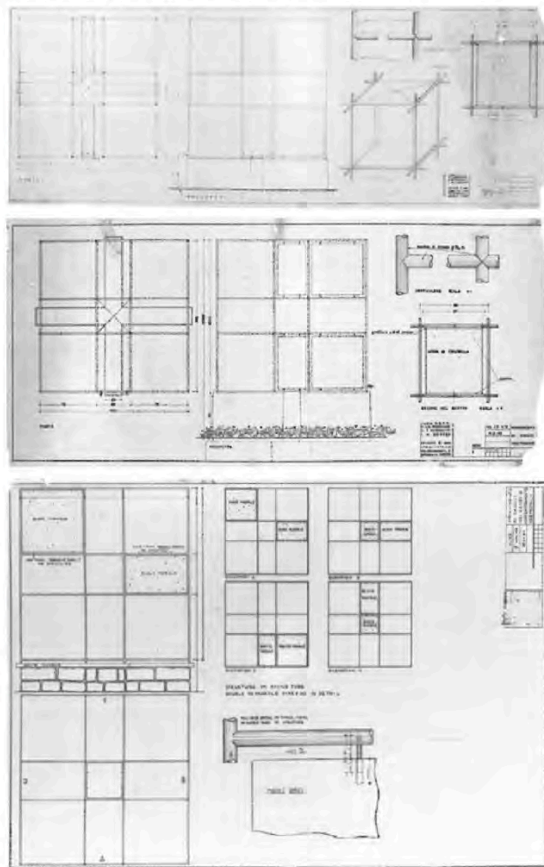
The second re-construction of the *War Memorial*, designed and realised in 1955, was thus meant to be a reproposal of the first

version of the monument, which differed from it in the inscription on the slabs. The new monument is seemingly identical to the one originally designed. However, comparing the graphic elaborations of the first project with the solution obtained from the third version, it can be observed that the geometric relations change, the materials are not the same and the position of the stone slabs and the detail of the junctions vary.

On the one hand, there is the change in dimensions and proportions. The height of the monument's base decreases, while the cube's dimensions and the rods' diameter increase, although the latter had already grown with the second version. On the other hand, there is the change in materials and techniques. In this third version, the rougher Moltrasio stone

constitutes the base and replaces the Carrara white marble. The overlying coating is composed of the Serizzo Antigorio grey stone. The metal framework is made of steel rods, once more painted white: colour recalled by the prevalence of the stone slabs which, as a result, draw the attention to the two black panels with the inscription to the victims. Thus, compared to the first version, the colours of the slabs are inverted, and their details and some positioning changed as well. Moreover, the materials are not the same: the third version confirms the second project Candoglia white marble slabs, without veins, but it inserts the Sweden black granite for the panels of the monument facing the renowned personalities' memorial chapel.

Figure 3. BBPR studio, War Memorial dedicated to the victims of the German camps, Monumental Cemetery, Milan, Italy, 1947-1950, second version.
© Marco Pogacnik, *op. cit.*, 18-19, 45.



Finally, there is the transformation of meanings: a few words contained a deep message which, over time, had become too generic. Therefore, the awareness of putting the blame on a State and not on a political party led the German consulate to request that the monument turn into the translation in built form of a new message. In which way? Through the change of a writing. As a matter of fact, the two slabs in honour of the victims, now made of Sweden black granite, do not present any longer the writing “to the dead in the German camps”, but the inscription “to the fallen in the Nazi concentration camps” (Fig. 4).

Furthermore, a request from the Association of the concentration camps’ survivors, which commissioned the monument, and the relatives of the victims introduces a further modification, confirming the reception problems of users. Initially, the monument, emblem of a collective grief, did not reveal the names of the victims. Therefore, a need for identification had led to extempore solutions: already with the second version, the monument’s users enriched the work with photographs commemorating the victims, placed on the flowerbed at the feet of the *War Memorial*. Therefore, the moment the designers chose to shift to the third version, the answer to this further need could not be disregarded but, once again, it was the removing principle which governed the intervention. Indeed, the project of the third version opted for the removal also of the photographs in memory of the victims and, three years following the monument’s inauguration, it decided to introduce on the round flowerbed seven stone slabs reporting the engraved names of the victims of the Nazi concentration camps.

3. A MEMORIAL THAT IS SMALL IN DIMENSIONS, BUT GREAT IN REFLECTIONS

The shifting identities of the *War Memorial dedicated to the victims of the Nazi concentration camps* in the Monumental Cemetery in Milan mirror its metamorphoses over time. However, in this case, it is not about metamorphoses in the form of constructed reality in continuous and inevitable transformation, but it is about metamorphoses governed by the principle of the irreversible replacement.

The *War Memorial* in Milan is as small in dimensions as it is stirring great reflections. Indeed, the modifications – in material, technological and intangible terms – of the three versions of the *War Memorial* make it possible to raise useful questions to reflect, more generally, on the topics of restoration. Is it necessary to take the drastic measures adopted in the monument in Milan in order to contrast the materials’ degeneration and to



Figure 4. BBPR studio, War Memorial dedicated to the victims of the Nazi concentration camps, Monumental Cemetery, Milan, Italy, 1955, third version. © Giulia Favaretto, 2018.

intervene on the meanings of a work? The *War Memorial*, designed by BBPR studio, is a borderline case. It is a warning against the extreme consequences of the approach adopted by the monument’s authors. An approach that is “the result of the designers’ indifference to the work’s material values, although it is their own work, therefore, their own planning choice”⁹. Certainly, the 20th century architecture materials deteriorate rapidly and the meanings of this period’s buildings change just as quickly. Nevertheless, it is the respect for the works lasting to this day which requires intervening with the purpose of transmitting to the future what the more or less recent past has given us.

Indeed, time does not come back and the *War Memorial* proves it: by operating according to the addition principle it could

have been possible to leave trace of the several contributes on the monument, even if intervening on degenerated materials and aged meanings. On the contrary, BBPR studio decided to operate according to the removal principle:

and it did so without questioning the motivations for such changes, therefore, without realising that those changes implied issues of no little relevance, such as the role of a work with its users, or the role of materials and techniques in the transition from the project to the construction, or the acceptance of the effects of time. Not to mention that all of this should lead to reflection on the sense of authenticity¹⁰.

As a matter of fact, the three versions of the monument contribute to make clear that "the same is not the very same"¹¹. And that the very same, once removed, will not come back.

In order to intervene on tangible metamorphoses and intangible changes there is no need to employ the extreme measures adopted in the *War Memorial* in Milan. Indeed, it is possible to operate by identifying interventions aimed at materials' conservation and introducing punctual elements which are able to add new meanings to the work. On the one hand, there is the inevitability of transformation of the 20th century architecture; on the other hand, there is the need of addressing changes within a process of continual metamorphosis. Nevertheless, it should be capable of not being indifferent to the material values of the monument, of respecting the uniqueness of the architecture due to its material substance and of preserving the work's meanings, even if adding new ones deriving from the epoch of the intervention.

NOTES AND QUOTATIONS

1 Cristina Villa, "...E Mnemosine, confusa e smarrita, vaga tra le rovine. Monumenti e luoghi della memoria della deportazione razziale in Italia", *Memoria collettiva e memoria privata: il ricordo della Shoah come politica sociale*, Utrecht, Igitur, 2008, 188.

2 *Ibid.*; Giovanni Denti, "BBPR (Banfi, Belgiojoso, Peressutti, Rogers). Monumento in ricordo dei caduti nei campi di concentramento in Germania, Milano, 1946 e successivi rifacimenti", *I monumenti nell'architettura moderna. Simbolo, memoria, luogo*, Firenze, Altralinea, 2015, 73; Fabio Cutroni, "Monumento ai caduti nei campi di concentramento in Germania al Cimitero Monumentale di Milano", *Rassegna di Architettura e Urbanistica*, September-December 2005, 56; Ernesto Nathan Rogers, "Il mestiere dell'architetto", *Esperienza dell'architettura*, Torino, Einaudi, 1958, 33.

3 Enrico Peressutti, "Dedica", *Costruzioni-Casabella*, March 1946, 3.

4 Speaking of which, the monument in Milan constitutes a clear quotation of one of the competition projects elaborated for the Palazzo della Civiltà Italiana in Rome. "Concorso per il Palazzo della Civiltà Italiana", *Architettura*, December 1938, 849-864.

5 Fabio Cutroni, *op. cit.*, 58.

6 Stefano Guidarini, Luca Molinari, "Dalla casa ideale alla casa standardizzata", *Domus*, October 1997, 14-17; "La casa e l'ideale", *Domus*, August 1942, 312-333.

7 Ulrike Jehle-Schulte Strathaus, Bruno Reichlin, "Parole di pietra - architettura di parole", *Il segno della memoria. 1945-1995: BBPR Monumento ai caduti nei campi nazisti*, Milano, Electa, 1995, 17.

8 Eugenio Vassallo, "Progetto e costruzione nel percorso formativo dello studente architetto", *Quaderni PAU*, January-December 2009-2010, 203.

9 *Ibid.*

10 *Ibid.*

11 Ulrike Jehle-Schulte Strathaus, Bruno Reichlin, *op. cit.*, 46.

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BIOGRAPHY

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IDENTITY AND CHANGE IN THE REUSE OF MASIERI MEMORIAL BY CARLO SCARPA IN VENICE

Sara Di Resta, Roberta Bartolone (Italy)

ABSTRACT

The Masieri Foundation was established in memory of Angelo Masieri, a collaborator of Carlo Scarpa, tragically died in 1952. The memorial was built on a typical Venetian triangular plot, at the corner of the Grand Canal and Rio Novo: in the area was situated a vernacular three-floor palace that should have been replaced by a new building commissioned to Frank Lloyd Wright. He designed a residence and study center for architecture students but the project was rejected to protect the city's historical appearance from the change.

In 1968 Scarpa imagined to realize the Masieri Memorial by removing the interior walls and floors of the original palace, leaving the historical outer walls as a shell within which entirely modern spaces were constructed. The current building is the representation of both continuity and change: the ancient façade, visible from the canal, and the new insertion, a masterpiece of light and details.

The building felt into disuse, is now owned by the Angelo Masieri Foundation. In 2016 a preliminary conservation and

adaptive reuse plan was elaborated: the first goal is to enhance the history of the building and to preserve the details of the Scarpa's work. The second aim is to achieve a balance between conservation and transformation choosing a suitable use of the building: it will be turned into a research center to host students and professors coming from Italian and foreign universities, in compliance with the legacy provisions and the articles of association of the Masieri Foundation.

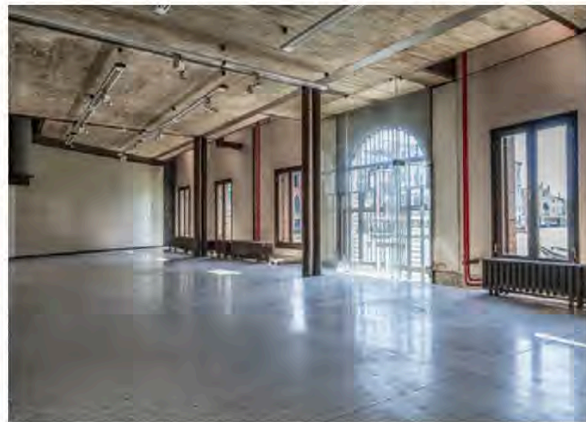
1. MODERN IS A TIME/SPATIAL JOINT

The Masieri Foundation was instituted in memory of Angelo Masieri, a former student and collaborator of Carlo Scarpa, tragically died in 1952. The memorial was built at the corner of the Grand Canal and Rio Foscari, a memory-place of unrepeatable possibilities: in the area was situated a Venetian three-floor palace that should have been replaced by a new building commissioned to Frank Lloyd Wright. On the Masieri house site, he designed a residence and study center for architecture students to be called Masieri Memorial. The

Figure 1. Carlo Scarpa, Masieri Memorial, Venice, Italy, 2017.
The historic masonry façade from the Grand Canal. © ph. John Volpato



Figure 2. Carlo Scarpa, Masieri Memorial, Venice, Italy, 2017.
The main room on the ground floor. © ph. John Volpato



Wright's design, despite being "an elegant and uncharacteristically restrained abstraction of the of the typical Venetian palazzo"¹, ignited an international debate between those who sustained that Venice should remain untouched by modern buildings and those who insisted that, in order to survive, it must be an evolving place. Like many exponents of the cultural circuit of the time, the Renaissance art historian Bernard Berenson opposed the project as did Wright's fellow Oak Park resident Ernest Hemingway, who said: "if Wright's design was built, Venice deserved to be burnt to the ground"². The project site then led to one of the greatest controversies over whether any modern structures should be built in Venice's historic center³. In 1954, both the international complaint and the pressure of the Venetian Tourist Commission forced to reject the project in order to protect the city's historical appearance from the change. The project was officially rejected by the Municipality of Venice on 18th November 1954⁴.

Between 1968 and 1969, Carlo Scarpa was called to work out three consecutive proposals: in the last one, approved in 1972⁵, he chose to realize the Masieri Memorial by removing the interior walls and decaying floors of the original palace, leaving the historic outer walls as an untouched shell within which entirely modern spaces were constructed⁶ (Fig. 1-2).

The new floors should have been detached from the façade through spatial cuts and the interiors should have been reconstructed by new materials like steel and concrete structures. The modernity of the current building lies precisely in its being the representation of both continuity and change: the ancient façade visible from the canal is mainly detached but dialogues with the new insertions, a masterpiece of light and details.

Unfortunately the construction was underway only when Scarpa died in 1978. The architect Franca Semi and the engineer Carlo Maschietto oversaw the final work on the Masieri Foundation, which was suspended in 1983 despite the realization was never entirely completed.

2. KEEPING THE 'AS-BUILT' STATE

Three Istrian stone-faced steps lead nowadays to the up of the steel-framed concrete entry door. Inside, other steps lead to the Venetian *terrazzo* ground floor, which is raised above the level of the *high water*. This wide and open room runs along the Canal Grande façade. The two upper floors, reachable by a metal rising staircase, have board-formed cast concrete ceiling and red coloured cement floors exposing the H-shaped steel beams, their bottom flanges set flush with the ceiling.

Double-steel tube pillars run to the floor from the points where these beams intersect in the slab. The steel-edged concrete floors stop short of the wall and a void, less than 1 metre wide, runs from the ground level to the roof; as Robert McCarter highlighted, "this disengagement of the new interior floors and the Grand Canal's historical masonry façade makes clear the relationship between the old and new, as well as creating a modern spatial connection between all of the levels"⁷. Scarpa's design helps to better focus an aspect of the path taken by the Italian architecture in its relationship with the remains of the past. A non-canonical connection, controversial in the conservative value of the remains. With its load of stratifications and contradictions, the actual building testifies a significant passage of recent history: the relationship with the past cannot be managed in a single direction, the 'other' is not ignored or suppressed, but discovered in its diversity. At the same time, the new architecture do not establish with the old one a relationship of necessity but only of co-extensivity, which stops only a few centimetres before the older walls: "gaps, interruptions of continuity, glazed cuts, are the clear sign of this cohabitation"⁸.

Differently from the masonry façade, the new insertion is built by selected materials: steel, concrete, *marmorino* polished plaster (cobalt blue, white, grey), Venetian cement *terrazzo* (white, red), Istrian stone, glass.

The building, owned by the Angelo Masieri Foundation, never properly fulfilled its intended use and, since 2015, it felt into disuse.

The Masieri Memorial is mainly in a good state of conservation but the most fragile building surfaces (external exposed concrete elements, wooden frames, steel systems) need accurate interventions to preserve finishes from physiological decay due to the presence of water, rising damp, consumption. Nonetheless, the building actually needs a compatible use able to respect and to enhance its features and also to consider issues related to the improvement of the public accessibility and the comfort of the spaces according to the contemporary requirements.

In 2016 a preliminary conservation and adaptive reuse plan⁹ has been elaborated with the aim to achieve a careful balance between conservation and transformation. The first goal is to preserve the building and to enhance its history. At the same time, in compliance with the legacy provisions of the Masieri Foundation, the aim is to turn the building into a research center also able to host students and professors coming from foreign universities.

How to respectfully fit into the time-line of the building and, at the same time, into the logics of the Scarpa's work? How to accompany the modern values through the change that represents one of the main paths for their preservation?

The project intends to establish with the past a relationship of listening, rediscovered by an allusive method, in which the historical legacy, even with its contradictions, is not cancelled but connected with the contemporary cultural horizon. The design of all new elements necessary for the adaptive-reuse plan will be preceded by an accurate study aiming to choose the most appropriate architectural language and materials: the intervention does not intend to philologically reproduce Carlo Scarpa's design, but rather to reinterpret it on a con-

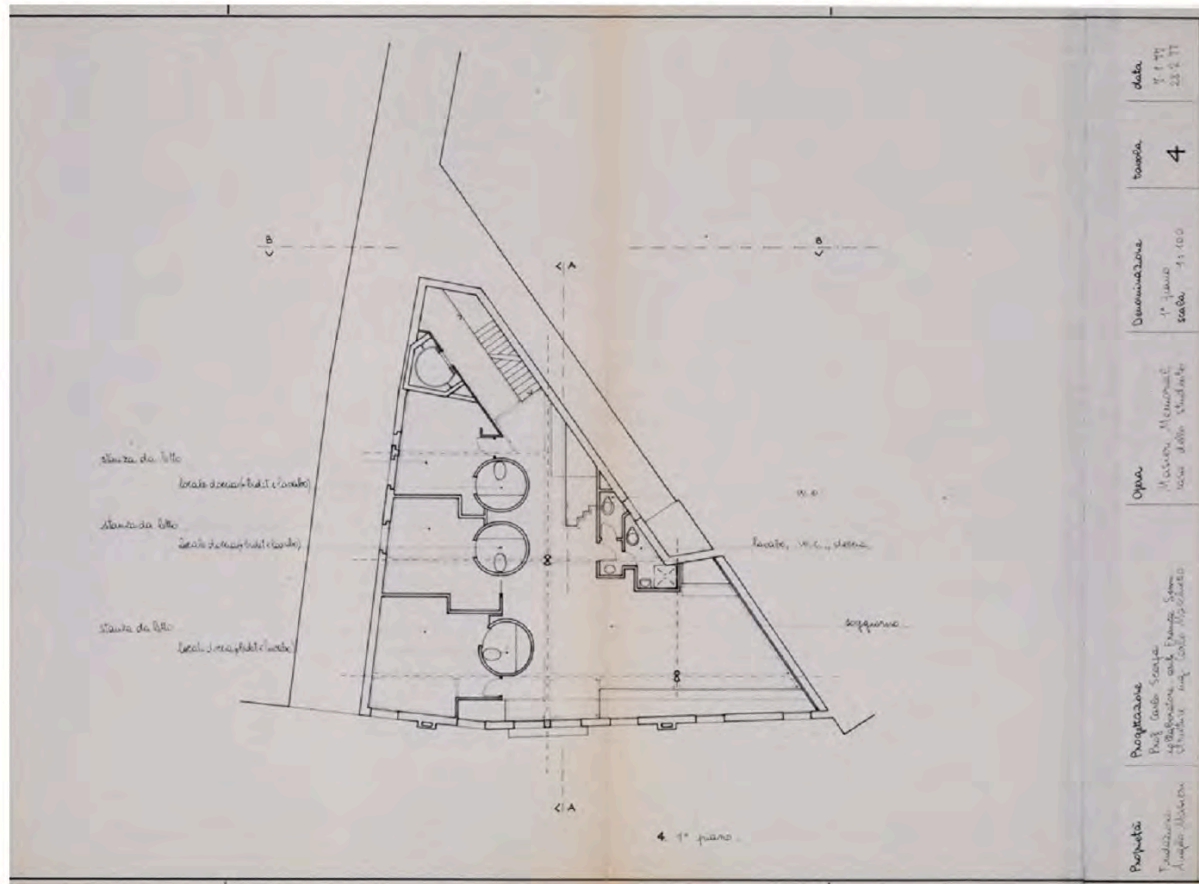
temporary basis, preserving the building's identity through the change.

[S.D.R.]

3. THE FORTUNE OF AN UNFINISHED WORK

The roots of the adaptive-reuse plan lie in the deep knowledge both of the fortune and the identity features of the building. Actually the ground floor is organized in a series of sequential spaces: a small space facing the access door, the elevator serving all levels including the attic and the caretaker's lodge. A door allows the access from the passageway to a small room leading to the bathroom and bedroom of the caretaker's dwelling. The main room, destined for the students' learning and recreational

Figure 3. Carlo Scarpa, Masieri Memorial, Venice, Italy, 1977. Plan of the first floor, scale 1:100. © MAXXI Architecture Archives Center



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activities, overlooks the Grand Canal. A partition wall separates the space for collective use from that for private use, namely the caretaker's kitchen.

The first design proposal approved by the Municipality of Venice provided for three bedrooms, both on the first and the second floor. Each bedroom was equipped with private bathroom, but the rooms were built only on the second floor. The variance of the layout was the result of the Masieri Foundation's choice of changing the building's use from dormitory to guesthouse for students. On such occasion, the rooms on the first floor were eliminated and the works were completed turning the building's first floor into a great, undivided space destined for work and study.

The Centro Studi Carlo Scarpa in Treviso keeps documents and sketches¹⁰ showing different plans including the layout of tables and chairs or the walls' colour chosen by the architect for the spaces mentioned above. One shows that the first and second floors flush with the façade overlooking the Grand Canal, free from the hollow space, on all levels, that featured in the first project submitted and rejected by the Building Committee. The attic turns out to be, as illustrated in the archive documentation, the floor that more differs from Scarpa's first proposal. The plan shows two bedrooms, three bathrooms, two of which directly accessible from the bedrooms and equipped with washbasins, toilets and bidets while a third, for collective use, contained washbasin, toilet and bath. The space between the elevator and one of the private bathrooms includes a double-leaf door that would have allowed the access to an exterior terrace overlooking the *calle*. The side elevation features five double hinged windows including one lined up with the dormer and two windows with three parts each on the ground floor. The interior height (between floor and ceiling) of the first three levels is equal to 3.06 m. whereas that of the attic is equal to 2.40 m.

From the works stoppages to 1996 the Masieri Foundation acted as a breeding ground for cultural production on the architecture field. It was home of an architecture gallery, as well as the Iuav Design Archive headquarter.

Not only is the Masieri Memorial an example of XXth century heritage successfully integrated into the historical city, it is also the witness of a fortune that relates two undisputed masters of the modern architecture: Frank Lloyd Wright and Carlo Scarpa. Nowadays, the history of the building seems to reflect the image of the city for its capability to embrace transformations and to enhance its role as a center of cultural production.

4. RE-OPEN, RE-USE

The intervention represents the proper opportunity to investigate and thoroughly understand the relationship between the architect and the local craftsmen, the building techniques and materials. The aim of the preliminary design is also to integrate the never-realized fragments of the Carlo Scarpa's work through the grafting of essential signs and minimal elements: their distinctiveness is expressed both by the detail scale and the choice of new materials and technologies.

The integration is explained by the realization of the three bedrooms on the first floor of the building (**Fig. 3**); the intervention then restores the Masieri Memorial's use as accommodation and research center managed by the Masieri Foundation, equipped with 10 beds for students and professors involved in learning-educational and research activities in Venice.

The general philosophy is supported by the accurate analysis of the historical and archival documents kept at the Centro Studi Carlo Scarpa in Treviso, the National Museum of XXI Century Arts (MAXXI) in Rome, the Archivio Progetti Iuav in Venice and the archives of the Municipality and the Superintendence of Archaeology, Fine Arts and Landscape for the city of Venice and Lagoon. The research, started in January 2016, was focused on the chronological reconstruction of the four different versions of the design drawn up by Scarpa. The partial outcomes of the data collection activity have been gathered in the exhibition "Carlo Scarpa after Carlo Scarpa" held at Iuav University of Venice in the same year.

The research carried out led to the understanding the various phases, starting from the unrealized projects to the works, that affected the building up to its current state. The phase aimed at exploring the projects was also essential to work out solutions from a functional, formal and material-related point of view that were adequate to respect the features of the place and its use in accordance with the current regulations.

The decision to use the spaces, according to a consistent use compared with that of the functional areas from the original Scarpa's design, led to the choice of using the ground floor for community activities. The main room overlooking the Grand Canal will be used as a conference room with 24 seats. The design includes the restoration of the bathroom next to the room used as a kitchenette on the ground floor with direct access from the corridor. Wood panelling will be realized to separate a small portion of the ante bathroom. The space, previously used as an office, will be turned into a kitchen. The main room will feature a fixed partition to separate an area destined for office.

The adaptive-reuse plan also means to insert on the first floor the volumes of the rooms with private bathrooms from the project licensed in 1972, through the construction of new partitions. The underlying idea is that of evoking the features of the first – never realized – layout interpreting it through a formal and material-related language extant that is capable of distinguishing the additional parts from the existing ones. The intervention is reversible, as the partitions will be realized with a steel frame structure, an interior sound insulation layer, an interior and exterior coating layer with 'esoflex' wooden double panels and colored zinc laminates (**Fig. 4**).

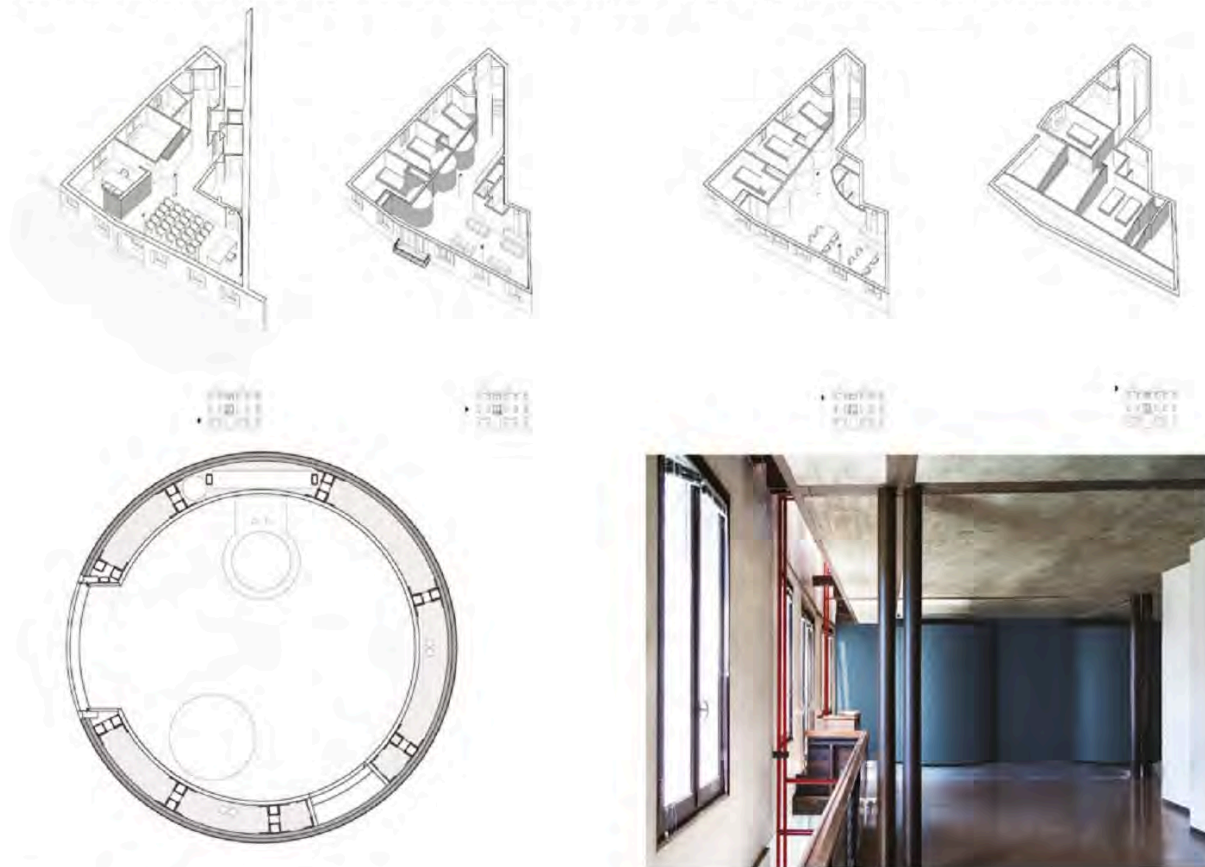
All the new insertions, both the partition walls and the fixed furnishings, will be equipped with spacers both to limit the anchorage points to the existing structures (walls and flooring) and to

compensate their irregularities. On the second and the third floor, conservation intervention will be carried out for the maintenance of the bathrooms' functions. Other significant issue is the implementation of the piping system by using the already realized hollows into the slab between the ground floor and first floor.

On the third floor new partition walls will be installed for a new bathroom. Both the design of the fixed partitions on the first floor and of the fixed furnishings within the rooms on the second floor and in the attic will be preceded by an accurate study aiming to choose the most suitable materials to be used within the Scarpa's spaces. A supplementary study will be dedicated to the details related to the connection of these new elements to the extant walls and flooring.

[R.B.]

Figure 4. Roberta Bartolone, Giulio Mangano, Masieri Memorial, Venice, Italy, 2016. Design strategies for the new insertions. © Barman Architects



Sara Di Resta, Roberta Bartolone Identity and Change in the Reuse of Masieri Memorial

The paper illustrates methods and aims of the design path dedicated both to the conservation and the adaptive-reuse of a significant document of modern architectural heritage. The proposal is focused on cultural issues that deal with conservation field as a tool able to manage both continuity and change. In a place overloaded with old and modern signs, the attitude of listening was preferred to a shouted architectural languages' contamination. The Masieri Memorial then embodies the city's logics and contradictions: "Venice is *contrasting polyphony*, a complementarity of times and languages, it is intolerance of any form or design that completely resolves within itself. If we do not understand its aspiration, its desire for metamorphosis, for disguise, for enrichment with new presences and images, we are betraying its *genius loci*"¹¹.

NOTES

- 1 Robert McCarter, "Fondazione Masieri renovations. Venice, 1968-1978", *Carlo Scarpa*, London-New York, Phaidon, 2013, 190.
- 2 Bruce Brooks Pfeiffer (edited by), *Frank Lloyd Wright: collected writings*, vol. 5, New York, Rizzoli International, 1995, 16.
- 3 Robert McCarter, *Carlo Scarpa*, London-New York, Phaidon, 2013, 190-199.
- 4 Planning Committee of the Municipality of Venice, minutes of the 30th September 1969 session. Archival fund 'Palazzina Masieri', Carlo Scarpa Study Center, Treviso.
- 5 The project approved by the Planning Committee of the Municipality of Venice was registered with the building permit n. 55996/77/72 issued on 5th September 1972.
- 6 In the last year of his life, Carlo Scarpa commented on the fortunes of the Wright's design: "Wright did not copy the window next door. He proposed a work for first time, without forgetting the essential feature in Venice was and is water. As I said, I had nothing but trouble from planning in Venice and the bureaucrats who interpret them. They order to imitate the style of the ancient windows, forgetting that those windows were produced in different times, by a different way of life, with "windows" made of other materials, in other styles, and with a different way of making windows. [...] Buildings that imitate look like impostors, and that is just what they are. [...] Of course, I have been free in design interiors", Martin Dominguez, "Intervista a Carlo Scarpa", Francesco Dal Co, Giuseppe Mazzariol (edited by), *Carlo Scarpa. Opera completa*, Milan, Electa, 1984, 297.
- 7 Robert McCarter, "Fondazione Masieri renovations. Venice, 1968-1978", *Carlo Scarpa*, London-New York, Phaidon, 2013, 192.
- 8 Claudio Varagnoli, "Edifici da edifici: la ricezione del passato nell'architettura italiana 1990-2000", *L'industria delle costruzioni*, 368, 2002, 4-15. See also, Sara Di Resta, *Le «forme» della conservazione. Intenzioni e prassi dell'architettura contemporanea per il restauro*, Rome, Gangemi International, 2016, 99-149.
- 9 Scientific advisory committee: Prof. Arch. Alberto Ferlenga (Dean of the Iuav University of Venice and President of the Masieri Foundation), Prof. Arch. Aldo Aymonino (Iuav University of Venice and board member of the Masieri Foundation). Design team: Arch. Roberta Bartolone, Arch. Giulio Mangano (Barman Architects).

10 MAXXI Architecture Archives Center, Carlo Scarpa Study Center, folder n. 202, ref. nn. 52466-52473.

11 Massimo Cacciari, "Preface", *Contemporary Architecture in Venice*, Venice, Marsilio, 2014, 15.

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BIOGRAPHIES

Sara Di Resta, PhD in Conservation of Architectural Heritage, is Assistant Professor of Architectural Preservation at Iuav University of Venice. Her research activities are focused on the conservation of 20th-century heritage and on the architectural language in conservation design. Her last volume is "*Forms of conservation. Purposes and practices of contemporary architecture for restoration*" (2016). She is member of SIRA Italian Society of Architectural Restoration and of the Scientific Committee Science and Cultural Heritage. Gold medal at the Domus International Prize for Architectural Conservation (2017), in the same year she obtained the habilitation as Associate Professor according to the Italian National Scientific Habilitation procedure.

Roberta Bartolone received a Master Degree in Architecture and a PhD in Architecture at Iuav University of Venice. She was involved in several restoration projects of historic buildings in Venice and new commercial buildings and private houses in Angola. She is teaching assistant in Architectural and Urban Design and in Architectural Restoration at Iuav University of Venice. In 2016 she founded, with Giulio Mangano, Barman architects, an architectural practice based in Venice. In the same year she was involved as project leader in the preliminary conservation design of the Masieri Memorial.

Session 10_REINVENTING PUBLIC INSTITUTIONS

Session Chair: Claes Caldenby (Sweden)



Public institutions, such as schools, universities and health care facilities, have, besides housing, been considered main tasks of modernist architecture. This was the case already in the 1930s and still more so in the post-war period, with the building of welfare societies. When the American architectural photographer and writer G E Kidder Smith published his book *Sweden Builds* in 1950 he claimed that Sweden had the highest average standard of architecture in the world. Choosing one word to characterize Swedish architecture he made up his mind for “civilized”, referring to the everyday architecture of housing as well as of public institutions, as opposed to the exceptional monuments. On the cover of the book was the new big hospital, Södersjukhuset, in Stockholm from the early 1940s.

The allure of these institutions for modernism was in their mass character and their content of repeated units, which favoured standardization and rational plans. But for the schools it was also about the democratization of formerly very authoritarian institutions and for the health care facilities about their emphasis on hygiene, clean forms and evidence based design. But built into the shifting pedagogical ideals and often disputed design of schools and the rapidly changing technologies of health care is the problem of continuous change of such institutions. Conservation is here faced with a three-fold challenge:

1. The incremental changes caused by highly respectable everyday practical needs which must be met.
2. The lack of understanding from local clients and users for the historical and architectural value of the building.
3. The inherent paradox of how an architecture favouring innovation could be preserved in the face of deep functional changes of its contents.

The third point was met in the post-war period with structuralist architecture, not least in public institutions, with its emphasis on an architecture for continuous change. One conclusion of this might be that “reinventing” the architecture of these institutions is just as important, or even more so, than

“restoring” or “conserving” it. This is a challenge to professional knowledge, which is not always asked for or even prepared to face this challenge.

To this could be added another need for reinvention today, that of the publicness of the institutions. Since the 1980s there has been a global neoliberal wave, favouring private good over public good and trying to control quality with measurement methods inspired by private business. New Public Management and Private Public Partnership are frequently used concepts coupled to this. Modernism has a somewhat ambivalent attitude here, on the one hand often supporting the public good, on the other hand with a strong belief in quantitative and evidence based methods.¹

The four papers in this session illustrate the challenges meeting conservation and reinvention of public institutions in different countries.

Roberta Grignolo's paper on Livio Vacchini's Saleggi Primary School in Locarno describes a school built according to contested progressive pedagogical ideas on “school democratisation” in the 1970s: “Classrooms should be structured to encourage the active work of students, the practice of individual and group work”. Despite being listed the school has been facing changes in regulations and pedagogical ideas as well as “the short-sightedness of its owners and users”. This has forced heritage authorities to act coercively, in this case with good result, even if the ideal would be a more proactive role. Maria Bacharel's and others' study of the renovation of two schools in Portugal, one from the 1930s and one from the 1960s, also discuss “the need to cope heritage values with functional requirements, current legal standards and community demands”. They propose a method in two stages, starting with a survey of the cultural, technical and functional status of the building, followed by an identification of constraints “in face of current educational, functional, technical requirements and regulations”.

Susan Ross in her paper presents the case of University of British Columbia in Vancouver, a university mainly built in

the 1950s. In recent renewals UBC has quite consciously acted as a “living laboratory”, challenging the 20th century modernist legacy of “troubled politics of resource exploitation and colonization”. The university is situated on grounds traditionally belonging to the indigenous Musqueam people. Engaging these people in the planning process, reforestation and reuse of materials, in particular wood, are on the agenda. Re-invention is here about how “evolving social perspectives, and changing environmental strategies might reframe the work of heritage conservation”.

Daniela Arnaut's paper brings us the cases of three Portuguese hospitals, built in the 1930s, 1950s and 1960s. It is a building type where “a permanent renewal of its installations, and a complete reshuffle of its departments” comes first, more than in any other types of buildings. Paradoxically hospitals are “heavy infrastructures” with a very transitory nature. Arnaut discusses how necessary metamorphosis can avoid leading to amnesia. She asks for “a scale of knowledgeable interventions from restoration of original states to reinventing actions” and sees a possible role of Docomomo in promoting this.

Facing society's “continuity of change” the role of Docomomo cannot be documentation and conservation in a limited sense, as if trying to stop a flood. Nor can the Modern Movement be seen as frozen phenomenon. If you find a point in Thomas Fisher's provocative statement that “design may have as central a place in a world of flows as science and technology had in the Industrial Revolution” the Modern Movement of the first machine age has to be reinvented.² And public institutions are a place to begin.

NOTES

1 For a scientific paper in pedagogics using “modernism” for the market and test score oriented “Global Education Reform Movement” (and “post-modernism” for its opposite, the “Finnish model”), see R D Nordgren, 2016, “Modernism in School Reform: Promoting Private over Public Good”, published by Institute of Education Sciences, US Department of Education, files.eric.ed.gov/fulltext/EJ1094415.pdf.

2 Thomas Fisher, *In the Scheme of Things: Alternative Thinking on the Practice of Architecture*, Minneapolis, University of Minnesota Press, 2000, 4.

BIOGRAPHY

Claes Caldenby is an architect and architectural historian. He is professor emeritus in Theory and history of architecture at Chalmers university of technology in Gothenburg. He has also been one of the editors of *Arkitektur*, the Swedish review of architecture, since 1977. As an architectural historian he has specialized on Swedish post-war architecture. He has edited and contributed to books like *Asplund* (1985), *Sigurd Lewerentz: Two churches* (1997), *20th century architecture: Sweden* (1998) and several others in Swedish. Altogether he has written some 80 books and 800 articles.

LIVIO VACCHINI'S SALEGGI SCHOOL IN LOCARNO. STRATEGIES FOR THE CONSERVATION OF 1970S INTERIORS

Roberta Grignolo (Switzerland)

ABSTRACT

The Saleggi Primary School in Locarno is an early work of Livio Vacchini, a prominent representative of the so-called "Ticino School". Comprising three buildings erected over a decade – 1970-72 (9 classrooms), 1973-74 (14 classrooms) and 1975-79 (gymnasium and public services) – the complex is crucial to understand the architect's subsequent work.

Outcome of a 1970 competition based on progressive pedagogical ideals – "school democratisation" – the classrooms and service spaces, with their simple associative principles, embody 1970s teaching goals: dual-purpose interiors, divided into teaching and group work areas; closely interrelated interiors and exteriors, the latter were considered as classroom extensions; autonomous yet intercommunicating teaching units.

Today, despite being listed (2011), the complex is facing the short-sightedness of its owners and users. Inadequate appreciation for this instance of 1970s heritage as well as the requirements of current regulations are a threat to its late brutalist/early high-tech interiors, designed to leave all components visible – prefabricated structure, ducts, switches.

Fortunately, recent interventions performed under the guidance of the Heritage Department, have opposed this trend proving the relevance of interior features in conveying the original atmosphere. The period light fixtures were made compliant by just replacing the light source (from fluorescent to LED), while the original curtain fabric pattern was re-produced using modern fire-proof yarn after tracking down the original supplier.

These and other similar interventions show that a timely reconnaissance of original material features is crucial in conserving still frequently overlooked recent interiors.

SCHOOL ARCHITECTURE IN TICINO IN THE 1960'S

Livio Vacchini (1933-2007) was a prominent representative of the Swiss "Ticino School" which gained global recognition in the 1980-90s' architectural discourse. His early works are

little known. Nevertheless some of them should be considered as masterpieces in their own right, both for their architectural features, as well as for their influence on contemporary architecture in Switzerland and abroad; furthermore they represent key-oeuvres to understand the evolution of Vacchini's architecture.

The Saleggi School in Locarno is a case in point. The commission was the result of a public competition that marked a crucial moment in the development of Ticino school architecture. In the 1960s the Region's economic and demographic growth led to a strong increase in the demand for education and fostered debates inspired by the desire to "democratise education", i.e. to offer all young people equal training opportunities, regardless of their social background. A lively debate on school architecture developed in period newspapers and magazines.¹ It opposed on the one hand the advocates of traditional school systems and on the other promoters of a modern anti-authoritarian pedagogy, inspired among others by Pestalozzi and Piaget.

AN INNOVATIVE COMPETITION

The Municipality of Locarno called a competition for the Saleggi Primary School in June 1970. It was to accommodate 600 students divided into 24 classrooms; it also comprised spaces for special activities, a gymnasium and outdoor areas for recess and sports.

The brief was "in stark contrast with the criteria prevailing in the canton":² it included a pedagogical report – an absolute novelty at the time – that defined Municipal guidelines on teaching methods. The report was centred on "the issue of school democratisation"³ and endorsed a pedagogic model in which "the student is the protagonist of the learning process", as opposed to the traditional and authoritarian teaching model. The document also clarified how school architecture could facilitate this kind of teaching: "Classrooms should be structured to encourage the active work of students, the practice of individual and group work", as well as spontaneous activities;

as for connecting spaces, they should be designed not only for mobility, but also “as places of life, of social relations”.

VACCHINI'S PROJECT: A LITERAL TRANSCRIPTION OF THE BRIEF

In December 1970 the competition was awarded to Livio Vacchini. His personal and professional affinity with the theme of school architecture certainly played a key role in this success.

In those years his eldest daughters attended primary school and he, as a parent, played an active part in discussions about teaching. Brought-up in out-dated nineteenth-century school-buildings, Vacchini was naturally attracted by the theories of democratic teaching, based on the cognitive development and personality of a child. This interest was the background against which he developed his personal “theory” about school architecture, the size and articulation of which was to depend on the age and socialisation skills of the students: primary schools should be an extension of home and offer classrooms for large school-families of 25 pupils; secondary schools should allow for further interaction between students, in groups of 50; high-schools, where students were grouped in large, 100 pupil-groups, were an introduction to civil society.

Furthermore, in those years Vacchini forged a friendship with young teachers with progressive pedagogical orientations, in particular Ivo Dellagana, who was then introducing experimental teaching methods to Ticino primary schools. Although greeted with enthusiasm by students and parents, this teacher's approach was criticised by school officials, who fired him in August 1970. It was then that Vacchini had a shrewd idea: since he was working on the Saleggi competition, he asked the young teacher to act as an informal “pedagogic consultant” and help him with the design of the school. The correspondence between Vacchini's and Dellagana's ideals was perfect – both dreamed of an anti-authoritarian school, founded on the ideas of Summer Hill (the anti-authoritarian school *par excellence*) and of Barbiana (set up by Don Milani) – and they were also fully in line with the brief's pedagogical report based on “school democratisation”.

The result was unparalleled: Vacchini's competition project can be read as a literal transcription of the brief's requirements. The classrooms were juxtaposed on one single level in groups of two or three, and simply connected by covered outdoor corridors, thus creating a mat-like pattern. By providing access to each classroom directly from outdoors, the stairs

and corridors, which the brief described as potential “spaces of segregation”, were completely eliminated. The side-by-side juxtaposition of modules in groups of 2 or 3, besides favouring the relationship between classrooms in both transversal and longitudinal directions, also enriched the overall composition.

THE SALEGGI SCHOOL AS BUILT

The project evolved after the competition, but the overall layout strategy remained unchanged: on the one hand the classrooms organised on a regular and orthogonal grid, on the other the public building with a more “monumental” character. *A posteriori* Vacchini described the school as a city: “it is made up of houses, palaces, streets, squares, private spaces and public spaces, gardens, arcades”.⁴ The classrooms of the Saleggi School – built in two phases (9 classrooms in 1970-72; 14 classrooms in 1973-74) and arranged in two different blocks – are the houses, separated yet connected by roads and arcades (which actually appear in the 14 classrooms block), while the gymnasium – a large building comprising public services and inaugurated in 1979 – is the palace, surrounded by its public spaces and gardens. (Fig. 1).

As for the typical classroom, it embodies 1970s teaching goals (Fig. 2).

Firstly, a close interrelation between interiors and exteriors, the latter considered as classroom extensions and enriched with different kinds of trees and bushes; two completely glazed walls enhance the interior/exterior relation of each classroom.

Secondly, the classroom is considered as a “laboratory” to de-

Figure 1 – Livio Vacchini, Saleggi School, Locarno, 1970-79. Aerial view.
© Comune di Locarno, Scuole Comunali, 1976.



velop the students' socialisation skills and is therefore designed as autonomous yet intercommunicating with other teaching units. Each class is flanked by its own service corridor, which comprises access, wardrobe and toilets; from such reserved and "protected" corridors pupils can see neighbouring classrooms, through round glazed openings in the intercommunicating doors.

As for the interiors, they are divided, into a teaching area and an area for group work by means of a central vertical-sliding blackboard.

Last but not least, the classrooms are designed to allow a perfect legibility of the exposed systems and of the construction method, thanks to the complete dissociation between the

load-bearing metal structure and the concrete-block infill walls. In a 1974 article Vacchini described the project as follows: "The proportions of the buildings are those of a child. [...] The spatial simplicity is matched by the building's structural simplicity."⁵ The choice of a prefabricated metal structure and the simplicity of construction was certainly determined by aesthetic issues – Vacchini had visited Craig Elwood's Los Angeles houses, which strongly influenced the design for his home in Ascona (1968-69) – and by the urgency to provide new classrooms for the booming population. Nevertheless the tectonic clarity of the school structure should equally be considered the outcome of a pedagogical intent.

Figure 2 – Classroom interiors. © Archivio Studio Vacchini, photo: Alberto Flammer, 1976.



Roberta Grignolo Livio Vacchini's Saleggi School in Locarno

A MONUMENT IN USE

Recognized as an important building in the history of Ticino architecture and of school architecture internationally, the Saleggi School was listed in 2011 by the Ticino Canton Heritage Department as part of a comprehensive strategy for the protection of 20th century architecture.⁶ However, heritage protection doesn't necessarily entail conservation.

Today the primary school is still owned by the Municipality and is run by the local School Department. Since its completion at the end of the 1970s, it has required several interventions to address technical flaws and functional updating. The poorly insulated roofs and leaking skylights were done over by adding new layers which are visible from the ground and thus modify the perception of the formerly thin, flat roof; several classrooms were transformed to accommodate a library, kindergarten classes, etc.

Transformations were superintended by the town's Technical Office, that oversees the management and maintenance of the Municipality's building stock and has but limited competence in the field of conservation. Hence, the interventions aimed to meet the changing needs of the school's users (teachers, parents and children) and were driven mainly by pragmatic considerations.

While conservation of heritage of the early 20th century and 1950-60s seems to have gained broader support in the last decade, buildings from the 1970s still lack appreciation. This applies especially to their interiors.

At the Saleggi School inadequate appreciation for architectural quality, together with current changes in regulations and pedagogical methods, are a threat to the late brutalist/early high-tech interiors, designed to leave all components visible (prefabricated structure, ducts, switches). Minor and seemingly invisible transformations risk tarnishing their high level of material authenticity.

Happily, since the complex's listing in 2011, subsequent interventions have had to meet the approval of the Heritage Department and this collaboration has countered the risks mentioned above.⁷ Thus the main actions undertaken since that date, which were called for by the need to make this public School compliant with new and ever more stringent energy efficiency and fire regulations, benefitted from the competence of heritage officials. Two interventions – on the original lighting fixtures and the curtains – are worth mentioning.



Figure 3 – Integration of LED technology in the original Regent lamps.
© photo: Roberta Grignolo; drawing: Regent Lighting.

LED UPGRADING OF ORIGINAL LIGHTING FIXTURES

Vacchini had provided each classroom with natural lighting through completely glazed facades and translucent skylights. Artificial lighting was added as a complement for darker hours and comprised nine concentric-disks ceiling-lamps, typically used in post-war schools. The ones used at Saleggi were produced by the firm Regent.⁸ The metal shade-disks protected the pupils' eyes from direct lighting, whereas their white coating redirected the light towards the ceiling. Furthermore the gaps between the disks allowed for a "transparency" of the fixtures, reducing their physical presence and increasing the perception of the ceiling above, hence the impression of being in a closed, protected space.

Natural and artificial lighting still provided enough light for users, but unfortunately it no longer guaranteed the Lumen required by new Swiss regulations.⁹ At first, the Locarno Municipality (owner of the building) tried to replace the original fluorescent bulbs with low-emission ones, but these didn't produce enough light. The Municipality then realised that by replacing the original fluorescent bulbs with low power consumption LED systems the required Lumen could be guaranteed while also significantly reducing operating and electricity costs.

Regent Lighting, the successor of the original lamp manufacturer, was contacted. At first they suggested an off the shelf model from their catalogue. The so-called "Torino" lamp was submitted to the Heritage Department and was rejected: its sleek design and satinated glass had little to do with the industrial character of the original interiors; furthermore, once installed under the low classroom ceilings the lamp blinded

users. Guided by the Heritage Department, the Municipality developed a close collaboration with Regent to find updated LED-based solutions that wouldn't disrupt the original character of the interiors. They therefore tried re-using the original concentric-disk structure and adapting the lamps to accommodate new LED sources. An early solution was rejected because the diameter of the LED disk system was too wide and radically reduced the transparency of the lamp; Regent then produced several prototypes in order to check out the lighting effect *in situ*. In the final solution, the size of the LED disk was reduced within the first disk of the lamp structure, while a diffuser hides the individual LED lights and creates a uniform illuminating surface. The transformer required for the LEDs to work was integrated into the suspen-

sion cone of the original lamps and made invisible (Fig. 3). If on the one hand the integration of LED technology in the existing lamps required an "ad hoc" project, on the other it offered several concurrent results: it preserved the metal structure of the original lamps, it improved their lighting power and it increased their energy efficiency.

The cost of this "tailor-made" solution was 30-35% higher (including design and production) than choosing lighting from a catalogue. However, now that this initial investment has been covered, costs will potentially decrease significantly if similar lamps elsewhere need to be restored and upgraded. This will prove to be useful since the model used for the Saleggi School was very popular in those years in Switzerland and abroad.¹⁰

Figure 4 – The open-weave curtains, originally produced by Création Baumann. Following a thorough investigation in the firm's archives, the fabric was re-produced following the original "production-recipe" but with new fireproof yarns. © Roberta Grignolo; Miriam Filipponi, Ufficio Beni Culturali, Bellinzona.



Roberta Grignolo Livio Vacchini's Saleggi School in Locarno

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RE-PRODUCTION OF THE ORIGINAL CURTAIN FABRIC

As for the classroom curtains, they too were part of the original design and pedagogic strategy: their open-weave fabric had been chosen for its outward visibility while ensuring day-time privacy. Furthermore, the stripy pastel-colour pattern, which had been expressly chosen by Vacchini from the collection of Création Baumann,¹¹ was typical of the time and contributed to the domestic atmosphere of the classrooms.

After 40 years of continuous use, many of the original curtains were worn and torn, but above all they were no longer compliant with fire regulations and had to be changed.

The Municipality initially suggested they be replaced with ordinary cream-coloured office curtains, but the Heritage Department understood the importance of these seemingly ephemeral elements in conveying the original atmosphere and rejected the proposal. Through the original supplier, the original manufacturer was tracked down. In its rich archive – which conserves samples of the fabric collections manufactured over the years – the firm found a swatch of the fabric used at the Saleggi School, together with – most importantly! – its “recipe”, i.e. the number and colour of the yarns used as well as the production specifications. The pattern, called “Animato”, was produced in two coloured variants: in yellow-orange tones or green-blue ones. Since the original yarns were no longer available, a Baumann employee carried out careful research to find yarns with filaments and colours as close as possible to the original ones and at the same time compliant to current regulations. New curtains were therefore re-produced following the original pattern and using a fireproof yarn (Fig. 4).

AN ONGOING CHALLENGE

Through his careful choice of industrial materials and components, his design of child-height details like furniture, windows and door handles, coupled with his attention to light and colour, Vacchini created “classroom-homes” which still provide a comfortable and productive learning environment today.

The interventions carried out to make the lighting fixtures and the curtains of the Saleggi School compliant to current regulations are exemplary and show that a timely identification of original material features is crucial in conserving recent interiors, which are still frequently overlooked.

Nevertheless, this case study also highlights how such interventions were only possible because the School complex was

listed and hence any alterations had to receive the approval of the local Heritage Department.

Furthermore, we have recently learned that the original metal-structure blackboards, that had been custom-designed by Vacchini to double as interior partitions and to force teachers to adapt to the double space-articulation (traditional teaching area on one side and group work on the other), are being replaced by new mass-produced ones without consulting heritage officials.

Owners/Clients, practicing architects and the general public still seem to lack the culture and sensitivity to grasp the value of 1970s architecture and interiors. This is partly understandable because of their chronological proximity, but until buildings of the 1970s are considered as potential heritage, their transformation will be driven by urgency and practical needs and will occur only episodically.

In such a scenario heritage authorities can only act coercively when faced with potential heritage losses, whereas early collaboration with owners/clients would allow heritage officials to embrace a proactive approach. Timely collaboration is beneficial for both parties: the owner/client can benefit from the knowledge and competence of heritage departments in the field of historical research and restoration practice thus reducing the duration of research and design phases, whereas heritage officials, once fully informed about the owner/client's changing needs, can suggest fitting and heritage-friendly solutions.

Such a collaboration-based approach is crucial in defining conservation priorities tailored to specific buildings, and thus in making careful use of existing resources.

If heritage of the 1970s is often still too recent to require a comprehensive restoration campaign, its authenticity and value is jeopardised by the sum of seemingly small interventions. Hence it is crucial to develop far-reaching maintenance strategies for buildings that we wish to conserve for future generations. The architectural and cultural values of 1970s architecture are yet to be revealed and disseminated to the public at large.

NOTES

- 1 The local but lively magazine *Rivista Tecnica* dedicated several issues to school architecture, eg.: 16/1971, 18/1971, 4/1973.
- 2 Tita Carloni, "Edilizia scolastica. Dopo le soluzioni improvvisate quelle burocratiche? La crisi continua", *Politica nuova*, 2/1971, p. 4.
- 3 This and the following quotations are taken from: "Progetto per una nuova scuola elementare a Locarno", Competition brief, 11th June 1970, Archivio Storico Locarno.
- 4 Livio Vacchini, "Scuole elementari ai Saleggi, Locarno", *Rivista Tecnica*, 12/1974, pp. 22-28.
- 5 Ibidem.
- 6 *La Tutela del Moderno nel Cantone Ticino*, Repubblica del Cantone Ticino, Dipartimento del territorio, Ufficio dei beni culturali, Bellinzona 2012.
- 7 The work was carried out under the guidance of Miriam Filipponi of the local Heritage Department (Ufficio dei beni culturali, Bellinzona). I wish to thank her for the precious information she shared with me.
- 8 Regent was founded in 1908 to sell gas lamps. Its production range expanded progressively to include glass lamp fixtures. Today it continues to sell lighting systems under the name "Regent Lighting".
- 9 Conferenza dei Servizi Cantionali dell'Energia, *Energia elettrica, SLA 380/4*, Parte illuminazione, June 2011.
- 10 Similar lamps were used for instance in Bruno and Fritz Haller's Wasgenring I-II School in Basel (1953-55) and in Alfred Roth's Riedhof School in Zurich (1961-63).
- 11 The company was founded in Langenthal in 1886 to produce and sell linen. In the 1960s a textile designer was hired and the production of linen goods was replaced by decorative fabrics. The firm is still active today.

BIOGRAPHY

Graduated in Architecture from the Turin Polytechnic, in 2003 **Roberta Grignolo** completed the DEA in "Sauvegarde du patrimoine bâti moderne et contemporain at the Institut d'Architecture" of the Université de Genève. In 2006 she gained a PhD with a thesis on the technical image of Post-War architecture from the Milan Polytechnic and the Institut d'Architecture in Geneva. Since 2009 she has been assistant professor of Restoration and reuse of twentieth century architecture at the Mendrisio Academy of Architecture (Università della Svizzera italiana). She collaborates with the Archivio del Moderno, in Chiasso, where the Vacchini Archive is conserved. Her research focuses on Post-War architecture, its history and its conservation.

RENOVATION OF MODERN SECONDARY SCHOOL BUILDINGS: TWO CASE STUDIES IN PORTUGAL

Ana Fernandes, Maria Bacharel, Patrícia Lourenço, Alexandra Alegre (Portugal)

ABSTRACT

This paper aims at analysing the conceptual strategies and design principles adopted in the renovation process of two school buildings located in the cities of Lisbon and Beja, which are part of the modern heritage of Portugal. It addresses the adaptation of the original buildings to current functional, environmental, safety and construction requirements. It is now possible to make a reflexion and critical review of the process, after the renovation and a period of users' adaptation to the renewed schools, in order to identify best practices and improvement areas for future interventions.

The main research question focuses on the adaptive capacity of modern school buildings to assimilate the current requirements in different domains while keeping the values of their modern identity. It is assessed how the renovation processes of two case studies suited contemporary educational challenges, the programmatic requirements, current safety directives, environmental requisites, and how these affect atmospheres, interior and identity of the building. This study was based on documentation analysis, site visits, interviews, and a post-occupancy evaluation.

The analysis of these two cases is therefore an opportunity to discuss the process of renovation of modern school buildings, stressing good practices and failures in these processes.

1. INTRODUCTION

The preservation of the modern heritage is a pressing concern for its specialists all over the world. In the specific case of public school buildings, the need to cope heritage values with functional requirements, current legal standards, and community demands enables room for improvement.

The refurbishment of two modern school buildings provides a unique insight into the adaptive capacity of modern schools to assimilate the current requirements in different domains while keeping their modern identity. It is also an opportunity to understand different issues raised by the preservation of modern schools still in use, the methodological approach re-

garding the refurbishment planning, and to identify the cultural significance of school values¹.

The two case studies date from different times of the modern period in Portugal: *Liceu Diogo de Gouveia* (1930-36), designed by Cristino da Silva, followed the Modern Movement principles in the 1930's; *Liceu Padre António Vieira* (1958-1965), designed by Ruy d'Athouguia, expressed the late modern period in the 1960's.

This paper discusses the refurbishment process that occurred in each school regarding functional, environmental and construction efficiency, as well as post-occupancy evaluation. A critical review of the process is made, relating design planning methodological approach, the response to current functional and technical demands, and the daily use of school space.

For a better understanding of the process and its transformations, a series of visits took place to both schools. Interviews were led to school directors, operational staff and to the designer teams responsible for the refurbishment project. The guidelines for each intervention scoped: space-use, organization, management, energy consumption, and the school awareness and involvement in the process.

2. TWO MODERN SCHOOLS IN PORTUGAL

These two modern Portuguese secondary schools are well-known and considered an expression of the modern architecture purpose: to serve a social and educational programme, aiming at providing a better society.

Liceu Diogo de Gouveia (1930-36) designed by Cristino da Silva, followed an architectural language marked by the adhesion to the principles disclosed by the Modern Movement in the 1930's, the reinforced concrete enabled the exploration of a modernist vocabulary of form and rigorous geometry, based on pure, articulated volumes with smooth surfaces and flat roofs. It was the beginning of the modern period and its design was an opportunity to define the programmatic, pedagogical and hygienic requirements for the secondary education buildings.



Fig 1. Cristino da Silva, DGSS, Beja, Portugal. Classroom-block. ©Estudio Mário Novais Collection, Fundação Calouste Gulbenkian BA-CFT003.100308.

Different functional and autonomous volumes, hierarchically and rationally organized, along with the inclusion of new sports facilities, and the distribution of the classrooms throughout extensive corridors (classroom blocks) had a great impact on school building design. The new approach aimed at improving the physical conditions and hygienic requirements. Due to the use of reinforced concrete, it was possible to design ample interior spaces with large windows, thus optimizing lightning and ventilation conditions. This new material allowed the exploration of a modernist formal vocabulary without decorative elements. Furthermore, the integration of new materials in the construction allowed the hygienization of the internal spaces: the use of marble stone, chromium plating components, and tiles in the circulation and learning spaces.

In the late modern period, the conceptual design principles were based on a different approach. *Liceu³ Padre António Vieira* (1958-1965), designed by Ruy d'Athouguia, proposed a modern approach to the site, a clear individuality of functional volumes supported by *pilotis*, and an explorative expression of different materials.

The placement and the building's location were carefully studied attending to the best solar orientation and their surroundings' interconnection. The impressive block of the classrooms with three floors contrasts with the rest of the school, which assumes a grounded one-floor layout. Ruy d'Athouguia took advantage of the scale and proportion of the buildings playing with "*the contrast of the volumes, the emptiness and fullness of spaces, the light and shadow, and materials*"⁴.

Clear and rigorous, the design of the school was determined by the rhythm of the structure and the modulation of the classrooms, revealing the pure elements and materials in each detail. The core circulation was materialized in a wide concrete block that houses a ramp linking the entrance with the classrooms building, aiming at the democratization and simplification of circulation throughout the school. The classroom block, located on the slope, is slightly elevated from the ground, creating a covered area under the building used as a playground.

Exposed concrete and brick, coloured window frames, and wood replaced the hygienic smooth surfaces from the previous modern period.

3. SECONDARY SCHOOL MODERNIZATION PROGRAMME

In 2007, the Portuguese government launched the Secondary School Modernization Programme aiming at the renovation of secondary education school facilities. This programme promoted a customized school building model adapted to the educational project pursued by each school, its needs, objectives and characteristics, ensuring school buildings' durability and sustainability while taking into account the adaptability and continued need to restructure space in light of changes in educational strategies.

The conceptual model that guided the renovation process relied on three basic principles: integration between the various functional areas, guaranteed conditions for integrated use of the space, and the possibility of opening up some areas to wider community use.

The interventions focused on the correction of construction problems and the improvement of use conditions, considering the new pedagogical needs and learning modes, environmental comfort, safety and accessibility. Beside the classroom, other school spaces were given a growing importance in the learning process. Meeting, social, and circulation spaces were designed as informal learning spaces, where collective or individual work could take place, promoting active interaction among its users.

4. THE REFURBISHMENT PROCESS

Despite the particularities of each school, both projects adopted a similar approach in the refurbishment strategy: to preserve the original character of the pre-existing school in its spatial, formal and construction features, to respect the original functional layout and typology, and to build new blocks to house specific learning spaces such as the library, ICT rooms, multipurpose laboratory and covered games fields. The new buildings were placed and dimensioned in a way to avoid overpowering the existing ones and to respect the orig-

Fig 2. Ruy d'Arthouguia, PAVSS, Lisbon, Portugal. Entrance and classroom-block. ©Archive of Secretaria-Geral do Ministério da Educação, 1965/6.



inal typology and geometry. The articulation with the existing buildings enabled the functional and safety conditions for opening the school to the community in post-curricular periods. Large scale technical equipment was placed in the new blocks, avoiding overloading the original structures. Also, the improvement of accessibility conditions for people with disabilities was accomplished by placing ramps and elevators in the new buildings.

During the design process, a meticulous historical analysis was undertaken, based on archive research and physical evidence to identify building's values and significance. A participatory process included meetings between the design teams and the schools' directors.

4.1 Diogo Gouveia Secondary School (DGSS)⁵

The original school building is classified as Building of Public Interest. The design strategy focused on assuring the authenticity and integrity of the building and its components and materials. A set of photographs taken by Mário Novais⁶ (1899-1967) was a valuable resource to apprehend the original atmosphere of the buildings (space, light and shadow).

The designers mentioned that complying with fire safety and energy performance regulations while keeping the buildings integrity was a major challenge. Fire safety compliance implied the subdivision of the existing classroom block – with almost 100 meters in length – into isolated units, which would destroy its main spatial character. The adopted strategy

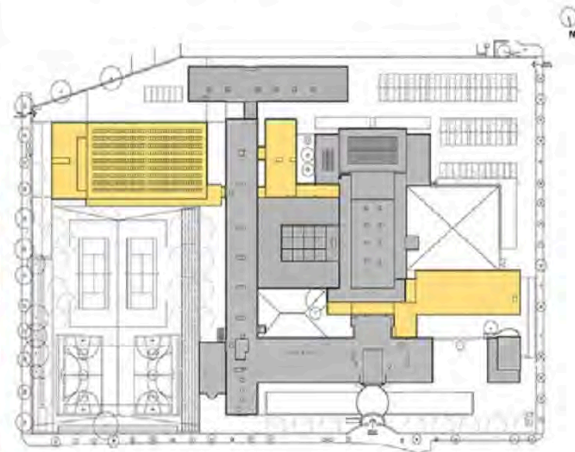
was to use a smoke and fireproof curtain that can be lowered to isolate areas from each other in case of fire.

The original structural walls in stone and ceramic brick masonry, supporting reinforced-concrete slabs and reinforced concrete beams, were in good conditions, requiring only minor repairs. The exceptions were the water tank, which was demolished because of the degradation of the reinforced concrete due to reinforcement corrosion, and the terraces that reflected practices used in the early days of reinforced-concrete construction structures in Portugal. The 8 cm slabs had a rainwater damage and had been unsuccessfully repaired over the time. This refurbishment was an opportunity to rebuild the terraces as they were designed in the 1930's while correcting the drainage problems.

Non-intrusive methods were used for HVAC and networks, by adopting suspended cable trays and ceilings, avoiding the destruction of the existing walls and floors.

One of the main important aspects in the refurbishment of modern buildings is the preservation of the original window frames due to their aesthetical value. However, original wooden or metallic frames with single glass do not fulfil the current comfort and energy performance criteria, raising issues related to their replacement by new ones. It is already known that the original character of these buildings often depends on the design of the original window frames. In this case, the original wooden window frames had already been replaced by aluminium frames, so the option was the redesign of the win-

Fig. 3. Pedro Botelho and Rosário Beija, Refurbishment of Diogo Gouveia Secondary School, Beja. Classroom-block. General plan with new buildings in yellow. ©Alexandra Alegre and Pedro Botelho



dows according to their original design and material (wood) but supporting a double-glazed system.

4.2 Padre António Vieira Secondary School (PAVSS)⁷

The main objective was to preserve the modern character of the existing buildings and its spatial and construction characteristics, since they were compromised by different additions through time. This purpose had to be balanced by solutions that ensured the resolution of seismic resistance and construction problems, as well as the proper integration of the new HVAC network, and lighting infrastructures.

The structure reinforcement solution followed the premises expressed in the Principles for the Analysis Conservation and Structural Restoration of Architectural Heritage (2003) implying that “each intervention should respect, as far as possible, the concept, techniques and historical value of the original or earlier states of the structure and leaves evidence that can be recognized in the future”. A new metallic structure was introduced, cross bracing the original concrete structure while strengthening the system as a whole. In the entrance and gymnasium blocks, the seismic reinforcement was executed in both directions and fitted inside partition walls, thus minimizing its impact. In the classroom block, only one brace frame was introduced in each structural module across all the floors, positioned longitudinally in the wall between the classrooms and the corridor⁸. These new elements painted in white for better integration, are clearly assumed as new

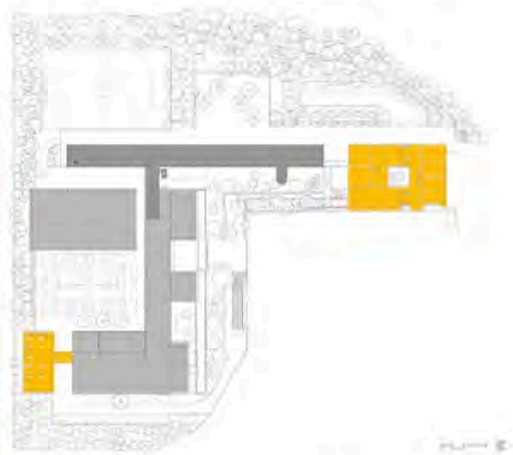
additions. The construction elements that presented signs of decay were replaced according to its original design.

The integration of the infrastructures was thought to simplify and lighten the need of heavy machinery. A Computerized Building Management System (BMS) was installed to optimize the facilities management. Despite the increase of technical infrastructures, the classrooms preserved the original identity by concealing them in the suspended ceilings and in technical cabinets. The new ceiling incorporating lighting and acoustic isolation defines a margin in the classrooms' perimeter, thus preserving the original height of the windows. The cabinets hide independent HVAC and electrical switchboards in each classroom, to avoid large equipment and ducts. Along the corridors a suspended cable tray was installed, concealing electrical, telecommunications, water and fire safety systems with lighting fixtures integrated below, thus avoiding the destruction of the existing walls and floors.

Given the importance of the window frames for the image and aesthetical value of the original building, a new window frame system was designed in aluminium. Despite of adopting a new material (originally in iron), the same frame thickness was maintained, meeting current energy efficiency and comfort requirements. The passive ventilation system was preserved in the corridors allowing the upper windows to open when necessary.

Two new buildings were designed in alignment with the

Fig. 4. Teresa Nunes da Ponte, Refurbishment of Padre António Vieira Secondary School, Lisbon. Entrance and classroom-block. General plan with new buildings in yellow. ©Maria Bacharel and Teresa Nunes da Ponte, arquitectura.



pre-existing. The smaller for the cloakrooms near the gymnasiums and the larger connected to the classroom block with an independent entrance that ensured continuity to the urban area. This new building accommodates new laboratories, arts studios and teachers' room along with the kitchens, canteen and cafeteria, which needed to expand to meet current legal standards. It also includes new facilities, such as the multi-purpose space and the centre for adult education.

5. RETHINKING MODERN SCHOOL BUILDINGS

The refurbishment of both schools provides an opportunity to discuss the adaptive capacity of modern schools to meet current functional, aesthetical, constructive and environmental demands, while preserving their modern identity. This discussion raises a number of questions related to the design/planning phase, the response to current educational, functional, and technical demands, and to day-to-day use of school building.

The initial planning stage provided a basis to recognize modern values to be maintained in the schools, which give them a cultural significance, through methodological procedures such as documentation analysis, historical research, together with an effective on-site survey (physical analysis, construction and structural condition, uses and functions). In a second stage, these values should be assessed identifying the constraints and vulnerabilities of their preservation, in face of current educational, functional, technical requirements and regulations. This procedure is often forgotten regarding modern heritage⁹.

Both case studies recognized importance of preserving spatial¹⁰, formal, material, and construction characteristics of the original building, as well as the respect for original typology, as values to preserve.

The refurbishment of both schools proposed a compromise between the preservation of the existing building, and the resolution of new functional and educational demands. Rather than provide new pedagogical methodologies, some interventions allowed small improvements in the learning process: proposing multifunctional common spaces, redesigning outdoor spaces, fitting labs with new equipment, access to information technology equipment in the school spaces, and opening facilities to community use.

Updating of the technical infrastructure and legal compliance are major challenges. Maintenance needs and such equipment's short life cycle should be taken into account in the design and planning strategies.

A post-occupancy evaluation shows evidence of best practices

as well as situations to be improved. Some problems were observed after few years of interventions regarding windows usability, shading systems, floor covering, sanitary equipment, difficulties in managing the new HVAC and electrical system, the lighting system and the BMS.

School space is exposed to an intensive and demanding use by a community (with different kind of people), which was not taken in consideration in the planning stage. This demands robust and cost-effective, low maintenance solutions, which may be incompatible with modern solutions and materials.

The consumption of energy and obtained thermal comfort were also a matter of analysis. In both schools, the energy consumption increased due to its expansion and more intensive use of equipment. When compared to other secondary schools, also refurbished under the same modernization process, DGSS has similar energy consumption levels¹¹, but PAVSS has significantly lower values. In this school, the HVAC system is not being used. The users do not feel able to use both the HVAC and the BMS system in an efficient way, undervaluing its potential, due to lack of instruction on its use and management.

In this school, thermal comfort conditions were measured in three classrooms during one week in the winter season. The original classroom building in PAVSS, facing south, presented temperature values within the adaptive comfort interval¹² during the operational period (17°C–24°C), even though the HVAC systems was not operating. As for the new building, classrooms facing north presented values below the comfort interval during part of the operational period. Nevertheless all measurements revealed relatively constant interior temperatures, revealing good thermal inertia. Although no measurements were performed in the summer period, during the interviews users expressed to be satisfied with the thermal conditions in the original classroom block during the all school year, revealing the efficiency of the innovative solutions of the modern design. The constructive features developed were comprehensive and dynamic, assuring an effective environmental passive performance. Understanding the environmental and comfort performance of modern buildings is also crucial to grasp the complex building system of the Modern Movement as a unit.

The school community is not always aware of the heritage value of the building that they use daily. Actions of awareness are essential in parallel with the recognition of user's behaviour and efficient management strategies. This is essential in a school: a place for education.

ACKNOWLEDGMENTS

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We thank the valuable insights provided by the architects Pedro Botelho and Teresa Nunes da Ponte.

NOTES

1 See Macdonald, "Preserving the Ephemeral", 305-311.

2 After the unification of the educational system, these schools shifted the designation of 'Liceu' to 'Secondary School'.

3 See note 2, above.

4 D'Atouguia, "Memória Descritiva".

5 The refurbishment of the school was carried out by the architects Pedro Botelho and Rosário Beija, between 2008 and 2011.

6 Mário Novais was a famous Portuguese photographer from Lisbon, specialized in photography of art-works and architecture.

7 The refurbishment of the school was carried out by Atelier Teresa Nunes da Ponte between 2008 and 2011.

8 Menses, *Seismic Strengthening of School Building*.

9 See note 1 above.

10 High ceilings, lighting conditions, original material, window frames and relationship with the outdoor space.

11 Lourenço, "From indicators to strategies"

12 Matias, "Adaptive Thermal Comfort"

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BIOGRAPHIES

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Maria Bacharel is a researcher in Architecture and is part of the ASAP-EHC research team since 2016.

Maria holds a Master Degree in Architecture, after which she practiced as an architect for several years. Her Phd in Architecture was completed in 2015 under the title "In-between Formality and Informality. Learning Spaces in University Context", which was awarded the "Glenn Earthman Outstanding Dissertation Award" in 2016.

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VANCOUVER EXPERIMENT: REINVENTING A MODERN UNIVERSITY CAMPUS

Susan M. Ross (Canada)

ABSTRACT

This paper addresses questions of heritage and change as considered through the paradigm of modern architecture as 'experiment'. It argues for alternate ways of preserving modernist ideals associated with educational structures and landscapes, through a renewal of 'the experiment'. The post-war university campus was a key place of research and development for architecture, landscape and urban design in Canada. Known for promoting modernism since the 1950s, the University of British Columbia's design schools and campus structures are also known for teaching and demonstrating sustainable design. UBC upholds itself as a 'living laboratory' that seeks a deep integration of operational and academic efforts in sustainability challenges. More fundamentally, increased participation of the ancestral Indigenous keepers of the land, the Musqueam people, is reflected in educational programming and a metamorphosis of the public realm. Through consideration of selected projects, this paper illustrates how maintenance, renewal and transformation objectives are interwoven to create distinct outcomes for heritage conservation, resource re-use, and, renewal of the relationships to BC's First Nations people.

1. RENEWING A MODERNIST UNIVERSITY EXPERIMENT

Built heritage is often portrayed as a 'non-renewable resource', that is, a resource that does not renew itself in a time frame meaningful to human measures. Resource renewal replicates the biological function of a living organism, in which naturally occurring processes are the basis of renewal. However, there can be many good reasons to challenge this metaphor, perhaps none better than when the legacy of the 20th century reflects the troubled politics of resource exploitation and colonization. This is the case on the West Coast of Canada, where Vancouver, British Columbia, as the site of a number of corporate headquarters of expanding resource industries, intersected with leading experiments in modernist design.

This is part of the legacy of the University of British Columbia (UBC), where its vital connection to engineering and science research and development goals of the era facilitated the education and training required for professionals and industry leaders. Even as it has expanded this post-war legacy, UBC has also been reinventing itself, offering many instructive examples of the renewal of its modern heritage. As places for experimentation in laboratories, in planning models, and in social structures, the university context has offered a unique place for reflection on this evolving and diverse legacy.¹ By addressing questions of heritage and change, and connecting them to the paradigm of modern architecture as experiment, this paper argues for alternate ways of preserving the associated modernist ideals, advocating processes of reinvention that consider expanded perspectives and new ideals.

The achievements of post-war Canadian university research and development in architecture, landscape and urban design critically reflected rethinking the models of the institutions themselves. Muthesius has identified two distinct contexts for these idealist efforts, the 'concentrated college' and the 'spreading campus'.² Canadian universities, like Lethbridge University in Alberta, designed as a single structure campus by Arthur Erickson, are celebrated for their unique contributions to this international post-war experiment with 'the academic utopia'. But expansive older campuses like UBC's are no less interesting for what they can tell us about modernization's expression of the ongoing possibilities for metamorphosis.³

1.1 UBC settlement, planning and modernization

The UBC campus is located on Point Grey, a formerly-wooded coastal plain southwest of downtown Vancouver. The northern perimeter is bordered by cliffs overlooking the Strait of Georgia and magnificent views of the Coast Range's North Shore mountains. For thousands of years before the university existed, the Musqueam people inhabited and cared for this land. After the site was taken over by the university in 1910,

without any apparent recognition that it was located on their traditional, ancestral and unceded territory, it was incrementally deforested as the setting of buildings, research fields and roads.

The early design planning and social history of UBC includes a 1913 Beaux-Arts-influenced plan, and a famous student march in 1922 that finally activated construction.⁴ (See figure 1) The character of its present-day campus takes its more definite modern form during two post-war expansion periods, beginning in 1947 and also 1958. During this time, over 100 structures were built. Modernism arrived in this context not so much as rupture as mutation.⁵

From 1913 to 1961 a single architectural firm provided the campus plans and many of the key building designs. Sharp and Thompson, later with younger associates Berwick and Pratt (TBP), became the de-facto university architects. In collaboration with a new generation of engineers and landscape architects, they continued to lead the university through its post-war phase, including designing the updated campus plan of 1958. By this time all new buildings were expressions of, essentially, modernist ideals. This transition, initially resisted by senior partners but endorsed by the university, reveals the continuity of change through the intergenerational development of a practice.⁶

1.2. UBC campus today: a living laboratory

Modern designs overlaid on earlier plans were not utopic in a formal sense, but as added layers expressing changing ideals about university education, including 'universality', 'accessi-

bility' and 'equity'. They also responded to increased spatial demands, and changing political, economic and administrative perspectives.⁷

Today UBC has grown to occupy nearly 500 buildings. Its annual enrollment is 55,000 students, supported by over 13,000 faculty and staff. In recent decades, university responses to the challenges of growth and change have demonstrated increased concern for its modern legacy. At the same time, there are meaningful efforts to repair the environmental impact of earlier development based on expropriation and deforestation.⁸

Multiple studies and plans now exist to guide diverse objectives, but perhaps the one that most speaks to the notion of experiment as an ongoing deliberative process, is the adoption of a "Campus as a Living Laboratory" vision.⁹ Since the 1990s, UBC's design schools and campus structures have become known for teaching and demonstrating sustainable design. In 2018, UBC's Sustainability Office upholds the university as a 'living laboratory,' seeking a deep integration of operational and academic efforts in sustainability challenges. This context frames the sustainable conservation of UBC's diverse modern heritage.

2. MAINTENANCE, TRANSFORMATION AND RENEWAL AT UBC

The following three case studies of UBC's reinvention of its modernist legacy illustrate how maintenance, renewal and transformation objectives were interwoven to create progressive outcomes. The projects describe: unique rehabilitation

Fig.1 The Great Trek student formation, Point Grey, 1922 © UBC Archives



strategies of campus-wide approaches for funding maintenance through energy conservation; deconstruction as a model for materials salvage and re-use *in situ*; and renewal of BC's First Nations engagement with their own heritage in a museum context.

2.1 Buchanan Building

Built between 1956 and 1958, the Buchanan Building is a central component of the early modern heritage of the campus, reflecting a key period in the university's history. Designed by Zoltan Kiss and Roy Jessiman for TBP as UBC's main Arts building, the complex of five low structures wraps around two courtyards.¹⁰ While office, auditorium and classroom functions are differentiated in the details of each wing, the one- to four-storey concrete frame structures are all clad in a combination of enameled brick and porcelain-enamel

panels. This established a modernist idiom of standardized structure, materials and furnishings repeated across UBC. It is also representative of the economic interests of much Canadian post-war campus architecture, which sometimes has invoked the character of commercial building of the time.

Today, as the main Arts Building, the Buchanan complex is one of the most heavily used areas of campus, with traffic from over 4500 students per day. In the early 2000s, it was identified as a candidate for "UBC Renew", a university-wide initiative that commenced in 2004 in response to the notion of 'deferred maintenance debt'. A program was developed in partnership with the province to fund building retrofits as a means of reducing costs by saving energy. Over a sequence of five phases completed from 2006 to 2013, nearly 16,000 sq. meters of the Buchanan's five blocks were rehabilitated.¹¹ (See figure 2).

Fig.2 Thompson, Berwick, Pratt/Perkins & Wills, Buchanan Building, UBC, Vancouver, Canada, 1956-1958 © Susan Ross, 2016



Susan M. Ross Vancouver Experiment

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UBC engaged Perkins+Will Architects Canada to design the rehabilitation. Changes to the building envelope and systems addressed both indoor environment quality and overall thermal efficiency, while program re-configuration improved the access of teaching and office space to daylight and natural ventilation. Single-pane glazing was replaced with new low-E glazing to provide better heat loss/gain under varying weather conditions. A more recent project to rehabilitate the courtyard has added a layer of contemporary site features that contribute to creating micro-climates and changing occupant behaviour, and includes a cistern for rainwater irrigation, bioswale for filtration, and relocated mature trees.¹²

In keeping with a 'campus as laboratory' approach, the programme was well-documented at each stage, and the conclusions from lessons-learned analysis have continued to influence more recent work. Projects involving ten other buildings

from pre- and post-war eras have since been completed as part of UBC Renew. More broadly, UBC Renew can be a planning and funding model for other modern heritage ensembles. The process is as interesting its outcomes. UBC Renew documentation includes lessons on how to assemble the financial and human resources and implement them in phases over time.

2.2 Pan-Hellenic House/Liu Centre for Global Studies

The Pan-Hellenic House was designed by TBP and completed in 1960. It was a much smaller structure than the Buchanan, with a modest presence on the campus, clad in stucco, located in a wooded area on the Western perimeter. Its function was to provide meeting spaces for all UBC sororities. Ten meeting rooms were arranged on one side of a corridor on two floors, with stairs and washrooms on the other

Fig.3 Architectura/Erickson/Oberlander, Liu Centre for Global Studies, UBC, Vancouver, Canada, 1999-2000 © Susan Ross, 2016



side. Each room gave onto a balcony surrounded by the woods. While simple in geometry, twenty-eight glue-laminated beams spanned the timber structure. As women's groups used the building for forty years, it can be associated with social and gender-related changes of the era; "youthful enthusiasm" is said to have influenced fraternities to commission modernist houses in the 1950s.¹³

The Pan-Hellenic House was not selected by UBC as part of its legacy worth retrofitting through UBC Renew. Instead, from February to March 1999, the building was carefully deconstructed in order to salvage the valued wood elements; 93% of all building materials originally used were reclaimed for reuse or recycling.¹⁴ A certain amount of these were used in the new structure built later that year on the site, the Liu Centre for Global Studies, designed by Architectura together with Arthur Erickson and Cornelia Hahn Oberlander. The reuse of the glue-laminated beams and wood decking were given prominence in the exposed roof structure of the principal meeting room. Protection of surrounding trees was also important, and the clerestory windows of this new round space provide a panoramic view of the preserved adjacent forest. (See figure 3)

Recognition that the materials were still valuable had by then become part of an emerging interest in Vancouver for materials reuse, and in particular, for wood. This project was one of the campus's first experiments with addressing the pressures on natural resources and lessening the environmental effects associated with manufacturing and demolition. Both UBC and the city of Vancouver were at the forefront of studies to show that it is economically feasible to salvage and reuse most types of structural or finishing wood.¹⁵ This is but one of many of the university's buildings that have served as laboratories for the emerging ideas of sustainable building that would have been more difficult to experiment with on private lands or in commercial developments.

Ironically, giving new values to older materials may incite the demolition of smaller modern buildings in order to salvage large timber elements. However, reusing some of the materials *in situ* has added the benefit of reducing energy used in transportation but also created a context for telling the story of the site's evolving use and meaning.

2.3 Museum of Anthropology

The Museum of Anthropology (MOA) is known as much for its natural setting and major collections, as its iconic design by architect Arthur Erickson, who also worked with TBP ear-

ly in his career. Its evolving museological mandate has redefined a context of First Nations engagement in their heritage.¹⁶

The project, started in 1971 and opened in 1976, provided a dramatic exhibition of First Nations arts, crafts and sacred artifacts, including multiple memorial poles, and a pioneering visible display of storage areas. The main hall was designed as a stepped series of massive concrete post and beam frames that connect the interior to its immediate surroundings on the cliffs overlooking the Strait of Georgia and the North Shore mountains.¹⁷ Working closely with landscape architect Cornelia Hahn Oberlander, the distinct design created a landmark space for the appreciation of First Nations cultures in Vancouver.

From the campus side, the building was lowered in the site, while imparting a layered approach to preserving earlier history. Three circular gun emplacements of a battery intended to defend the Port of Vancouver during the Second World War were integrated into the design. One was included on the inside as a base for an iconic sculpture by Haida artist Bill Reid, and one on the outside as an interpreted historic site.

Like Erickson's structure, Oberlander's original landscape design paid homage to the culture of the Haida people, planning for a grass-framed reflecting pond around which two reconstructed longhouses would be situated. The pond was not completed until 2009, by which time Erickson had also been involved in a major addition to expand the gallery areas. In the meantime, Oberlander's experiments with 'native plants', green roofs and retention basins, tested in other projects, were able to inform this work. Coming back to this site in her 90s, she also modified her original design to speak to the building's occupation of Musqueam land.¹⁸ (See figure 4) Over the last four decades, the ongoing MOA project, involving Erickson until his death in 2009, respected the modernist legacy, but with increasing collaboration with local First Nations peoples. The most recent modification draws attention to an emphasis on integrated architectural, museological and social objectives. The Northwest Coast Masterworks Gallery transformed an existing gallery in 2016-17 to present a major bequest of repatriated First Nations arts and other works by leading modern Northwest Coast artists. This return of lost art works is seen as a major advance for a new generation of BC's First Nations artists, who can study these historical artworks, learning the techniques of their production and interpreting their visual connection to their ancestral stories and histories.¹⁹

Embedded in the original open storage experiment was a reflection on the interaction of visitors with the curatorial process. The Museum's idea of the discipline of anthropology, with regard to local First Nations people, has evolved to become as much about the local descendants as their ancestors' historical artifacts. This includes working closely with the Musqueam people, whose ancestral territory UBC occupies, but also the Indigenous youth of Vancouver of diverse origins, who are eager to connect to the expanding collections, and occupy the spaces in contemporary forms and events.²⁰

3. FURTHER LAND-BASED EDUCATIONAL OPPORTUNITIES

This is one of three papers that address educational properties in a session on "reinventing public institutions," but the only one to address the broader context of a campus, or the university level, where the emphasis is as much on planning and research. This look at UBC campus provides a broader cultural landscape view, and one more concerned with identifying

new research questions for heritage conservation. Although oriented to the Canadian context, implicit concerns for how evolving social perspectives, and changing environmental strategies might reframe the work of heritage conservation, could inform conceptions of stewardship in other places. Experiments often focus on answering one question. What happens when you look at three beside each other? Observed connections and disconnections suggest a myriad of other contexts and unique decisions, players and outcomes. One observation is that these UBC projects are all located in the Northwest end of the campus, a wooded area of dramatic views, where Indigenous artist Edgar Heap of Bird's *Native Hosts* project provides a constant reference to unsettling ways of reading the landscape/land.²¹ The role of public art in the university's public realm has increasingly expanded and provides multiple opportunities to dialogue with structures and what they have represented, or could, going forward. As new ideas about the environment and perspectives on territory emerge, the place that modernist buildings and landscapes

Fig.4 Arthur Erickson, Cornelia Hahn Oberlander, Museum of Anthropology, UBC, Vancouver, Canada, 1976 © Colin Knowles, 2012



made for art can be seen as a mutable and receptive canvas. Reflecting the goals of the Campus as Living Laboratory, one could ask if the increasing number of ways the university engages with the Musqueam people are reflected in new models of governance, planning or project approvals. Canadian universities thrive on models of self-governance. UBC's Sustainability Office credits the university's regulatory independence as part of the campus laboratory – suggesting that a certain level of freedom is needed to experiment. This may already be creating opportunities to question the assumptions of established colonial structures of property management or land stewardship. Unless the Musqueam people are fully engaged in planning processes as the land's traditional stewards, territorial acknowledgement risks remaining symbolic. Future changes can be opportunities, but reflective research, planning and dialogue are critical to balance the possibilities of needed reinvention.

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BIOGRAPHY

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MODERN HEALTHCARE BUILDINGS IN PORTUGAL FROM ANAMNESIS TO INSTITUTIONAL AND PUBLIC AWARENESS

Daniela Arnaut (Portugal)

ABSTRACT

Through the research on Portuguese modern healthcare buildings the aim of the paper is on one hand, to discuss how to establish a methodology to select what must be preserved and what can be changed within the modernization pressure of medical buildings in use, and on the other hand, to argue how to address change throughout decision-making processes developed together with institutions.

Most of Portuguese healthcare system was built in the 20th century as a result of major actions to provide an efficient healthcare network on tuberculosis, leprosy, mental illness, maternal health, oncology, physical rehabilitation and general medical assistance. Modern healthcare buildings haven't been studied yet in Portugal and transformations are extensive.

Considering three case studies, Radium Pavilion (1933) of Portuguese Institute of Oncology, *Santa Maria* Hospital (1953) and *Alcoitão* Physical Rehabilitation Center (1966), the goal is to systematize which and how main interventions are managed today. Obsolescence of use, new space necessities, and new technical and legal requirements, are the main reasons for transformations in a typology where function and efficiency appear to remain above all values.

Institutions are interested in discussing the cultural and historical qualities of healthcare buildings beyond functional or economic utility, nevertheless financial constraints, lack of planning, and amateur interpretations don't lead to an inclusive strategy.

Regarding the progress of medical science, and new developments brought by biotechnology and information technology, it's imperative to promote institutional comprehensive knowledge and awareness of modern healthcare buildings in use, and achieve public sense of belonging and collective identity.

1. INTRODUCTION

As *Carlos Ramos* stated, in 1929, "If there are buildings that need a permanent renewal of its installations, and a complete

reshuffle of its departments, hospitals are, undoubtedly, the ones where that necessity comes first".¹ In a scenario of time pressure and financial constraints, modern healthcare institutions face every day the call for transformation in order to follow the progress of medical science, together with technological challenges, new developments brought by biotechnology and information technology, and also comfort demands. Healthcare institutions are significant volumes in the urban fabric, seen as "heavy infrastructures" and having simultaneously a transitory nature, as they face a permanent call of form and space metamorphosis towards the noble mission of saving lives.

Starting from the recognition of architectural significance of three case studies from the Portuguese healthcare system built in the 20th century, the discussion between "heaviness" and the transitory nature brings to light the lack of a knowledge bridge between modern heritage experts, that recognize the architectural significance, and institutions which are aware of everyday requirements and economic viability pressure.

The state of art in preserving modern buildings shows several paradigmatic cases of the return to original architectural form, such as the Tugendhat House (1930) by Mies van der Rohe (1886–1969), the Paimio Sanatorium (1933) by Alvar Alto (1898–1976), and the Zonnestraal Sanatorium (1931) by Jan Duiker (1890–1935), or the adaptation to a new use as in Van Nelle Factory (1931) by Van der Vlugt (1894–1936). Naturally, several other case studies have been published on these two approaches, however, most of them, in a tailor made process of intervention where its architectural significance is widely recognized.

If today we live in a majority of buildings from the 20th century we have to be able to make a selection of the ones to restore and conserve by a tailor made process of intervention, but also to build up pragmatic strategies and guidelines for the ones in intensive use. This will lead towards a sustainable significant future, where metamorphosis doesn't lead to amnesia like in Kafka's novel.

2. RADIUM PAVILION IN LISBON (Fig.1)

Carlos Ramos (1897–1969) designed the Radium Pavilion (RP) in 1927 for the recently established Portuguese Institute of Oncology (IPO). It was built between May of 1931 and December of 1933. The IPO was one of the best Cancer Institutes of Europe, and the Radium Pavilion was the first European construction with effective protection against radiation. The ephemeral modernist expression of RP was designed between the last years of Republican Regime and the 1930's. On the urgency of *Francisco Gentil* (IPO Chair) it sought to avoid the diseases caused on people working with radiation therapy. The II International Congress of Radiology that took place in Stockholm in July 1928 defined an innovative construction method to assure radiation reduction through the

introduction of lead layers. In RP, this expensive method had to be replaced by a central barite layer on the walls, keeping the lead layers for the floor slabs of rooms where the radiation was used.

RP is a unitary rectangular prism of three floors, and a modern solarium terrace, where the “functional imperative overlaps the artistic one, establishing it as the reference work of the national modernism directly affiliated with the radical international principles”². Program and functional demands, together with new construction technologies generate a clean and austere volume. Symmetry is the compositional tool established through the higher volume containing the stairs, placed on the central axis. The walls are defined by a smooth surface where the openings were carefully placed according to

Figure 1. Carlos Ramos. Radium Pavilion. Portuguese Institute of Oncology. Lisbon. Portugal. 1933. Southeast façade.
© Art Library of Calouste Gulbenkian Foundation, Photo Mário Novais.



the plan's functional needs, based on the rigorous 2,5mX-2,5m structural grid. The façades are a clear result of the plan, as can be seen in the stairs' exterior volume where the openings follow the stair levels generating an asymmetric composition.

In 1975, RP suffered a profound and visible transformation of its original volume. An entire floor was added where the "modern solarium terrace" was previously designed. This expansion area was added with new, and needed, comfort equipment as heating, cooling and ventilation systems, and with the improvement of cooling and water systems, sewage and gas infrastructures no longer fulfilling the demanding needs. Also oxygen and vacuum plumbing were introduced. The new plumbing systems didn't follow any design orienta-

tion; they were defined wherever they were needed in a simplistic functional decision. The new heating system was introduced through convector radiators placed all over the walls with no kind of criteria. Identical lack of understanding of the character of the building was present when it was needed to decide where the cooling and ventilation ducts systems should cross, be placed, and where they meet the skin of the volume to reach the exterior to breathe. As a result of the need of more space, the new floor compromised the compositional hierarchy established through the higher volume containing the stairs, placed on the central axis of the south facade. The new floor windows follow the alignment from the ones below, however don't respect the proportion of the previous ones.

Figure 2. Hermann Diestel. Santa Maria Hospital. Lisbon. Portugal.1953. Aerial view.
© Art Library of Calouste Gulbenkian Foundation, Photo Mário Novais.



The modernist functional skin reflects new functional interior needs, but without a design strategy and compromising the building character.

In 2013 the Radium Pavilion was established as “Monument of Public Interest” by the *Portaria* nº 389/2013, thereby recognized as a national cultural value. For any intervention the *Decreto-Lei* nº 140/2009 defines a list of procedures and in the meantime a “Protection Zone”, was established. While managing IPO facilities the Ministry of Health, through a local managing office, didn’t apply any conservation policies defined by the referred legislations. None of the documents brought institutional architectural awareness since saving lives is always the argument for prompt daily interventions.

3. SANTA MARIA HOSPITAL (Fig.2)

Santa Maria public Hospital opened to the public in 1953, placed in a high area of a monumental plan for the construction of the University City under the public works policy of *Estado Novo* led by *Duarte Pacheco* Minister, and designed by *Porfírio Pardal Monteiro* architect. The opening overlaps with the beginning of a new public care strategy in Portugal, addressing the long-diagnosed need for healthcare network assistance for the Portuguese population.

Hermann Diestel (1975–1945), Chairman of the Hospital Construction Committee of the International Council of Hospitals, designed it, invited by *Salazar* as an expert on hospital planning.

It was a needed scholarly hospital built in the northern part of the city of Lisbon, a radical landscape change with its colossal scale. The gigantic unit, with 1500 beds, auditoriums, classrooms and space for the Faculty of Medicine laboratories was designed according to the latest worldwide hospital built models. *Francisco Gentil* was the Commission Chair for its construction. He visited hospitals all over the world, studying the model hospitals by *Ernst Koop* (1890–1962), *Ettore Rossi* (1894–1968), Jean Walter, Paul Nelson (1885–1979) and others.

The hospital block is composed of two main parallel volumes oriented North-South, linked by three perpendicular smaller ones. The Faculty of Medicine is facing the entrance area in the North and is also occupying the central volume that links the main ones. The 9, originally 8, floors are organized in a rationalist scheme based on the repetition of elements and a standardization process.

Being one of the most important healthcare buildings in Portugal, facing crucial challenges of maintenance and improve-

ment needs, *Santa Maria* Hospital has met several official plans for intervention (1970, 1995, 1999, 2006), some developed by the local office within the hospital, others by external private companies. The transformations range from complete new buildings added on the plot around the building block and in the inner patios, total renovation and modernization of medical areas, and infrastructure modernization. In all the developed plans the architectural character and concepts haven’t been discussed, the primacy of health care comes first. In this particular building its rationalist original design is a flexible anchor that accommodates changes, nevertheless architectural expertise guidance is needed.

4. ALCOITÃO PHYSICAL REHABILITATION CENTER (Fig.3)

Alcoitão Physical Rehabilitation Center (APRC), designed by *Sebastião Formosinho Sanchez* (1922–2004), the first Portuguese modern building answering to physical rehabilitation requirements, opened to the public in April 1966.

In 1946 the national Hospital Construction Commission was created to define the central and regional hospitals network and consequently provide a consistent health care system for the Portuguese population. Palliative care and rehabilitation was introduced ten years later in addition to the Ministry of Health healthcare facilities national program.

Santa Casa da Misericórdia (SCML) is the charitable catholic organization that tries to bridge that gap in national assistance. SCML is a private institution with a public mission managing its own buildings. As in IPO and *Santa Maria* Hospital there is also an office at APRC taking care of daily needs and building interventions.

The awareness of facing a difficult task, derived from inexperience and the need for high investment, led SCML to search for the best foreign knowledge, and to the creation of new financial sources throughout a new national lottery game – the *Totobola* (1961). Beyond the construction of a new building, a vast program of specialization for technical staff was held around the world. Dr. Howard Rusk, professor of medicine at the University of NY, and chairman of the International Society for Rehabilitation of the Disabled and the World Rehabilitation Fund, made his first visit to Portugal in 1958, and was part of the commission for the definition of the functional layout. APRC was recognized as one of the best rehabilitation clinics in the world.

APRC consists of two North-South parallel volumes crossed by a third perpendicular one, establishing the connection and

comprising medical areas. The entrance space is defined by two parallel glass walls translating the clear intention of transparency between the exterior, the interior of the reception atrium, and the inner courtyard. This permeability is also expressed by the use of granite slabs on the pavement, crossing the entrance atrium floor through the exterior patio. The intention to privilege natural light throughout all the building is evident. In the circulation areas natural light is brought by skylight design and the introduction of glass brick walls, especially in the wards volume. These options, as well as the introduction of patios, along with landscape architecture of outdoor spaces, reveal the careful design of *Formosinho* for the humanization of space.

Prefabricated elements can be recognized in the exterior and

interior, defining the essential of the structural system. The reinforced concrete and the glass facades take on a plastic dimension where architecture overlaps structure, and where it is not possible to detach the construction system from the formal options.

Since 1966 different levels of intervention took place. On the one hand, constant interventions derived from new spatial and functional requirements, on the other hand, key structural interventions were necessary to keep it working, together with updates that seek to meet the current safety parameters concerning fire precautions, comfort and accessibility. The two main interventions took place in 1984 and 1993. In 1984, a process of rupture of large-span slabs was observed in the ward sector on the east wing. This was caused by the defi-

Figure 3. Sebastião Formosinho Sanchez. Alcoitão Physical Rehabilitation Center. Alcoitão. Portugal. 1966. South façade.
© Alcoitão Physical Rehabilitation Center.



nition of a different structural solution from the one predicted on the original project. A structural rehabilitation process was developed to reinforce the structure; otherwise in case of an earthquake immediate collapse could occur. In 1993, a new volume of emergency exit ramps was added to the original building in order to fulfil the fire escape legislation and accessibility needs.

Formosinho was still involved, and not so pleased, for these last compromise solutions that generated conflict situations, stating that "From the architectural point of view the building will be in permanent conflict with a structure which it is foreign to".

5. DISCUSSION

None of the three case studies presented fit entirely on the distinction between functionalism and rationalism which Adolf Behne defined in 1926, and referred in articles on Van Nelle or Zonnestraal.

If on one hand, some areas are a "tailor made suit for a close fitting system that provides an answer to specific requirements" and "each function is allotted a specific space with particular dimensions and characteristics", on the other hand, there are areas where a "neutral non-specific system can be adapted to changing requirements over time" and "additional investments in flexibility can be made in the design construction", so, none of them has proved to be obsolete or ready for functional change.

Consequently, for the examples shown, we can conclude that different design strategies have to be applied to assure the continuity of their economic viability together with cultural and historical recognition.

Three recurrent problems apply for the three case studies: the incremental changes caused by everyday practical needs, the lack of understanding from the client and users for the cultural significance, and a third one, that drifts from the previous ones, which is the unawareness of institutions of the possibility to define a scale of knowledgeable interventions from restoration of original states to reinventing actions. If the rational modern way of thinking was towards a better society by innovations in social, functional, aesthetics and technological realms, how then to be faithful to modern ideals and at the same time develop interventions without threatening the modern character? How to establish a methodology to select what must be preserved and how to define a scale of interventions within the modernization pressure of hybrid healthcare buildings, developing decision-making processes within institutions?

Laws and legal restrictions don't bring inclusive strategies, and don't give quick answers to pressured daily life of healthcare buildings. If we look at the paradigmatic restoration and conservation examples as Tugendhat House (1930), Paimio Sanatorium (1933), Zonnestraal Sanatorium (1931) and Van Nelle Factory (1931) we perceive an empirical methodology where design strategies and options were based. A methodology starting from documentation, to site and actual analysis towards a strategy of intervention developed by a multidisciplinary team totally engaged with that specific project.

But how to come up with a strategy, a masterplan that can work as guide lines for daily decisions and that don't rely on the architect's daily presence? The recent publications of TU Delft by Paul Meurs (2016), or Marieke Kuipers and Wessel de Jonge (2017) sustain processes of analysis regarding buildings' significance and essential qualities built on previous models or reflections by Alois Riegl, Steward Brand or Theodore Prudon. These are only a few examples from which a matrix of analysis could be built.

Considering healthcare buildings' transitory nature of requirements and the progress of medical science this analysis has to be discussed together with the institutional perception of its own role in society towards future. The answer on how to develop these guide lines and actions is on partnership work with healthcare institutions, universities, research institutions and organizations like docomomo. The Ministry of Health already defined a masterplan definition guide for healthcare facilities (2006;2015), only one hospital did it and there is no financial support to apply it extensively, but maybe this is an opportunity window for docomomo.

If we assume, like in Kafka's novel, that metamorphosis leads to amnesia, we lose identity. We have to preserve by change, in continuity with the original, understanding the identity of the building itself towards a sustainable vision of future. The aim is to achieve a timeless synthesis between fragments of the past and contemporaneity. As Badiou states change without identity is not change but building a different entity.

Docomomo has to have a proactive role in anamnesis processes, to move outside itself and go to discuss with institutions, understanding their needs and values and by that becoming a needed and tacit tool for daily intervention. As NGO, docomomo has to find partnerships with universities and research centers, developing its education role, and starting with seductive awareness raising actions on institutions about their significance supported by a technical document. From that build up technical support on the definition of

masterplans where scale of interventions is defined together with the institution's needs. Docomomo as a close and easy tool to achieve institutions' proud actions, docomomo as a device towards the future, playing an active role in reinventing public institutions.

ACKNOWLEDGMENTS

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Daniela Arnaut. Architect (2006). Assistant Guest Professor at Instituto Superior Técnico (IST), where she teaches Architectural Design Studio since 2009. PhD candidate on Architecture regarding the Portuguese Healthcare buildings from 1930 to 1970, (IST). Executive Co-Coordinator of the International Workshop within the 14th International docomomo Conference, where she was co-session chair on "The Modern healthcare architecture: obsolescence and transformation", 2016. Chair for the session "Buildings' performativity: Health facilities" within the 11th Space Syntax Symposium, 2017. Jury for Archiprix Portugal, 2015. Until 2011 she collaborated with Risco S.A. architecture office: Ferreira Dias School, NATO Summit in Lisbon (2010), and Santa Filomena Hospital.

Session 11_DOWNTOWN RELOADED

Session Chair: Ruth Verde Zein (Brazil)



Modern Movement architecture is not something of the past. Modern buildings are now working as inseparable parts of contemporary cities. For better or for worst, modern urban ideas have been hugely responsible for shaping of contemporary urban spaces. It is a legacy that is mixed with the present and the future of the cities in diverse, intricate, complex and more or less successful ways. The insertion of the best modern buildings had also helped creating important and meaningful places in every city, all over the world. While some of the modern buildings have been considered— sometime too hastily — as culprits of challenging problems in contemporary cities, on the other hand their renovation, reuse and/or metamorphosis may also become responsible for helping assist the recreation of better environments for the present and the future of the cities.

This session will bring four case studies situated in Europe, South, Central and North America exemplifying the transformation of the neighborhoods of several cities thanks to the insertion and/or recycling of high-quality modern buildings. Each case will show a different situation, giving testimony of the flexibility and variety of methodological approaches that may be summoned up to help change our cities for the better. Some cases present the restoration of classical modern buildings; others, the radical changes of previous less modern buildings into contemporary ones; some will show how the presence of a new singular building provoked a drastic change of a city image and cultural stance. Others debate how the insertion of modern pieces amid the traditional urban fabric may be of help to preserve or to counteract against the decay of downtown historic places.

Allan Shulman will show us how a multinational company prioritized their corporate urban representation through the construction of modern architecture buildings in many cities, and how this policy is still helping preserve the places and neighborhoods they were installed in Santiago and Havana, Cuba, in Mexico City and in Miami.

Carlos Comas and Marta Peixoto will present the case of a contemporary transformation of a modern ensemble, and how the application of modern design strategies were invoked in the new building in order to house a new complex program and to help the renovation of a problematic downtown area, in São Paulo.

Eva Branscome will suggest that the so called “Bilbao effect” of the end of the twentieth century was actually inaugurated by a late modern example of 1972-82, analyzing how a modern building was able to completely change the image of the German city of Mönchengladbach.

Fernando Diniz and Patricia Ataíde will debate how the local heritage agencies chose to let modern buildings and towers strive among a historical downtown neighborhood not only to “modernize” it, but also to try and revitalize it, betting on the possibility of the coexistence of old and new in the same urban environment, in the case of Recife.

Each of these cases was born polemical. Here they are critically considered not necessarily as beacons, nor as fixed conceptual leading lights, but as complicated situations that deserve to be better and carefully known. The debate they might provoke will possibly be capable of illuminating conceivable futures.

Besides, they also show how vital and present the Modern Movement legacy is; how varied, open and locally perceptive it has ever been, at least in its better examples. And, despite the errors and losses that are part of any daring and avant-garde enterprise, how modern architecture had— and probably still has —, a huge role to perform. Finally, how it may be of help to shape more open and democratic urban spaces, able to be cherished and embraced by its citizens.

BIOGRAPHY

Ruth Verde Zein is Architect (FAUUSP, 1977), Doctor (UFRGS, 2005, awarded as the best architectural thesis in Brazil of 2006) and Professor at the Mackenzie Presbyterian University of São Paulo, Brazil; teaches architectural design and architectural history and theory, both in graduate and postgraduate courses; has participated in several seminars and given conferences and courses in Brazil and abroad; has more than a hundred articles published and a dozen books on Brazilian and Latin American modern and contemporary architecture.

THE SESC PROJECT.

GOING MODERN AS A CONTEMPORARY URBAN STRATEGY

Carlos Eduardo Comas, Marta Peixoto (Brazil)

ABSTRACT

SESC- Serviço Social do Comércio is a Brazilian institution that promotes the welfare of commerce employees offering educational and recreational facilities besides health services. It is famous by the social and architectural quality of its units, such as SESC Pompéia (1976-86) by Lina Bo Bardi in the periphery of São Paulo's downtown. Lina reiterated modern architecture's interest in the practical and symbolical values of the industrial heritage, recycling an early twentieth-century factory for leisure and education while building brutalist towers for sports, SESC 24 de Maio (2000-2017) by Paulo Mendes da Rocha was inaugurated recently in the heart of the same downtown. Bringing to mind Robert Venturi's interest in the mid-century commercial vernacular, Paulo stripped down a 12-story-high modernistic department store to its bones, added a pool at the rooftop, ramps at one side, elevators at another, a theater in the basement; he left open the ground floor, created balconies on other floors, and wrapped most of the structure in a curtain-wall as shimmering outside as the pool above, while exposing the required ducts and cables inside. SESC's choice of architects is telling, testifying to the vitality of the complex social and esthetic values of modern architecture in São Paulo. Each extracting poetry out of the ordinary in different ways, they show that modern architecture is an ongoing process made up of different strands and traversing different phases, and far more positively engaged with the existing city and disciplinary history than its detractors assumed.

THE SESC PROJECT: GOING MODERN AS A CONTEMPORARY URBAN STRATEGY

SESC (*Serviço Social do Comércio*) is a non-profit private institution that operates in Brazil since 1946, supported by mandatory contributions from commerce businessmen and focused primarily on the social well-being of commerce employees and their relatives. SESC is famous for the social and archi-

tectural quality of its units, which offer recreational and educational spaces open to the general public, while health services and social assistance are restricted to members. Programmatically, each unit works like a big club aspiring to be a social condenser, a device for transforming social relations between citizens. The outstanding example of the institution's architectural patronage so far was SESC Pompeia (1976-86) by Lina Bo Bardi (1914-1992), in the industrial periphery of São Paulo's downtown, where factories and worker's row houses were being replaced by apartment and office buildings. Occupying most of a super block, SESC Pompéia (1976-86) was an intervention in two acts.¹

First Lina Bo Bardi recycled an old drum factory (1976-82). Its sheds became theater, cafeteria, classrooms and a spectacular covered plaza, a half-sibling of the open ground floor of the Museum of Modern Art of São Paulo, another Bo Bardi project (1968), the marquee at Ibirapuera Park (1954) in São Paulo by Oscar Niemeyer (1907-2012), and the Plaza Cubierta at the campus of Universidad Central de Venezuela in Caracas (1953) by Carlos Raul Villanueva (1900-1975). The exposed reinforced concrete structure of the sheds was cleaned, and so were the exposed brick walls. The clay tiles at the roof were partly replaced by translucent glass tiles to create a diffuse and intimate luminosity. Heavy and massive, the furniture designed by Bo Bardi is fixed to the ground as most urban equipment. Due to the lack of available land, Bo Bardi built two towers, embraced by walkways and accompanied by a water castle that resembles a chimney or a candle. One tower contains the stairs, elevators, service and fitness rooms, while the other superimposes multipurpose courts and a swimming pool. According to the architect, the rings produced by concreting the water castle in stages were suggested by the texture of Torres de Ciudad Satélite (1957-1958) in Mexico City by Luis Barragán (1902-1988), another instance of Bo Bardi's Latin American awareness. The Brutalist concrete of the towers shows irregular perforations regularly arranged and regular perforations irregularly arranged. The sil-

houette of the towers assimilates them to the new buildings in the neighborhood. The fenestration and the irregularly spaced, overlapping balconies signal difference, attuned to the towers' special program.

SESC 24 de Maio was inaugurated last year, in the heart of that same downtown.² Abandoned by the upper classes since the 1970s, it remains a highly vital and accessible area, punctuated by remarkable structures, such as multistoried commercial galleries from the 1950s and 1960s, which open to the street the void between the lateral wings of their C-shaped plan, and by important cultural institutions, such as the Teatro Municipal (1903-1911), by Ramos de Azevedo (1851-1928), Domiziano Rossi (1865-1920) and Claudio Rossi (1850-1935). The corner lot measures about 40 meters along the pedestrian D. José de Barros Street, and about 60 meters along the 24 de Maio Street, one block from Praça da República in one direction and Teatro Municipal in the other. Paulo Mendes da Rocha (1928-xxxx) led the long process of design and construction (2000-2017), assisted by MMBB Arquitetura e Urbanismo principals Marta Moreira (graduated in 1987) and Milton Braga (1963-xxxx). Known for the consistency of his work since winning the competition for the Clube Atlético Paulistano gymnasium (1958), and awarded for that with the Pritzker Prize (2006), Mendes da Rocha was the author of exemplary interventions in existing buildings, such as the insertion of a Cultural Center (1996) in the modern FIESP building (1969-79) by Rino Levi Arquiteros Associados, successor to Rino Levi (1901-1965), and the renovation of the unfinished neo-Renaissance Lyceum of Arts and Crafts (1905) by Azevedo and D. Rossi, to house the Pinacoteca de São Paulo (1993-1998).

Mendes da Rocha did not raze the existing 12-story modernistic department store. He stripped it down to the bare bones and demolished excrescences to create a U-shaped volume. In the void between its legs and crossbar, he inserted four pillars to support a new terrace featuring a huge swimming pool, a theater in the underground and floor slabs defining alternate single and double height spaces, in tune with a rational zoning that superimposes reception, administration, food court, lounge, culture (library, exhibits, workshops), dental offices, and sports (courts, exercise areas, pool).³ The lateral setback facing 24 de Maio Street accommodated elevators, stairs, balconies, and lighting wells. The lateral setback facing D. José de Barros Street accommodated ramps that propose a vertical promenade architecturale, articulated with the circular route in the various pavements. Floor slabs supported by two new



Figure 1. Paulo Mendes da Rocha & MMBB, SESC 24 de Maio, São Paulo, Brazil, 2000-2017, Axonometrics. © MMBB, s/d

columns were added to the original rounded corner, increasing the built area and sharpening the built volume. The 8-story commercial building in the narrow adjacent lot at D. José de Barros Street was originally the Fasano Vertical Restaurant (1964) by Telesforo Cristofani (1929-2002), a gifted architect and fellow student of Mendes da Rocha; at the latter's advice, it was bought and replaced by a service tower. (Fig. 1) The reinforced concrete in the old store was scraped. The new concrete was poured into cardboard tubes or plywood formwork ensuring a smooth texture. The hybrid structure, partly original and partly additional, was clad above ground in a mirrored green curtain wall, as shiny as the pool above, except for strategic voids and a milky vertical strip at D. José de Barros Street hiding from the outside view vertical ducts and cables exposed inside. The ground floor became permeable, cut diagonally by a public gallery and square, with the reception sector sheltered at the corner in a chamfered triangular volume, which is provocatively painted a shade of pink with a neo-classical pedigree (pink was a favorite color for the facades of Brazilian houses during the nineteenth-century imperial period)⁴ and carnivalesque overtones (green and pink are the colors of Mangueira, a nationally famous samba school from Rio). The reception volume is set back from the edges and the ceiling, leaving visible from the street the top of the outer columns. The triple height balcony prolongs and contrasts with the low-ceilinged lounge taking the whole

fourth floor. Integrated to the sports sector on the ninth floor, the double height balcony is equipped with a climbing wall. The balcony on the twelfth floor (christened the pool garden) is also double height, but recedes to allow for a reflecting pool doubling as foot basin, and extending along the two frontages. Equally significant is the horizontal slit that interrupts the curtain wall at the fourth floor⁵ lounge, exposing to the streets a substantial part of the outer columns. The benches and tables designed for this space respond well to its dimensions; like couches, they invite people to recline and lie down, in contrast to the nearby balcony. **Fig. 2**

Sheet metal and tubular steel furniture is one of the highlights of the project, and its lightness is one of the points of contrast between Bo Bardi's and Mendes da Rocha's works for SESC. They reflect the distinct temperaments of their au-

thors. Pompéia, predominantly introverted, offers a warm materiality and does not avoid figuration. It tolerates the procession of regular freestanding columns in the old factory, but prefers the uninterrupted space of a room limited by powerful walls as in the sports towers. 24 de Maio appears cold and smooth in its abstract hue and extroverted attitude. The curtain wall reflects the adjacent commercial galleries, but it does so by distorting them, echoing the mirrored maze in an amusement park, and yet, inside, everything is transparency, in the best modern tradition of the free plan and the free facade: freestanding columns dialog with autonomous walls defined by the functional logic of each floor. Bo Bardi sympathized with Louis Kahn (1901-1974) and the American Mies van der Rohe (1886-1969), while Mendes da Rocha operates within a Franco-Brazilian tradition fashioned by Le Corbusi-

Figure 2. Paulo Mendes da Rocha & MMBB, SESC 24 de Maio, São Paulo, Brazil, 2000-2017, Furniture, Lounge, 4th floor. © Marta Peixoto, 2017



Carlos Eduardo Comas, Marta Peixoto The SESC Project

er and Niemeyer as well as Lucio Costa (1902-1998), Vilanova Artigas (1915-1985) and many others, including himself.⁶ And yet, Bo Bardi celebrates with an earnest face the industrial vernacular as well as popular culture and the role of bricolage within it, all the while claiming that hers is an *architettura povera* equivalent to *arte povera*. Mendes da Rocha's attitude since the 1980s seems to owe something to the ironic interest of Robert Venturi (1925-xxxx) in the commercial vernacular, and to pop artists' play with mass society icons too; one should not forget that São Paulo's 9th Art Biennial (1967-68) became known as the Pop Art Biennial,⁷ and the subsequent conversion to pop art of several Brazilian artists formerly associated with the Concrete Art movement. At any rate, heroism is absent at SESC 24 de Maio. The architect avails himself of ready-made rather than made-to-order elements, and those do not prefigure a new social order. Otherwise, at SESC Pompeia, the freestanding new towers are juxtaposed to the sheds, which occupy most of the parcel. Bo Bardi validates a moment of transition between the pre-modern and the modern city as CIAM would have it. At SESC 24 de Maio, the ratification of the almost complete occupation of the parcel- and of the corresponding urban block- amounts to a critique of the freestanding building floating in open space, presented by CIAM's Athens Charter as a universal solution (1933). Indeed, the city of modern architecture is not so unresourceful, so dependent on a single typology. Whether aware of it or not, in this particular case Mendes da Rocha follows a trail explored earlier by Costa with the Brazilian Jockey Club Headquarters (1957-1972) in Rio de Janeiro, and Clorindo Testa with the Bank of London (1968-1968) in Buenos Aires: congestion befits downtown.⁸

Fig. 3

Besides, both SESC units promote the covered plaza as an architectural and urban typology, a fruitful species of new public space. At SESC 24 de Maio, this interior attraction unfolds in four levels, providing different stages that can be admired from each ramp slope or landing. Downstairs it is no more than an expansion of the street. Then it becomes intimate, in spite of the triple height balcony. Further up, at the pool garden, it shows itself witty, where the rectangular foot basin contrasts with SESC Pompéia's curvilinear reflecting pool, and the square mezzanine reveals the obliqueness of the frontages. At the top, it explodes as multiple, receding layers of megalopolitan construction both delimit and open the view on all sides of the square pool and terrace. **Fig. 4**

Both SESC units distinguish themselves from their neighbor-

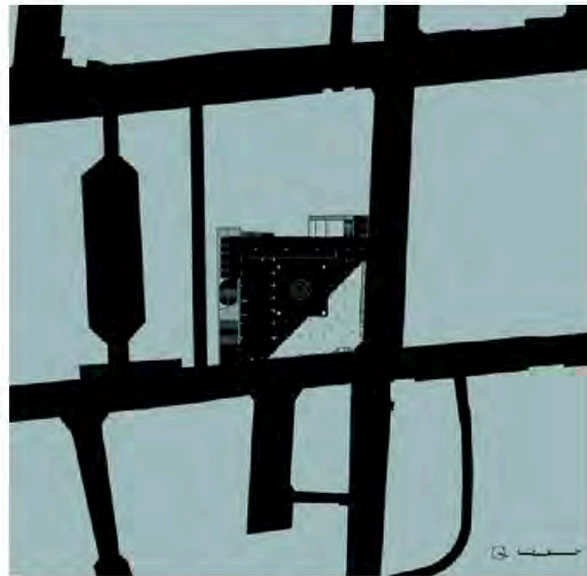


Figure 3. Paulo Mendes da Rocha & MMBB, SESC 24 de Maio, São Paulo, Brazil, 2000-2017. Ground floor plan w/ adjacent buildings. © MMBB, 2017

hood and evidence their special program with considerable subtlety. The balconies, the slits, and the operable windows of SESC 24 de Maio, which contrast with the rather ordinary curtain wall, match the exotic fenestration and the irregularly spaced balconies of SESC Pompeia, which contrast with the rather ordinary silhouette of the sports towers. Virtuosity in the manipulation of an erudite language coexists with deliberate demonstrations of awkwardness: naïf traits that suggest the potential connection of children and reveling crowds with the marvelous, or kitschy features that make fun of the architect's disenchantment with an industrialization which was once idealized.

The favorable press coverage of SESC 24 de Maio has been confirmed by the numerous enthusiastic visitors. SESC Pompeia remains a popular venue, much praised by the cognoscenti at home and abroad. Both units belie the idea that the complex social and esthetic values of modern architecture are under attack in São Paulo. The choice of architects by SESC is telling. Bo Bardi and Mendes da Rocha testify to the vitality of those values. Each extracting poetry out of the ordinary in different ways, they show that modern architecture is an ongoing process made up of different strands and traversing



Figure 4. Paulo Mendes da Rocha & MMBB, SESC 24 de Maio, São Paulo, Brazil, 2000-2017, The pool garden, 12th floor. © Marta Peixoto, 2017

different phases, and far more positively engaged with the existing city and disciplinary history than its detractors assumed. Evolutionary rather than revolutionary, they validate the need for good architecture instead of a new architecture every Monday, as Mies aptly remarked. To boot, SESC Pompeia demonstrates that even outstanding architecture depends on enlightened policies and efficient administration to be experientially successful. Its example bodes well for the megalopolitan downtown that SESC 24 de Maio is already enriching.

NOTES

1 For a detailed analysis of SESC Pompeia in Portuguese and English, see Carlos Eduardo Comas, "Lina 3x2," Porto Alegre, *Arqtexto* 14, 2009, 146-189, where I develop ideas first stated in "Arquitetura Brasileira Anos 80: Um Fio de Esperança," São Paulo, *AU* 28, 1990, 91-97. For the critical reception

at the inauguration, "Sesc Fábrica da Pompeia. As cores e a criatividade de Lina Bo Bardi," São Paulo, *Projeto* 92, 1986, 18 pages that include texts by Ruth Verde Zein, Marlene Acayaba and Eduardo Subirats. For drawings and photos, Marcelo Ferraz (ed), *Lina Bo Bardi*, São Paulo, Instituto Lina Bo e P.M. Bardi, 1993. Portuguese and English editions.

2 Drawings and photos of SESC 24 de Maio can be found at the sites of MMBB Arquitetura (mmbb.com.br), SESC São Paulo (sescsp.org.br/unidades/36_24+DE+MAIO), Leonardo Finotti (leonardofinotti.com), and Archdaily Brasil (archdaily.com.br).

3 Double height spaces serve the ground (plaza), 6th (exhibits), and 9th floors (sports).

4 According to Sonia Nara Mascarello, *Arquitetura Brasileira: elementos, materiais e técnicas construtivas*. São Leopoldo- RS, Universidade do Vale do Rio dos Sinos, 1982.

5 For Bo Bardi and Mendes da Rocha, see also Ruth Verde Zein, *A Arquitetura da Escola Paulista Brutalista*. PhD thesis, Porto Alegre, UFRGS, 2004, and Carlos Eduardo Comas, "The poetics of development. Notes on two Brazilian schools," Barry Bergdoll et alia (eds.), *Latin America in construction. Architecture 1955-1980*, New York, MoMA, 2015, 40-67.

6 The United States exhibition included works by Robert Rauschenberg, Jasper Johns, Andy Warhol, and Roy Lichtenstein. For Lina's comparison of her architettura with arte povera, see Comas, "LBB. Three city Pieces. 1976-1988," Horacio Torrent (ed): *El desafío al tiempo. Proyecto y persistencia del movimiento moderno*, Santiago de Chile, Docomomo CI/PUC CI, 2014, 41-48. Vilanova Artigas claims a pop side to his Elza Berquó House, according to Joao Kamita, *Vilanova Artigas*, São Paulo, Cosac & Naify, 2000, 42.

7 For drawings and photos of the Jockey Club Brasileiro, see Guilherme Wisnik, *Lucio Costa*, São Paulo, Cosac & Naify, 2001. For the Bank of London, see Jorge Glusberg, *Clorindo Testa. Painter and architect*. Buenos Aires, Summa, 1999, and Manuel Cuadra, *Clorindo Testa. Architect*. Rotterdam, NAI, 2009.

BIOGRAPHIES

Dr. Marta Silveira Peixoto is Associate Professor at Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil, her alma mater. She directs architectural studios and teaches architectural theory at the undergraduate and graduate levels. A Docomomo member, she has edited books, written for architecture journals and lectured in many national and international conferences, focusing on modern interior design and domesticity at home and abroad.

Dr. Carlos Eduardo Comas studied architecture in Porto Alegre, Philadelphia and Paris. He has written and lectured extensively on Modern Brazilian Architecture and Urbanism, along with curating exhibitions on Brazilian and Latin American Modern Architecture. A former chair of DOCOMO-MO Brazil, he is Full Professor at Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil, and edits its Graduate Program in Architecture journal, ARQTEXTTO.

RADICAL COCKTAIL: MIAMI'S BACARDI IMPORTS CAMPUS

Allan Shulman (USA)

ABSTRACT

Ron Bacardi, the world's largest distiller of rum, planned to celebrate its centennial in 1962 with a new modern headquarters building designed by Mies van der Rohe in the company's hometown, Santiago de Cuba. Instead, the Cuban revolution and the expropriation of the company's Cuban assets instigated the re-organization of Bacardi geographically and functionally. Leaving Cuba, Bacardi was re-forged as a transnational entity, an archipelago of industry and administration managed from the nerve centers of the company's critical overseas markets. Bacardi eventually marked its centennial with a new motto: "Bacardi in many lands," featuring a tropical and pan-American identity. A novel manifestation of this newfound identity occurred in 1963 when Bacardi initiated construction in Miami of a new North American headquarters building, a pluralistic and expressive distillation of modern architecture.

Miami's Bacardi Imports Building advanced strategies of corporate urban representation that had been prioritized by the company since the 1920s and were part of its brand. From Santiago and Havana to Mexico City and San Juan, the company projected iconic buildings along the future-oriented vectors of the city as inscriptions of power and identity. The Miami tower, developed during a period of existential crisis for the company, goes further, as it was designed to embody the company's resilience and cultural symbiosis. Blending regional and international, folkloric and progressive, artisanal and technological expressions in a typological hybrid, Bacardi's tower cocktail re-branded the distiller as it also re-cast Miami, crystalizing for both a transformation toward ideals of the modern city.

RADICAL COCKTAIL: MIAMI'S BACARDI IMPORTS CAMPUS

The Bacardi Imports Building in Miami is a radical cocktail of brand, architecture, and place – a corporate home defined by its own cultural hybridity and transience. Its design was eccen-

tric, yet followed a long record of establishing new homes across the hemisphere, and using the architecture and urban situation of these homes to burnish the company's identity. Indeed, the formula for Bacardi's global expansion was crafted along with the formula for distilling clear rum. In 1862, Don Facundo Bacardí Massó, a Catalan immigrant, developed the technique for turning native raw materials into an especially refined and consistent clear spirit. This revolutionized the industry, creating new markets that slowly built Bacardi. The company then advanced chemical technology to the point where the rum's specific taste could be reproduced in other regions, using other sugars, a process that led naturally to the globalization of the company's production and administration. Bacardi early put forward an image of itself based on technical competence and industrial prowess. The distiller was forged in Santiago de Cuba, Cuba's second city, where sugar played an important role in the colonial economy. By the middle of the 19th century, sugar had become Cuba's principal commodity, and Cuba its primary producer. By the 1920s, Bacardi was the largest industrial concern in Cuba. Its status as the island's flagship industry was embodied in an early slogan: "The One That Has Made Cuba Famous."

Parallel with the growth of its power and prestige, Bacardi became interested in explicitly representing its civic identity. In Santiago, the company demonstrated its model of industry and patronage by constructing a powerful new monument in the city center, a counterpoint to its humming industrial campus located outside the city walls. The Emilio Bacardí Museum was a complex hagiography that monumentalized the life of the company's first president, Emilio Bacardí, who played multiple roles in his home city of Santiago: corporate leader, independence activist, writer, politician and chronicler of the life of the city. Designed by Santiago architect Carlos Segrera Fernández and completed in 1927, it appropriately took the form of a temple, or republican shrine, its grand staircase and deep front portico fronting a public plaza. The museum associated the Bacardí name with the promotion of

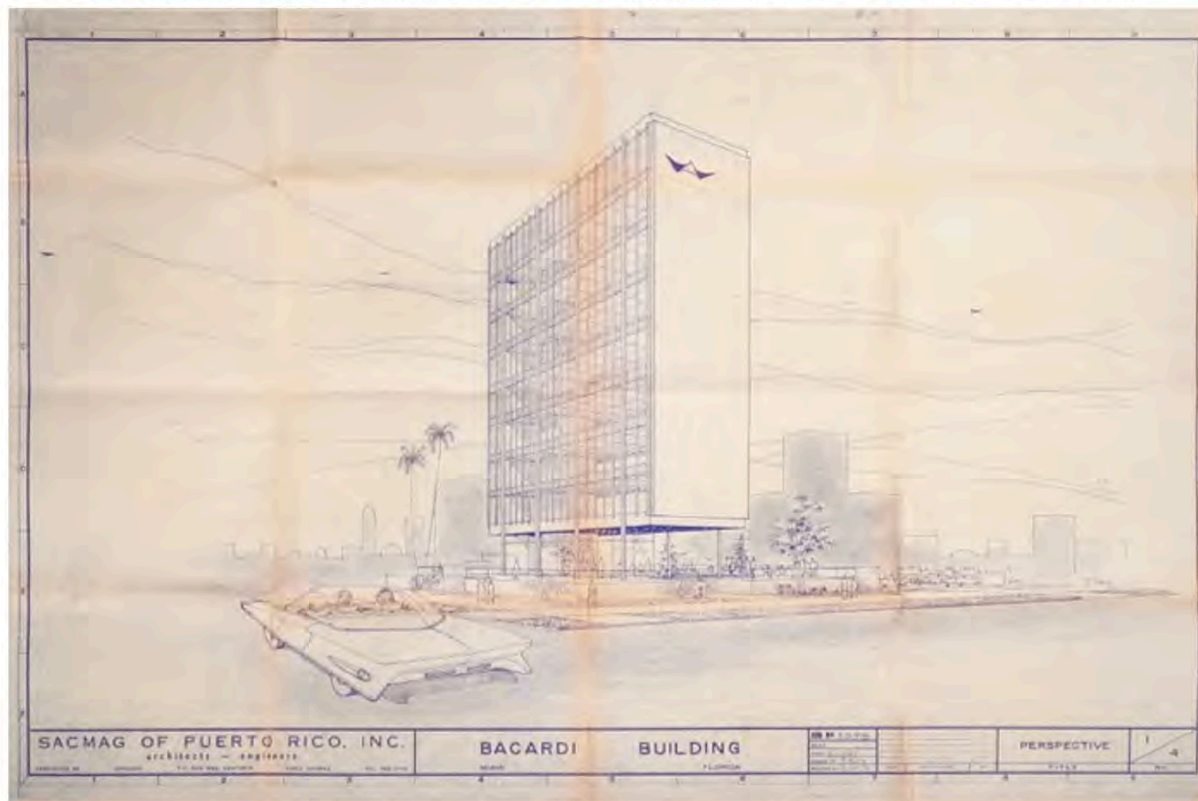
high culture and, just as importantly, brought it into formal discourse with the symbols of the modern nation. Located on calle Francisco Vicente Aguilera, it was designed adjacent to, and in coordination with, the Palacio Provincial (also by Segura Fernández), the new seat of the provincial government and symbol of the recently-formed Cuban republic.

An even more powerful architectural representation of Bacardi's newfound national prestige emerged in 1930 with the completion of the Edificio Bacardi in central Havana. Here, the company exploited two of the most important Jazz Age American motifs, the skyscraper and the cocktail bar, to represent the Bacardi family and its interests in the modern nerve center of the Cuban capital. The site on Avenida de Bélgica was strategically located on the edge of the colonial heart of Havana, near the recently renovated Prado and only a block from the new Parque Central and the neoclassical

Capitol building – effectively the emerging republican core of the city. The Bacardi Building was indeed little more than a symbolic shell since, beyond its iconic bar and exhibition hall, most of the space in the tower was to be rented.

Enrique Schueg, Bacardi's second president, stirred public and professional interest by announcing an invited competition to design the building. The winning entry, by architects Esteban Rodríguez Castells and Rafael Fernández Ruenes, with engineer José Menendez, featured a Renaissance Revival-style commercial block crowned by a tower whose stepped pyramidal roof was topped by the gilded bronze bat. It mixed "Yankee proportions" with "an agreeable Spanish air,"¹ and echoed a generation of North American commercial towers inspired by the iconic Giralda tower of Seville's cathedral. Beyond its American commercial heritage, the symbolism of the tower was manifold. As Francisco Mujica observed, the tower

Figure 1. Bacardi Imports Tower, Miami. Perspective view. Enrique Gutierrez (SACMAG of Puerto Rico), c. 1962. Courtesy of The Bacardi Archive.



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type could be considered a true and representative pan-American type;² it could thus be understood as a symbol of the company's incipient hemispheric identity. It also could be seen as a symbol of Havana's emergence as a capital city. Exhibiting polychromatic effects using glazed terra cotta in colors ranging from ocher and sienna to white, yellow and cobalt blue, it soared above the colonial structures of the Cuban capital as an advertisement, while its swank Bacardi Bar, the building's main event, drew tourists from the street. For its largely American clientele, the bar suggested the Prohibition-era conventions of a speakeasy —discreet and cozy, with a gold-hued club-like atmosphere. The cocktail bar, indeed the whole tower, traditional, modern and vernacular, was a corporate showcase for the development of Bacardi's brand, an emblematic home. The Art Deco landmark reveals the complexity at the heart of the company, as well as its civic ambition to be part of the image of the city.

LEAVING THE CITY

Another attempt to represent the company came after World War II, under the leadership of José Mario "Pepín" Bosch, company president from the 1940s to 70s. Bosch conceived an iconic new corporate headquarters in Santiago de Cuba, a quintessential example of modern architecture, to provide the company with a state-of-the-art corporate face, and to symbolize the international and highly integrated corporate nature of Bacardi operations. Abandoning its congested headquarters location in the Colonial city, the company followed prominent North American corporations in leaving the city center for greener suburban pastures. It selected a prominent open site along the national highway in one of Santiago's modern extensions, a locale that prioritized mobility and visibility. In 1956, the German émigré architect Ludwig Mies van der Rohe was commissioned to design the headquarters building. Mies and Philip Johnson's new bronze-clad tower rising on Park Avenue in New York (1954-1958) for Joseph E. Seagram & Sons, the Canadian distiller, had recast that company as a business frontrunner.

Eschewing the tower type, which now represented Bacardi in the Cuban capital and Seagram in New York, Mies designed a low-slung glass and concrete pavilion, a modern corporate temple that faced the highway. The structure, a single square 5-foot-deep roof plate supported on eight perimeter columns and set atop a broad plinth, covered a single glass enclosed volume enclosing the offices. Mies used the singular volume beneath the roof to advance the concept of "universal space"—open rooms that were



Figure 2. Bacardi Imports Tower, Miami. Study panels for North facade. Francisco Brennand, artist, 1963. Courtesy of Francisco Brennand.

inherently flexible and adaptable.³ The physiognomy of this temple emphasized power, precision, transparency and order, the very corporate principles that Bosch and Bacardi wished to transmit to a global audience. It demonstrated extraordinary structural artistry, developed in conjunction with SACMAG's engineer Luis Saenz, allowing its single roof plane to span almost 180 feet in both directions: a two-way structure of post-tensioned concrete beams tautly woven. Cast in concrete to precise and monumental effect, the power of the Bacardi project also rested in its classical sensibilities. The building sat on a granite plinth, accessed by broad steps that augmented its civic presence. Brick wall enclosures and a reflecting pool on the plinth shaped a precinct that James Speyer likened to a "miniature acropolis."⁴ The strategy of locating iconic structures along new urban vectors can also be seen in Mexico, where Bacardi's 1930s

Figure 3. Bacardi Imports Tower, Miami. Enrique Gutierrez (SACMAG of Puerto Rico) and Francisco Brennand, artist, 1963. Photograph, 1972. Courtesy of The Bacardi Archive.



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pattern of overseas expansion produced a network of new bottling plants, distilleries and administration buildings. Outside Mexico City, the company developed a new campus that conjugated crystalline rows of concrete industrial shells, designed and built by Felix Candela, with a Mies van der Rohe-designed steel headquarters building. The headquarters building was located in a park-like setting and set on pilotis, a design solution inspired by the proximity and raised profile of the Mexico-Queretaro Highway, along which the complex was sited. Facing the highway, the long, low volume of the main office floor appeared to float, an impression strengthened by the building's cantilevered ends and inset ground floor lobby. As the primary image of the complex, Mies's black pavilion stood in monumental singularity, representing Bacardi with cool corporate abstraction, a counterpoint to Candela's suave concrete curves which filled the lot behind. The two architectures, at the antipodes of mid-century architectural discourse, find an uneasy proximity at Tultitlán, joined under the patronage of Bacardi, for whom such divergences were simply proof of its own complex agenda.

BACARDI IN MIAMI

When Bacardi's Cuban assets—including its plant in Santiago, its network of Hatuey breweries, and its iconic tower in Havana—were nationalized in the wake of the Cuban Revolution, the crisis triggered the exile of the company and its leaders, and a reimagining of Bacardi in the Cuban diaspora. Spontaneously, the first iterations of a new brand synthesis emerged in Miami where, in 1963, Bacardi Imports constructed a new North American headquarters. Four years after the Cuban Revolution, and a year after the Cuban Missile Crisis, Miami had become home to hundreds of thousands of exiled Cubans. With its own recent exile, Bacardi's move from New York to Miami was a statement of endurance and social solidarity. The Bacardi Imports Tower, designed by Enrique Gutierrez of SACMAG of Puerto Rico⁵, boldly rendered the angst confronting Miami's Cuban community into a cutting edge yet playful landmark. Gutierrez combined technical virtuosity, artistic brio, and touches of irony and parody, to pitch a powerful counter-narrative for the company in exile.

The virtual transfer of the company's identity from Cuba to Miami coincided with, and symbolized, Miami's embrace of the ideals of a modern city, and its rise as a hub city for the Americas.⁶ Bosch chose a site along Biscayne Boulevard, in a developing corridor of modern corporate offices rising north

of downtown. Like the site chosen for the Mies project in Santiago, Biscayne Boulevard embodied the postwar expansion of office buildings into commercial and automotive arteries that were not explicitly suburban, but rather linear elaborations of “downtown” that radiated from the center. As renderings of Gutierrez’s first design for the structure indicate, the Bacardi Imports Tower was designed to be appreciated from the moving car.

Bacardi, captivated architecturally by the discourses of the modern movement, accomplished vertically in Miami what was intended horizontally by Mies in Santiago: a transparent showcase of Bacardi administration, a center for Bacardi’s far-flung empire and a visual landmark. In most every way, however, the building subverted expectations of the tower building type. Rising from its plaza, the Bacardi Imports Tower defied gravity. It employed an exoskeletal structure designed

by SACMAG’s engineering virtuoso Luis Saenz in which the floors were hung using a system of cables and pulleys from trusses supported on four marble-clad piers. The resulting 24-foot cantilevers at either end transmitted a sense of daring, accentuated by delicate stairs that hung from these cantilevers. In the glass box beneath the tower volume, the company replaced the customary lobby with a public art gallery called The Bacardi⁷.

The tower was particularly remarkable for its Janus-like skin, which alternated a corporate-tailored curtain wall of plate glass and vertical aluminum tendrils with flamboyant *azulejo* murals by the Brazilian artist Francisco Brennand that covered its endwalls. Against the blue Miami sky, the Bacardi Building’s impassive smoked glass skin stood as a statement of corporate purpose, a testament to the controlled technique of rum production, and of course a signal of connection to Mies’s

Figure 4. Bacardi Imports Administration Annex, Miami. Ignacio Carerra-Justiz, architect. Stained glass works by Gabriel and Jacques Loire based on designs by Johannes Maria Dietz, 1973. Courtesy of The Bacardi Archive.



earlier Bacardi work. Conversely, the tropical, baroque sensuality of the murals emblemized the company's modern pluralism, galvanized by the company's own hemispheric transience. Inspired by the Mexican Mural Movement, and specifically by the recently-completed Central Library of the National Autonomous University of Mexico (1956)⁸, the narrative murals featured gigantic enlargements of different vegetation that signified, in the words of the artist, "the discovery by Europeans of the South American continent."⁹ The blending of modernist curtain wall and sensuous, larger than life floral tile work, illustrated in a new way the company's pluralism, a quality already evoked in classic Bacardi cocktail formulations like the Cuba Libre, and more recently in the company's contemporary, Saatchi & Saatchi-designed advertising campaign: "Bacardi: The Mixable One".

Within the modernist corporate milieu of Biscayne Boulevard, mainly low-scale commercial blocks covered in tropicalist concrete egg-crates and louvered brises-soleil, the Bacardi Building was strikingly monumental. The building's civic ambition was manifest in the slender seven-story tower, which sprung from a broad paved plaza, the verticality of the one accentuated by the horizontality of the other. The tower-plaza cohort was full of references to Mies van der Rohe, particularly the Seagram Building in New York, completed five years earlier. The relationship dignified the building, a principal aim of Bosch who, like Seagram's Sam Bronfman, saw himself in the role of patron of architecture rather than client. The plaza gave the billboard-like building a generous public presence at the pedestrian scale.

CODA

The billboard-focused strategy of representing the company to the city was reinforced in 1973 when the mushroom-like Annex building sprouted from the plaza behind the tower. The annex would rival the tower for both iconographic content and structural adventurousness, although it introduced a mysterious and nearly opaque landmark into the urban landscape. Designed by Ignacio Carrera-Justiz, who like Gutierrez was recently exiled from Cuba, the building's two office floors comprised a shallow matte hung by rods from a grid of deep, post-tensioned beams in the roof, and cantilevered from the building's core. Returning to the low-slung pavilion type developed by Mies for Bacardi, its four equal walls were sheathed in tapestries of colored glass that translated commissioned artwork by the German artist Johannes Maria Dietz and executed in France by Gabriel and Jacques Loire. At night these

vitreous walls glowed, bringing alive Dietz's illustrated sugar metamorphosis and transforming the building into a vibrant urban lantern.

The tower and annex buildings together demonstrate the oscillation between vertical and horizontal building forms in the work of Mies, now reflected in the company's collective memory and also in its conception of the city. More importantly, they demonstrate the complex motivations bubbling up in contemporary architectural culture, and celebrated in works like Robert Venturi's *Complexity and Contradiction in Architecture* (1966). The large-scale murals in particular signified a new, postmodern approach to iconography in which applied decoration delivered messages that could compound, or contradict, the primary architectural idea. They told stories about the corporation's resilience and global reach, its civic ambitions, but also Miami's emergence as a modern tropical city. In the predominantly Anglo-dominated city, which in the 1960s was still searching for its own artistic and economic place in the hemisphere, the presence of these murals captured rising Latin American influence. It manifested the condition of exile (designed by exile architects for an exile company), and announced the presence of the Cuban diaspora that would soon be a formative part of Miami's civic and business culture.

Finally, these bespoke corporate designs were an affirmation of business culture in tune with the playful resort character that Miami had affirmed, while raising the artistic ambition of the physical environment. In this way, the Bacardi mix paved the way for Miami artists to explore similar collaborations that helped to define a distinct regional modernism in the Magic City.¹⁰ Indeed, the Bacardi Tower & Annex have continued to play a part in the urban transformation of the city. In its new life, incorporated into a Frank Gehry-designed campus master plan for the National YoungArts Foundation, the complex participates the rebranding of the city as an arts hub. The tower stands as a culturally and temporally freighted landmark of modern architecture, a marker of both continuity and the transformative power of revolution, disruption and adaptation.

NOTES

1 The formulation “yankee proportions” and “agreeable Spanish air” were used by Manuel Gallego to describe Edificio Cooperativo de la Habana, which the Bacardi Building resembles. Manuel Gallego, “El primer edificio cooperativo de la Habana (Cuba),” *La Construcción Moderna* (Madrid) 20:18 (September 30, 1923): 275–282.

2 Mujica, Francisco. *History of the Skyscraper*. Paris: Archaeology & Architecture Press, 1929.

3 Mies called the single big room, “the most economical and most practical way of building today.” C. Norberg-Schulz, “Ein Gespräch mit Mies van der Rohe,” *Baukunst und Werkform* 11, (1958): 615–616. From Immo Boyken and Hans J. Oestmann, “Ludwig Mies van der Rohe and Egon Eiermann: The Dictate of Order,” *Journal of the Society of Architectural Historians* 49:2 (June 1990): 133–153. His previous investigations of this type of space spanned projects like the Fifty x Fifty House (1950–52) and IIT’s Crown Hall (1956). The Bacardi project brought the idea into a new synthesis, using refinements of technique, proportions and materials. The refinement of ideas was done collaboratively with Havana-based engineers and architects Saenz-Cancio-Martin and Alvarez-Gutierrez. Phyllis Lambert has described “Mies’s process of working through and improving a single structural type as the slow unfolding of architecture. Phyllis Lambert, “Mies Immersion: Introduction,” in Phyllis Lambert, *Mies in America* (New York: H.N. Abrams, 2001), 482, 490.

4 James Speyer, *Mies van der Rohe*, (Chicago: Hillison & Eiten Company, 1968).

5 In the aftermath of the Cuban Revolution, SACMAG of Puerto Rico was a successor firm to SACMAG.

6 TJ Hils, “What’s New? That Building in Miami,” *Construction Craftsman* 4:1 (January 1965): 14–16.

7 Pepín Bosch’s longtime friend, the architect and painter Alberto Fernández-Pla was the inaugural curator of the Bacardi art gallery.

8 The hieroglyphic walls of the UNAM library were illustrated by architect and muralist Juan O’Gorman. According to Francisco Brennand, Bosch “referred as an example of what he intended to do, the tiled panel finish of the National Library of Mexico.” Interview with Francisco Brennand, Oct. 22, 2012, by email.

9 Interview with Francisco Brennand, Oct. 22, 2012, by email.

10 Miami artists Al Vrana and Kay Pancoast, for example, collaborated extensively with local architects.

BIOGRAPHY

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THE INSERTION OF MODERN BUILDINGS IN THE HISTORICAL CENTER OF RECIFE, BRAZIL: 1946-1979

Fernando Diniz Moreira, Patrícia Ataíde Solon De Oliveira (Brazil)

ABSTRACT

The urban remodeling of Brazilian cities during the mid-decades of the 20th century was followed by an intense process of modernization. The central districts of Recife underwent drastic morphological transformations with the building of new avenues and an intense process of verticalization replacing colonial and eclectic buildings. This moment also witnessed the beginning of recognition and protection of the local historical heritage, with the installation in the mid-1940s of the local office of the National Institute of Heritage (SPHAN), and the affirmation of modern architecture in Recife from the 1950s on, turning the city into an arena of conflicts, interests and experimentations. The several documents referring to the approval processes of the new buildings reveal not only how negotiations were conducted and the professional viewpoints, but also the different strategies used by modern architects. The insertion of new high-rise buildings in the center of Recife is a privileged field to study the complex dialogue between preservation professionals, who sought to establish parameters to control the verticalization of the central areas, and modern architects, who sought to implement the new architectural values. This dialogue is complex because, as we know, these two fields share a series of common values in Brazil. This article derived from a broader research which studied the negotiation processes and the strategies adopted by the architects for the approval of modern buildings in the historical center of the city of Recife around listed churches between 1946 and 1979. Due to limits of space, in this article focuses in one of the cases, the buildings near to the Santo Antonio Church, between 1954 and 1964.

INTRODUCTION

The urban reforms that significantly transformed the urban fabric of Recife were followed by the intense replacement of old colonial or eclectic buildings by modern high-rise buildings, particularly between 1930 and 1960.

This moment also witnessed the arrival of two modern professionals: the preservationist and the modern architect. The recognition and protection of the local historical heritage was strengthened, with the installation in the mid-1940s of the national heritage office, which had a fundamental role in protecting the built heritage, seeking to control the verticalization and establish parameters for the insertion of new buildings.

This is also the period of consolidation of modern architecture in Recife. Between 1949 and 1951, the Rio de Janeiro-born Acácio Gil Borsoi, the Portuguese Delfim Amorim and the Italian Mário Russo established in Recife. Their professional practice and teaching activities at the School of Architecture of Recife influenced a whole generation of architects.

The debate provoked by the insertion of new high-rise buildings in the district of Santo Antônio is a privileged field to study the complex dialogue between preservation professionals and modern architects, because these two fields shared in a series of common values in Brazil.

Promoted by intellectuals inclined to modernism, the National Institute of Heritage (SPHAN) was created in 1937 and had a pivotal role in the construction of a modern Brazilian identity. One of the leading modern Brazilian architects, Lucio Costa, was also one of the protagonists in the consolidation of the organ, evidencing the strong ties between the preservation system and modern architecture. Modern local architects such as Acácio Gil Borsoi and Vital Pessoa de Melo also actively participated in SPHAN's local office (called SPHAN's 1st District) as consultants but were at the same time seeking to meet demands of the real estate market. Heritage leaders, such as the engineer Ayrton da Costa Carvalho, also had their training linked to the values of modernism. He was a junior member of a State architectural office coordinated by Luis Nunes, which designed pioneering modern buildings in the 1930s.

The modernization of Recife has generated numerous conflicts between the real estate market and the heritage officials, turning the city into an arena of conflicts, interests and experimentation. With the installation of the SPHAN's 1st Dis-

trict, all owners interested in reforming had to apply for authorization from it. Due to these requests, several documents referring to the approval processes of the new buildings were produced, serving as important sources to understand the process of inserting new buildings, the conflicts and negotiations that ended up shaping the center.

This article aims to identify the negotiation processes and the strategies adopted by the architects for the approval of modern buildings in the historical center of the city of Recife, analyzing the specific case of the construction of modern buildings near a religious landmark: the Santo Antônio Church.

THE MODERN MOVEMENT AND THE TRANSFORMATION OF THE CENTRAL AREA OF RECIFE

With the density of the city and lack of perimeter roads, the central district of Santo Antônio, became an obligatory passage for most of the urban displacements, generating traffic jams in its narrow streets. A campaign to remodel the district began to emerge in newspapers, in local engineering magazines and even in radio programs in the late 1920s. The remodeling of this district became a privileged field of experimentation for the new ideas of Urbanism, attracting the interest of the most important urban planners in all the country. The debate included a series of proposals, studies, which were published in magazines and local and national newspapers, marking the birth of a culture of urbanism in the city¹. Two major avenues were the protagonist: the Avenida Guararapes, which cuts the neighborhood east-west, completed in 1949, and Dantas Barreto Avenue, which cuts the city north-south, partially completed in the early 1950s.

After a long succession of plans, the Guararapes Avenue was reduced to a single broad avenue and its adjacent blocks, since financial restraints prevented further expropriations, which were built between 1938 and 1949. The overall design has clear affiliations with the dense and vertical business center proposed by Alfred Agache for Rio de Janeiro in 1930. Codes determined the alignment of the façades, the volumetric unit of blocks and the concordance of heights and architectural motifs, composing a carefully designed setting².

The construction of Dantas Barreto Avenue, on the opposite, was a slow, complex and time-consuming process that lasted four decades. This is related not only with financial restraints, but also with the inauguration of the SPHAN local office came to protect the surroundings of the listed buildings, in addition to the growing awareness of local cultural elites of

the need to preserve the built heritage, provoked more conflicts, dragging its conclusion until mid of the 1970s. The Avenue became interesting for the real estate market that saw the possibility of creating a new dynamic axis of vertical buildings. The application for building permissions, to both SPHAN and the municipality, multiplied.

The opening of Dantas Barreto Avenue did not follow the Guararapes pattern, which was seen as outmoded by modern architects, although it was just completed (the last building was inaugurated in 1949). They rejected it in favor of a modern architectural language, using *brise-soleil*, hollow bricks (*cobogós*), curtain walls and artistic panels on the facades. The new buildings were designed to be observed as isolated objects. Their scale was one of the points of greatest conflict.

THE CHURCH OF SANTO ANTÔNIO: THE MERCANTIL BANK AND LAVOURA DE MINAS GERAIS BANK BUILDINGS

The first case was the construction of two tall buildings in the corner of Santo Antônio, delimited by Dantas Barreto Avenue and Nova, Camboa do Carmo and Flores streets. In an official letter sent to the 1st SPHAN District in 1953, the owner of the house at the corner of Nova Street and Dantas Barreto Avenue (lot 145) asked for the authorization for a ground floor renovation, with the purpose of adding a canopy and showcases, adapting it to commercial use. With his request denied, since SPHAN intended to enlist the house, he made a new request in 1954 to carry out repairs on the plaster, floor and roof of the same building, which was again rejected³.

Simultaneously, SPHAN's 1st District was requested to authorize the construction of a new building in a series of contiguous lots (lots 38,40, 46 and 50) joined to create a single corner lot between Flores Street and Dantas Barreto Avenue. The Lavoura de Minas Gerais Bank, owner of the land, wanted to build a fifteen-floor building, designed by the architect Vital Brazil, to house its headquarters in Recife⁴.

In response to this request, the head of the 1st SPHAN District, Ayrton da Costa Carvalho, stated that he did not oppose the construction of a 15-floor building in that lot, but considered it indispensable to create a pedestrian crossing allowing physical and visual connection between Dantas Barreto Avenue and Camboa do Carmo Street. The opening, outlined by the architect Acácio Gil Borsoi, would be made possible by using a strip in the back of the old houses⁵.

Revealing his modern background, Ayrton Carvalho argued that the height limit of the entire block should not surpass

the height of the house of the lot 145: "With these urban planning measures, a relative balance of masses may be maintained, among whose constructive volumes the monument is raised."⁶ This strategy of separating the new from the listed buildings through the creation of free spaces refers to the precepts stipulated in the Athens Charter⁷.

Even with the unauthorized major reform that mutilated the house of lot 145, which made its listing impossible, Ayrton Carvalho recommended that the construction of the headquarters of the Lavoura of Minas Gerais Bank still should recede from the limit of the lot in order to preserve the height limit for the buildings near the Santo Antônio Church⁸. However, in 1954, the architect Alvaro Vital Brazil informed the 1st District that, in order to speed up the time of the approval process, he sent the design of the building to the Municipality of Recife and that he obtained its approval since it met all requirements. In this project, the ground floor of the building would occupy the entire perimeter of the lot, and according to the architect to make the changes proposed by the 1st District of SPHAN would entail a significant delay at the beginning of the construction works⁹.

This fact, joined with a position of the Municipality of Recife alleging financial difficulties to execute the pedestrian crossing proposed by the 1st District, may have motivated Ayrton Costa de Carvalho to give up the crossing required to the Banco Lavoura de Minas Gerais, accepting that the new building occupied the entire lot, as long as the it recedes from the first floor and up.

The final proposal developed by Vital Brazil for the Lavoura Bank headquarters was a prismatic and austere volume resting on one floor base which occupies the whole lot. Most of the vertical prism is covered by a skin of hollow concrete pieces, without interruptions or demarcation of pavements. Its neutral surface emphasizes the contrast with the ornamented churches. Returning to lot 145, Ricardo Brennand, who led the group of new owners, requested in 1963, to the municipality of Recife information regarding the height limit for that area. He obtained as a response the possibility of building up to 15 floors, but the design must be submitted to SPHAN due to its location next to the listed Church¹⁰. The architects of the proposal, Acácio Gil Borsoi and Vital Pessoa de Melo, were both involved within the SPHAN's 1st District. Due to the processes related to the construction of the neighboring building of Lavoura Bank, SPHAN's 1st District had decided to keep the height limit of that block in 4 floors (with the opinion of Acácio Gil Borsoi) and denied the possibility of a building of 15 floors.

Failing to achieve a favorable opinion from the 1st District, Brennand decided to send the case directly to SPHAN's central office in Rio de Janeiro, arguing the economic unfeasibility of building a four-floor building in a so valued area of the city. He also argued that the owners decided for an excellent design and construction for the new building, the Mercantil Bank, to replace the old one occupying the lot 145, scheduled to be demolished later that year¹¹.

In addition to the letter addressed to Rodrigo Melo Franco de Andrade, the general director of the central office SPHAN in Rio de Janeiro, Brennand submitted two design studies developed by Acácio Gil Borsoi for the new building: one of them representing a 15-floor building, aligned with the Lavoura Bank, and a second representing the a 10-floor building, aligned with the SULACAP building, located just after the Church. The central office response, however, was also unfavorable to the construction of the 15-floor building and did not refer to 10-floor proposal.

Months later, Ricardo Brennand requested again to the Central office authorization to build a building in lot 145, this time with 10-floor. After being analyzed, the application received a favorable position by the architects Lucio Costa and José Souza Reis. Ayrton de Carvalho showed dissatisfaction with this in a letter to Rodrigo Melo Franco de Andrade, because now it would be difficult for the 1st District to refused it, after the favorable opinions of central office.

In order to clarify the favorable position of SPHAN's central office, Costa and Souza Reis replied listing a series of points that were considered in the analysis of the Mercantil Bank. The fact that the new building was designed by Acácio Gil Borsoi influenced the decision: "It may also have influenced the formulation of our opinion that a new building would obey a project with a good architectural design, by the architect Borsoi"¹².

Even with the favorable opinion of the SPHAN central office, approval was not issued by the 1st District. In this impasse, the Planning Office of Recife's Municipality suggested a *non-edificandi* area on the ground floor and the increasing of floors to the original 10-floor design. This compensatory area would allow a greater distance from the new building in relation to the listed property.

The definitive approval of this long process came in mid-1964, when Lucio Costa sent a sketch with guidelines for the implementation of the Mercantil Bank building, suggesting that the *non-edificandi* area proposed by the city hall be occupied by the ground floor of the building, with maximum height established in 4.6m, with slab destined to the implan-

tation of a roof garden. The 14 floors above should recede due to its proximity to the Santo Antônio Church.

Following these suggestions, the final design for the Mercantil Bank was developed by Borsoi in partnership with Vital Pessoa de Melo. The facades are composed of a combination of *brise-soleil* in precast concrete and frames with transparent and colored glass (green, red and blue). The repetition of the elements in concrete makes clear reference to the neighboring Vital Brazil's building. The base and crown of the building are finished in apparent concrete shaped with a wavy texture.

The cases of the buildings of Lavoura Bank and Mercantil Bank demonstrate the strong influence that modern architects had in the decisions taken under the SPHAN. Decisions about the permissions of new buildings were directly related to the aesthetic perception that these professionals had in relation to urban composition. They were flexible in relation to the insertion of new buildings in historical areas, especially when the new project presented plastic quality. This fact was related, to the recognition of the importance of preserving cultural assets, especially those from the colonial period, and to the view that the survival of these historic assets depends on coexistence and co-functionality with new structures capable of ensuring the dynamic character of urban centers.

CONCLUSIONS

The strategy used by the architects was mainly based on the construction of a new image for the new buildings inserted in the historical center, through the use of new materials and a formal repertoire affiliated with the expressions of modern Brazilian architecture. There is no explicit reference to the buildings that make up the traditional urban fabric in the proposals. The constant presence of architects linked to the modern movement in the activities of the SPHAN 1st District represents a continuation of the national tendency to have the technical staff of these institutions almost entirely composed of intellectuals committed to modernism. In the period studied here, the field of conservation was still undergoing a process of consolidation in Brazil, so the lack of specialization of professionals working in this field also stimulated the presence of professionals linked to the modern movement in the management and consulting positions at SPHAN.

Authors such as Solà-Morales Rubió, David Leatherbarrow and Carlos Eduardo Comas have avoided the commonplace opinion that modern architecture has completely ignored architectures of other periods of history, but instead they believe that it was able to offer an interpretation of the past ex-

ploring a more rich and subtle relationship with it. Contrast intervention was a strategy frequently used for the insertion of new buildings in consolidated urban areas in Brazil, especially during the 20th century, such as the Olinda Water Tower, and the Brazilian Press Association, in Rio de Janeiro.

In the case analyzed in this study, a similar attitude was observed by the architects-authors of the new buildings proposed for the Santo Antônio neighborhood: the formal solutions adopted for the surroundings of listed buildings by SPHAN were almost invariably based on exploitation of new materials and in the aesthetic vocabulary of modern architecture.

The new buildings inserted in the District of Santo Antônio in the period of study did not intended to diminish the architectural manifestations of the past, but to prioritize the contrast between the new materials and the traditional constructive techniques present in the historic area. This was an essentially modern design methodology that had so much ethical bases described in the Athens Charter, as of aesthetic order.

NOTES

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7 Charter of Athens, 1933, 27.

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BIOGRAPHIES

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Patricia Ataíde is a graduate architect at the Federal University of Pernambuco in 2014, and holds a master's degree in urban development at the same university. She coordinated the cultural project „Inventory: Acácio Gil Borsoi“, sponsored by the Pernambuco Foundation for Historical and Artistic Heritage between 2015 and 2016. She currently teaches at the University Center of Vale do Ipojuca - UNIFAVIP | Wyden, in Brazil.

BEFORE THE BILBAO EFFECTS:**A CASE STUDY OF HANS HOLLEIN'S MUSEUM ABTEIBERG
IN MÖNCHENGLADBACH**

Eva Branscome (UK)

When the celebrated German curator, Johannes Cladders, became director of the Städtisches Museum Mönchengladbach in 1967, that post-industrial town was best known for football. Housed in a neo-gothic bourgeois mansion, the museum held

an odd assembly of cultural objects, religious relics and twentieth-century artworks. Packing those items away, Cladders reinvented the venue through a sequence of ground-breaking exhibitions. Starting with Joseph Beuys's first-ever retrospective exhibition.

Figure 1. Hans Hollein, Museum Abteiberg, Mönchengladbach, Germany, 1972-1982, externally the museum becomes part of the collage of the city, merging with its fragmented fabric through the diversity of shapes, materials and sizes. (courtesy of the Museum Abteiberg and courtesy of Ruth Kaiser, 1982)



bition in 1967, Cladders put the museum onto the international map. From the outset, Cladders' discontent with his building was evident, so he lobbied for a new purpose-built museum to promote the emerging avant-garde.

Hans Hollein was appointed in 1972 to design the new Mönchengladbach museum, opening in 1982. It was instantly lauded by international critics for integrating externally into the city as an architectural collage of building types that stood out in contrast to the monolithic megastructures that had been so popular in the 1960s and 1970s. Its town planning established a dialogue with the ancient Gothic abbey, but also drew from the post-war streetscape, fusing with the fragmented fabric of the place as a surrogate urban landscape. Over 20,000 people came to see the museum during its opening week, becoming a pilgrimage for those interested not so much in avant-garde art, but architecture. Charles Jencks, Kenneth Frampton and Joseph Rykwert went there and wrote about the place. The museum led to a new type of architectural tourism where people flocked to the city to see the building, and Frank Ghery has stated that the Guggenheim in Bilbao would not have been possible without this important precedent.

In Bilbao, the formula was repeated with a star architect building a museum of art in a post-industrial city, creating a new industry of culture. It seems to reinforce the argument of the Marxist cultural geographer, David Harvey, that cities around the world are now in competition with each other to attract global surplus capital, utilizing artistic culture for economic gain. But with this capitalist formula globally also drawing ever more spectacular art museums into the limelight, attention to this particular building has faded in terms of cultural tourism.

As the Mönchengladbach museum has returned to the realm of an insider destination for avant-garde art connoisseurs and indeed has now become a piece of architectural heritage itself, this poses the question: Can, or should, any single building ever really have this kind of power within a city?

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Please refer also to the documentaries made as part of the Gerda Henkel funded research on Hans Hollein's Museum Abteiberg in Mönchengladbach (all films are also available in English):

Episode 1: Alles ist Architektur

http://www.lisa.gerda-henkel-stiftung.de/alles_ist_architektur?nav_id=6320

Episode 2: Kunst im deutschen Manchester

http://www.lisa.gerda-henkel-stiftung.de/kunst_im_deutschen_manchester?nav_id=6321

Episode 3: Die inneren Werte

http://www.lisa.gerda-henkel-stiftung.de/die_innenen_werte?nav_id=6322

Episode 4: Das Generalinterview mit Dr Eva Branscome

http://www.lisa.gerda-henkel-stiftung.de/das_generalinterview_mit_dr_eva_branscome?nav_id=6323

BIOGRAPHY

Dr **Eva Branscome** is an Austrian-American architectural historian and writer based in London. Her accomplishments in protecting the architectural heritage of the recent past, when working for the Twentieth Century Society, led to the inclusion of more than 50 post-war buildings on the statutory list of historic buildings in England and Scotland (including the US Embassy, Barbican Estate, Lloyds Building, and University of East Anglia).

Her doctorate at the Bartlett School of Architecture, which was supervised by Professor Adrian Forty, involved a rethinking of Postmodernism through the work of the celebrated Austrian architect, Hans Hollein. On completing her thesis, she was awarded a Postdoctoral Fellowship by the Gerda Henkel Foundation to research into the Museum Abteiberg in Mönchengladbach, a building that was widely regarded as Hollein's masterpiece when it opened in the early-1980s.

Eva has taught at University College London since 2012, both in the Bartlett and in the History of Art Department. She has published many essays on the history of modern architecture, and her book on Hans Hollein and Postmodernism: Art and Architecture on Austria, 1958-1985, which is based upon her PhD thesis, was published by Routledge in late-2017.

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Session 12 Updating Materials and Technology

Session Chair: Uta Pottgiesser (Germany, Belgium)



INTRODUCTION

Updating Materials and Technology describes different approaches and challenges when dealing with the conservation of Modern Movement buildings and ensembles. First of all, many buildings and constructions of Modern Movement have been innovative updates of existing building technology and materiality, witnessing an experimental and deliberate handling by combining traditional techniques with new requirements and materials aiming to improve architectural quality or building processes. Secondly, updating refers to the controversial discussion that conservation practitioners are facing when it comes to balance different priorities and aims, such as authenticity and significance versus functionality and comfort. In particular, the increasing needs for security, sustainability and adaptability of existing buildings and spaces to react to changing economic, societal and technological developments are questioning the decisions taken in the conservation process of recent heritage. This is not only relevant when adaptive reuse is taken into consideration; it is also crucial and critical for the pure protection of a buildings' materiality when the focus is shifting from repair to rehabilitation or improvement.

In its beginning in the 1980s DOCOMOMO focussed on early Modern Movement architecture from the 1920s and 1930s, in the last three decades the scope has been widened and now in 2018 the first examples of the 1980s have become monuments being recognised for their cultural and architectural significance. With regard to material and technology this period results in an extreme extension of material combinations, construction typologies and building services, expressed for example in Béton brut, huge glazings, plastic components and composite materials for surfaces, connections and structural elements. This fact presents a new challenge for researchers, material scientists and conservation practitioners.

Since its foundation in 1994 the DOCOMOMO International Specialist Committee Technology (ISC-T) has supported the work of DOCOMOMO with study and research

on materiality and technology applied in architectural heritage of 20th century. In fourteen international seminars, the ISC-T and its members have presented and discussed several themes, most of them documented in the DOCOMOMO Preservation Technology Dossiers 1-13 and available under: <https://www.docomomo.com/#>. The 15th DOCOMOMO International Conference in Ljubljana under the theme of 'Metamorphosis. The Continuity of Change' offers a perfect background for this session and its four authors dealing with the 'Updating of Materials and Technology' of different building typologies, in different eras, climates and cultures. As an introduction Ivo Hammer and Robert Linke want to 'rewrite the colour history of Modern Movement architecture' by presenting the results of a conservation-science study of the materials used in Josef Frank's Villa Beer (1930) in Vienna (Austria). In their study, they will identify that the notion of white coloured surfaces of early Modern Movement icons has to be seen as a cultural construct and that the 'white cubes were never white'.

Giulia Marino describes the fruitful collaboration between the architect Maurice Novarina, the engineer Serge Ketoff and the constructor Jean Prouvé culminating from 1955-57 in the new 'Buvette' (pump room) of the Source Châta in Évian-les-Bains (France). The building is a typical expression of its time showcasing the reduction of structural elements with a 'highly expressive sensibility with rigorous structural calculations' considered of being 'Precision mechanics' and already listed in 1963 as an object of national importance.

Different in structure, materiality and architectural attitude the Salk Institute for Biological Studies near San Diego (USA), designed and built in 1965 by Louis I. Kahn, is known for its concrete surfaces and teak window walls, that suffer from the exposure to the marine environment and other deteriorations. In their paper Kyle Normandin and Sara Lardinois discuss the conservation decision-making process for the long-term care of the teak window walls to sustain the original window assemblies over time.

The last author Kenji Watanabe presents Kenzo Tange's Yamanashi Communication Center (YCC) in Tokyo, a mass-media conglomerate building and a famous example of Metabolist Architecture, finished in 1967. As a private building of the Yamanashi Broadcasting System (YBS) Group, the owners announced in 2014 the '*RE DISCOVER PROJECT*' to actively accompany the conservation and preservation processes over the next 50 years of adaptation for social and functional change and the communication of information about the concept of conservation.

BIOGRAPHY

Uta Pottgiesser is Professor of Interior Architecture at the Faculty of Design Sciences of the University of Antwerp (Belgium) since 2017. From 2004-2017 she was Chair of Building Construction and Materials at the Detmold School of Architecture and Interior Architecture of OWL, University of Applied Sciences (Germany). In 2002 she obtained her PhD at TU Dresden on the topic "Multi-layered Glass Constructions, Energy and Construction" and holds a diploma in architecture from TU Berlin. She is chair of the DOCOMO-MO International Specialist Committee Technology (ISC/T), board member and reviewer of international journals and author of more than 50 peer reviewed publications (<https://www.uantwerpen.be/en/staff/uta-pottgiesser/publications/>).

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WHITE, EVERYTHING WHITE? JOSEF FRANK'S VILLA BEER (1930) IN VIENNA, AND ITS MATERIALITY

Ivo Hammer (Germany), Robert Linke (Austria)

ABSTRACT

A recent conservation-science study of the materials used in the construction of Josef Frank's main work, the Villa Beer (1930) in Vienna-Hietzing, and of the building's surfaces was an opportunity to find evidence indicating whether the contemporary description of the wall colour as a noncolour white corresponded to physical reality. The notion "Weiss, alles

Weiss" ("white, everything white"), celebrated as "an expression of values and of the times" (Hammann, 1930), will be identified as a cultural construct that stands in contradiction to the actual materiality of the buildings of the period. We must rewrite the colour history of Modern Movement architecture. The white cubes were never white.

1. INTRODUCTION

The house of the Jewish family Julius and Margarete Beer, built in Vienna at 12 Wenzgasse, designed by Josef Frank and Oskar Wlach in the years 1929-1930, is internationally, alongside the famous buildings of Mies van der Rohe or Le Corbusier, "probably the most important example of Viennese living culture of the interwar period."¹ It exemplifies the endeavours of Josef Frank, who aimed at "an independent, enlightened, bourgeois domestic culture, free from stylistic dogmas and fashionable conventions,"² and whose understanding of "the house as path and place" (1931)³ was brought to realisation in this house without financial restrictions. The Villa Beer, at first glance, does not seem monumental; it is nevertheless quite an opulent one-family house with 800 square metres of living space. Including the basement, it counts 60 rooms on four floors and a mezzanine, the latter dividing the service area horizontally into two spaces with lower ceiling heights. In the spacious living hall, the mezzanine serves as a music gallery. Josef Frank and his partner, Oskar Wlach, also designed all of the house's interior furniture in every detail: the mobile furnishings, seating, tables, curtains, etc. were manufactured by Haus und Garten (House and Garden), a company founded by the two architects along with Walter Sobotka in 1925. The house thus represented an artistic synthesis that answered the housing needs of a bygone era. The builders, manufacturers of rubber products, had to sell the house in 1938, and emigrated to the United States in 1940. In the course of its history, the Beer house has been divided up several times into as many as five apartments. Currently owned by a private foundation, the house will

Figure 1. Josef Frank und Oskar Wlach, Villa Beer, Vienna Austria, 1930: main hall with music gallery. © *Innendekoration* 42, Darmstadt 1931, 362



hopefully be acquired by the Austrian state in the near future and made into a museum in its own right, open to the public.

2. WHITE WALLS?

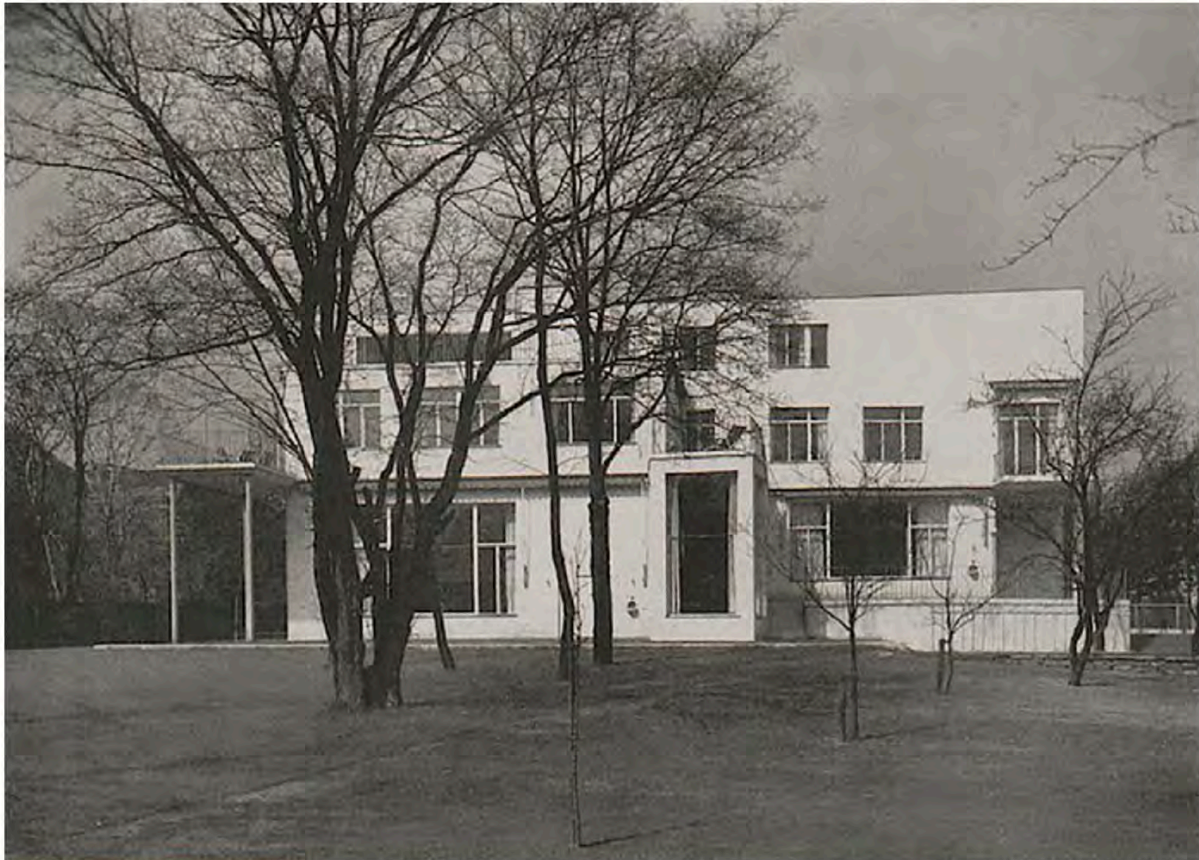
In 1924, in one of his earliest essays, Josef Frank already wrote about the white colour of the walls of his Bunzl House in Pernitz, Austria (1914): “The walls are white throughout: not only because a colour – intended to dominate the character of a room – makes a very small and scant impression in comparison to the large areas of the outdoor surroundings, but mainly in order to make the occupants feel independent of it and to allow them freedom of choice in everything that they wish to place in their rooms: flowers and paintings, carpets and furniture.”⁴

In 1931, Oswald Haerdtl, a student of Frank’s, characterised the colour of the walls of Josef Frank’s Villa Beer in similar terms: “The walls of the house, outside and inside, are white. Far from giving a cold impression (sic!), these bright surrounding surfaces, enlivened by floral curtains and oriental rugs, give a sense of serene and light beauty.”⁵

Wolfgang Born, author of a contemporary publication devoted to the Villa Beer, wrote in that same year, 1931: “The coloured impression that this house gives is determined by the pure white of the walls...”⁶

In the contemporary discourse on the white of Modern Movement architecture,⁷ J. E. Hammann, in 1930, formulated a pointed opinion in the journal *Die Form*. For him, the “colour white” (“der Farbton Weiß”) was a metaphor for the

Figure 2. Villa Beer, 1930, Vienna, Austria: garden view. © *Innendekoration* 42, Darmstadt 1931, 364



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Figure 3. Villa Beer, 1930, Vienna, Austria: music gallery, ceiling, the original yellowish-white paint uncovered. © Ivo Hammer, 2017

spirit of the times ("Zeitgeist"), an important cultural factor, "a component of today's entire modern philosophy of life" ("Weltanschauung").

With regard to the idea behind the white of the interiors, Hammann comes strikingly close to Josef Frank's argument: one seeks to "gain space" not only "by means of large windows, gardens adjacent to the house and roof gardens, verandas and the like, but also with the help of the illusion created by the white painting". "The human being today wants freedom, air and light; he needs distance for his thoughts and ideas."⁸

The architecture of the Modern Movement has become iconically fixed in cultural memory as white architecture due to black-and-white architectural photography.⁹ As Andreas Haus suggests, these photographs visually preserve not only the design but also "the utopian and socially romantic ideas of the early post-war period and develop them with photographic perfection".¹⁰

Until 20 years ago, the stereotypical idea of white architecture for the period continued to prevail even in the case of the façades of the masters' houses in Dessau, which had been occupied by Feininger, Kandinsky and Klee. The authorities and architects opted against carrying out a conservation-science study and thus conceded the possible destruction of the original polychrome.¹¹

The prevalent idea of white cubes¹² for the 1920s and 1930s has also had consequences with respect to preservation practices, both past and present: without regard to the original material composition of the surfaces, façades of the Modern Movement era have been repainted in a garish white using such modern, non-compatible materials as titanium white and artificial resin. More often than not, the original plaster surfaces of the façade and the interior walls have been destroyed, because many professionals perceive them as interchangeable garments.¹³

In the last 15–20 years, conservators/restorers have carried out studies of the Bauhaus (1999–2000)¹⁴, for example, and of the Weißenhofsiedlung in Stuttgart (2002–2005)¹⁵ and the Tugendhat House (2003–2005).¹⁶ These studies have shown that the stereotypical idea of white cubes has a relation to a culturally constructed category but does not correspond to physical reality. The white cubes, for the most part painted with lime wash, were, if only for technical reasons, never white.

3. VILLA BEER

3.1. Conservation-Science Study (2017)¹⁷

The primary objective of the conservation-science study, carried out in 2017 under the direction of Ivo Hammer, was to conduct a pilot survey of the wall surfaces with respect to heritage conservation and to establish short-term orientation for the redevelopment of this private property as a state museum. Only four days were available for on-site examination. The client's basic idea was, while limiting intervention to a minimum, to carry out the conservation/restoration of the house and to adapt it step by step to the needs of a museum – a "work in progress", so to speak.¹⁸ Apart from the analysis of materials, wall surfaces, ceilings, floors and built-in furniture, the research team also concerned itself with the possible need to undertake structural measures in terms of building security, fire protection, heating, electrical installations, sanitary facilities and adaptations necessary for the house's operation as a museum. The conservators/restorers implemented their transdisciplinary research in collaboration with other professionals (building

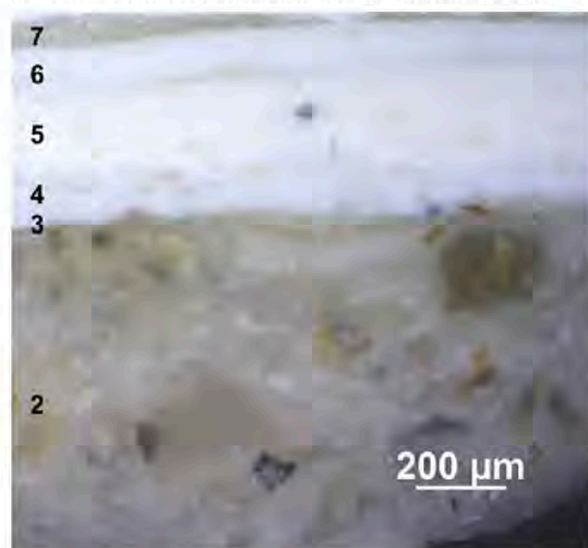
equipment, appliances). The study documentation included room data sheets (collectively “Raumbuch” in German) for the 60 rooms of the house.¹⁹

3.2. Façade²⁰

The fine plaster, with a grain size of about 0-2 mm, was found to have been rubbed and smoothed with a wooden board to create a rough surface. The yellowish-white whitewash, probably pigmented with fine grains of sand, is so thin that it barely covers the grains²¹, a finding that can be compared with accuracy to those concerning the façade plaster of the Tugendhat House in terms of structure, texture, facture and, above all, the shade of white.²²

The varnish of the exterior window frames, the railings of the terraces and most of the metal doors are also in line with the achromatic “colourfulness” of the render of the façade: a very slightly greenish grey, a multi-layered oil paint smoothed with precision, which approximates the material colour of metal. Only the entrance area was highlighted with bright colours: the Beer family’s front door was painted “Japanese red”²³, bordered with slabs of “Cipollino”/Styra green marble, which is also known from buildings by Adolf Loos, e.g. the Michaelerhaus in Vienna.

Figure 4. Villa Beer, 1930, Vienna, Austria: section of a sample of the wall paint, detail, original paint (4-6), pigmented with fine yellowish silicate grains. © Bundesdenkmalamt (BDA), Scientific Laboratory, Robert Linke, 2017



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3.3. Interior Wall Surfaces

The careful preparation of the wall and ceiling surfaces consists of a stucco with finely smoothed gypsum, with gluten glue added and a considerable proportion of fine, silicate sand grains measuring up to approx. 300 microns, and also some dolomite. The grain colour of the fine silicates has the effect of giving an overall yellowish-white colour to the finely smoothed plaster. Casein paint was applied (at least partially in two layers) to a protein intermediate layer (casein or vegetable glue) with some oil (“tempera”), filled with chalk and gypsum (Bolognese “chalk”), pigmented with fine silicates in silt grain size or bright ochre pigments and zinc white. Robert Linke also verified the addition of an early type of titanium white, an opaque, white pigment, which had been manufactured in the USA and Norway since 1919.²⁴ This was, as far as is known, the first use of this pigment in Austria, which was perhaps not mere coincidence. Josef Frank wanted the whiteness to appear as even, regular and “pure” as possible, in keeping with his idea of the colour of interior walls, which he saw as being a neutral, non-dominant background allowing a free choice of objects – and their colours – in the room: flowers, pictures, carpets, curtains and furniture. The use of the highly opaque titanium white is the technical correlate of the aesthetic intention of having a regular “white” surface. The surface is relatively smooth; individual brush strokes (“impasto”) are visible. Nevertheless, the white-colour paint of the interior walls intended by the architect, and described in contemporary publications devoted to the Villa Beer, does not correlate with the physical evidence – the research team also considered the effects of aging and pollution. As a result of the presence of the aggregates described, the white paint of the walls and ceilings was yellowish, similar to that of the Tugendhat House. However, all wall surfaces throughout the house were treated uniformly and – unlike in the case of the Tugendhat House – no distinction was made between the servants’ rooms and those of the family.²⁵

Also, other interior components, such as window frames, doors, fitted wardrobes and kitchen cabinets, which are made of various materials, were painted in a light yellowish hue of white with thoroughly smoothed surfaces.²⁶

The remaining components, such as windows, doors, pillars, railings and radiators, were painted with oil or alkyd paint. The light yellowish-white paint is multi-layered and was manufactured with high-precision craftsmanship.²⁷

Exceptions to this bright, aesthetic continuum of architectural surfaces are the fitted sideboard of the dining room and the

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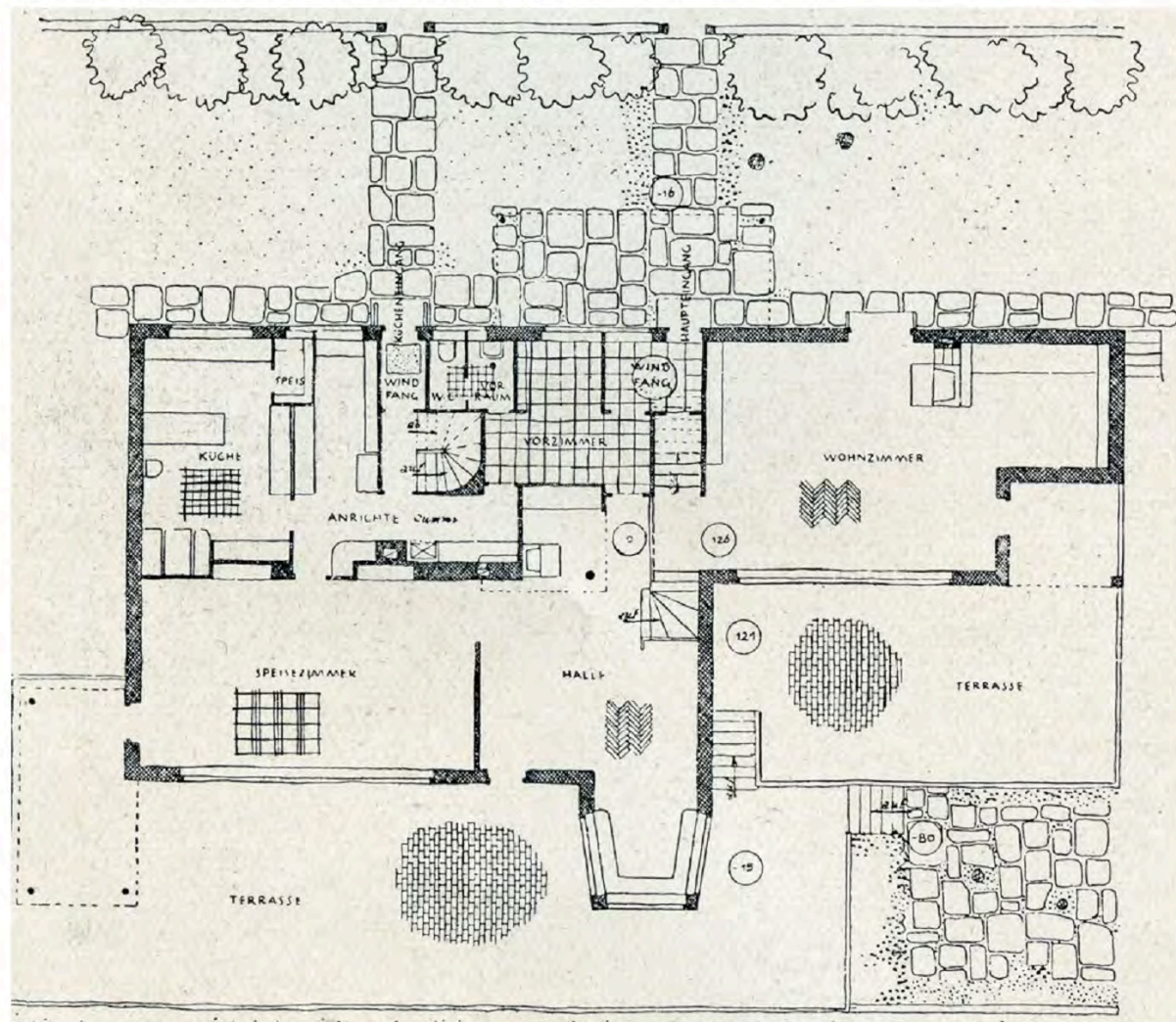
library shelves, which, like the floors and benches, show the natural colour of the wood used, which was intensified by means of a transparent varnish.²⁸

The bright, marble-like walls and ceilings in fact provided a noble, restrained background for the lively, colourful mobile furnishings that were planned for the house, such as curtains and furniture, and also for the flowers and other objects that surrounded the inhabitants in their daily living space.

4. CONCLUSION

We must rewrite the colour history of Modern Movement architecture. The 'white cubes' were never white. The notion of white as a metaphor for the "Weltanschauung" of the Modern Movement, fixed as such in cultural memory due to black-and-white architectural photography and recorded in writing as intentional by the architects themselves, is superseded by the evidence provided by the colourful wealth of the

Figure 5. Villa Beer, 1930, Vienna, Austria: ground floor plan. © *Innendekoration* 42, 1931, 360



actual works of architecture. Art is always more than just the intention of the artist, not least because of the inherent character – if not the “stubbornness” – of the materials used.²⁹

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- 1) ACHLEITNER, Friedrich, *Österreichische Architektur im 20. Jahrhundert, vol III/2 (Wien 13.-18. Bezirk)*, Vienna 1993, 65–66.
- 2) THUN-HOHENSTEIN, CZECH, HACKENSCHMIDT 2016, 21.
- 3) FRANK, Josef, “Das Haus als Weg und Platz”, *Der Baumeister*, 29, Munich, 1931, vol. 8, 316–323.
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- 5) HAERDTL, Oswald, “Una nuova casa di Josef Frank”, *DOMUS*, 4/43, Milan, July 1931, 48; HAERDTL, Oswald, “Una casa privata degli architetti Josef Frank e Oscar Wlach”, *DOMUS* 4/44, Milan, August 1931, 28–30, 77; translated from the Italian by I.H.
- 6) BORN, Wolfgang, “Ein Haus in Wien-Hietzing von Prof. Dr. Josef Frank, Dr. Oskar Wlach (‘Haus und Garten’)-Wien”, *Innendekoration*, Darmstadt, 42/1993, 366. Translated from the German by I.H.
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- 9) HITCHCOCK, JOHNSON 1931, passim.
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- 11) DANZL, Thomas, “Konservierung, Restaurierung und Rekonstruktion von Architekturoberflächen am Meisterhaus Muche/Schlemmer”, *GEBESSLER*, August, *Gropius. Meisterhaus Muche/Schlemmer. Geschichte einer Inszenierung*, Stuttgart/Zürich 152–181.
- 12) The term “white cube” is probably not contemporary; it probably comes from the collection of essays by Brian O'DOHERTY, *Inside the White Cube: The Ideology of the Gallery Space*, San Francisco 1976.
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- 15) REICHWALD, Helmut F., “Surfaces and Colour Treatment of the Interior and Exterior of the Double House by Le Corbusier and Pierre Janneret”, *CERNA/HAMMER* 2008, 58–66.
- 16) HAMMER, Ivo, “Materiality: History of the Tugendhat House 1997–2012. Conservation- Science Study and Restoration”, *HAMMER-TUGENDHAT* et. al. 2014, 162–223.
- 17) Commissioned by the MAK – Museum of Applied Arts, Vienna; first survey on site 24.-27.1.2017; participants: academic conservators/restorers Ivo Hammer (director), Alexandra Sagmeister, Lea Huck, Magdalena Schindler, Susanne Wutzig; architect: Claudia Cavallar (construction files, plans, historical photographs); heritage authority: Oliver Schreiber, Robert Linke (laboratory analysis); very helpful: WILK, Johanna, “Das Haus Beer – die Bestandsaufnahme einer Innenausstattung aus den 1930er Jahren”, KRIST, Gabriela (ed.), *Collection Care. Sammlungspflege*, Vienna/Cologne/Weimar 2015, 223–234. Preliminary report: 13.2.2017; report on the pilot survey: 1.8.2017. We acknowledge the permission given by Tano Bojankin to document his private rooms in the Villa Beer.
- 18) HAMMER, Ivo, “Aide mémoire” reporting a conversation with MAK, ms. 17.12.2016.
- 19) Commissioned by the MAK, a planning phase concerning, as mentioned, structural measures and calculation took place in the second half of

2017, executed by Ing. Dr. h.c. Erwin Resetarits and Mag. Claudia Cavallar. The conservators/restorers were not involved.

20) The traditional bricks walled with lime mortar, stiffened at static critical points with lime-cement mortar, stamped concrete and partially reinforced concrete. Thickness of the wall: 38 cm. The partitions of traditional bricks (‘half shoe’ walls), partially cement slag plates, reinforced with steel wire, sometimes also gypsum slag plates. The ceilings are made of cast concrete (system Ast-Mollins) and about 26 cm suspended gypsum plaster supports made of reed mats and lightweight metal mesh (hash grid).

21) SEEBACH, Gerhard, Untersuchungsbericht zum Fassadenputz, Mai 1999, files of the Bundesdenkmalamt (Austrian Heritage Office). Well preserved parts of the exterior plaster can be found on the upper terrace which has been partially transformed into an interior. The façade was renovated with a pre-fabricated mortar and silicate-resin paint containing titan white (KEIM Organosilikat) in 2015.

22) HAMMER 2012, 234–179; Hammer 2014, 183.

23) Led chromate; colour term (“Japanrot”) see: BORN 1931, 363.

24) Kronos-Titandioxide, Anatas-modification, associated with Si and Ca; www.materialarchiv.ch, accessed 3.2.2018.

25) Perhaps a reflection of the well-known social democratic sentiments of Josef Frank.

26) An exception is the spiral staircase in the service area: light-yellow pillars and bright yellow faces of green rubber covered the steps.

27) Also, the inner wings of the box-type windows are painted on the outside with (slightly greenish) light gray, as are the exterior window frames.

28) Marbles in different colours and brass decorate the fireplaces of the hall, the living room and father's bedroom. Green rubber – still in situ – covers the floor of some private rooms.

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BIOGRAPHIES

Ivo Hammer 18. Mai 1944: Born in Ulm, Germany. Conservator-restorer, trained in the workshop of Walter Hammer, courses at the Academy of Fine Arts in Stuttgart. 1975 PhD in art history. 1976-97: Head of Mural Painting/Architectural Surface in the Conservation Institute of the Federal Heritage Office, Vienna. Conservation e.g. of romanesque murals paintings (Lambach and Salzburg Nonnberg), the Beethoven-Frieze of Gustav Klimt (1902), facade paintings and historical renderings e.g. of the castle of Salzburg. 1997-2008 Professor at HAWK University of Applied Sciences and Arts, Hildesheim. 2010-2012 chair of the international expert commission THICOM (Tugendhat House).

Robert Linke: born 1971 in Vienna, studies of chemistry at the Vienna University of Technology. 1998-2004 Univ. Ass. at the Academy of Fine Arts Vienna, 2000 PhD in analytical and physical chemistry. Since 2007 head of the Scientific Laboratory of the Federal Office for the Protection of Monuments (BDA), Austria. Lecturer at the Academy of Fine Arts Vienna, the University of Applied Art Vienna, and the Vienna University of Technology. Work focus on material analysis of objects of art.

RESTORING JEAN PROUVÉ. THE “BUVETTE” AT ÉVIAN-LES-BAINS (1955-57) AND OTHER TECHNICAL OBJECTS

Giulia Marino (Switzerland)

ABSTRACT

Completed in 1957, the new *buvette* (pump room) of the Source Cachat in Évian-les-Bains (France) is to be classed among 20th century icons. The building was the outcome of a fruitful partnership between an experienced architect, Maurice Novarina, an “inspired constructor”, Jean Prouvé, and an architect-engineer, Serge Ketoff, who was capable of combining a highly expressive sensibility with rigorous structural calculations.

The result of this collective adventure was a “technical object” of outstanding value. The Évian *buvette* is indeed a bravura piece, a tour de force brilliantly carried out, and goes far beyond the showcasing of industrial materials. “Precision mechanics” rather than simple “Meccano”, the building is a perfectly calibrated assembly of highly diverse elements and components, in accordance with a relationship of true interdependence that takes advantage of this tensioning.

Figure 1. M. Novarina, J. Prouvé, S. Ketoff, new buvette of the Source Cachat in Évian-les-Bains, 1955-57 © MNAM-CCI, Centre G. Pompidou.



Giulia Marino Restoring Jean Prouvé

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The very nature of this “ordered system” entails an equally rigorous approach to restoration. The logic of the interlocking of the constructional elements then becomes the unifying thread of any intervention aimed at preserving the building, today a listed monument.

This paper is also an opportunity to resituate the *Évian buvette* in the current state of Jean Prouvé's oeuvre with respect to its preservation. Between *reassembly*, *reconstruction* or *restoration*, the approaches adopted in recent years have been highly diverse, not to mention the multitude of buildings that have been dismantled, dismembered, restored and then auctioned off as design pieces. This exceptional *corpus*, through a survey coherent with its current state, yields multiple reflections on the heritage of the 20th century and its preservation.

1. INTRODUCTION

“The *Évian buvette*, 1955-57. The best proof that architectural beauty is often based on the accuracy of technical solutions, which are themselves subject to the creator's enthusiasm.”¹ As observed by the architect and critic Ionel Schein, the *Nouvelle Buvette de la Source Cachat* is one of the finest demonstrations of Jean Prouvé's innovative ‘pioneering spirit’,² in certain respects a manifesto, rightly recognised as one of his most significant works.

Resulting from the fruitful collaboration between the architect Maurice Novarina, the engineer Serge Ketoff and Jean Prouvé, the *Évian* building is a ‘technical object’ of great formal and ‘constructional elegance’,³ a “masterpiece of subtlety”⁴ of worldwide significance. Despite receiving early recog-

Figure 2. The *Évian buvette* building site in 1956: the roofing complex © MNAM-CCI, Centre G. Pompidou.



nition – the pavilion was listed as an object of national importance already in 1963⁵ – the *buvette* was yet subjected to some major alterations, especially when a new thermal spa was created on the site in 1984. Permanently deprived of its function as a public pump room at this time, then progressively decommissioned, the building is now closed to the public and suffers from a somewhat chronic lack of maintenance. This historic monument, neglected in recent years, deserves renewed attention, even consistent enhancement of its value, but above all respectful restoration. The most significant strategies of intervention will emerge from the building's material history, meaning a thorough understanding of its constructional genesis and an analysis of its intrinsic characteristics, so enabling this emblematic work to regain its international influence.⁶

2. MATERIAL HISTORY

As is well known, “together with the exhibition building in Grenoble, [the *buvette*] was one of his creations that Jean Prouvé most cherished”.⁷ The brilliant and many-sided *constructeur de Nancy*, as he liked to call himself, claiming a technological formation responsive to the logic of industrial production, set great store by this singular object, seeing it as a crucial phase in the development of his ‘structural alphabet’ from the ‘coque’ (shell) type to the ‘béquille’ (crutch) type. The problematic context in which the project evolved further explains Prouvé’s particular attachment to the pavilion of the Cachat spring on Lake Geneva, conceived on behalf of the Évian mineral water company.

The construction of the *buvette* coincided with the last phases of the dispute that, since 1952, had pitted Jean Prouvé against L’Aluminium français-Studal, the majority shareholder in his company, which was seeking to enforce a radical shake-up in the organisation. The operations of the Ateliers Jean Prouvé at Maxéville (Nancy) – a ‘pilot factory’ and at the same time a research and production centre where ‘architects, workers and foremen were partners’⁸ – were being called in question. Prouvé criticised the aberrant commercial operation and with it the ‘distortion of his ideas and their incoherent implementation’.⁹ This event would make a deep impression on him personally, but above all it marked a clear break in the career of this blacksmith who had become architect, engineer, entrepreneur and designer. The definitive separation came about just when the first working drawings of the *buvette* were passed to the client, in January 1956. At that time, Prouvé was therefore completely excluded from his Ateliers, his ‘mi-

cro-universe’,¹⁰ much more than a simple production facility, being the necessary and sufficient condition for his design process founded on the progressive improvement of the ‘prototype’. And then, in strictly legal terms, Prouvé had to give up his earlier patents, but ‘his dream, *making* things, had fallen through’. Once the founding experience of Maxéville was over, the method had to be completely rethought and, in these circumstances, the project for the *buvette* became a privileged opportunity for technological and constructional experiments. Surrounded by experienced collaborators – his son Claude and Jean Boutemain, the architect-engineer Serge Ketoff, Steph Simon, the gallerist who specialised in contemporary design furnitures, and the Goumy metal construction company – Prouvé took advantage of an apparently unfavourable context to produce a building of great merit, a ‘technological object’ that would become an icon of 20th century architecture.

2.1. A surprising Symphony of Materials

The process of “progressive reduction of the structure to simple elements”,¹¹ which began with the series of *écoles coques* (shell schools) in the early 1950s, was radical. The building in Évian is a clear demonstration of this: the symmetrical frameworks of the preliminary design were transformed into a succession of 12 *béquilles* (crutches) of sheet steel bent and welded and articulated on the ground, with their profile embodying the diagram of forces. The vertical supports, particularly effective as sculptural forms, and which mark off the essential space of the glazed parallelepiped of the *buvette*, are braced by a box girder with a bolted rectangular section; they were then stabilised by a series of steel tie rods arranged on the southern front and by an open-section longitudinal beam, also made of steel plate, anchored to the ends of the *béquilles*. The latter, and, to a lesser extent the uprights in the façade – made from extruded aluminium alloy profiles on the model of those designed by Prouvé for the Pavillon de l’Aluminium (Paris, 1954) – support the roof, an extremely striking smooth continuous surface with a double curvature in wood and steel.

In spite of the apparent simplicity of the static scheme – a series of asymmetric frames, on which the roof seems to simply rest – the Évian *buvette* conceals such complexity as to make it difficult to read it according to the usual classification into constructional elements. It is impossible to dissociate the load-bearing structure, the envelope and the finishes; each component takes on multiple functions simultaneously (think of the aluminium uprights, which are both structural

supports for the roof and frames for the large windows). The coexistence of very different materials – steel, wood, aluminium, as well as stone and various plastics – also imposed a relentless logic on the assembly. Prouvé's *pensée technique* orchestrated this “amazing symphony of materials”¹² with the complicity of the engineer-architect and mathematician Serge Ketoff, who was responsible for the structural calculations, taking – not without some difficulty! – civil liability for them.

2.2. A Patchwork Anthology

The complication lay in the fact that, having lost the Ateliers, Prouvé could no longer afford to design elaborate new components in bent sheet metal (the *tôle pliée* that had made him famous in the 1930s) or devices requiring complex assembly in cast aluminium. It was now a question of “creating an object conceived according to a rigorously feasible constructional concept”,¹³ as he himself pointed out. In other words, “*savoir-faire* became *pouvoir-faire*”.¹⁴

As in the project for his home in Nancy, completed a few months earlier in equally complex circumstances, the *buvette* at Évian became a ‘patchwork anthology’,¹⁵ in which each component was designed as part of a whole in a fiendish combination of constructional elements that can be traced back to the most disparate universes. “Prêt-à-porter”: industrial commercial products such as Triondal aluminium corrugated sheets for the roofing (an idea of Prouvé, later patented by his long-standing competitor Studal), or the Rousseau wood laminated-multilayer panels (developed by engineer Pierre Gauthier in 1948). ‘Haute-couture’: construction elements designed by Prouvé himself, suitably simplified to facilitate their manufacture by the small Goumy company. “Second hand”: above all components in light alloys – which required more complex extrusion processes than Goumy was unable to carry out – developed for projects on which Prouvé was working at the same time, so that he was able to simply reuse their matrices, such as the splendid drums in folded sheet aluminium of the entrance doors designed for the INP (P. Dufau, 1957). As for the uprights of the building's envelope, these were actually retrieved when the temporary structure of the Pavillon de l'aluminium in Paris was dismantled and reused a few weeks later on the Évian building site.

Freed (momentarily) from the constraint of the notion of serial production, Prouvé played the card of elasticity. Although it was a mix of heterogeneous elements, on the whole the

Évian *buvette* was a meticulously balanced machine, a technological object in which the components were designed to work in perfect synergy. Its assembly, studied with meticulous care, enabled the stresses to be absorbed in keeping with the constructional role of its components and the nature of the different materials, taking into account, of course, their respective physical-chemical characteristics and their compatibility with each other. The control of the profile of the “tensed hyperbolic section” of the three-jointed roof, resembling a curved three-dimensional deck, testifies to the refinement of the technological solutions adopted, where Prouvé's “instinctive understanding of the characteristics of materials and technical processes”¹⁶ played an essential role. The ability of the ‘constructor’ who took risks with a certain nonchalance reached its apex in the Évian *buvette*.

3. RESTORATION

The refinement of the constructional solutions as well as the impeccable control of their execution are attested today by the excellent state of preservation of the building. Diagnosis of it is rather reassuring, apart from some unfortunate alterations. Paradoxically, the complete lack of maintenance has preserved the original components, which are still in place. This is highly unusual in Jean Prouvé's immense output, which has certainly been mistreated in recent years and which today raises major ethical issues going far beyond mere technical constraints.

3.1. Authenticity

Between the demolition of emblematic works (the splendid suspended prestressed glass façade at the CNIT at La Défense, replaced in 1988) or their complete reconstruction in a dramatically simplified version (the façade panels of the headquarters of the Fédération Nationale du Bâtiment in Paris, replaced in 1996-97), there are numerous examples of radical alterations, affecting both the production of the Ateliers at Maxéville and Prouvé's subsequent experiments (the progressive and almost systematic disappearance of the facades panels is a testament to this). At the time of the Maison du Peuple at Clichy, a work from 1935 already heavily reworked in 1993-96, was threatened by an incomprehensible ‘extension’ project (a hotel 96 meters high!), the Évian *buvette* is a happy exception in terms of its material authenticity. Considered as an essential plus in defining the heritage value of the building, in keeping with established scholarly criteria, this crucial factor dictates the definition of the principles of the preserva-



Figure 3. The Évian buvette east façade, demolished in the 1980's © ADHS.

tion project. The pieces that have survived the surge of unrestrained refurbishment that has clashed with Prouvé's heritage over the last twenty years, have become valuable and unique evidence, which indeed deserve to be preserved as the only authentic trace, and the only one capable of expressing the architectural qualities of his built *œuvre*. In other words, the important presence of the original materials is a major asset; this encourages privileging conservation strategies rather than replacement.

3.2. An orderly System

The option of conservation in the face of the identical restitution of the components is naturally inscribed in the new recognition of the material values of buildings that one can observe in recent years in several significant operations on a European

scale. But leaving aside deontological considerations, the conservation approach is also necessary in view of the high degree of technicality of the Évian building and even more so because of the nature of the arrangement of the components.

In recent years, many "dismountable houses" have been carefully restored at great expense by a network of specialist galleries and then sold on to architecture buffs who appreciate "aesthetic stripped of all artifice". Whether they are his *Maisons Tropicales* (1949) or the houses with axial gantry, for example, they are dismembered, the parts inventoried, straightened out, reset, chemically stripped, sanded, then treated and painted, to be finally reassembled, while making good any losses with new components reproduced identically or "using today's technical means", as Jean Nouvel did for the offices of the Ferembal factory.¹⁷

In most cases, these operations are carried out with the care generally lavished on collectable furniture (or cars!), so preserving the material and its patina. While they may be a valuable precedent for certain techniques of restoration of components, they cannot be taken as a model for the Évian building in terms of the procedure used. Just like the “rediscovery” and reassembly of the Pavillon de l’Aluminium in 2001, the comparison with the “nomadic” school of Villejuif is very telling. Five of its bays were dismantled, restored and reassembled, to be sold in 2011 (for 1’830’402 euros!) as a design piece. In the Évian building – precisely, a building, designed by Maurice Novarina and subsequently given material form by Prouvé – we are in another register, which excludes from the outset any attempt at dismantling it: true “precision machinery”, rather than simple Meccano, the *buvette* is actually a perfectly mastered assemblage of elements and components of very different kinds, which works with the stresses in a different way. Designed according to a balance of forces that appears obvious at first glance, but actually conceals a series of ingenious devices, the structure is a *tour de force* that goes well beyond the installation of materials mostly produced industrially. The true interdependence established between the constructional components is therefore to be considered as the real unifying thread running through the project by Jean Prouvé and Serge Ketoff and, furthermore, of any intervention in the Évian building to preserve its qualities. Only respect for the very close-knit relations uniting the different parts of the whole makes it possible to safeguard this “ordered system” which, in spite of its complexity, is perfectly accomplished in strictly technical terms as well as on the formal and architectural plane.

The logic of the assembly, or even the interlacing of the constructional elements – a true synergy, which has nothing of the logic of “industrialisation by compatible components” – dictates the measures to be undertaken. This means that, in order to avoid compromising the equilibrium and the tension of the whole, ingenious but fragile, it is advisable to adopt interventions *in situ*, avoiding at all costs, as far as possible, the removal of the components or their processing in the workshop, which would have catastrophic effects on the preservation of the whole. These are the conclusions that logically emerge from the preliminary studies of the TSAM laboratory at this stage.

Finally, a last crucial point for the safeguarding of the Évian *buvette* has to be mentioned: the character of a true roofed space of this “pavilion amid the greenery” used exclusively in the summer period. It is a temperate space, largely open to the park, simply protected from the wind by the large glazed surfaces. Any operation aimed at converting it into an enclosed and heated space would entail unacceptable modifications both spatially (for example in the case of so-called “box-in-box” strategies) and materially, until its complete “reconstruction”, a heavy-handed operation, certainly incompatible with the status of Prouvé’s and Novarina’s building as a listed historical monument.

The reflections that are currently engaging with the future use of the *buvette*, paralleling the preliminary studies for its restoration, have to take into account this fundamental criterion, indispensable to ensure the durability of a work that is both world-famous and unfortunately somewhat overlooked today.

Figure 4-5. The Évian building in 2017 © Photo TSAM-EPFL/Claudio Merlini.



NOTES

- 1 Ionel Schein, "Jean Prouvé", *Bauen + Wohnen*, 1964, 277.
- 2 Gérard Gassiot-Talabot, "Jean Prouvé", *Cimaise*, 1961, 112.
- 3 Joseph Abram, *L'Architecture moderne en France, 1940-1966*, Paris, Picard, 1999, 91.
- 4 Jacques Lucan, *Architecture en France (1940-2000). Histoire et théories*, Paris, Le Moniteur, 2001, 108.
- 5 Completed in 1957, the building is included in the "Liste des monuments modernes à protéger au titre de la législation sur les Monuments historiques" drafted in June 1963 aware of the need to broaden the scope of the heritage. The building was registered as a Historic Monument in 1986, then ranked in 2013.
- 6 This contribution is the result of the Évian *buvette* restoration preliminary studies carried out by Giulia Marino and Franz Graf within the scope of the TSAM laboratory at the EPFL in 2016-2017.
- 7 Gérard Gassiot-Talabot, cit., 112.
- 8 Benedikt Huber, Jean-Claude Steinegger, *Jean Prouvé. Une architecture par l'industrie*, Zurich, Artemis, 1971, 201.
- 9 Bernard Marrey, *La mort de Jean Prouvé*, Paris, Editions du Linteau, Paris, 2005, 28.
- 10 Ionel Schein, "Jean Prouvé", *Bauen + Wohnen*, 1964, 1.
- 11 Gérard Gassiot-Talabot, cit., 112.
- 12 Pierre L. Debomy, "Entretien avec Jean Prouvé", *Revue du CIMUR*, 1968, 38.
- 13 Benedikt Huber, Jean-Claude Steinegger, *Jean Prouvé. Une architecture par l'industrie*, Zurich, Artemis, 1971, 28.
- 14 Jean-François Archieri, "A partir de Maxéville", Raymond Guidot, Alain Guiheux (Eds.), *Jean Prouvé constructeur (1901-1984)*, Paris, Centre Georges Pompidou, 1990, 149.
- 15 Catherine Drouin, Raymond Guidot, "Deux maisons à histoire", *ibidem*, 209.
- 16 Peter Rice, *L'immaginazione costruttiva*, Milan, Marinotti, 2012 [S. Rice, 1994], 81 and 84.
- 17 <https://www.patrickseguin.com/fr/designers/jean-prouve-architecte/inventaire-maison-jean-prouve/maison-ferembal-1948/>.

BIOGRAPHY

Giulia Marino is specialized in conservation of the modern and contemporary heritage, and in history of 20th century construction techniques and building services. She has a degree in architecture from the University of Florence, a Master in advanced studies in preservation of modern and contemporary built heritage from the University of Geneva and a PhD in architecture from the École polytechnique fédérale de Lausanne, on history of building services in modern architecture. Since 2007 Giulia Marino has been a teacher and researcher at the Laboratory of Techniques and Preservation of Modern Architecture at the EPFL. She is Vice President of Docomomo Switzerland.

SALK INSTITUTE FOR BIOLOGICAL STUDIES: TEAK WINDOW WALL CONSERVATION PROJECT

Kyle Normandin, Sara Lardinois (USA)

ABSTRACT

Situated on a Southern California bluff overlooking the Pacific Ocean, the Salk Institute for Biological Studies (1965) is one of architect Louis I. Kahn's finest works. One of its significant architectural features are the teak window wall assemblies. After fifty years in an exposed marine environment, these window walls had weathered to a non-uniform appearance and, in some locations, had deteriorated due to moisture

infiltration, insect infestation, and varying maintenance practices over time.

In 2013 the Salk Institute partnered with the Getty Conservation Institute (GCI) to develop a conservation project for the long-term care of the teak window walls. The first phase of the project included preliminary research, survey and investigation of existing conditions, and diagnoses of deterioration mechanisms. A trial mock-up program was proposed to

Figure 1. Louis I. Kahn, Salk Institute for Biological Studies, La Jolla, California, USA, 1965. View of plaza, flanked by study towers. © Elizabeth Daniels, 2017.



evaluate three repair approaches ranging in degree of intervention from minor to major.

In 2015, the GCI along with Wiss, Janney, Elstner Associates, Inc. (WJE) worked with the Salk Institute to develop and implement the trial mock-up program, including evaluation of preliminary treatment recommendations. As part of design development, WJE finalized the repair approaches and designed a repair program to renew all of the windows in place, including preparation of construction drawings and specifications. Construction started in 2016 and was completed in 2017.

This paper discusses the conservation decision-making process for determining the appropriate level of intervention, considering both visual and material integrity, as the site possesses high aesthetic values and significance. It also examines how conservation protocols were balanced with performance-based interventions to sustain the original window assemblies over time.

1. INTRODUCTION

Situated on a bluff overlooking the Pacific Ocean, in La Jolla, California, the Salk Institute for Biological Studies (1965) is one of architect Louis I. Kahn's finest works. Kahn was commissioned by Jonas E. Salk, the creator of the first successful polio vaccine, to design an inspiring campus for his new scientific research institute. Kahn's campus design consists of two nearly identical wings of laboratory, study, and office space mirroring each other on either side of a paved central plaza (Fig. 1). One of the major architectural elements of the site are the approximately two hundred prefabricated teak window wall assemblies set within openings in the concrete walls of the study towers and office wings. After fifty years in an exposed marine environment, the window wall assemblies were deteriorated, weathered, and in need of repair. The Salk Institute embarked upon a conservation-based repair program from 2013 to 2017 to address the deterioration of the window walls. The aim was to develop a conservation solution in which the original window walls could be retained and repaired, as they are a critical part of the site's cultural significance.

This paper provides a brief overview of the design and significance of the window walls at the Salk Institute, and discusses weathering and deterioration mechanisms and conservation approaches and solutions, highlighting some of the key challenges of the work. This paper complements an article about the project that will be published in 2018 in a special issue of *Docomomo Journal* on the works of Louis I. Kahn.

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2. TEAK WINDOW WALL ASSEMBLIES

2.1. Description

The teak window walls are prefabricated assemblies consisting of different combinations of horizontal sliding window sashes, louvers, and/or panelled shutters, with an internal pocket where required to accommodate these sliding components. They were constructed using teak structural members and softwood stud framing that was sheathed with asbestos-cement (transite) board. The exterior face of the wall is clad in vertical tongue-and-groove teak siding, and the interior face is clad in oak panelling or gypsum board. Narrow glazed lights at either side of the assembly served as shim space when the assemblies were set in the wall, and allow for additional light to wash the concrete walls of the work spaces. Prefabrication was selected as both a means of reducing project costs and increasing quality; the units were partially assembled in a local cabinetmaker's shop prior to being transported to the site and lifted into place by crane.

2.2. Significance

The window wall assemblies are an exceptionally significant element of the Salk Institute, expressing a human-scale element within the monumental structure. One of the design features of the Salk Institute is the physical separation of the individual work spaces of the study towers and offices from the collective work space of the laboratories.¹ The use of individual window walls with operable sashes, in contrast to the large expanses of inoperable metal-framed window walls at the laboratories, is an exterior expression of these different spaces.

Though the window walls are prefabricated units - often thought of as an industrialized process - Kahn innovatively synthesized industry and craft through the customization of the units and the detailing of the teak by carpenters to fit many different openings in the building complex. The design of these window walls is also significant within Kahn's larger body of work, as they expand upon a language of custom exterior millwork designed and established in his office. The use of wood for the window walls together with concrete, "often conceived of as materials of opposite character", results in a contrasting but complementary effect.² Teak was specified as it was thought to be a durable, relatively maintenance-free material requiring no finish coating, and that its anticipated natural, bleached, white-to-grey weathered appearance would be compatible with the colour of the adjacent concrete, thus contributing to the overall subtle palette of building materials.³

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3. WINDOW DETERIORATION AND WEATHERING, 1965–2013

The institute has a long history of good stewardship of the site. Over time, it carried out minor to moderate maintenance efforts and repairs to address localised deterioration and aesthetic concerns at the window assemblies. However, as the institute approached its fiftieth birthday - an age when many modern buildings require their first major repair or intervention - the long-term exposure to the marine environment and sunshine in La Jolla had led to surface erosion and overall degradation of the window assemblies that varied significantly across different elevations. A fungal biofilm appeared on the surface of the wood as early as 1967, spreading from nearby eucalyptus trees and resulting in a black appearance that varied considerably by exposure (Fig. 2). At that time, the presence of this fungus was

particularly troublesome to Dr. Salk and became a unique challenge for the institute, whose desire was to retain the appearance of freshly milled teak.

Initially, a program of routine washing to remove the fungal biofilm was undertaken, but washing practices accelerated erosion of the wood. In the 1970s, surface treatments were applied with the aim of protecting the wood and preventing the return of the biofilm; however, they discoloured the wood, giving it a deep red appearance that aesthetically contrasted with the adjacent concrete. Furthermore, the biofilm returned over time. Additionally, the assemblies suffered from air and moisture infiltration, due to the omission of flashings and window weatherstripping during the original construction project and failure of perimeter sealants. They also exhibited variable termite damage to both the teak and the internal framing. Yet,

Figure 2. Louis I. Kahn, Salk Institute for Biological Studies, La Jolla, California, USA, 1965. View of west-facing office wing, illustrating black fungal biofilm at base of window wall assemblies prior to conservation. © J. Paul Getty Trust, 2013.



despite these conditions, most of the original teak components of the window wall assemblies remained relatively intact; and as a result, the assemblies retained a high degree of integrity. Given these conditions, the Salk Institute had originally assumed that total replacement of the window walls might be necessary. However, the institute realized that such a project would result in the loss of a significant amount of the building's original material fabric and that this loss would also raise questions about whether replacing such a quantity of a rare natural resource, Southeast Asian teak, was necessary.

4. CONSERVATION PROJECT

4.1. Project Approach

In 2013, the Salk Institute partnered with the Getty Conservation Institute (GCI) to determine if there was way to conserve, rather than replace, the existing teak window assemblies and better protect the site's significance. The resulting project, the Salk Institute for Biological Studies Teak Window Wall Conservation Project (2013–2017), demonstrated how a conservation-based approach could be applied to address the care of the window wall assemblies in a comprehensive, long-term manner. The project utilized a standard conservation methodology that has long been applied to a variety of heritage sites, including modern heritage sites. This process can be summarized as:

- Understanding the place and what is significant about it;
- Gathering information about its physical condition, and external requirements such as codes, client needs, and feasible uses;
- Developing conservation principles or guidelines for retaining significance in future use or development; and
- Applying those principles to guide a design response and implementation.

The project was divided into four phases. Phase 1 of the program included preliminary historical research and an assessment of significance, condition surveys, investigative inspection openings, wood and fungus identification, analyses of past surface treatments, and diagnosis of weathering and deterioration mechanisms. Conservation principles and guidelines were then prepared to guide the development of initial treatment approaches. In phase 2 of the work, the GCI and the Salk's conservation architect, Wiss, Janney, Elstner Associates, Inc., developed a trial mock-up program to assess the protocols of three treatments: minor, moderate, and major interventions. In phase 3 (2015), the treatment approaches were refined by WJE and developed into a project manual

that included construction repair drawings and technical specifications. The construction project (phase 4) started in 2016 and was completed in June 2017 (Fig. 3).

For the Salk Institute, the shift from an asset management approach, which involved responding to maintenance and repair issues as they arose, to a long-term stewardship approach with conservation at its core provided much needed guidance in caring for the site. A second shift in approach was adopting a conservation methodology for developing and implementing the physical repairs. This included starting with documentation and research to understand the problems and their causes, and then developing solutions to address these problems, as described above. As part of this process, a trial repair program confirmed the efficacy of the solutions. This had clear parallels with the scientific research methodology that the Salk Institute practices in its biological studies and research.

4.2. Guiding Conservation Principles

The following conservation principles were considered when developing the three different conservation treatment approaches:

- Preserve significance, considering the relative contribution of each component in the significance of the overall assembly (Fig. 4).
- Preserve the overall integrity of the window wall assembly through preservation of the original teak cladding and sliding windows, louvers, and shutters to the greatest extent possible.
- Preserve and respect the natural characteristics of the wood and the complementary relationship between the subtle palette of materials.
- Allow for subtle to moderate variations in the exterior wood, but avoid high or extreme variations by retarding the growth of the fungal biofilm and removing past surface coatings.
- Fulfil the assembly's primary purpose as functional windows and a barrier to the elements by retaining the functionality of the windows, encouraging improvements to enhance performance, and mitigating hazardous materials.

4.3 Treatment Typologies

Minor interventions included in-situ cleaning and repair of existing window wall assemblies exhibiting minor to moderate erosion at the teak cladding and no termite damage. Moderate interventions included in-kind replacement of tongue-and-groove teak siding exhibiting erosion and minor deterioration in the internal framing. Major interventions included in-kind replacement of tongue-and-groove teak siding and other components exhibiting severe erosion, including struc-



Figure 3. Salk Institute for Biological Studies, La Jolla, California, USA, 2017. View of conserved window wall assembly in the north study towers.
© Wiss, Janney, Elstner Associates Inc., 2017.

tural repair of major frame deterioration exhibiting severe termite damage. All three levels of intervention included cleaning and removal of past surface coatings, application of new surface treatments to retard the growth of the biofilm and better integrate existing and replacement teak, preventive treatment to control termites, and installation of head flashings. For moderate and major interventions, improvements to resist air and moisture infiltration, such as the installation of additional flashings and weather barriers, were carried out to enhance long-term performance, thus sustaining and further protecting the window assemblies. Transite panels remained in place, where possible; where disturbed, they were replaced with compatible materials. Both reclaimed teak and new First European Quality (FEQ) teak from Southeast Asia were considered as replacement materials; FEQ was chosen

for selective replacement based on consistency with quality and sourcing requirements.

4.4. Challenges and Solutions

Numerous technical challenges were identified throughout the preliminary investigation and later during development of the construction documents that included the window repair design and conservation treatments. These challenges included the following:

1. moisture and air infiltration problems
2. fungal biofilm growth
3. teak material sourcing

The original design and shop fabrication drawings showed metal flashings and weatherstripping at the head and sill of the window walls and at the base of the sliding sashes; how-

Significance Assessment of Window Wall Components

CONSERVING
MODERN
ARCHITECTURE

Component (Partial list included in this chart)	Signif. Grading	Attribute				Other Considerations (code requirements, owner objectives)
		Form	Fabric	Location	Use/ Function	
Overall assembly	E	x	x	x	x	
Exterior teak (material)	E	x	x	x	x	Environmental concerns
Exterior teak (joinery, details)	H	x	x	x	x	Consider subtle design modifications to improve deficiencies
Internal wood framing	M	x		x	x	Poor condition; use compatible material for repairs
Exterior sealants	M			x	x	Critical to overall performance
Transite board	M	x		x	x	Hazardous material – consider replacement with sheet product
Past surface coatings	I					Patchy weathering & color detracts from aesthetic significance, but must consider owner expectations for appearance

Key: (E) = Exceptional; (H) = High; (M) = Moderate; (L) = Little; and (I) = Intrusive

Figure 4. Significance assessment of the different components of the window wall assemblies. Components with a higher level of significance were retained or only minimally altered. Components with a lower level of significance were able to undergo greater change without substantially impacting the overall significance of the assemblies. Concept adapted from Draft Sydney Opera House: Conservation Management Plan, 4th ed. and *tolerance for change* concept developed by Sheridan Burke in other conservation management plans prepared by GML Heritage in Australia. © J. Paul Getty Trust, 2017.

ever, this detailing was never installed due to cost constraints. These early omissions - a deviation from the original design - presented a challenge to the long-term performance of the windows and the management of moisture and water over the years. Without flashings, the perimeter sealants were the only means of preventing air and water infiltration into the wall cavity. They were insufficient and water leaks were reported soon after construction was completed. In order to address these leaks, metal flashings were added at the top of the window head assembly as per the original specifications (Fig. 5). The performance of the conserved window assemblies was further enhanced by integrating a weather barrier system in the wall cavity to mitigate potential air and water infiltration. One challenge was to make these improvements without altering the window assemblies' visual characteristics, original design, and craftsmanship. For example, the construction of

the vertical tongue-and-groove teak siding made it difficult to disassemble the window and access the wall cavities for installation of improvements without causing significant damage. In minor interventions, where the teak siding was to remain in place, only the head flashings were installed. Where deteriorated teak had to be removed in moderate and major repair interventions, it was possible to provide weatherproofing throughout. Flashings were integrated at the head and base of the window assemblies, and air and weather barrier detailing was installed and concealed behind the teak siding.

The fungal biofilm was an ongoing issue. Due its host environment in the surrounding eucalyptus trees, it would not be possible to entirely eliminate it from the environment or the surface of the teak wood. However, its growth could be retarded by reducing potential contact with water and moisture. One solution considered was to trim the end grains of the vertical



Figure 5. Salk Institute for Biological Studies, La Jolla, California, USA, 2017. View of low-profile metal flashing and sealant inserted at the top of the window head assembly. © Wiss, Janney, Elstner Associates Inc., 2017.

wood elements in situ to prevent moisture uptake or wicking. Another solution was to apply a water repellent and fungicide treatment to the surface of the wood. Whilst both of these options were tested in the initial mock-up phase, neither treatment was able to address the problem on its own. Ultimately, a combination treatment was utilized in all interventions. Care was taken to select a translucent coating that matched the appearance of freshly milled teak in order to maintain its complementary relationship with the adjacent concrete and to better integrate areas of new and original teak. This was of particular importance when they would both be visually perceptible as part of a single window assembly or building area.

In areas where the teak material was considerably deteriorated, teak wood was selectively replaced in-kind. As part of the installation, the teak wood was configured into a panel system that could allow access to the window wall cavities in case of water leaks in the future.

The final and overarching challenge was finding a way to balance the need to repair or replace material with the need to maintain overall visual integrity. As the Salk Institute is an architecturally significant site with high aesthetic value, it was important to maintain visual and material integrity and authenticity, especially in areas that are highly visible.

The use of all three treatment approaches for the project responded not only to the varying material conditions, but also to long-term concerns about weathering and environmental exposure. In selecting a treatment for each window location, it was important to consider not only the physical condition

of the material fabric but also the visual compatibility of the treatment with other treatments implemented in the same area. Consideration was given to applying similar treatments to a particular area of the building based on preferential exposure. Ultimately, the differences in appearance between the three treatment approaches were minimized and the applied surface treatments further maintained visual integrity throughout the complex.

5. CONCLUSIONS

One of the major successes of the project is that over two-thirds of the original teak was conserved in place, preserving not only material authenticity but also a rare natural material resource - Southeast Asian teak. The conservation repair approach represented a dramatic shift from the complete window wall assembly replacement program initially anticipated by the Salk Institute.

The conservation-based methodology used for the window project successfully demonstrated that this approach can also be applied in caring for the palette of modern materials used throughout the building complex and its setting, including concrete, travertine, metals, and brick. Furthermore, this conservation-based approach has been incorporated into the Salk Institute's asset management process through the adoption of a recently completed conservation management plan for the place and its setting, which will guide the care of the complex, including the buildings, spaces, and material fabric into the future.

ACKNOWLEDGMENTS

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BIOGRAPHIES

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THE YAMANASHI COMMUNICATION CENTER AS MODERN LIVING HERITAGE FROM THE COMMUNICATION OF INFORMATION TO THE COMMUNICATION OF CONSERVATION: A CASE STUDY OF THE ADAPTABLE RE-USE OF METABOLIST ARCHITECTURE

Kenji Watanbe (Japan)

ABSTRACT

The Yamanashi Communication Centre (YCC) designed by Kenzo Tange and built in 1967, has been undergoing repeated metamorphosis to expand or diminish in volume and to conserve and preserve the building's characteristics of building itself in accordance with the original concept of Metabolist Architecture. For instance, in 2014, after the 2011 Great East-Japan Earthquake, to adopt seismic isolation retrofit system, which was likely the first example of cultural heritage preservation attempted by a private company in Japan. The YCC Group began this project by naming it the 'Yamanashi Cultural Centre 100 Year Project', which means using this building for more 50 years. This paper focuses on the YCC's conservation and preservation processes over 50 years of adaptation for social and functional change against the cultural background of its construction in the 1960s to the DOCOMOMO mission's new approach of adaptable re-use in the 2010s, and aims to elucidate the meanings and practical methods of adopting the new technologies of the seismic isolation retrofit system underlying the concept of 'Metamorphosis=Metabolism'. This approach could be called gradualism conservation with respect to an architecture-in-time approach. The case study of the YCC's conservation and preservation practices suggests the possibility of the transformation of the original concept of the communication of information to the concept of the communication of conservation itself.

1. INTRODUCTION

The Yamanashi Communication Center (YCC) is a mass-media conglomerate building housing a newspaper, television and radio broadcasting stations, a printing company and some public facilities, such as a hall space. The complex was designed in 1966 by Kenzo Tange (1913-2005) and his architectural firm (URTEC) and built in 1967.

In 2004, DOCOMOMO Japan¹⁾ has selected the YCC as one of 100 important buildings and evaluated it as a successful and realised example of Metabolist architecture in the 1960s in Ja-

pan. In 2013, when the Yamanashi Broadcasting System (YBS) Group celebrated its 140th anniversary, YBS president, Eiich Noguchi announced the slogan 'RE DISCOVER PROJECT: Let's reconsider our roots once again' through which YBS would try to propel the building's heritage towards the future.

In 2013, several ceremonies commemorating the 100th anniversary of Tange's birth took place, including an exhibition. These events have promoted the re-evaluation of Tange's works including *Hiroshima Peace Center* (1955), *Kagawa Prefectural Government Hall* (1958), *Kagawa Prefectural Gymnasium* (1964) and argued for their value which directs us to towards the future.

In addition to the temporary events and actions noted above, the YCC has been undergoing repeated changes since 1974 to expand or diminish in volume and to conserve and preserve the building's characteristics in accordance with the original concepts of Metabolist architecture. For instance, after the 2011 Great East-Japan Earthquake, the YBS Group decided in 2014 to adopt seismic isolation retrofit system, which was likely the first example of cultural heritage preservation attempted by a private company in Japan. The YBS Group began this project by naming it the 'Yamanashi Cultural Center 100-Year Project' which suggests an intention to use this building for at least 50 more years.

This paper focuses on the YCC's conservation and preservation processes over 50 years of adaptation for social and functional change against cultural background of its construction in the 1960s to the DOCOMOMO mission's new approach of adaptable re-use in the 2010s, and aims to elucidate the meanings and practical methods for adopting the new technologies of the seismic isolation retrofit system underlying the concept of 'Metamorphosis=Metabolism'.

2. THE METABOLISM MOVEMENT AS ARCHITECTURAL CONCEPT

2.1 The Aesthetic of Growth and Transformation

Kenzo Tange discussed his main idea of the YCC in an interview with *Space Design* in April 1967, saying,

What we got our attention was thinking about the integration of the functions as well as the growth and transformation of the functions themselves, which means the functions should be implicated in their own processes. ²⁾

Tange insisted on the possibilities of growth and transformation of architectural space in contrast to the static traditional image of architecture. His ideas would be brought abroad and reflected upon by cultural radicals such as Team X in 1950s Britain and the Netherlands; Tange especially influenced the British architects, Alison and Peter Smithson who opposed Le

Corbusier's modern movement. The Smithsons proposed their idea of *aesthetic of growth and change* idea at CIAM at Otterlo in 1959, which Tange also attended ³⁾. Tange also insisted,

There is another idea that we would like to positively propose. According to our concept, the design of the YCC has been already included an estimated basic skeleton for a future extension, ... What we expect the difference in design to be between now and later in the 20th century is whether the design could reflect upon dynamic growth and transformation. We want something expres-

Figure 1. General View of the YCC Building, 2014, © YCC Group 2014



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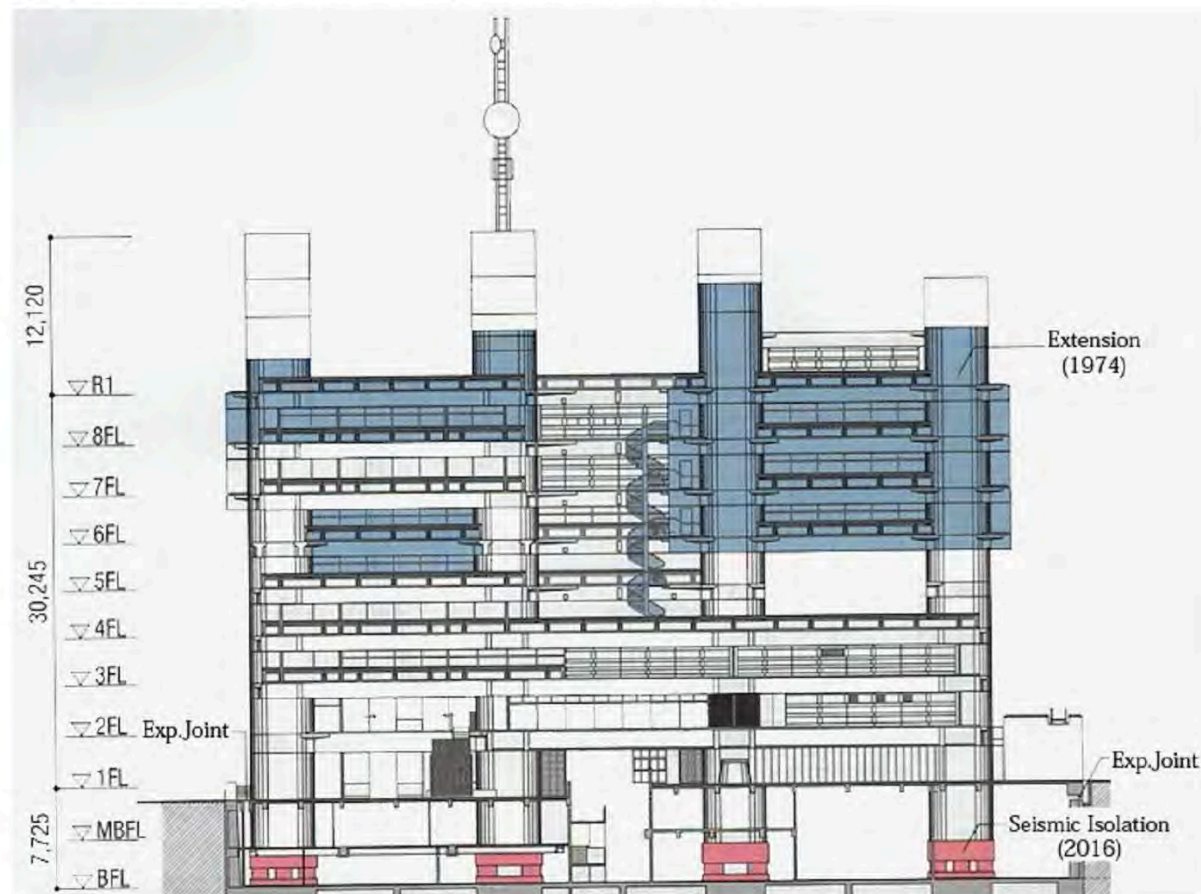
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sion of space not like a rigid square or rectangular box. Perhaps, the space that we require should always imply something unfinished continuously. At the same time, however, at any level, we want the parts to be related to each other, and totally well-organised.⁴⁾

This statement is an example of the correspondence between Tange and the Metabolism Movement in Japan, which had been already initiated at that time by the generation after Tange's, including Kiyonori Kikutake, Kisho Kurokawa and others. These figures brought a concept from the biological domain – Metabolism – to the field of architecture and urban design. Examples of this style include Kikutake's own residence *Sky House* (1958) and Kurokawa's *Nakagin Capsule Tower* (1972), a building with room capsules room in the

centre of Tokyo. Both buildings were, however, considered failed works as examples Metabolist architecture. Although *Sky House* included small cabinets for Kikutake's children hanging from the first floor, the cabinets unfortunately did not comply with the children's actual lives. While the *Nakagin Capsule Tower* was completed after the YCC, its well-known story of failure teaches us the gap between Kurokawa's Metabolist concept of changing each capsule as they deteriorate over time and the reality that no capsules were ever changed after the building's completion⁵⁾. Therefore, the YCC could be described as a successful example of Metabolist architecture. Tange himself never described his ideas by using the term 'Metabolism', perhaps due to pride, instead, refer-

Figure 2. Cross Section (Blue parts: 1974 extension, Pink parts: 2017 retrofit) © YCC Group 2017



ring to his ideas using expressions such as 'growth and transformation', 'future extension', 'unfinished' and 'organic relationship of parts and the whole system'.

2.2 Communication of three-dimensional Information

In the late 1950s, at his academic urban planning and design laboratory at the University of Tokyo, Tange began analysing and investigating the situation and theorisation of future design systems for architecture and urbanization. In collaboration with younger architects and scholars, including Sachio Otani, Arata Isozaki and Takashi Asada, Tange proposed the 'Tokyo Plan 1960', the 'Tsukiji Project' (a part of which had been realised as the *Dentsu Head Office*), the 'Skopje Project' (a part of which had been realised as *Skopje New City*) and the *Osaka International Exposition*, which he master-planned and coordinated in 1970.

The design of the YCC had proceeded in parallel with these projects and had been reflected upon through the concept of the 'communication of three-dimensional information'. Tange announced this concept in an article in *Kenchiku-Bunka* (Architectural Culture) in April 1967 titled 'Space as Places for Information'⁶⁾.

The design of the YCC is based around 16 enormous vertical cores of cylindrical superstructures in a 17m (north-south) by 15m (east-west) axial grid formation that supports the inserted horizontal tray-like superstructures. While the cylindrical components provide the vertical circulation of elevators and staircases, as well as the spaces for the mechanical and HVAC-related facilities, the horizontal tray-like structures provide all the offices, studios and other work-related spaces and facilities, while the vacant or pilotis zones provide the apparatus for the inner private domain to relate and intermix with the public domain or society at large. The metabolistic notion is based on an urban-spatial theory that features the architectonic allowance for anticipated possible future growth. Transformation is adopted into the building's design concept.

The concept of the YCC's functional fluency of 'spaces as places for information' has reached the physical space and design not by abstract and unrealistic 'Metabolist ideas like those of Kurokawa but through a concrete logical methodology based on academic research and investigation. The cores of the cylindrical superstructures would control and gather all the vertical circulation of information as a main axis, and from these junctions of circulation, this building would be designed as a three-dimensional information city.

3. THE METABOLISM MOVEMENT AS A CONSERVATION AND PRESERVATION CONCEPT

3.1 Practice for Gradualism Conservation

As mentioned above, the YCC has not been renovated or preserved temporally or shown as a dramatic renovation on the popular Japanese TV program 'Dramatic Change: Before and After'. Instead, since its completion in 1967, the YCC has been continually maintained to expand or diminish in volume and to conserve and preserve like the growth as the *Metamorphosis=Metabolism* of a living organism for 50 years divided in seven stages.

The building maintenance section of the YCC has been organising and planning a scheme for responding to any problems that occur, such as exchanging deteriorating parts of the building and the extending and contracting the volume to transform functions and utilities. However, these schemes were never carried out until planners could understand and respect the building's original characteristics as mentioned above. Adding detailed parts of the building, including to the outside walls or interior finish, could be referred to as 'gradualism conservation'.

Buildings in which this method is adopted do not look explicitly different or radically changed, but one can find small changes at first glance. It is possible to compare gradual conservation with gradualism socialism, the 19th century English socialist movement inaugurated by the Fabian Society. The Fabian Society adopted not the radical, concentrated socialist movements of Marxist Revolution in Germany or Soviet Russia but rather gradual social reformation over time. Such an English approach might stem from a critical attitude towards the French Revolution by figures such as Edmond Burke, who emphasized maintaining traditional values.

The process of gradualism conservation and preservation of the YCC could be divided into seven stages; the first from 1974 to 1975; the second in 1990; the third in 1997; the fourth in 2000; the fifth in 2005; the sixth in 2013; and the seventh from 2016 to 2017.

In the first stage, the northeast corner of the building was extended to create additional space on the sixth, seventh and eighth floors, and the southeast corner was extended on the fifth, sixth and eighth floors, creating a new dining room and a cafeteria with a kitchen. The interior space was designed in an Italian style by using black-and-white checkered flooring and installing *Eames chairs* and *Hammer Mirror products* since the client originally had a strong preference for using high quality materials.

In the second stage, renovation was focused on the entrance hall and the interior corridor fittings and the office partition walls from the ground floor to the fifth floor. The purpose of this renovation was to set up a new circulation pattern in which people could access the building smoothly. However, in this renovation, the original structure, through which people could access the inside of the building via a connecting deck, was lost. In the third stage, new floors and spaces were added on the seventh floor for a VIP room and on the eighth floor for a radio broadcasting studio from which one can observe Mt. Fuji through a picture window and provide announcements to describe Mt. Fuji's appearance over the air.

In the fourth stage, preservation was mainly focused on changing the outside wall panels and the stained surfaces of concrete handrails to the die-cast aluminium panels which imitated the look of the original concrete. This project succeeded in lightening the building's weight by 200 tons, a structural advantage for earthquake resistance.

In the fifth stage, according to a separate printing section, the huge rotary press machine in the double basement space was removed to add floors for a news studio beside the control room. These new spaces were intended to respond to the needs of digital terrestrial television broadcasting, which required twice as many rooms as before.

In the sixth stage, as the YBS celebrated the 140th anniversary of its founding, the scale of the renovation could be compared with the first stage. The western entrance gate was rebuilt with a glass curtain wall as a windscreen room so visitors could access the YCC more smoothly from Kofu Station. At the same time, this windscreen room, with an eye-catching wall with a large LED signage panel, was to be an image of the original eye-catching wall constructed fifty years previously. A shop and cafeteria approached by escalator opened on the second floor, in the double-height entrance hall.

In the seventh stage, the YBS Group has started a renovation project called the '*Yamanashi Cultural Centre 100-years Project*' to create seismic base isolation retrofit system to be discussed below.

3.2 Adaptive Re-use for Living Heritage

Since announcing the '*Eindhoven and Seoul Statements*' in 2014, DOCOMOMO's mission has changed from focusing on more academic works of documentation and research on the conserving modern heritage to the more practical aspects of sustainability and adaptability in re-using modern heritage. Almost simultaneously, the International Council on Monuments and Sites (ICOMOS) International Science Committee on Twentieth

Century Heritage (ISC20) developed guidelines for the conservation of 20th century heritage sites. As a contribution to this debate, the International Conference 'Intervention Approaches for the Twentieth Century Architectural Heritage: CAH 20th C' adopted the 'Approaches for the Conservation of Twentieth Century Architectural Heritage, Madrid Document 2011' on 16 June 2011⁷⁾. This raised the issue of modern heritage conservation, particularly, the identification of the concepts of intervention, authenticity, integrity and living heritage.

More recently, the theme of the 14th International DOCOMOMO conference in 2016 was '*Adaptive Re-use: The Modern Movement towards the Future*' in which the author presented a paper entitled '*Conservative Surgery Method for the Re-use of a Modern Hospital in Yokosuka*'⁸⁾. Therefore, the YCC's conservation and preservation processes will be effective for reflecting upon methods for the adaptive re-use for living heritage.

3.3 Using a seismic Base Isolation Retrofit System

Among the modernist architecture buildings selected by DOCOMOMO JAPAN, the *National Museum of Western Art, Main Building* (1998), designed by Le Corbusier and the *Ministry of Foreign Affairs* (2007), were adopted for seismic isolation retrofitting. Both are public buildings were built under the initiative of the Ministry of Land, Infrastructure and Transport. Meanwhile, among the private buildings selected by DOCOMOMO, the YCC might be the first building to undertake a similar seismic isolation retrofitting despite the cost. This choice could reflect upon the YBS Group's intense belief that this should be part of their legacy.

There are three main reasons to adopt a seismic isolation retrofit. First, the YBS Group and Tange Architects Associates did not want a change to the design features of the Metabolist architecture, in which the 16 column cores of the YCC and the floor slab are jointed. Second, the retrofit required keeping the working space above the ground floor during the construction. Third, there was not enough space for a construction site.

To explain the construction method for seismic isolation, a *second basement intermediate seismic isolation model*, which cuts the 16 cylindrical cores into a two-story basement and installs a seismic device, was adopted. This enable seismic isolation by separating the first floor from surrounding ground. A secure clearance *seismic isolation gap* of 40 centimetres was installed to prevent collision with the surrounding ground. On the gable column that hits the outside of the 16 cylinders, an X forming a foundation with the enhanced function was installed to resist '*tensile force*' (the seismic isolation device cross-linear

bearing (CLB). On the inner column of the building, a bowl base with a base isolation device called a 'tin rubber bearing' (SnRB) that enhanced damping performance to absorb lateral shaking from earthquakes was adapted.

4. COMMUNICATION OF CONSERVATION

4.1 Exhibition and Symposium

In 2013, the YBS Group celebrated the 140th anniversary of its founding, and the YBS president announced the slogan

'RE DISCOVER PROJECT, Let's reconsider our roots once again', and plans to publish the brochure 'Sannichi YBS RE-DISCOVER PROJECT 140'. In 2014, the YBS public relations department published another brochure 'History of Yamanashi Cultural Centre' to offer a brief history of Kenzo Tange and his works and of the YCC's design and construction, including its renovation.

The contents of these publications were arranged and edited as exhibition sources for the 'Yamanashi Cultural Centre and

Figure 3. Parts of Gradualism Conservation 2007 © YCC Group 2017



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Kenzo Tange works Yamanashi Cultural Centre as Symbolic Metabolist Architecture' exhibition and symposium held at the YBS Hall and Communication Space in the basement of the building in October 2014.

4.2 Guided Tour

According to the YBS public relations department, many people, including architectural experts and students from Japan and overseas have visited the site since its registration by DOCOMOMO Japan in 2004. After the completion of the seismic isolation, structural engineers and researchers studying the conservation and preservation of modern architecture have also been to the site. The YBS public relations department has adopted a unique recipe for a guided tour of the building. They hand visitors an

iPad on which textual information and original photos have been installed to be shown during the guided tour. It is useful for the YBS company to take advantage of these types of digital tools. Their attempts to publish relevant materials and introduce the building to visitors could pioneer possibilities for the communication of conservation.

5. CONCLUSION

Since 1974, the YCC has been undergoing repeated changes to expand or diminish in size and to conserve and preserve the building's characteristics by adopting new technological engineering approached for seismic base isolation retrofit system in accordance with the original concepts of *Metabolist architecture*. This approach could be called as gradualism con-

Figure 4. Details of Retrofit System 2017 © Kenji Watanabe 2017



servation with respect to an architecture-in-time approach. The case study of the YCC's conservation and preservation practices suggest the possibility of the transformation of the original concept of the communication of information to the concept of the communication of conservation itself.

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BIOGRAPHY

Kenji Watanabe Professor of Tokai University, born in 1961 Fukuoka, Japan, graduated from Nihon University Bachelor and Graduate School Master course in 1987, worked for Yoshinobu Ashihara Architects and Associates from 1987 to 1993 as licensed architect, member of Architectural Institute of Japan and Japan Institute of Architects (UIA), studied and researched at Architectural Association Graduate School History and Theory Course under R. Landau and N. Bullock from 1993 to 1998, and got PhD from University of Tokyo supervised by Professor H. Suzuki, worked at Muraji Takeo Architectural Laboratory from 2000 to 2004, started teaching history and theory of modern architecture and design at Tokai University from 2005, member of DOCOMOMO Japan from 1998 (director from 2010), member of international science committee of registration DOCOMOMO International from 2008.

Session 13 ENERGY EFFICIENCY AND ENVIRONMENTAL IMPACT

Session Chair: Franz Graf (Switzerland)



Energy efficiency is producing a real transfiguration of the contemporary city that is silently under way all around us, and as an uncontrolled environmental impact in terms of architectural quality¹. Of course there are some landmark operations such as the reinterpretation of the Wohnüberbauung Heuried (Paillard and Leemann, at Wiedikon 1969) by Adrien Streich or the renovation of the Cité du Grand Parc at Bordeaux by Lacaton et Vassal, and Druot and Hutin, made on ordinary housing to which each designer has in his own way contributed a “+Plus”² to the existing fabric (effectively a new building), it is a pity that more common practice generally misses the mark.

Major physical interventions, clumsy on the aesthetic level never mind the heritage impact, are the norm. They are made independently of the intrinsic qualities of buildings. Tougher energy legislation is compounding the issue. New, over-insulated and ventilated façades are popping out all over, flattening modelled detail and erasing lines of force that were once described with utmost carefulness. We have metal siding and fibre-cement wrapped around volumes and cloaking balconies, losing nuanced reliefs, simplifying and impoverishing the volumetrics. Clumsy, irreversible “thermal renovations” follow a trend for “upgrading” or, more prosaically, achieving “code compliance” that too often rides roughshod over the need for a prior determination of the value of the built object and ignores its intrinsic qualities. Undertaken at huge cost, they should give us pause for reflection.

The imperatives of energy conservation – rightly recognised as inescapable – are becoming the pretext for giving buildings a new identity, even in heritage context. In a more subtle way it seems that even objects acknowledged as of exceptional historical importance might not be free from harm in spite of the tight constraints of the heritage planning context. While some interventions – such as the *Unité d’habitation* in Marseille – have fortunately established constraints for energy retrofitting as a priority from the outset, others cases like the Siedlung Halen, Berne-Kirchlindach (1955-61), an iconic

housing estate by Atelier 5 known and admired well beyond the Swiss border, face an uncertain future. In much the same vein is the recent “energy upgrade” of the Miremont-le-Crêt complex, Geneva (1956-57) by Marc J. Saugey. Listed as a *Monument historique* in 2002, it illustrates the limitations of the exercise where there is no clear strategy setting out what is to be achieved³. On one level, a fruitful cooperation involving the cantonal heritage and energy efficiency authorities has spared Saugey’s building from the worst effects of “code compliance” – meaning radical alteration – allowing performance below the legal consumption limits thanks to a series of well-conceived off-sets. But on another level, the need to demonstrate “exemplary” energy efficiency outcomes has by default sanctioned an overall “upgrade” strategy that uses a repertoire of hi-tech, thermal-performance products aiming to meet insulation values similar to those of new constructions, even though they have somewhat uncomfortable consequences in terms of the visual and architectural qualities of the original ensemble...

Emblematic of these modern works, where notions of lightness and transparency play a crucial role, marrying technical and architectural innovation, the case of the “energy upgrade” at Miremont-le-Crêt encapsulates the difficulties of reconciling the cultural challenge of heritage conservation with environmental paradigms. On another scale, built assets are repeatedly faced with hasty and all too radical transformations with no overarching strategy capable of placing limits on what is effectively a transfiguration of the contemporary city. Aside from cultural considerations – or even just the architectural ones, the general “dumbing down” of our environment – with recession on the horizon we should be looking at this practice with a new sense of urgency. In stating that “the different strategic options for restoration stem from, among other things, a precise analysis of the existing building”, technical guideline 2047 *Rénovation énergétique des bâtiments*, recently published by the *Société des Ingénieurs et des Architectes suisses* (SIA), gives crucial indications.

This salutary stance has grown out of a number of highly significant experiences. A case in point is the guidelines developed for the impressive Barbican complex in London (1953-57) which identifies the original elements as the sole traces of authentic fabric, the only evidence capable of expressing the complex's architectural qualities, including the often neglected issue of exterior spaces. In Switzerland we can point to the important work by architects Miller and Maranta in advance of the energy upgrade works to Hermann Baur's Siedlung im Lee scheme, in Basel (1963) or the intelligent pilot project for the upgrade of the Tscharnegut in Bern (Hans and Gret Reinhard, 1958-61), devised by Rolf Muhlethaler.

Equally, the highly conclusive experience of the TSAM Laboratory and its applied academic research at the Cité du Lignon was recently extended to other late 20th-century "grands ensembles" in the Geneva area for a research project supported by the *Stiftung zur Förderung der Denkmalpflege*¹. An appraisal of buildings according to a wide range of constructional types – from a masonry facade with openings in the Quai du Seujet (1964-76), to the externally insulated prefabricated concrete panel of the Cité Avanchet Parc (1973-77), not to mention the "Honegger" buildings in the Carl-Vogt (1960-64) and the curtain wall of the Meyrin residential suburb (1960-64) – has shown how the balance between preserving the built object and making sizeable thermal improvements generally comes in at around 80-90% of the legal requirement, depending on techniques used. The 10-20% that still needs to be achieved to attain current standards implies heavy and highly destructive interventions which are technically challenging and therefore entail an exponential increase in build costs for an equivalent life cycle. For existing housing assets, the price in conservation terms – and more prosaically, in terms of economic investment – appears out of proportion.

In place of this "intensive therapy", which exacts such a heavy price, we should be looking at responsible steps to highlight the notion of "built heritage as resource" – essentially, something very akin to the *use value* imagined by Alois Riegl – accepting building performance ratings that, while not perhaps the best, at least favour sizeable or substantial reductions in consumption to be coupled perhaps with gains from renewable energy.

As for highly significant items, young monuments, an explicit stance is required: can one reasonably aim for energy excellence by demanding of an existing building with acknowledged heritage value that it meet the performance needs of a new building, rigidly established by rules that have evolved into extreme-

ly strict limit-values? The response is nuanced. In balancing preservation of the built fabric with the environment, perhaps we need to be broadening the issue and reversing the trend. In other words, the building itself should define the limit of interventions, depending on intrinsic material characteristics opportunely mapped during preliminary studies. This gets around the issue of a strict application of standards, which so often have repercussions, and potentially irreversible ones, on the integrity of objects and, more broadly, the appearance of our cities. It is not a matter of neglecting the paradigm that requires us to respect the very legitimate need to reduce energy consumption and CO₂ emissions. Rather it is a matter of calibrating performance improvements more closely to the built object, prioritising smaller, targeted interventions, *ad hoc* responses developed from closer contact with the built fabric and geared towards accommodating it in a way that improves user comfort. This pragmatic and sympathetic approach should be adopted more widely as part of the project of conservation of recent heritage. This is a "demanding brief" illustrating, above all, the intelligent and culturally aware position the designer must be ready to occupy.

NOTES

1 Franz Graf, Giulia Marino, Housing in Europe, 1945-2015, in Ana Tostoes, Zara Ferreira (dir.), Docomomo Journal 54, 2016.

2 We refer to the research heading « + », a rehabilitation strategy for large scale housing schemes in France, devised by Druot, Lacaton & Vassal. Cf. Frédéric Druot, Anne Lacaton, Jean-Philippe Vassal, Plus, Les grands ensembles de logement. Territoire d'exception, Gustavo Gili, 2007.

3 Giulia Marino, "Kampf um Millimeter. Renovation der Wohnhäuser Miremont-le-Crêt in Genf von Marc-Joseph Saugey durch meier+associés und Oleg Calame", in *werk, bauen+wohnen*, 1-2, 2016, 36-41.

4 Franz Graf, Giulia Marino, Patrimoine moderne, énergie, économie: stratégies de sauvegarde, EPFL-TSAM, Stiftung zur Förderung der Denkmalpflege, 2015

BIOGRAPHY

A graduate in architecture of the École polytechnique fédérale de Lausanne, **Franz Graf** has worked as a freelance architect in Geneva since 1989. A lecturer in architecture and construction at the University of Geneva (1989-2006), he became Full Professor of Technology at the Accademia di Architettura di Mendrisio in 2005 and Associate Professor of Architectural Theory and Design at the École Polytechnique Fédérale de Lausanne in 2007, as head of Laboratory of Techniques and Preservation of Modern Architecture. Since 2010 he has been President of Docomomo Switzerland and a member of the International Specialist Committee on Technology.

ENERGY CONSERVATION VS. HERITAGE CONSERVATION: EVALUATING THERMAL REHABILITATION SCENARIOS BY THE CASE STUDY OF TERRASSENHAUSSIEDLUNG GRAZ

Alexander Eberl (Austria)

ABSTRACT

Both, energy conservation and heritage conservation are declared goals of the European Union and the Austrian government. In the case of historic landmark buildings, these ambitions conflict with and sometimes even exclude each other. At the same time the public interest of conservation often collides with the private interests of the owners and inhabitants. The present paper addresses these conflicts of interest by the case study of Terrassenhaussiedlung Graz - a late Modernist housing estate in Graz, Austria, and a rare example of Brutalism and Structuralism in this country. Three potential thermal rehabilitation scenarios are being proposed and further investigated: Interior insulation, exterior insulation and the replacement of non-structural elements. These strategies are evaluated and discussed in terms of their impact on energy efficiency, building physics, architectural appearance and their practicability. The paper shows a work in progress and seeks the discussion with the audience. It poses the question of how far energy conservation measures can go in a culturally valuable building complex and of how much heritage conservation is appropriate for a sustainable housing estate.

1. INTRODUCTION

1.1. Background

The appropriate way of refurbishing historically valuable post-war building stock is a topic of growing urgency. Being built with little regards to energy efficiency and making up for about 40% of Austria's building stock,¹ thermal rehabilitation of these buildings plays a key role in reducing overall energy demand and reaching EU's ambitious 2030 climate goals.² Many of these buildings are historically and architecturally valuable, but in spite of recent initiatives, such as *SOS Brutalism*, not under heritage protection.³ Such buildings are under particular threat to get disfigured by inappropriate retrofitting methods, as has already happened to many architectural monuments so far.⁴

A recent special issue of the *Journal of Architectural Conservation*, dedicated to the preservation of post-war building stock, underlines the actuality of this topic.⁵

1.2. Aims

This paper builds upon the results of the exploratory study *Smarte Modernisierung Terrassenhaussiedlung – SONTE*,⁶ funded by the *Climate and Energy Fund*, Austria⁷ and led by the *Institute of Housing Research*, Graz.⁸ This study was carried out by an interdisciplinary team, including the author of this paper, with the participatory involvement of residents of the estate and had the goal to develop a general guideline for assessing the modernisation possibilities of participatory inventory designed residential buildings.

Striving for an appropriate refurbishment strategy that lowers the energy demand significantly, respects the cultural significance of the buildings and allows a gradual rehabilitation of the estate, three potential thermal rehabilitation scenarios for Terrassenhaussiedlung Graz were proposed and further investigated.⁹ The present paper evaluates these refurbishment strategies in terms of energy efficiency, building physics, architectural appearance and practicability.

1.3. Terrassenhaussiedlung Graz

Terrassenhaussiedlung Graz was envisioned and planned by the Graz based architects of *Werkgruppe Graz*.¹⁰ Planned in the mid 60ies and realized in the 70ies, it was one of the first large-scale housing projects in Austria to apply user participation in the planning process.¹¹ With its modular structure and large exposed concrete surfaces, it combines elements of Structuralism and Brutalism and is a prime example of late modernist architecture in Austria. Even after 40 years of usage, it still offers a high quality of living and a high popularity amongst its users. Yet, several measures should be done to preserve its qualities and to improve known weaknesses. One of these measures is the thermal rehabilitation of the estate, which involves many challenges:

1.4. Challenges

1.4.1. Legal Framework

Unlike in most housing estates of that size, Terrassenhaussiedlung Graz was privately financed and houses owner-occupied apartments. The estate counts more than 800 different owners at the moment, which turns any structural intervention into a difficult process. A circumstance that lead to a good preservation of the estate but which is at the same time an obstacle for major improvements. Keeping this in mind, refurbishment strategies that allow a gradual rehabilitation of the estate are favoured.

1.4.2. Heritage Protection

The structural, aesthetical and functional concept of the estate builds upon a clear separation between primary and secondary structures:

While primary structures are materialized by exposed concrete surfaces, the main facades of the building are characterized by “infills” of lightweight walls. This is an architectural reaction to the user-participation process and allowed to adapt the apartments to the buyer’s wishes during and after the construction process of the primary structure. The architects’ vision was to create a “megastructure” with a potential for transformation. Following this intention, several spaces were deliberately left open and undefined (see Fig.1). Ironically these spaces remained in the same undefined state even 40 years after completion, moreover the “infills” proved to be more durable than the primary structure: While the concrete facades had to undergo several refurbishments until today, most windows, doors and lightweight walls remained in comparably good condition. It should be also mentioned that the exposed primary structure leads to many thermal

Fig. 1 Werkgruppe Graz, Terrassenhaussiedlung, Graz, Austria, 1972-1978, South-East façade of house No. 33, © Alexander Eberl 2017.



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Fig. 2 Thermography of Terrassenhaussiedlung Graz, house no. 33, © Alexander Eberl 2017.

bridges that negatively influence the thermal performance of the buildings and may lead to condensation problems if not treated properly (see Fig.2).

This leads to a dilemma when it comes to heritage conservation: The exposed concrete surfaces are a testimony of the era and the architect's intentions and at the same time they are a main structural weakness of the building.

1.4.3. Energy Demand

Apartments in the estate have an average heating energy demand of about 100 kWh per m² usable floor area (UFA) and year.¹² This is slightly better than the typical energy demand for multi-family buildings of the 1950ies to the 1970ies in Austria and corresponds to an energy efficiency class between C and D.^{13 14} To meet the national 2020 requirements for comprehensive rehabilitation, the heating energy demand should be reduced to 56 kWh per square meter (m²) total floor area (TFA).¹⁵ These requirements can only be met by introducing additional thermal insulation measures to the existing buildings.

1.5. Hypothesis

The hypothesis of this paper is that Terrassenhaussiedlung Graz has an inherent potential for modernisation. Its clear separation between primary and secondary structures allows for an upgrade or exchange of the latter without compromising the design intents of the architects, the use of repetitive

elements bear a potential for a modular approach and prefabrication in renovation.

However, this potential is confronted with structural problems which make thermal rehabilitation difficult. These include thermal bridges at junctions between primary and secondary structures, as well as ageing phenomena of exposed concrete.

2. RENOVATION STRATEGIES

In the preceding study, three potential thermal rehabilitation scenarios were proposed and further investigated: Exterior insulation, interior insulation and the replacement of non-structural elements. These strategies were evaluated and discussed in terms of their impact on energy efficiency, building physics, architectural appearance and their practicability. Special attention was given to the many thermal bridges caused by the exposed con-

Fig. 3 Building elements affected by the external insulation strategy: Except for the windows, most parts of the building envelope will be visibly affected © Alexander Eberl, 2017.



crete structure of the estate, moreover the potential for building-integrated energy production was investigated. Results were derived by different simulation methods, including small scale hygrothermal simulations and large scale dynamic thermal simulations. This chapter gives an overview of these scenarios.

2.1. Strategy 1: External Insulation

In this strategy, the whole building envelope is packed in thermal insulation material, while existing constructions remain largely in place (see Fig.3). This requires scaffolding and is only economical if larger building parts get refurbished at once. In contrast to the other proposed rehabilitation strategies, inhabitants can occupy their apartments during the refurbishment process. To minimize the effect on the appearance of the building, *aerogel* has been proposed for insulation measures, which al-

lows to reach today's thermal standards with low layer thicknesses. While light-weight façade elements will be protected by additional aerogel sheets, concrete elements will be covered by an aerogel insulation plaster. This strategy should be uncritical in terms of condensation and it would reduce the effect of thermal bridges. Apart from that, the additional insulation layer would protect the concrete from weathering. With an additional insulation layer of only 30mm thickness, a thermal energy demand of 57 kWh per m² TFA and year could be reached, which is close to the national 2020 requirements for comprehensive rehabilitation (see Fig.6).¹⁶

2.2. Strategy 2: Internal Insulation

Thermal insulation measures on the inside of the building

Fig. 4 Building elements affected by the internal insulation strategy: No external surfaces will be visibly affected
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Fig. 5 Building elements affected by Strategy 3: Windows, lightweight walls and roofs will be affected
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envelope allow the refurbishment of individual residential units, without a need for cranes and scaffolding and without altering the external appearance of the building (see Fig.4). In contrast to the other proposed variants, however, it is critical in terms of vapour condensation: Damage to the required vapour barrier may lead to condensate failure in the construction. Moreover, interior insulation will reduce the temperature of concrete walls which may increase the risk of frost damage.

There are also economical and practical issues: Interior insulation means a reduction of usable and therefore lettable and sellable floor space. To minimize this negative effect, 25 mm thin vacuum insulation panels (VIP) were proposed as insulation material. It should be noted that this material is significantly more expensive than conventional insulation material and requires careful handling. Applying and connecting insulation materials and vapour barriers requires constructive measures at floors, ceilings and interior walls, and careful execution of these measures.

According to the preceding study, a heating energy demand of 53 kWh per m² TFA and year can be reached with the proposed interior insulation measures (see Fig.6). This is slightly below the national 2020 goals of 56 kWh per m² TFA. It should be noted, that roofs and terraces were assumed to receive no additional internal thermal insulation layer in this scenario, as these elements are most endangered for condensation failure. By applying additional external insulation measures instead, an even lower energy demand would be achievable.

2.3. Strategy 3: Replacement of lightweight elements

This refurbishment strategy doesn't touch the exposed concrete surfaces at all. Instead of adding additional insulation layers, the lightweight facades will be replaced entirely (see Fig.5). This strategy leads to higher costs of materials and higher embodied energy expenditure than the aforementioned measures. Also it will be difficult to conduct these measures during usage.

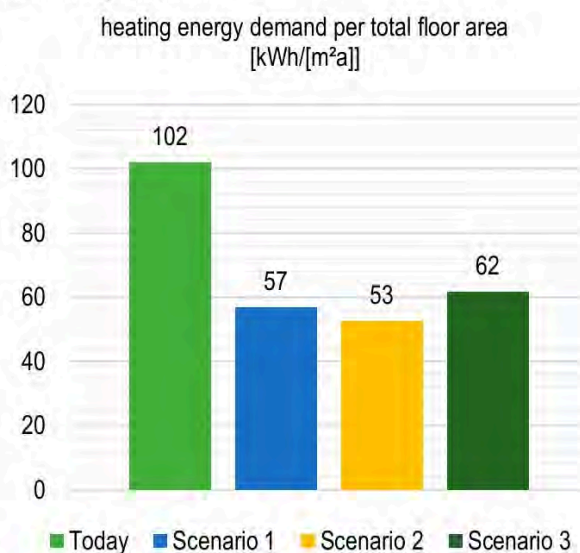
Apart from that, it leads to higher heat losses through the concrete walls, which make up for roughly 30% of the building envelope and which can only partly be made up by a better thermal quality of the lightweight wall elements. This leads to a heating energy demand of 62 kWh per m² TFA when the present window-to-wall ratio is kept, and exceeds the national 2020 requirements by 10% (see Fig.6). If this strategy is followed, additional measures to reduce the thermal energy demand will be needed.

3. DISCUSSION

3.1. Strategy 1: External Insulation

This strategy has the highest impact on the appearance of the buildings but at the same time ensures the best physical conservation of the structure. Even though thermal insulation is kept at a minimal layer thickness, there will be significant impacts on the appearance and character of the building: The proportions will change slightly, especially when it comes to narrow elements, such as the demising walls, which protrude beyond the light weight façade elements (see Fig.1). Raw concrete surfaces and their details will disappear, thus concealing the "authenticity of materials" as propagated by the movement of Brutalism, which had influence on the architect's design and thinking.¹⁷ On the other hand, this insulation strategy would still be able to reflect the structuralist ideas behind the design: An external layer of insulation plaster on concrete elements would keep the homogenous character of the primary construction elements and would also keep a clear visual separation from secondary construction elements. Another argument in favour of external insulation is its contribution to the physical conservation of the structure, by protecting it from weathering.

Fig. 6 Heating energy demand for all investigated refurbishment scenarios
© Edina Majdanac, 2018.



3.2. Strategy 2: Internal Insulation

The interior insulation strategy is the typical approach when it comes to the renovation of historically relevant buildings. Following this strategy, significant reductions in energy demand can be reached without any significant changes in the outer appearance. A major downside of this approach is its inherent risk of condensation failure as outlined under point 2.7.

Arguably, it is not the façade that makes the estate historically valuable, but rather its underlying pioneering and experimental ideas and design processes and it seems questionable if it is the right approach to conserve an estate, which was led by structuralist design ideas of transformability and adaptability, in its initial state.

3.3. Strategy 3: Replacement of lightweight elements

In this strategy the original lightweight façade elements and the original windows will be replaced, which will lead to a change of the visual appearance, be it in material, proportion or in rhythm of the façade. It should be noted that the existing windows are to a large extent made of mahogany wood and were custom made by the manufacturer for this building project, thus the replacement of windows will inevitably lead to a loss of original architectural qualities.

At first glance this strategy doesn't appear to be an attractive option: The potential for energy savings is lower than in the aforementioned strategies, still it has significant impacts on the appearance of the buildings.

Bearing in mind that this potential was calculated on the basis of the present window-to-wall ratio and reflects a classical punctuated façade, it becomes apparent that the calculated value doesn't represent the full potential of this strategy:

Exchanging entire façade elements allows to optimize window-to-wall ratios and passive use of solar energy and also opens up many possibilities for building integrated solar energy production. These systems could be probably integrated into the existing façade as well, but most likely not in the same extent and with the same potential for optimisation. Last but not least it opens the opportunity to readapt the façade to changing user needs and current technical possibilities.

Obviously this potential for optimization is also a thread to the visual quality of the building, as an optimized design in terms of energy might not integrate well into the existing façade system.

4. CONCLUSION AND OUTLOOK

While Strategy 1 – External Insulation has the highest impact on the appearance of the estate but is least critical in terms of

building physics, Strategy 2 – Interior Insulation allows a complete conservation of the outer appearance of the estate but is most critical in terms of building physics. Both Strategies allow to reach Austria's 2020 requirements for comprehensive rehabilitation. Strategy 3 – Replacement of Lightweight Elements implies the highest heat losses but has the highest potential for building integrated energy production and passive solar energy use. It implies a significant impact on the appearance of the estate but also bears the potential to readapt to changing conditions and user requirements. These potentials should be further investigated.

All proposed strategies require a high quality of design and workmanship to be successful. While Strategy 2 requires diligent planning and execution internal insulation measures, Strategies 1 and 3 are highly dependent on the visual quality of finishes and details.

A replacement of lightweight façade elements, as proposed in strategy 3, should revive and reinterpret the idea of freedom of choice within a predefined construction system, as it has been realized in the existing façade system. To allow a smooth and gradual renovation, this should be in line with the aesthetics of the existing façade elements.

Further investigation is also needed on measures to preserve the concrete structure of the building. This issue cannot be regarded separately from the rest of the building and must be taken into consideration before a final renovation strategy can be proposed.

These issues are planned to be investigated and elaborated in the near future.

NOTES

1 About 39% of Austria's building stock was built between 1945 and 1980. See: STATISTIK AUSTRIA, Registerzählung 2011, accessed on April 15, 2018, http://statistik.at/web_de/statistiken/menschen_und_gesellschaft/wohnen/wohnungs_und_gebaeudebestand/074076.html

2 See: 2030 Energy Strategy, accessed on April 15, 2018, <https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/2030-energy-strategy>

3 For more info on the initiative see: <http://www.sosbrutalism.org/cms/15802395> (accessed on April 15, 2018)

4 One prominent Austrian example of inappropriate retrofitting is the "FRZ Leoben" by Eilfried Huth, for more info see: <http://www.gat.st/en/news/die-demonstration-eines-denkmals> (accessed on April 15, 2018)

5 See: *Journal of Architectural Conservation*, 23:1-2, accessed on April 15, 2018, <https://www.tandfonline.com/toc/raco20/23/1-2>

6 For more information on the research project see: <http://www.smartcities.at/stadt-projekte/smart-cities/smar-te-modernisierung-terrassenhaussiedlung-graz/> (accessed on March 10, 2018).

7 This project was funded by the Climate and Energy Fund Austria, see: <https://www.klimafonds.gv.at> (accessed on March 10, 2018) and conducted

under the program Smart Cities Demo, see: <http://www.smartcities.at> (accessed on March 10, 2018).

8 For more information see: <http://www.institut-wohnbauforschung.at> (accessed on March 10, 2018).

9 The study is yet unpublished and is currently in the phase of finalisation. In this document it will be referred to as follows: Alexander Eberl, Edina Majdanac, *Publizierbarer Endbericht Smart Cities Demo - 7. Ausschreibung – Sondierungsstudie Smarte Modernisierung Terrassenhausiedlung*, unpublished manuscript, Graz, 2018.

10 In this project the following architects were involved: Eugen Gross, Friedrich Groß-Rannsbach, Werner Hollomey, Hermann Pichler, Walter Lagner and Peter Trummer

11 Kurt Freisitzer, Robert Koch, Ottokar Uhl, *Mitbestimmung im Wohnbau: Ein Handbuch*, Vienna, Picus, 1987, 29f.

12 According to the energy certificate issued on 12 March 2014 by Martina Franke, Grazer Energieagentur, based on the reference climate.

13 ÖNORM B 8110-1: *Thermal protection in building construction - Part 1: Declaration of thermal protection of low energy buildings and lowest energy buildings – Heating demand and cooling demand*, 2011-11-01, Austrian Standards Institute, Vienna, 2011, 11.

14 ÖNORM H 5055: *Energy certificate for buildings*, 2008-02-01, Austrian Standards Institute, Vienna, 2008, 7.

15 OIB-330.6-014/14-012: *Dokument zur Definition des Niedrigstenergiegebäudes und zur Festlegung von Zwischenzielen in einem „Nationalen Plan“ gemäß Artikel 9 (3) zu 2010/31/EU*, 2014-03-28, Austrian Institute of Construction Engineering (OIB), Vienna, 2014, 3, accessed on January 31, 2018, https://oib.or.at/sites/default/files/nationaler_plan_27_03_2015.pdf

16 Figure taken from: Alexander Eberl, Edina Majdanac, *Publizierbarer Endbericht Smart Cities Demo - 7. Ausschreibung – Sondierungsstudie Smarte Modernisierung Terrassenhausiedlung*, unpublished manuscript, Graz, 2018.

17 As stated by architect Eugen Gross in a personal conversation.

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BIOGRAPHY

Alexander Eberl is a university assistant at the Institute of Buildings and Energy, Graz University of Technology, since 2014. He holds a Master's degree in Architecture and is currently working on his PhD thesis on the revitalisation of buildings of the era of Structuralism.

CONCEPTS FOR ASSESSING STRATEGICALLY THE HISTORIC PLACES OF THE MID-20TH CENTURY IN SCOTLAND FOR CLIMATE CHANGE IMPACTS

Carsten Hermann (Scotland)

ABSTRACT

Climate change is threatening the integrity of many historic places and sometimes their existence. Historic places of the mid-20th century appear to be particularly vulnerable. In this paper, concepts are explored to assess strategically the environmental impacts of climate change on the historic environment and test these concepts, using Scotland's built heritage of the mid-20th century. Both gradual, cumulative degradation processes and natural hazards are considered. The assessments use historic environment data, climate projections and hazard maps and aim at evaluating the historic environment strategically, instead of considering singular buildings. The assessments, thereby, also test the availability and suitability of freely available data for use in a built environment context. The assessment of gradual degradation processes is demonstrated, using data from UK Climate Projections 2009 for the regions *Eastern*, *Northern* and *Western Scotland*, by combining, in a geographical information system, these data with historic environment information. How impacts of hazards can be assessed is shown by using online flood maps of the

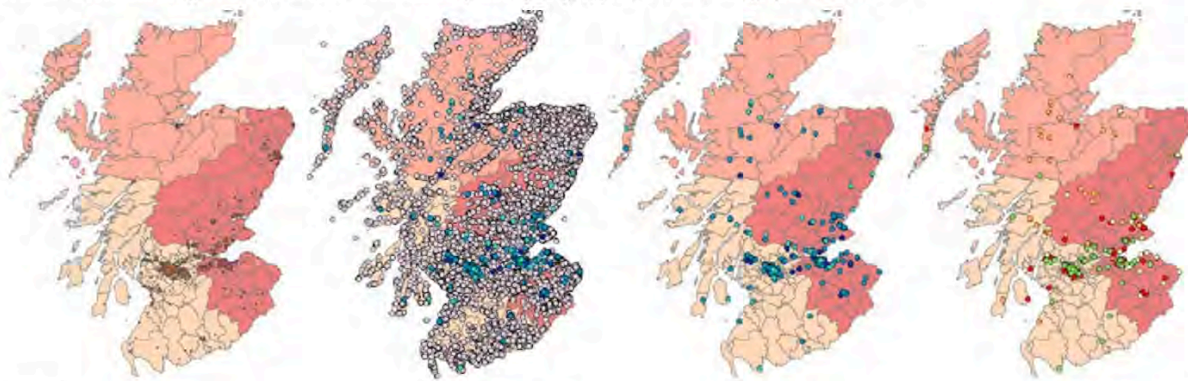
Scottish Environment Protection Agency. The assessments described in this paper demonstrate extant limitations: Scotland's historic environment data would benefit from better structuring; the interrogation parameters used in the published climate projections are not particularly suited for advanced place assessments; and natural hazard maps should be made more freely available to aid risk analyses.

The assessment concepts discussed in this paper are transferable to other countries, and the focus on the mid-20th century will hopefully encourage discussions about climate change impacts specifically on Modernist historic places – both within and beyond Scotland.

1. INTRODUCTION

Climate change is threatening the integrity of historic places and sometimes their existence. Built during an era of experimentation with new building materials, construction techniques and design concepts, historic places of the mid-20th century (mid-20c) appear to be particularly vulnerable to climate change, in the form of the changing environmental im-

Fig.1 Maps of Scotland, excluding Orkney, Shetland and St. Kilda, where no *listed* mid-20c historic places are located: from left, (1) urban areas in dark red and UKCP09 regions in lighter reds; (2) *listed buildings* in grey with mid-20c places in blues; (3) *listed* mid-20c historic places, with *A-listed* in dark, *B-listed* in mid- and *C-listed* in light blue; (4) *listed* mid-20c historic places by usage types (see Tab.2). Imagery/data © HES



Carsten Hermann Concepts for Assessing Strategically the Historic Places

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Fig.2 Climate projections presented in the web-portal Scotland's Environment: The screenshots show percentile precipitation change at high emission scenario for the UKCP09 region Eastern Scotland, with the left screenshot displaying distribution of winter precipitation 2020-2080 and the right screenshot showing the same data during 2070. Imagery © Scottish Government, data © UKCP09

pacts observed to date and expected to intensify in the future. Environmental impact assessments of historic places are commonly location-specific. Assessments ignoring singular places in order to investigate the historic environment strategically are less common. This approach has for example been used to research the energy performance of Sweden's historic building stock.¹ Assessments specific to climate change impacts, though, remain rare.² Sweden's region Västtra Götaland has assessed its historic environment for natural hazard risks associated with climate change, using a geographical information system (GIS).³ Similarly, Historic Environment Scotland (HES) used GIS risk maps of natural hazards to analyse its estate of historic places.⁴

Many studies on climate change impacts focus on natural hazards. Yet, "[t]ypes of risks to... cultural heritage vary from sudden and catastrophic events (such as major earthquakes, floods, fires...) to gradual and cumulative processes (such as chemical, physical, or biological degradation)."⁵ These degradation processes can already be experienced: Increased precipitation causes more moisture-related damage to material fabric, and rising temperatures lead in northern Europe to the spreading of fabric-damaging insect infestations. Nevertheless, such degradation processes are rarely considered (in quantifiable form) when assessing climate change impacts on historic places.

Building assessments often focus on climate change mitigation, rather than adaptation. One of the few published case

studies on mid-20c historic buildings in the United Kingdom of Great Britain and Northern Ireland (UK) discusses alterations to Manchester's CIS Tower with regard to climate change.⁶ Although noting flooding and overheating as possible impacts, the discussion centres on achieving reductions in energy use and associated carbon dioxide emissions by installing photovoltaic panels. Similarly, the seminal book *Greening Modernism*, concerned with the sustainability of Modern Movement buildings, focusses on energy use, without a single reference to 'climate change' in the book's index.⁷

By contrast, in this paper, concepts are explored to assess strategically the environmental impacts of climate change on the historic environment, considering both gradual, cumulative degradation processes and natural hazards. The concepts explored are tested using mid-20c historic places in Scotland, which were constructed during the period from 1945 to 1984 and are designated statutorily as cultural heritage through a process called *listing*. (Although referred to as *listed buildings*, they don't necessarily have to be buildings, as the *listed* Forth Road Bridge illustrates.) The assessments discussed in this paper use data from three distinct sources: Firstly, HES provides historic environment data.⁸ Secondly, degradation processes will be investigated, based on UK Climate Projections 2009 (UKCP09), which provide data at national and regional levels.⁹ For Scotland, UKCP09 uses three *administrative regions*: Eastern, Northern and Western Scotland.¹⁰ (In autumn 2018, revised climate projections, UKCP18, are due for publica-

tion.) Lastly, natural hazards maps are interrogated to demonstrate how hazard risks can be identified. This demonstration will focus on coastal flooding, using online maps from the Scottish Environment Protection Agency (SEPA)¹¹ and Scottish Government¹². The assessments performed, thereby, also tests the availability and suitability of freely available data for use in the context of the built environment in general and mid-20c historic places in particular.

2. HISTORIC ENVIRONMENT

Scotland has about 47,000 historic places which are statutorily designated as cultural heritage, by placing them on a list maintained by HES. These places are referred to as *listed buildings* and are assigned one of three significance *categories*: A is the highest category, indicating national and international significance, and C the lowest, for local significance. The list entries include descriptions of the places and information about their locations (place names, area names, spatial references) and heritage designations (*listing* numbers, categories, dates). The list can be accessed through web-portals and downloaded as simplified spreadsheet and geospatial dataset. From these data, we can learn that, currently, 3,552 places are *A-listed* (8%), 23,380 *B-listed* (50%) and 20,111 *C-listed* (43%).¹³ Yet, how many of these *listed buildings* are mid-20c places?

The list's structure does unfortunately not allow for easy interrogation of construction dates or periods. Luckily, mid-20c places are also recorded in a separate spreadsheet, (primarily to monitor *listing* progress). Although not containing *listing* descriptions, this spreadsheet tables in a structured format construction dates, designers and designation dates and assigns building types. Without this spreadsheet, the assessments presented here wouldn't be possible. The spreadsheet contains 279 historic places¹⁴, of which 53 are *A-listed* (19%), 165 *B-listed* (59%) and 61 *C-listed* (22%). By combining this spreadsheet and the geospatial dataset, the geographic distribution of these places can be analysed and visualised.¹⁵ *Listed* mid-20c places can be shown in relation to other *listed buildings*, illustrating that the former are concentrated in Scotland's principal cities, Edinburgh and Glasgow (Fig.1b,c). Using the Scottish Government's Urban-Rural Classification (SGURC), 188 places (67%) are located in settlements with more than 10,000 inhabitants (Fig.1a,c, Tab.1).¹⁶ Similarly, places can be grouped by building types and UKCP09 regions.¹⁷ (Tab.2) These spatial analyses will be used later to discuss the impacts of fabric degradation processes due to climate change.

Tab.1 Numbers of *listed* mid-20c historic places in urban settlements

Area	<i>listed buildings</i> (100%=279)	of which <i>A-listed</i> (100%=53)
Edinburgh	67 (24%)	17 (32%)
Glasgow	46 (16%)	7 (13%)
settlements with 125,000 or more inhabitants (SGURC-6 class 1)	125 (45%)	25 (45%)
settlements with 10,000 or more inhabitants (SGURC-6 classes 1&2)	188 (67%)	38 (71%)

Tab.2 Numbers of *listed* mid-20c historic places by building types and UKCP09 regions

Building type	Eastern Scotland	Northern Scotland	Western Scotland
Civic, commercial, educational, health, recreation	55	3	36
Defence, industrial, transport	21	13	12
Domestic	50	2	17
Memorial, worship	25	2	47

3. CLIMATE PROJECTIONS

Although UKCP09 data is available on a dedicated Met Office website, data used in the following was downloaded from *Scotland's Environment*, a web-portal of the Scottish Government¹⁸, presenting UKCP09 data in graphs, maps and tables.

But what data are we actually looking for? Climate change is commonly associated with global temperature rise. Such generic statements, however, aren't useful to assess impacts on places. More meaningful than averages are extreme values, such as the lowest temperature and highest precipitation quantity occurring during a year. Complex combinations of climate variables are often required to describe fabric degradation thresholds. The project Noah's Arc¹⁹, "for example",

used the following parameters for historic place assessments: consecutive precipitation >5 days and days of frost, precipitation >20mm and high wind >15m/s.

Scotland's Environment presents climate projections graphically as *time period* (2020-2080) and *averaging period* (course over a specific year). (Fig.2) Parameters for data interrogation include: climate variable (temperature, precipitation etc.), emission scenario (low, medium, high), probability level (10, 33, 50, 67, 90%), value type (change, absolute) and location type (administrative region, river basin, 25km grid). As we are interested in using the data for risk assessments, a *high* emission scenario and 67% probability level were selected. For simplicity, the location type was set to *region*, giving us *Eastern, Northern and Western Scotland*.

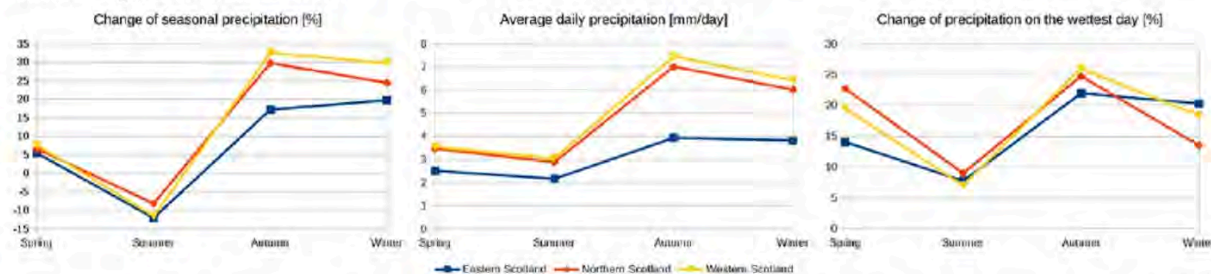
In the following, only precipitation will be considered. Fig.2 presents, as an example, the percentile precipitation changes for Eastern Scotland. Changes are "relative to the climate average of [UKCP09's] baseline period of 1961-1990"²⁰. The left graph in the figure shows steady increases in winter precipitation until 2080. The right graph suggests less precipitation in summertime by 2070²¹ (except at 90% probability level). A comparison of the regional data (Fig.3) shows that –by 2070, *high* emission scenario, 67% probability– this distribution applies generally to all three regions, except that Northern and Western Scotland will experience larger increases in autumn and winter precipitation (left graph). This is also confirmed in absolute numbers (middle graph), with Northern and Western Scotland being consistently wetter. In autumn, precipitation falling in Eastern Scotland will be slightly less than half of that occurring in Western Scotland (4.0-7.5mm/day).

Using GIS, we can establish that the 106 *listed buildings* in Western Scotland will in future receive substantially more precipitation and are therefore at higher risk of associated

moisture damage than the 152 in Eastern Scotland. Knowing extreme precipitation levels would however be more useful. Although UKCP09 provides information about *precipitation on the wettest day*, these data are available as seasonal percentile changes only and not as absolute values. The data confirm that, except in summertime, the wettest days will become wetter, with Northern and Western Scotland to experience significantly more precipitation change in spring. (Interestingly, Eastern Scotland will see larger changes in wintertime.) However, in order for the projection data to become useful for place assessments, precipitation quantities are required.

Precipitation can impact severely on building fabric when concurring with high windspeed, resulting in wind-driven rain (WDR), a condition common in Scotland.²² How climate change will impact on wind is still difficult to predict. Nonetheless, simple assumptions can be made, for example on the premise that urban places are generally better sheltered from WDR than those in rural settings. Considering that 81 places (76%) in Western Scotland are urban, problems might be limited. (For urban high-rises though, WDR might be a particular issue.) Looking at building types, most *listed* mid-20c historic places in Western Scotland are classed as *monuments and places of worship* (39%). Many of these are constructed of exposed brick and concrete blockwork, especially susceptible to moisture-related degradation due to WDR. UKCP09 also includes information about past climate change. This information is more detailed than the projection data and includes for example days of frost, days of heavy rain (>10mm precipitation), days of sleet or snow and maximum 5-day precipitation.²³ Were such detailed data available for climate projections, the accuracy of environmental impact assessments for historic places could be improved substantially. Hopefully, future climate projections (such as UKCP18) will provide sufficient detail to enable more advanced assessments.

Fig.3 UKCP09 precipitation data for 2070, high emission scenario and 67% probability, allowing comparison between UKCP09 *administrative regions* for Scotland. Imagery © HES, data © UKCP09



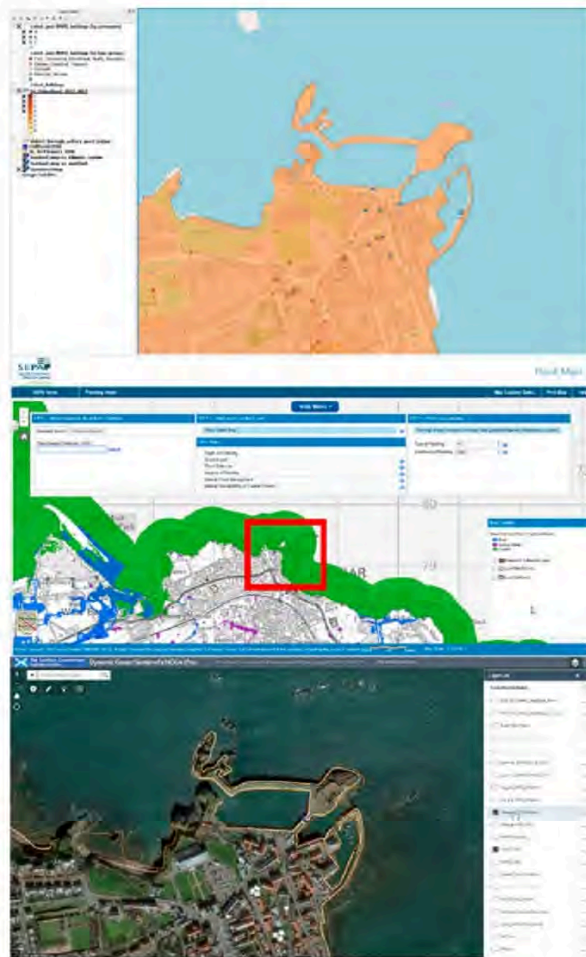


Fig.4 Geospatial imagery of Dunbar, East Lothian: from top, (1) GIS map of Dunbar harbour, with red-shaded shape indicating urban area and five blue points showing the locations of *listed* mid-20c historic places; (2) SEPA online GIS map showing in green colour *high* coastal flood risk (harbour marked by red box); (3) Dynamic Coast online GIS map showing in coloured lines coastline changes since 1970. Imagery/data © HES, Ordnance Survey, SEPA, Scottish Government

4. NATURAL HAZARDS

In the UK, hazards risk maps are produced by public organisations such as British Geological Survey and SEPA. Their data aren't freely downloadable, but can be viewed at local scales on web-applications. We will focus here on SEPA's coastal flood data to illustrate how an impact assessment for the historic

environment can be performed, based on the geospatial historic environment data used before. To demonstrate the assessment concept, the assessment was performed manually. Were the flood data freely available, an automated GIS investigation could have been performed.

From the various options of flood types and likelihoods of occurrence in SEPA's web-application, we will use *coastal flooding of high likelihood*. In GIS, *listed* mid-20c historic places near to, at or in the sea were identified. Their locations were then manually checked on the SEPA map. Recorded were all places within or less than 300m away from the *coastal flooding area* indicated on the map. This process is illustrated with Dunbar's harbour, East Lothian. The GIS map shows five *B-listed* buildings. (Fig.4a) The SEPA map confirms their proximity to the coastal flooding area. (Fig.4b) Furthermore, Scottish Government's web-application Dynamic Coast could be checked for past coastline changes. (Fig.4c)

This assessment identified 36 places, most of which are urban (25) and/or *B-listed* (29). (Tab.3) The *A-listed* Forth Road Bridge was the only place within the flooding area. Only two other *A-listed* places were identified: Easterheughs, Aberdour, Fife, and Eden Court Theatre, Inverness, Highland. Easterheughs, a rural towerhouse (1946-1955), lies at the top of a slope, with a railway line separating house and coast. Eden Court Theatre is near the embankment of the river Ness, which, due to the urban context, should have managed flood protection. This shows that, although both places are in proximity to the coastline, flooding is not a major risk to them.

Although the assessment method is useful to gain a first overview, the Easterheughs case shows the limitations of working solely with distance to the flood area. With downloadable GIS data on hazards' risks, assessments could have been coupled with elevation data to improve results.

Tab.3 *Listed* mid-20c historic places within or at less than 300m distance to a *coastal* flooding area of *high* likelihood of flooding

Listing category	Total 36	Rural		Urban	
		in flood area	>300m from flood area	in flood area	>300m from flood area
A	3	1	1	0	1
B	29	0	9	0	20
C	4	0	0	0	4

5. CONCLUSIONS

In this paper, concepts were explored to assess climate change impacts on *listed* mid-20c historic places in Scotland, considering both gradual, cumulative degradation processes and natural hazards. Using GIS analysis, the concepts aim at assessing strategically the historic environment, instead of considering singular buildings.

The data collection demonstrated extant limitations: Scotland's historic environment data would benefit from better structuring. The analysis in this paper was possible only because of a special spreadsheet, listing mid-20c historic places. Climate projections can be interrogated in web-applications, but the available interrogation parameters are not particularly suited for advanced place assessments, especially with regard to the thresholds required to understand fabric degradation processes. (Revisions to climate projections, such as UKCP18, will hopefully provide interrogation parameters more suitable for advanced assessments.) Natural hazards maps can be viewed online at local scales. Freely downloadable geospatial data, however, is not available, hindering risk analysis for the historic environment.

This paper did not attempt to undertake a complete assessment of Scotland's mid-20c historic environment, but aimed at showing assessment concepts. Some preliminary conclusions can still be drawn. Many *listed* mid-20c historic places are urban, mostly located in Edinburgh or Glasgow. Only a few places are located near the coast or at risk of coastal flooding. With regard to impact assessments, urban places are generally better sheltered from more severe WDR impacts due to increased precipitation, which will especially affect Western Scotland. Considering building types, the majority of *listed* mid-20c historic places in Western Scotland are used for worship and constructed of exposed brick and concrete blockwork, susceptible to moisture damage from WDR. This suggests that HES could work with the religious organisations in Western Scotland to enable better preventive conservation of their buildings, based on climate projections.

The concepts, discussed in this paper, to assess mid-20c historic places in Scotland are transferable to other countries, and the focus on this particular time period will hopefully encourage discussions about and investigations of climate change impacts specifically on Modernist historic places – both within and beyond Scotland.

NOTES

- 1 Broström, T., et al., 2014. A method to assess the potential for and consequences of energy retrofits in Swedish historic buildings. *Historic Environment: Policy & Practice*, 5(2), 150-166.
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- 8 HES. "Search for a listed building", accessed 31 January 2018, <https://www.historicenvironment.scot/advice-and-support/listing-scheduling-and-designations/listed-buildings/search-for-a-listed-building/>
- 9 Met Office, "UK Climate Projections", accessed 31 January 2018, <http://ukclimateprojections.metoffice.gov.uk/>
- 10 Jenkins, G.J., et al., 2009. *UK Climate Projections: Briefing report*. Exeter, UK: Met Office Hadley Centre. p.23. <http://ukclimateprojections.metoffice.gov.uk/media.jsp?mediaid=87868&filetype=pdf>
- 11 SEPA. "Flood maps", accessed 31 January 2018, <http://map.sepa.org.uk/floodmap/map.htm>
- 12 Scottish Government. "Dynamic Coast", accessed 31 January 2018, <http://www.dynamiccoast.com/>
- 13 One *listed building* can constitute of one singular building, a main building and outbuildings, properties complex (e.g. apartments) or building group (e.g. terrace of houses). In the latter case, the spatial dataset contains multiple entries for a *listing* entry. Analysis, therefore, requires duplication removal.
- 14 Prior to analysis, a small number of entries was removed from the spreadsheet, as, they related to buildings constructed before 1945.
- 15 For analysis and visualisation, QGIS 2.18 software was used.
- 16 Scottish Government, 2014. "Scottish Government Urban Rural Classification", accessed 31 January 2018, <http://www.gov.scot/Topics/Statistics/About/Methodology/UrbanRuralClassification/>
- 17 Assessment was performed against categories 1-2 of the 6-fold classification.
- 18 As neither geographic definition nor GIS shapefiles are available, ward boundaries were used, grouped to roughly constitute UKCP09's *administrative regions*.
- 19 Scottish Government. "Scotland's environment: Data analysis", accessed on 31 January 2018, <https://www.environment.gov.scot/data/data-analysis/>
- 19 Sabbioni, C., et al. (eds.), 2012. *The atlas of climate change impact on European cultural heritage*. London, UK, et al.: Anthem Press.

20 Met Office. *UK climate projections: Baseline*. Accessed 31 January 2018, <http://ukclimateprojections.metoffice.gov.uk/23204>

21 The data for the year 2070 is the average of the time period 2050-2080.

22 Hermann, C., 2013. *A review of research on the impact of wind-driven rain on Scottish traditional stone wall construction and its internal insulation retrofit*. In: Hauser, G. et al. (eds.), 2013. SB13 Munich. Germany: Fraunhofer IRB, 527-42.

23 Scottish Government. "Scotland's environment: Climate trends", accessed 31 January 2018, <https://www.environment.gov.scot/data-analysis-applications/climate-trends/>

BIOGRAPHY

A conservation architect, **Carsten Hermann** works at Historic Environment Scotland as advisor, researcher and project manager in the field of sustainable conservation of cultural heritage. He specialises in the conservation of 20th-century built heritage, energy performance of historic buildings and climate change impacts on historic places.

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Carsten is also Coordinator of Docomomo Scotland.

NEW WAYS IN RETROFITTING POSTWAR DUTCH WALK-UP APARTMENT BUILDINGS: CARBON NEUTRALITY, CULTURAL VALUE AND USER PREFERENCES

Leo Oorschot (The Netherlands)

ABSTRACT

Increasing energy efficiency of the housing stock is one of the largest challenges in the built environment today. In line with the international Paris-Climate-Change-Conference 2015, Dutch municipalities and housing associations have embraced the ambition to achieve carbon neutrality for their social housing stock by 2050. However, most deep renovation designs for increasing the energy efficiency of dwellings focus on the relatively easy portion of the housing stock: postwar row housing. Furthermore, such design solutions are mostly produced without much care for architectural quality nor for testing for user preferences.

Yet, such aspects are of major importance in tenement housing, particularly regarding the architectural qualities of the huge numbers of walk-up apartment buildings from the inter- and postwar periods owned by housing associations. Renovation of buildings of this typology is more complex because of, among others, technical, social and heritage factors. To support decisions in this complex context, a General Transformation Framework has been developed for generating design solutions for deep renovation of representative parts of postwar walk-up apartment buildings. The aim is to increase energy efficiency, retain architectural legibility and cultural heritage value, and allow for presenting (end) users with various options for adaptation based on an assessment of their preferences.

Keywords: walk-up tenement apartment building; retrofitting; renovation; postwar; carbon neutrality; architectural value; user preferences.

1. INTRODUCTION

Increasing energy efficiency of our housing stock is one of the largest challenges of the built environment today – a challenge that has been embraced in the Netherlands as well as many other countries. In line with the international Paris-Climate-Change-Conference 2015, Dutch municipalities and housing associations have embraced the ambition to

achieve carbon neutrality for the social housing stock by 2050. According to the European Energy Performance of Building Directive (EPBD), by 2020 all new buildings must meet the 'BENG'-norm, meaning that they must be almost energy neutral.¹ Dutch housing associations organisation Aedes has promised that their average affordable housing stock is going to have Energy Performance Certificate (EPC) label B by 2021.² The recently published 'housing agenda' 2017-2021 of Aedes promises a carbon neutral housing stock for all Dutch housing associations by 2050.³ In recent years, many concepts and design solutions have been developed for energy efficient retrofitting of the (Dutch) housing stock. Those solutions target different levels of energy efficiency, ranging from small upgrade of the energy label, most commonly up to label B, to achieving zero-energy demand, referred to as *Nul-op-de-meter* NOM. However, by far most of these solutions focus on the relatively easy part of the housing stock: row-housing. This can be partly explained from the huge share of terraced housing in the Netherlands (70%) and the fact that these dwellings are (technically) relatively easy to renovate on a one by one basis, either at turnover or when the tenant agrees to the renovation.

In current practice the emphasis is either to demolish and replace these buildings with energy efficient row houses or to give them a new insulated skin. Due regard to user preferences and architectural qualities is often lacking. Furthermore, recent research showed that the behaviour of tenants is an important parameter. There is a huge performance gap in predicting energy consumption and savings in the housing stock.⁴

To help address the challenge above, the article presents the development of a General Transformation Framework GTF of the postwar walk-up apartment buildings, which means the development of design alternatives for energy efficient retrofitting of these blocks, taking into account architectural values as well as enabling testing for user preferences. The article starts with a general description of the characteristics of

walk-up apartment buildings. Subsequently, we discuss the GTF, which combines energy efficiency measures with design solutions that respect the architectural cultural heritage values of these buildings. We illustrate how this GTF can be used by generating alternative design solutions for one exemplary case. Finally, we discuss the results of a validation session of the GTF with architects and representatives from client housing associations and present our conclusions with a roadmap 2018-2050 for this housing stock.

2. CHARACTERISTICS WALK-UP APARTMENT BUILDINGS

Dutch walk-up apartment buildings of the postwar period are primarily owned by housing associations; the interwar apartments are partly owned by housing associations and by the inhabitants themselves. The majority were built during two periods: between 1916 and 1926 (the interwar types) and between 1946 and 1965 (the postwar types). These time frames are related to several protocols like the Housing Act of 1901-1902, municipality building bylaws and laws about financing dwellings. Today, 2016, in The Netherlands there are still 799.956 apartments left of all types from the period 1906-1965. That's about 10.47 percent of the current Dutch housing stock. In

Amsterdam there are still 155.456 apartments (36,6%), in Rotterdam 104.014 (33,4%), in Den Haag 107.253 (42,4%), and in Utrecht 29.482 (19,7%).⁵ This adds up to about 400.000 apartments in the four cities, we assume that most of these buildings have walk-up apartments.

Preliminary research shows that this is the most common building type in urban regions built between 1905 and 1965.⁶ The characteristics are the result of a building stock and typology assessment. The inventory does not claim completeness but it is an overview with insight into the development of the building type, materials used and service systems. Implicitly, we assume that laws and bylaws from the period in question, among other factors, have had a big significance on the architecture. The main characteristics of all walk-up apartments are:

- Apartments are affordable houses built by housing associations and municipalities, and subsidized by the state. They have a clear and articulated street and garden façade. The living is always on the street side. The kitchen, washroom and balcony are usually on the garden side or near the stairwell.
- Blocks have three to five storeys with four to eight apartments, a shared stairwell without an elevator.
- Buildings are merged to urban blocks, with a private or semi-public garden inside and a street façade.

Fig. 2. Walk-up apartment buildings in Den Haag owned by housing associations. Top pictures involve early postwar architecture from the neighbourhood Moerwijk, bottom pictures show late postwar architecture from the neighbourhood Mariahoeve. Left pictures involve the Muwi construction system, and the right pictures show the Korrelbeton system. Only in some specific cases (Airey, Coignet) there is a clear relationship between architecture and construction system. Pictures by Leo Oorschot.



Leo Oorschot New Ways in Retrofitting Postwar Dutch Walk-up Apartment Buildings

Fig. 1 Four subtypes. Top left: subtype 1 interwar traditional construction methods Amsterdam. Top right: subtype 2 interwar traditional construction methods Den Haag. Bottom left: subtype 3 postwar mixed construction methods. Bottom right: subtype 4 postwar construction systems. Pictures are from the municipal picture data banks of Den Haag Amsterdam and Utrecht.



- Urban blocks are part of a coherent urban ensemble and neighbourhood.

These time frames 1916 to 1926 and 1946 to 1965 are related to laws like the Housing Act of 1901-2, municipality building bylaws, and laws about financing these dwellings. In the interwar period building bylaws of the different municipalities were important.⁷ In the postwar period the influence of national laws and protocols of the Dutch state was decisive, with some local differences. The post war subtypes were developed from the inter war types.⁸ After a change to the Housing Act in 1965 the elevator was mandatory in four storey apartment blocks. This was the end of the walk-up apartment block. The most successful and common postwar floorplan was *Keuzeplan P45.001* or *type E3* designed by the architect E.F. Groosman, derived from floorplans of the interwar period.

Social reformers had a great influence on the floorplans. About 80% of apartments have more or less the same size and division of space with two or three bedrooms and an average of 50-70 square meters of usable floor area. There are many similarities between tenement apartment blocks. However, there are also important differences between inter and post war apartment buildings to mention. As a result of the inventory and assessment four subtypes of tenement apartment buildings are derived:

1. Interwar buildings using traditional construction methods from Amsterdam, similar to building types of the European metropolises of the nineteenth century;
2. Interwar buildings using traditional construction methods from Den Haag, derived from the traditional Dutch *boven-beneden-woning* from the fin siècle, with two apartments on top of each other, each with its own entrance door;
3. Postwar buildings using mixed construction methods, i.e. traditional (brickwork loadbearing walls, façade), and prefabricated construction components (foundation piles and beams, floor elements, stairs);
4. Postwar buildings using construction systems, i.e. the dry assemblage of prefabricated construction components.

The postwar apartment buildings are linear blocks with four to eight stairwells. The most ideal orientation of the buildings is north-north-west to south-south-east with the living on the light (west to south) side and kitchen and stairwell on shadow (east to north) side. Sometimes the linear buildings are in parallel rows but usually they are open ensembles of buildings around a semi-public court. Blocks do not follow the building lines but are built in line with a front garden. There are

eight apartments in two stacks around a closed stairwell and there is usually a flat roof. There is storage space in the semi-basement (and later on, on the ground floor).

Construction methods: In the period 1946-1965 there were 235.000 apartments (53,4%) built by small contractors in a traditional construction system based on bearing walls, brickwork façades and concrete floor systems. Between 1948 and 1961 about 205.000 apartments (46,6%) with complex construction methods like Airey, Korrelbeton, RBM I, Rottinghuis, Bakker, Muwi, Pronto, BMB, Coignet or VAM were executed by bigger contractors. Non-traditional construction methods usually are divided into three categories: piled, poured or dry prefabricated. Originally, the heating was based on charcoal or district/block heating systems, ventilation was natural. In the sixties and seventies the heating system was changed to central heating with natural gas.

Architecture: The image of the architecture developed from the early to the late post war period. This period used expensive ceramic products such as tiles (pitched roof) and garden walls, sometimes with ornaments and beautiful entrances with glass.

Later on, flat or shed roofs with bitumen were applied, garden walls disappeared, window frames were usually inserted from floor to floor (instead of expensive brickwork) and a lot concrete was put into the façade. The change of architecture was due to a mix of directives from the ministry about reducing cost on expensive materials (ceramic), the lack of skilled labour, new ideas about modern architecture, and about standardisation and industrialisation.⁹ The architecture of the buildings was usually described in architectural guidelines as an annex of the urban extension plan of neighbourhoods. City Councils and Administration approved these plans and guidelines, and asked a supervisor to control the quality of the architecture.

After a change of the Housing Act in 1965, the elevator was needed when there were four or more storeys. A new building type was introduced: the galleried apartment block or 'flat', which appeared in the suburbs with generally ten storeys and elevators.

3. GENERAL TRANSFORMATION FRAMEWORK POST WAR

3.1 Triple bottom line: Planet, People, Profit

The General Transformation Framework (GTF) starts with identifying feasible interventions for improving the energy efficiency of the walk-up apartment buildings. We based our GTF on the triple bottom line Planet, People and Profit, a framework developed by John Elkington with three aspects:

environmental, social and financial to evaluate performance from a comprehensive perspective. The triple bottom line Planet, People and Profit is employed as the basic structure of the choice matrix for interventions from which design alternatives can be composed.

Planet or energy efficiency, indoor quality apartment in the GTF refers to a cluster of technical interventions that can be employed to improve the energy efficiency of the apartments. If the building skin is refurbished and air tightness provided then two problems will appear: the ventilation will not work appropriately and because the noise outside is reduced, tenants experience more noise between apartments. We treat these three aspects as one intervention.

People or socio-cultural values refers to a cluster of socio-cultural interventions related to the functional and cultural heritage qualities. By regulation, 70 percent of the tenants must agree with the deep renovation. These blocks have a narrative value for their inhabitants. Of course sometimes adaptations must be done to improve the quality of the building.

Profit or Strategies housing associations in the GTF refers to a cluster of interventions that deal with the investment of housing associations (and in the end the rent of the tenants). When it is possible to extend the building or enlarge the units on the roof or garden side, then housing associations make more profit and have more possibilities to invest in the expensive adaptations of their housing stock.

We used the VAM walk-up apartment building Camera Obscura in the neighbourhood Overvecht in Utrecht as design case. Floorplan type E3 is used in these apartments. The interventions were categorized in ten groups and for each intervention consumers could choose out of two or three options. The design variations and different interventions we summarized in a choice matrix and visualized in questionnaires. Housing associations in Den Haag and Amsterdam used the results of the questionnaires to provide quantitative data about consumer preferences.

3.2 Reflections of architects and housing associations

Housing associations and renovation architects reflected on the GTF and questionnaire. The following design interventions were preferred and listed in succession of importance: 1. Extending or enlarging the building, and making more apartments. More square meters imply a densification of the neighbourhood, more income for a housing association and lower construction cost, and the possibility to create accessible apartments for older people on the ground floor.

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DESIGN VARIATIONS AND INTERVENTIONS POSTWAR WALK-UP BUILDINGS		INTERVENTION A	INTERVENTION B	INTERVENTION C
PLANET ENERGY EFFICIENCY AND INDOOR QUALITY	01 reduction energy demand • insulation skin building • mechanical ventilation • CO ₂ and moisture detection • low temperature heating (LTH)	low level Energy Performance Certificate EPC B	middle level Energy Performance Certificate EPC A+	high level Energy Performance Certificate EPC A++
	02 use renewable energy linked to building • photovoltaic panels • solar collector	no changes/original PV panels	no changes/original PV panels	no changes/original PV panels / solar collector
	03 noise reduction between apartments • floating floor	no changes/original floating floor	no changes/original floating floor	no changes/original floating floor
PEOPLE SOCIO-CULTURAL VALUES	04 legibility architecture street facade • respect of concrete frame and balconies • remove closed facade ground floor	original facade half open window frames	original facade half open window frames	original facade open window frames
	05 functionality floorplan • adapting kitchen, entrance, toilet	no changes/original extending and improving	no changes/original extending and improving	no changes/original extending and improving
	06 functionality floorplan • social living and amount of bedrooms yellow = living green = bedrooms	single person big living, one bedroom	average family living, two bedrooms	large family living three bedrooms
PROFIT STRATEGIES OF HOUSING ASSOCIATIONS	07 ENLARGE APARTMENTS GLASS COVERED BALCONY • extension apartments with terraces • new apartments on the ground floor	no changes extension with a glass covered balcony on the garden side	no changes extension with a glass covered balcony on the garden side	no changes extension with a glass covered balcony on the garden side
	08 CHANGE FUNCTIONS GROUND FLOOR • social use ground floor • eyes on the street • new apartments ground floor	no changes/original social use ground floor	no changes/original social use ground floor	no changes/original social use ground floor
	09 ADDITION APARTMENTS GROUND FLOOR • social use ground floor • eyes on the street • new apartments ground floor	no changes/original eyes on the street, two small apartments	no changes/original eyes on the street, two small apartments	no changes/original eyes on the street, two small apartments
	10 ACCESSIBILITY APARTMENTS • add lift + gallery • social use ground floor • eyes on the street • new apartments ground floor	no changes/original add gallery and lift on the garden side	no changes/original add gallery and lift on the garden side	no changes/original add gallery and lift on the garden side, make entrance

Fig. 3 Design Design variations and interventions are categorised in a choice matrix, GTF, for option appraisal. The most common postwar floorplan type E3 designed by the architect E.F. Groosman is used for this GTF. Graphic by Leo Oorschot

2. Reducing energy demand by insulating the skin of the building to allow for a low temperature heating system in the apartment, combined with mechanical ventilation. It is possible to apply different types of heat pumps in the future.
3. Improving the kitchen, bathroom, toilet, and storage areas. This is important for the quality of the apartments and allows for the construction of new services systems, fuse box and shafts.
4. Noise reduction between units, although in inhabited state this is a complex issue to resolve. Technically, the most effective solution is a floating floor but this will most likely be

impossible in a fully furnished apartment. A solution could be insulation at the ceiling, i.e. a suspended ceiling.

5. Complex heat systems and installations with renewable energy in the buildings are too expensive and complicated for tenants. Their advice here is to keep it simple. Housing associations are currently using heating systems based on natural gas. In the future it is anticipated that all apartments will be connected to a heat network of 70°C and will use external renewable energy. The following pressing problems have been identified by the partnering housing associations: the lack of new apartments

Fig. 4 Roadmap 2018-2050 shows the interventions in consumer preferences in balancing carbon neutrality and cultural values in postwar walk-up apartment buildings. Graphic by Leo Oorschot

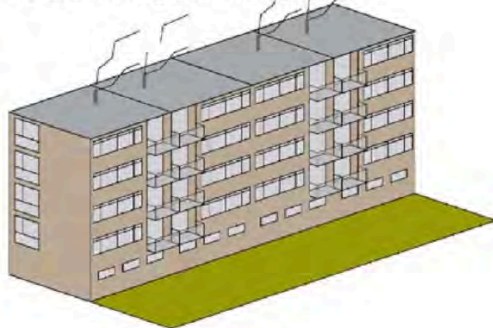
2018 - current situation

Skin energy label F/G

Open balcony

Natural ventilation

Individual heating with natural gas



Intervention A - renovation inhabited state

Skin energy label B or more

Glass covered balcony

Mechanical ventilation, CO2 detection

Block heating with natural gas

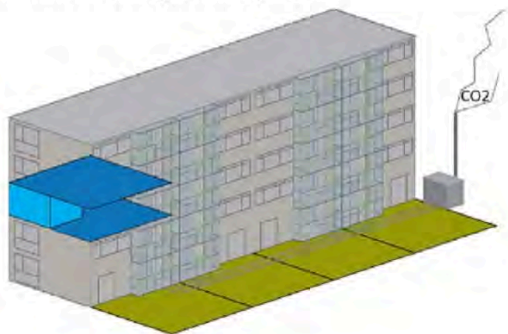


Intervention B - renovation uninhabited state

After tenant left apartment:

Sound insulation apartment

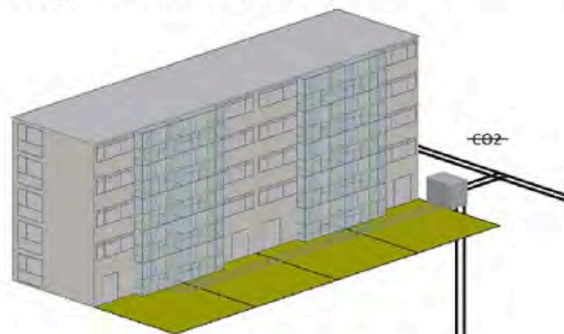
Refurbish kitchen, bathroom, toilet



Intervention C - 2050

From natural gas to renewable energy, two options heating:

- 1 All Electric + Seasonal thermal energy storage (50°C or 70°C)
- 2 Regional open heat network (70°C)



and stagnation of mobility of tenants on the housing market in the urban regions, and the lagging of municipalities about the choice of a heat distribution system for each neighbourhood in the future. However, as pointed out, the most likely option for the postwar housing stock will be a regional open heat network (70° C) and walk-up apartment building upgraded to energy label B or A.

4 CONCLUSION

4.1 Feasible interventions and the roadmap 2018-2050

Combining energy efficiency, legibility of architecture and consumer preferences in retrofitting Dutch walk-up apartment buildings is complex. The conclusion is that the best and most feasible approach is to adapt postwar walk-up apartment buildings in inhabited state in three intervention steps. Deep renovation to carbon neutral, taking into account the legibility of the architecture and consumer preferences is feasible and possible through this strategy. As the questionnaires show, tenants are indifferent about the addition of galleries and elevators, newly designed facades or even new floor plans. Tenants choose for just simple adaptations to make their dwelling more comfortable, but also to make sustainability visible.

Intervention A - Planet: building renovation in inhabited state. Adapting the building skin and reducing the energy demand, assuming label B or A. Change individual heating to collective block heating with natural gas, with a service plant in the basement or garden. Change natural ventilation to mechanical ventilation with CO₂ and moisture detection. Add a glass covered balcony on the garden side with new service space, pipes and ducts. Replace the fuse box. This step is the most difficult step because of the confrontation of tenants with a noisy construction process. There are usually vacant apartments or portable cabins available to stay for a few days, if necessary. - Profit: housing associations have the possibility to add dwellings to their postwar buildings on the ground floor replacing the storage space, apartments on the roof. - People: tenants could choose for visible sustainability measures such as a solar collector or PV-panels on the roof.

Intervention B - People: apartment renovation or adaption in uninhabited state, when a tenant moves house. Improve or redesign the kitchen, bathroom, toilet and storage. Make a floating floor and reduce noise between apartments. - Profit: a new tenant pays rent according to a new rating system which was introduced with the Housing Act of 2015. On the other hand, a tenant with a middle income who left the dwelling paid more rent than the regulations require from low-income tenants.

Intervention C - Planet: exchange heat and energy source when the layout of a regional open heat network in the neighbourhood is ready, or a smart grid with enough capacity is available. Then connect the building to the distribution network, and disconnect natural gas.

4.2 Results

This research dealt with consumer preferences in balancing carbon neutrality and cultural values in postwar walk-up apartment buildings. Everything depends on the preferences of the tenants of the apartments. In this balance between choices it appears that tenants prefer the existing façade and floor plan. The adaptations chosen by tenants were just to bring more quality to the existing qualities. For example: the new connection of the bathroom to the corridor or the transformation of the shallow balcony to a bigger glass covered balcony on the garden side. Furthermore, the research showed that label B in combination with regional and open heating network is the most likely approach to provide heat. In that case it is not necessary to change the façade radically. Furthermore tenants prefer a visual sustainability such as PV-panels or solar collector, instead of better EPC performance. Indeed, the results showed that carbon neutrality with consumer's preferences and with respect of the legibility of the architecture of the façade is possible in a feasible way. The roadmap 2018-2050 produced together with housing association and renovation architects shows a transformation framework for balancing sustainability and cultural values in energy efficient renovation of postwar walk-up apartment buildings

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BIOGRAPHY

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TALES FROM A MODERNIST GALLERY: INCORPORATING DWELLING EXPERIENCE IN THE 1956 PORTO PUBLIC HOUSING PROGRAMME

Paulo Providência (Portugal)

ABSTRACT

The “Plano de Melhoramentos”, built in Porto in the mid 20th century, is one of the largest public housing undertakings built in Portugal. The numbers speak for themselves: begun in 1956 and completed in 1966, the programme constructed 6072 units, accommodating 9.8% of the total population of the city at that time. Having reached the age of 60, the housing buildings are in need of conservation due to their poor thermal performance, rain water infiltrations, and abusive appropriations of escape exit spaces.

The housing blocks have been refurbished recently to increase their level of thermal comfort and to ensure energy sustainability through improvements made to the edifice's thermal envelope. However, the thermal enhancement raises problems of appropriation of the modernist gallery - the most innovative and ambiguous architectural element of the original programme. In fact, the gallery still is the greatest refurbishment challenge, as on the one hand, residents have strongly advocated for increasing their respective apartment areas by incorporating the gallery space, and since on the other, any renovation will bring technical problems given that changes will prevent cross ventilation, hinder fire escapes and emergency exits, and privatize a common space.

In other cases of buildings not yet refurbished, the gallery is incorporated and assumed as an everyday space, allowing residents to set up drying racks for laundry, to eat outdoors, park bicycles, plant flowers or gardens, have storage space, and access to their apartments. Focusing on the use of the gallery as a programme for refurbishing the housing blocks, this paper will reflect on strategies for re-designing this ambiguous in-between modernist space and will examine how to prevent the technical problems raised by enclosing the gallery and to keep their unique character, identity and atmosphere which have been shaped over time.

1. INTRODUCTION

The housing programme that started in Porto in 1956 is one of the largest of social housing undertakings built in Portugal.

The numbers speak for themselves: begun in 1956 and completed in 1966, the programme constructed 6072 apartments, corresponding to housing 9.8% of the total population of Porto at that time. Soon after the beginning of the programme in 1958, the first housing blocks were inaugurated. The architectural typology consisted of three-bedroom apartments articulated with a common living room space that included a kitchenette and a gallery offering access and distribution to an arrangement of four apartments per floor. The programme was developed by the technical department of the municipality, under the design of Luís Almeida d'Eça (1921-2011), an architect educated at Porto Beaux-Arts School in the 1950s who had previous experience in designing social housing neighbourhoods.

1.1 Story of a programme

The main purpose of the programme was to do away with the overly dense city centre blocks (“ilhas”, or “islands”), where a considerable number of Porto citizens lived in very unhygienic and unhealthy conditions, replacing them with new buildings surrounded by green spaces and free from urban tracings (see Fig. 1). The over-densified blocks were the vestiges of nineteenth century working class housing, built close to the factories and promoted by philanthropic entrepreneurs. Rows of one floor buildings, built in the back yard of typical bourgeois plots and organized through an “interior” street, allowed for accommodating 10 or more families (minimum 5 on each side). In general, the row houses consisted of one compartment where inhabitants cooked and slept. At the bottom of the interior narrow street, there was usually a set of water closets, one by each house, the only facility of the “island”.

The distribution of the new neighbourhoods which replaced the old and unhealthy “ilhas” was made according to the availability of land within the confines of Porto's ring road called the “Circunvalação”, which demarcates the city's borders. In so doing, the city took advantage of the new urban structures to replace the nineteenth century town. Although the vast majority

of these new neighbourhoods were located more toward the outskirts of the town, others were located closer to the city centre, either because a plot of land became available or because a major infrastructure project was under way, which made land available. The neighbourhood of Bom Sucesso is an excellent example of the latter as the plot designated for its construction was the result of the enlargement of Campo Alegre Street and the new accesses required for the Arrábida Bridge, whose construction began in 1957 and concluded in 1963.

The housing programme was made a priority, especially when taking account the substantial transformations that Porto was undergoing at that time. On the one hand, extensive planning processes included new ways of structuring the city, through mechanical access and circulation within the fabric of the Old City, which meant opening and cutting that fabric to allow for new motorways. On the other hand, the serious housing problem (that was unresolved despite a 30-year programme of social housing construction) was putting a great pressure and required an urgent resolution. This urgency led to the adoption of pragmatic housing solutions in which the plots of land resulting from public expropriation of private property for public infrastructure were combined with the pressing need to provide housing. The simplistic architectural typologies that were implemented in the newly created neighbourhoods were, to a great extent, a result of that pressure.

There are two examples of the social housing experiments that the city council was putting in practice before adopting

the 6000-housing unit programme of 1956. The first, located near the river, the Bairro Rainha D. Leonor (ex-Bairro de Sobreiras), consisted of a four-floor building with access through a gallery through which each apartment was entered; the gallery had two stairs at both ends, and was built in 1955. The second example is the housing for the employees of the Portuguese postal service, built at Pereiró in 1956, and consists of two buildings of four floors each and with access from three galleries: two at each top of the building, and another at the middle. These examples correspond to an urgent need for housing, resulting from the removal of overcrowded urban blocks from the city centre, and therefore its systematic and minimum area design. By that time, the Portuguese government was very reluctant to put all the workers together in "high rise" buildings, as the usual housing programs had stressed individual row housing schemes, in which each family used to have its own small garden.

In fact, the design projects, including all the engineering projects, measurement workbooks and technical specifications, were carried out in six months, and the work contracts started immediately following; over a ten-year period, each year the procedure was the same: projects for six months with the other six dedicated to supporting the contractor. This methodology allowed for building the desired 6000 apartments over a 6-year period.

After the launch of the new programme in 1956, the first neighbourhood constructed, the Bairro do Bom Sucesso, was

Fig. 1 Porto Public Housing programme 1956-1966, In "Plano de Melhoramentos", Porto, Portugal, Porto City Council, 1966.



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Fig. 2 CTT Housing Blocks neighbourhood, Porto, 1955. Luís Almeida d'Eça and Porto City Council.

executed with one single typology. The three-bedroom apartments were organized through a central distribution space that incorporated a small kitchen. The access from outside to this main space was direct, and the economy in the distribution gives a schematic look to the architectural typology. The apartments, all of which had the same number of rooms and reflected the same distribution principles, were equipped with an electric oven, hot water and a built-in wardrobe. The apartments were also equipped with sanitary installations (a toilet, a washbasin, a tub for washing clothes and a shower as well); there was no space for a private laundry, and a large communal wash basin was built in the back yard of the housing scheme, between rows of housing blocks. This meant that for residents to occupy the houses, they simply needed to arrive with their beds to begin living in these new and improved houses.

1.2 Occupying the gallery

Two years after the inauguration of the first blocks, a report signed by Nuno Portas (1934) and Bartolomeu Costa Cabral (1929) published in the journal "Arquitectura" (directed by Portas himself), criticized not only the absence of Porto School architects in such an important endeavour, but also the small size of the apartments and the absence of privacy in the living room - a space that was lit by windows facing the common access gallery/balcony. Moreover, the gallery was not conceived as an in-between space, one that would allow for the transition from the public space to the private home, but as a cool and simplistic distribution element that would permit the apartments located at its end to appropriate the space.

The article was profusely illustrated with photographs showing several aspects from the neighbourhood, that is to say, the children's playground, the surrounding gardens, some images of the construction process, and of course some images from the former "ilhas" which compared the new "habitat" with

the scandalous former living conditions experienced by Porto's working classes. One specific topic earned the right to be illustrated in four images: the access gallery. In one image, the "clean" gallery showed that there were flowers, but only in front of the last apartment because the previous one was prevented from exercising private appropriation. Another image showed the process of appropriation of the gallery through the construction of a gate and fence that hindered normal circulation. Finally, another image showed a laundry rack standing in the gallery.

The critique of the gallery design meant that times were changing - the modernist simplistic distribution models were now being criticized by a younger generation of architects who favoured more complex uses of space, as in the image of children playing in the gallery or mothers chatting in the stairs on the landing, or in the presence of traditional materials, textures and techniques, such as stone masonry walls and designs that better accommodate modern living habits.

Meanwhile, and despite the public housing processes of rehabilitation, the access gallery became a space of unpredicted everyday use and therefore a topic of increasing conflict with the passage of time. Offering a space for bicycle parking, a communal wash basin, a place for outdoor meals, a small garden, and storage space, the gallery represented a space for outdoor functions that was very much desired by the residents. And these functions bring facilities such as a table, a greenhouse, a drying rack, storage cupboard, etc.

In fact, the gallery still represents the greatest challenge to refurbishment, as on the one hand residents have strongly advocated for increasing their respective apartment areas by incorporating the gallery space, and since any renovation will bring technical problems as any changes will prevent cross ventilation, hinder fire escapes and emergency exits, and privatize a common space.

1.3 Closing the gallery

Some housing blocks from the 1956 programme have been refurbished recently to improve their level of thermal comfort and to ensure energy sustainability. The work projects which closed off the galleries began in the early the 21st Century (see Fig. 3).

The first projects to be implemented were simply meant to close the gallery and create a main door entrance to the building. To do so, the balcony railing was masonry enclosed and aluminium windows were employed to completely close the gallery. This device favoured a direct appropriation of the gal-

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Fig. 3 Two stages of refurbishment of Carvalho neighbourhood, Porto City Council, 2010 and 2016. Photograph by the author.

lery space, and therefore the inhabitants introduced a door dividing each segment of the gallery. Several problems then appeared. First, the gallery as an emergency exit would no longer be functional because to reach safety, residents living in the end apartment would now have to open four doors to reach the exterior space (their own apartment door, the first door in the gallery, the second door in the gallery, and finally the main entrance door to the building). Another problem detected was that the closed gallery now created a greenhouse effect, implying the need for shading it with interior blinds and closing the gallery to the exterior. Finally, closing the galleries by use of aluminium glass windows drastically reduced air circulation in interior spaces and greatly increased interior condensation in the main living spaces, raising the interior moisture level and causing discomfort, and therefore contributing to an unhealthy indoor housing environment.

A second strategy was then experimented, consisting of closing the gallery but not completely. The space in front of the stairs was kept open, and only the gallery spaces in front of the apartments were closed. Moreover, the design of the windows included an upper part that allowed ventilation of the gallery, or at least this was the intention. This solution was implemented without any further changes to the gallery, and the implementation of the glass doors from pavement to ceiling allowed a very simple design and execution solution, as it was implemented in the “back” of the balcony rail. However, the solution decreased the width of the gallery, increasing the problem of a free and unhindered space for any emergency exit. In addition, some problems present in the previous solution persisted: the greenhouse effect, for instance, was still felt, and therefore a special exterior shadow element was created. Another problem was that the ventilation was ineffective because no air entered through the lower level of the window. Finally, the practice of appropriation continued, implying a decrease in the gallery’s quality and effectiveness as an emergency exit.

1.4 A new program for an old gallery

Sixty years after completion, the current social situation of the first housing neighbourhood built via the 1956-1966 “Plano de Melhoramentos” programme in the Bairro do Bom Sucesso has been assessed by the study carried out by Borges Pereira¹ in 2009 and 2010 and published in 2016. The study aimed to draw a social portrait of the neighbourhood, showing a significant amount of prejudice in political statements made about social housing neighbourhoods and their resi-

dents. In fact, generalizations about the educational levels, main activities, and family make-up were excessive, as the reality has shown a much wider diversity of agents, even despite the effects of social vulnerability. However, the survey clearly showed a general tendency toward an ageing resident population, without any significant renewal – reflecting the more general issue of ageing within the Portuguese active labour force. The residents’ general sense of commitment to their neighbourhood, along with their perception of belonging to a reality they valued, were factors highlighted by the opinions of the persons interviewed. One of the more valued characteristics was precisely the location of the neighbourhood, as it is close to the Boavista Roundabout, one of the main new “urban centres” of the city. On the other hand, the size of the apartments and the access gallery are aspects which were most keenly criticized in the survey.

Another survey, conducted by the PhD student Joana Restivo in 2014, and published in her study “Porto public housing – intervening to requalify”, compares several interventions in Porto public housing, examining what she defines as public housing renovation – meaning both the building rehabilitation and a change in the architectural typology of the building. Her study is very much concerned with increasing the size of the apartments in relationship to housing typologies. Therefore, she studies ways of converting a three-bedroom apartment into a two- or even one-bedroom residence, while at same time she is concerned with the accessibility of the apartments, considering that the residents and families are becoming aged and may have mobility issues. As for the common access and distribution spaces, she is very critical of the solution which chooses to close the gallery, but she does not offer any indication of how to resolve the problem that originated the need for enclosing the gallery – which is not only the tiny interior area of apartments, but also the apartment’s direct entrance from the gallery into the main living space.

Instead of ignoring the real use of gallery, a new architectural program based on empirical observation may allow a diverse approach to the refurbishment of the housing blocks. In fact, the survey of housing blocks not yet refurbished may reveal that the gallery is to be incorporated as an everyday space, allowing for drying racks, outdoor eating, parking bicycles, having flowers or plants, storage space, and apartment access. Focusing on the use of the gallery as a program for refurbishing the housing blocks, we have reflected on re-designing this ambiguous in-between modernist space, examining how to prevent the technical problems raised by spontaneous build-



Fig. 4 Bom Sucesso neighbourhood, 1958, Luís Almeida d'Eça and Porto City Council. Project rendering.

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ing changes and to keep their unique character, identity and atmosphere which have been shaped over time.

1.5 Concluding: strategies of gallery refurbishment

Currently, the problem with refurbishing the gallery is still present. The City Council, willing to increase the thermal comfort and energetic sustainability of the housing blocks, but also to please residents who have randomly closed the galleries, is promoting projects that intend to increase the energetic performance of the building envelope by two levels to get a higher level of control on common spaces through the installation of a main entrance door, to enhance the accessibility to the upper level apartments by installing an elevator, and finally to enclose the access gallery. However, enclosing the gallery raises several technical problems, as stated previously. Would it be possible to increase climatic protection in the gallery - from wind and rain in Winter, and from sun in hot Summer - and at same time allow for cross ventilation of living rooms and compartments? Would it be possible to refurbish the gallery for drying clothes without creating obstacles for emergency exit? The solution we are designing consists of creating an external screen made of a stainless steel fabric that would allow ventilation and at same time shield from the rain (see Fig. 4). The screen is hung outside the gallery, enlarging the available space and allowing the drying racks to be incorporated without obstructing residents or hindering foot traffic. This architectural solution protects the apartment entrances and contributes to a new threshold - a space that is neither inside nor outside, a space that extends the interior and yet is autonomous from the interior, a space that allows a safe emergency exit and at same time enables appropriation. This solution seeks to incorporate the marks and scars of the 60 years that moulded the gallery, and opens the way for 60 more years of the building's existence.

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BIOGRAPHY

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Selected publications: *Leprosaria Nacional*. Porto: Dafne, 2013, on a 1940's Leprosy Hospital; *Architectonica Percepta*. Zurich: Park Books, 2016, a selection of his works and writings.

Session 14 THE IMPACT OF MOBILITY

Session Chair: Andrea Canziani (Italy)



If there is any symbolic element of the progress of modernism, that is the car. The automobile has been at the top of the 'food chain' of modernity and the incessant rise of car ownership and car culture has altered the experience of everyday life and human perception of space, both in the urban environment and out of it.

The most famous Ford Model T debuted in 1908, when cars were a luxury item and modernist was at the beginnings. Henry Ford invented a business model based on a radically modern idea: create an affordable product by mass production. By 1927, Model T's were rolling off the lines every 24 seconds. In that same moment the Weissenhof Siedlung pictures with a Mercedes-Benz 8/38 Typ Stuttgart 200 in front of the buildings by Le Corbusier and Mies van der Rohe colonized our imaginary. Since those first and most famous pictures, since the parallel between cars and the Parthenon in the corbusian pages of *Vers une Architecture*, the parallel between cars and architecture has been established as something that belongs to the same new world of modernity, progress, evolution and velocity. *"Let us display, then, the Parthenon and the motor-car so that it may be clear that it is a question of two products of selection in different fields, one of which has reached its climax and the other is evolving. That ennobles the automobile. And what then? Well, then it remains to use the motor-car as a challenge to our houses and our great buildings."* (1923). Le Corbusier was aware that the new mobility would totally change the way of living and made it an integral complement of his urban planning and architecture.

During Twenties' and Thirties' the automobile was a sign of social prestige and a modern, active lifestyle; consequently, the associated services were provided in an elegant, competitive, business-like manner, the city were not crowded, the road was still a place for the most different transport vehicles, and parking our cars was mainly a private problem, or was shaping the architecture of commercial garages structures, new as the concrete of they were built out.

The real change arrived few years later, following the end of World War II with the massive postwar car boom. The auto-

mobile had become "an enabling technology" for dispersing the population, fueling the massive postwar suburban building boom.

Even though suburbanization didn't begin with the invention of the car, it couldn't have taken place without the automobile. So the first drive-thru restaurant came about in the late 1940s (succeeded by questionable, applications of drive-thru technology including those at banks, post offices, cinema).

The post-war era with its huge development of motorization put an emphasis on quantity (over quality) and ushered in another step in the way how the automobiles were shaping the urban environment and the modernist architecture. Pedestrian and drivers were two different kind of users of the city, both with rights and spaces for their own, at the beginning symbolical expression of human values, but afterwards functionalist scission between the two that perhaps we have never recomposed.

Together with the 8th CIAM in 1951, when automobile and reconstruction were central issues in the debate, those were the years of "Theory and Design in the First Machine Age" (1960) by Reyner Banham; of "The View from the Road" (1964) by Donald Appleyard, Kevin Lynch and John Myer; of Robert Venturi and Denise Scott Brown *"LEARNING FROM LAS VEGAS"* (1977); of Alison Smithson *"AS in DS: An Eye on the Road"* (1983).

Nowadays driving is evolving and cities are evolving in response to continuously changing forces and issues around food, energy, water and transport are relevant to their design and development. Perhaps mobility is not anymore possible to be considered only as a dichotomy between pedestrians and drivers. We are facing the rise of a Critical Mobilities (O. Söderström, S. Randeria, D. Ruedin, G. D'Amato and F. Panese (eds.), 2013) because "a mobility turn is spreading into and transforming the social sciences, transcending the dichotomy between transport research and social research, putting social relation into travel and connecting different form of transport with complex patterns of social experience conducted through communications at-a-distance".

Within such evolution, the built heritage derived and connected with the story of car mobility is facing a fate of quick obsolescence and forgetfulness, as any typical functionalist product. Conserving those memories is not easy, because there is usually no historical appeal we can use as an argument for the conservation. Only occasionally local community concerns suggest that it is important to retain them as elements of the identity of place, guiding the decision-making process of adaptive reuse versus demolition, but many times buildings like the large multistories garages occupy very central and precious land and not even the immense embodied energy contained in these structures can save them from demolition. Others, like service and gas stations, have the only possible conservation in changing the function.

Nevertheless the potential of adapting them to different functions and today's environmental expectations can be challenging. For sure some part of this built heritage it is really worthy of conservation. That's why it is important to tackle the challenge and starting a wide, open, discussion on what is involved in such a heritage, as we do here in the Docomomo Conference.

BIOGRAPHY

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ARCHITECTURE IN THE SERVICE OF SOCIALIST AUTOMOBILE CULTURE

Petr Vorlík (Czech Republic)

ABSTRACT

Automobile architecture has long been overlooked as a subject of historical interest. It has, however, in recent years been dealt with in a number of studies, most of which show how architecture was shaped by developments in technology or lifestyle. The early stages of Czech automobile architecture were surveyed in the books *Interwar Garages in the Czech Lands*, and *Architecture in the Service of Motoring* (Vorlík, P., 2011 and 2013), but the post-war situation is only drawing attention now. In the interwar era the automobile was a sign of social prestige and a modern, active lifestyle; consequently, the associated services were provided in an elegant, competitive, business-like manner. But the post-war shortage in automobiles and the change in political system, which put an emphasis on quantity (over quality), ushered in an altogether different architectural philosophy, based on a rational approach and making maximum use of standardisation. Despite the theorists who long highlighted the shortage of sheltered parking spaces and criticised the open car parks that had become a blot on the urban landscape, for a long time the mammoth bureaucracy ignored the need for parking garages. Demand in society nevertheless eventually led to the construction of many interesting structures – from independently built individual garages, to the construction of parking garages to service the needs of housing estates or serve as noise barriers or built into the underground of apartment buildings, to the charming roadside restaurants and service and petrol stations that were almost constructivist in the practicality of their design.

1. THE SHORTAGE

Automobile architecture did not have an easy time in Czechoslovakia after the Second World War. State support was primarily directed towards restoring infrastructure and industry, and business made only a slow and stilted recovery in this tense and politically uncertain period. Car owners were initially able to take advantage of the lavish leftovers of interwar automobile culture – the hundreds of well-equipped rental

garages, petrol stations, and automobile showrooms. Out of this tradition new elegant garages were born, such as the one in the courtyard off Biskupcova Street in Prague-Žižkov (Josef Sazama, 1947–1948), and a supremely practical but unfortunately never built five-storey garage in Zlín (Josef Havlíček, 1943–1944).

A sharp decline in car production and culture, however, followed the victory of the Communist Party in the 1948 elections and the subsequent change in political orientation. A centralised system of rule began to take hold in Czechoslovakia and it was opposed to building projects of an individualistic nature and against private enterprise in the field of services, which is what the early stages of automobile culture were founded on. The roads were mainly occupied by motorcycles and old VIP vehicles, the production of new automobiles stagnated and imports from abroad were subject to huge customs duties and controls. If someone wanted to buy a car, they first had to obtain a voucher and then join a long waiting list, with delivery dates promised often many years down the road. Even then the new car remained the property of the state, and the private citizen had only the status of car 'holder'.

The impact of the dire shortage of automobiles is best illustrated by the country's housing estates, which until the mid-1950s remained remarkably pristine and favoured pedestrian traffic (even though in the 1930s it was already common to design apartment buildings to include garages). A good example is the Solidarita housing estate in Prague-Strašnice (František Jech, Hanuš Majer, Karel Storch, 1946–1951), the scale and enclosed urban layout of which literally acted as an 'obstacle' to automobiles (nowadays this is regarded as the estate's greatest quality). Other housing estates were no different, however; the core and basic building block of the estates was always a cluster of neatly hemmed-in, mono-functional apartment buildings with just basic amenities – a grocery store, a central laundry, and, on most larger estates, school and health facilities, a cultural centre, and a political administration building.

Most of the idealised and largely propagandist photographs and perspective drawings of housing estates in the 1950s show a large public space augmented with ample green areas and filled with pedestrians, preferably workers, families with prams, and playing children. Automobiles figure more rarely in the images, and usually only in projects created by former avant-garde architects or their students (even though automobiles figured as an essential part of the background in photographs of the politically promoted, model Soviet complexes published at that time, and were often added in the form of retouching as a symbol of technological progress). An important role was also played by the show policy of inhabitants living a communal life: *'New Ostrava will have ... all in all just 10 avenues... Five of them (the main avenues) will be devoted mainly to pedestrian traffic and mass means of transport... A worker who travels the main avenues to work will realise a sense of oneness with all the inhabitants of the city and its magnitude, the monumentality of the avenues and public buildings will arouse in them a sense the greatness of the age that they are living in and that they are building with their work.'*¹

2. CONSUMPTION AND IMPROVISATION

The isolated theoretical appeals for the construction of garages that began in the early 1950s were not heard until 1958, when the automobile market (and the situation in society) finally loosened up and when automobile production was fundamentally transformed by the Škoda plant in Mladá Boleslav. Nevertheless, automobiles were in short supply in

the Eastern bloc until 1989 and to that time remained a product that had to be carefully maintained by its user and had an envisioned lifespan of at least ten to twenty years. They were also a sign of social status and a ticket to spending leisure time 'freely' at one of the lodges operated by employers or trade unions, or more commonly at a private cottage in the countryside or on a dreamt-of seaside holiday in Yugoslavia or Bulgaria. All the more surprising is how little attention the politicians as authors of public investment plans devoted to the construction of central garages. A big role in this was likely played by the above-noted official preference for pedestrian traffic and the 'walking-distance' criterion favoured by urban planners, as well as by the priorities marked out in economic plans, where the most attention was naturally snatched up by housing and basic public facilities.

Gradually automobiles became more common among the public and the growing pressure this put on parking is well illustrated by the example of a prominent housing estate called Slovany in the city of Pilsen (František Sammer, 1957–1962). Its main avenue is lined on one side with buildings from the mid-1950s, which in the style typical at the height of socialist realism formed an enclosed block with a snug inner courtyard filled with greenery, while on the other side are buildings from the early 1960s, which are noticeably more solitary structures, are more frugally decorated, and feature airy inner courtyards accessed through enormous gates surrounded by several garage boxes.

Various types of parking garages appeared in the 1960s in

Figure 1. A colony of independently built garage buildings on Jabloňová Street, Kolín, Czech Republic © Petr Vorlík, 2017.



Petr Vorlík Architecture in the Service of Socialist Automobile Culture

most of the more progressive housing-estate projects. The conceptual model for the superb experimental housing estate Invalidovna in Prague (Josef Polák, Vojtěch Šalda, 1958–1967) includes, right next to the high-rise structure of the hotel, a three-storey, six-bay garage building. Although it was never built, in 1965 a newspaper published an optimistic announcement that construction was to begin the following year on a different, experimental version of a garage that would have six stories and would be inspired by garages built abroad (Office of the Chief Architect in Prague and the Regional Planning Institute in Mladá Boleslav).

Similarly, in the project for the iconic Lesná housing estate in Brno (František Zounek, Viktor Rudiš, Miroslav Dufek, Ladislav Volák, 1960–1970) there were plans for standard single-storey parking-garage yards to be built at six of the turns onto side roads off the main ring road around the estate. The dramatic increase in automobile traffic, however, exceeded the planners' expectations and the construction of these foresightedly decentralised garages would have been insufficient, even if they had actually built all six instead of just two of them (inspired by the Scandinavians the architects favoured a more humanistic design favouring quiet, pedestrian traffic inside the estate).

Central two-story covered parking garages were built on the Březinovy sady housing estate in Jihlava (Zdeněk Gryc, 1966–1986). Surprisingly, however, in Jihlava politicians gave the issue of parking the attention it deserved: *'In the past decade there has been a sharp surge in the production of personal automobiles here like in every other country ... and with this have come a number of problems that have not yet been resolved in a satisfactory way. First in line is the construction of garages. As of the end of 1969 there were records of a total of 400 applications for a building site for the construction of a garage submit-*

*ted to the financial division of the Municipal National Committee. The situation is gradually being addressed, so that consistent with zoning guidelines and the approved plan for garage construction the Municipal National Committee is making use of such areas especially in the peripheral parts of the city and on hillsides, etc., and there work is being done on the large-scale construction of garages.'*²

It was this kind of 'semi-improvised' construction of garage 'colonies' that took hold in Czechoslovakia and became quite a distinctive phenomenon. Areas for the construction of garage boxes were roughly marked out on worthless peripheral land as part of the urban planning process and the actual construction was usually then done independently – for instance, by families on the weekends or an organised group of neighbours helping each other out in what was called a 'Z event' (i.e. officially *Zvelebování* or 'beautification', unofficially *Zdarma* or 'freebie'), or collectively under the formal lead of a building cooperative. A standard garage box blueprint could be obtained secretly from a neighbour or could be bought 'officially' for a good price from a designer. Popular simplified manuals on how to build your own garage sold out quickly at bookstores.³ Materials usually had to be obtained on the black market, through friends, and with bribes.

That's why today colonies of garage boxes of varying quality and in states of completion can be found on the edge of most housing estates dating from the 1960s and 1970s. In most cases they were arranged as a single short street with garage boxes on either side; often, however, they covered large areas of land extending over hundreds of square metres. Even within these vaster complexes it is possible to find kindred groups of garage boxes built at the same time according to a similar garage design. Given that the garage colonies were located outside the limits of the housing estate the father of the family

Figure 2. A colony of independently built garage buildings arranged in circles, Mělník, Czech Republic © Petr Vorlík, 2017.





Figure 3. Mass collective parking garages on a housing estate Kročehlavy, Kladno, Czech Republic © Petr Vorlík, 2017.

often had to ride his bike to get to the car in the garage. The garage box was oftentimes only used in winter and in some cases was employed only as the family's storage space, while the car was ultimately left parked in a public area in front of the apartment building. One of the largest colonies of this type is on Jabloňová Street in the city of Kolín, which was originally meant to be used as the parking area for all of the city's new post-war housing development (Fig. 1). A more interesting approach is seen in the colony on Sportovní Street in Mělník (Fig. 2), where the garage boxes are arranged in six circles. An alternative option was to use metal, prefabricated boxes, which were cheap and did not require any difficult independent construction work, for example, along Březnická Street in Příbram.

Although these distinctive residual spaces often also served as very poetic little areas of seclusion, like something out of a Giorgio de Chirico painting, and as a great place for children to play ball games and for adventures, the absence of any order to them was not something architects or politicians could put up with for long. These parking areas spoil the picture of the centrally structured housing estate (somewhat confidently referred to at the time as 'all-inclusive housing development'), prevented the direct access to nature so extolled by modernism, and, above all, created a space for unmonitored private activities, which the regime was against. Planners therefore continued to push for the centralised, planned construction of mass parking garages.

The normalisation era of the 1970s and 1980s, however, was mostly characterised by an air of resignation, where there was neither the will nor the energy to work further on developing the public space and amenities of housing estates. The architects behind the Severní terasa project in Ústí nad Labem (Václav Krejčí, Josef Gabriel, Mojmír Böhm, 1965–1986) stated laconically in 1973: *‘The distribution and community centre in the district is equipped with the following facilities: a self-serve supermarket, a services shop, a restaurant, and a diner combined with a public education centre. For now the plans for mass parking garages remain, as with other housing estates, only on paper.’*⁴

The automobile gradually evolved into a more durable and common consumer good and as such people could safely park them on the street in front of their building. Housing estates ultimately came to typically make use of just open car parks, where car owners could attentively cover their car with tarpaulin or an unfolding ‘umbrella-like’ canvas canopy to protect it. In an attempt to at least slightly refine or embellish this environment planners turned to the latest fad: *‘Although a basic solution is the construction of multi-storey parking garages and outdoor car parks, a provisional contribution to solving the problem is to finish the surface of vast parking lots with grass-block paving.’*⁵

3. GARAGES

Occasionally it did happen in the 1970s and 1980s that a mass parking garage was built, but it was usually in experimental projects supported by the regime, where architects and politicians tried to respond to the growing criticism levelled at housing estates – e.g. a group of two-storey garages along Pařížská Street on the edge of the Kladno-Kročehlavy housing estate (Leslav Vlček, Milan Brzák, **Fig. 3**), the underground garage among the terraced buildings in the elegant Jižní Svahy housing estate in Zlín (Vladimír Vyhnák, 1968–1980), the garages that were built in the basements of the ‘Corbusier-esque’ duplex high-rises in Chomutov (Rudolf Berger, 1971–1973), the housing for the physically disabled along Hřebečská Street in Kladno-Kročehlavy (Milan Brzák, Jan Netscher) or the garage beneath the terrace of Nordický poetic Wolkerák building in Liberec (Jaromír Vacek, 1968–1972).

Sometimes parking lots and detached garage structures were included in development plans in which they were also to serve as barriers – against noise or to separate automobile and pedestrian traffic (although in some cases they weren’t built

until after the change in political regime) – for example, in the housing estates in Vinohrady in Brno (Jan Doležal, Miroslav Dufek, Aleš Jenček, Pavel Plšek, 1978–1992) or Vltava in České Budějovice (Miroslav Vyhnánek, Otto Kubík, 1973–1987). In most cases, however, it was possible to push through their construction if they could be argued for in connection with some other public service, usually a car repair shop – for example, in the Slovany housing estate in Pilsen (Hynek Gloser, 1959–1964) or in Prague-Malešice (Jaroslav Celý, Antonín Průšek, 1977, **Fig. 4**). Another option was to combine it with other technical structures, such as the boiler house on Na Vršku Street in Příbram.

These experiments were not very advanced spatially or structurally, unlike their counterparts in Western Europe and the United States. The standard was a hall with a central aisle, a reinforced concrete prefabricated ceiling, and, in rare cases, steel columns, and use of the D’Humy Motoramp design, in the case of a multi-storey car park. A genuinely remarkable experiment therefore is the garage on U Lesa Street in Ostrava (Jozef Poštulka, Ludvík Weisz, 1964–1968), which has a circular layout and a membrane roof suspended on steel cables, a design the architect also used in the four garages on Pionierská Street in Bratislava and in car repair shops in Bratislava and Chomutov.⁶

An important role in bringing about the construction of garages was also played by cooperative construction projects, in which the users and architects were able to go beyond standard prefab production. This approach managed to be put into practice already in the 1960s in the construction, for instance, of the underground garage for the experimental residential building on Řetězová Street in Děčín (Miroslav Vítek, 1970),⁷ garages on the ground floor of the elegant Hadovka apartment buildings in Prague built for employees of Průmstav building company (Josef Polák, Vojtěch Šalda, 1966–1970) or the Santinka building for employees of the Civil Engineering Faculty of the Czech Technical University (Jaroslav Paroubek, Arnošt Navrátil, Jiří Turek, František Havlík, Zdeněk Kutnar, 1968–1971).

Criticism of housing estates culminated in a number of (theoretical) projects from the 1980s that were clearly inspired by work abroad, in which the architects designed multilevel central areas offering an array of shops, public services and workplaces, and with large underground garages – for example Nové Butovice in Prague (Ivo Oberstein, Václav Valtr, Pavel Dydovič, 1967–1991). An alternative approach appeared in the form of designs for low-rise dense development interwo-

ven with green areas and basement parking – for example, the postmodern project for the new garden city Písnice I in Prague (Jan Fibinger, Jiří Vasiluk). Up until the change in regime in 1989, however, these visions had not been built.

4. SERVICES AND HISTORICAL CONTEXT

Other structures that stand out in post-war automobile architecture are the roadside restaurants that were built in the countryside and had a late-modernist or Nordicly poetic or even cottage-like atmosphere, such as the famous Konopiště Motel or the roadside restaurant in Jilemnice-Hrabačova (V. Herbst, J. Bedrna). The buildings used at motorway rest areas and petrol stations by contrast changed little from the post-

war era and leaned more towards rational, lightweight constructivist forms, standardisation, and smooth operational designs – such as the well-equipped Drahelčice rest area on the D5 motorway (Alexander Novák, 1972–1973).

Finally, mention should also be made of the state institution that oversaw automobile sales and repairs: *Mototechna*. In the late 1960s it had to respond to the spread of automobile culture by building a network of standardised sales showrooms, and these were given a rational design and were reminiscent in appearance of industrial halls. They moreover had to be built in different sizes for regional and district cities (František Martínek, Miroslav Mužík, 1967–1973, 1975–1976). Huge and similarly technocratic industrial halls for

Figure 4. Jaroslav Celý, Antonín Průšek, Garages and *Mototechna* services on a housing estate Malešice, Prague, Czech Republic, 1977 © Petr Vorlík, 2017.



the repair of Škoda automobiles were also later built in Prague-Záběhlice, Ružomberok, and Bratislava-Trnávka (Dana Matoušová, 1967–1980).

However much it may seem from the above discussion that the subject of vehicle parking in urban centres was of little or no interest to architects in the post-war years, there were articles in the contemporary press that specifically addressed this topic; projects for mass parking garages were also discussed by architects, and given the atmosphere of the time and the nature of the problem they were usually presented in the form of a model version that could be applied repeatedly using standard components. Mass parking garages at 'park-and-ride' sites were also envisioned in the baseline redevelopment plans of cities, such as Ústí nad Labem, where in the 1990s they were even actually built in the exact location that architects had already proposed for them forty years earlier. The kind of large parking buildings that we are familiar with from urban centres in Western Europe, however, have not received enough support in central investment planning. An exception is the roof of the new departure hall of the Central Train Station in Prague (Josef Danda, Jan Bočan, Jan Šrámek, Alena Šrámková, Zdeněk Rothbauer, Julie Trnková, 1970–1979) or the nearby austere designed Slovan Garage (Z. Lešetinský, 1985). Unfortunately, some garage projects that have never been built include the extraordinary project to redevelop the centre of Liberec (SIAL, 1970), in which many of the buildings were designed with a hall garage in the basement and the complex was accompanied by a C2 parking building with machine-like exterior contours moulded by the ramp structures (the design may have been inspired by Michael Webb's cult design for the Sin Centre).

It is possible to find in the contemporary press quite a number of articles devoted to urban transport and related infrastructure and they include references to examples abroad and even from the West. By the late 1970s there was even already open criticism of cars being parked in the historic centres of cities and marring the appearance of the residential public space: 'Red Army Square [in Olomouc – author's note], with two baroque fountains and a plague column, the biggest square in the city – originally a market, [is] now the largest parking lot in the centre...' ⁸ It is for this reason that in the first redevelopment projects or sensitive modernisations of historic developed areas before the revolution that were inspired by post-modern ideas from abroad it is possible to find proposals to introduce parking garages into the interior courtyards of buildings to improve and consolidate that space or to build

contextual 'city-making' buildings with integrated underground garages – for example in Prague in Vinohrady or Břevnov (Jan Zelený et al., 1977). These plans have, however, understandably never been realised.

5. CONCLUSION

We are still in the early stages of exploring the post-war automobile architecture of the Eastern bloc. At first glance it seems to lack the distinctive elegant culture that characterised the interwar era, but on closer inspection new and in many respects more serious issues appeared, which were oftentimes left unaddressed and have inertly survived into the turbulent present. Post-war automobile architecture nevertheless deserves our attention, in part because in recent years it is succumbing almost unnoticed to the ruthless pressures of commercial interest and very rapid decline. We thus have the last opportunity to make a record of their material remains and understand the driving forces that shaped them and continue to shape the environment we inhabit.

NOTES

- 1) Vladimír Meduna, 'Nová Ostrava', *Architektura ČSR*, 1951, pp. 259–264.
- 2) Archiv SOkA Jihlava, *Soupis prací Zdeňka Gryce; 1945–1970. Dvacet pět let života a práce města Jihlavy*, MNV Jihlava, 1970, p. 32.
- 3) 'Garážové kolonie – a co dál?', *Československý architekt*, 1960/12, p. 5; Jan Beneš, *Stavba garáže*, SNTL, Prague 1960; Jaromír Doležal, *Garáž svépomoci*, SNTL, Prague 1989.
- 4) 'Severní terasa v Ústí nad Labem', *Architektura ČSR*, 1973, pp. 122–125.
- 5) Ivo Oberstein, 'Parter základní prvek městské krajiny', *Architektura ČSR*, 1981, pp. 266–267.
- 6) Jozef Poštulka, 'Hromadné kruhové garáže', *Pozemní stavby*, 1975/5, pp. 276–280; W. Winter, 'Sokolovský autoservis', *Pravda XLVI*, no. 290, (4 December 1965), p. 3; 'Bývalý autoservis na Mlýnských nívách', accessed January 10, 2018, <http://www.ruzinovskeecho.sk/clanok/byvaly-autoservis-na-mlynskych-nivach>.
- 7) Private Archives of Members of the Děčín-Řetězová Co-op.
- 8) 'Olomouc', *Architektura ČSR*, 1986, p. 255.

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BIOGRAPHY

Petr Vorlík studied at the Faculty of Architecture, CTU in Prague. He has done design work independently and for the studios Barva and ADR. Since 2002 he has focused on teaching and research. In 2012 he was appointed associated professor. He specialises in 20th-century architecture and is the author or co-author of a number of publications, including *The Grounds of the CTU in Dejvice in the 1960s*, *Interwar Garages in the Czech Lands*, *Architecture in the Service of Motoring*, *Jasan Burín*, *The Czech Skyscraper*. He developed the concepts for a series of databases focusing on architecture: *industrialni-topografie.cz*, *dejiny.fa.cvut.cz*, *registr.cvut.cz/pa*.

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THE BEAUTIFUL EVERYDAY JOURNEY

Roberta Marcaccio (UK)

ABSTRACT

Since the modernist period the automobile has been at the top of the 'food chain' and the incessant rise of car ownership and car culture, has altered both human perception and the experience of everyday life in the urban environment. More recently, cyclists have started to compete for their space on the road, thus changing the experience of moving through the city, unfortunately though, not entirely for the better.

In integrating cycling, London has been scarring its fabric with a mesh of flyovers, segregated pedestrians and cycle paths. This expensive and scarcely flexible infrastructure, reminiscent of last century's process of modernisation, not only ruins the urban setting, but also generates many tensions on the roads. This is particularly evident at the junctions, where cyclists have to cross path with other modes of transport.

As recipients of the 2016 Built Environment Research Fellowship – awarded by the Royal Commission for the Exhibition of 1851 – DSDHA have investigated the nature of London's urban mobility, considering often overlooked aspects of aesthetic and psychological order. This paper will illustrate how, building on this research, we have devised a methodology for the design of safe and pleasant urban 'journeys'. Our aim is to reconfigure the city to reduce the traffic of motorised vehicles whilst making cycling (and walking) in London a more pleasurable and accessible mode of transport.

1. INTRODUCTION

In 'The Speed Handbook: Velocity, Pleasure, Modernism' Enda Duffy historicises the sensations and pleasures of speed during the modernist period. Since then the automobile has "rolled into the city like an assassin" (O. Das, 1983) and conquered space at the expenses of pedestrian areas and public space. Moreover the incessant rise of car ownership and car culture has altered both human perception and the experience of everyday life in the urban environment – as the work of Alison Smithson ('AS in DS'), Venturi/Scott Brown/Izenour ('Learning From Las Vegas') and Lynch/Meyr/Apple-

yard, ('The View From the Road') well started to document in the '60s and '70s.

More recently however, new road-users have started to compete for their space in the city. Cyclists in particular are dramatically changing the experience of moving through London. As more and more of them whizz past the lines of cars that roll into the centre, it is clear that on short trips through the inner city they are now faster than any other means of transportation. However, beyond its documented logistical, health, environmental and social benefits, cycling is also causing huge conflict on our roads. This is partly because, in integrating this mode of transport, the attempt has been to replicate 20th century planning models, scarring our city with a mesh of flyovers, segregated pedestrians and cycle paths. All this expensive infrastructure, due to its lack of flexibility, risks becoming obsolete with the introduction of autonomous vehicles, in the meantime it is ruining the urban setting and fuelling tensions between different road users. This is particularly evident at the junctions, where cyclists cross path with other modes of transport. It is here that the modernist narratives of 'speed', 'segregation' and 'efficiency' – as the imprint of last century's process of motorisation – still resonate and cause the most issue for the integration of different users.

As recipients of the 2016 Research Fellowship in the Built Environment – awarded by the Royal Commission for the Exhibition of 1851 – DSDHA have investigated the nature of London's urban mobility, considering often overlooked aspects of aesthetic and psychological order. Building on this research, we have devised a methodology for the design of junctions in the historic centre that allows the integration of cycling and walking journeys with other established and upcoming modes of transport, rather than segregating them. Taking into account a number of parameters, including the impact of panoramic views on different users' speed and modality of travel, this methodology seeks to improve the quality of our public spaces, mitigate the current tensions and therefore make cycling (and walking) in London a more pleasurable

ble and accessible mode of transport: one open to people of different ages and ability, rather than a specialism reserved for fearless lycra-clad ironmen, as it currently seems to be.

2. THE LONDON NETWORK

London is a unique place, a crowded mega-city with a resilient organic and wonderfully informal street and road pattern at its core. Even if (unlike other European cities) its centre hasn't been carved up with too many 19th century boulevards and 20th century highways, the automobile has been at the top of the 'food chain' since the last century, greatly impacting the mode and speed at which Londoners have engaged with the city. All this while city-dwellers, either in their role of pedestrians or car-drivers, gradually lost the ability to observe how the car was changing of the use of urban space.

In response to this phenomenon, which is true for many other cities, personalities like Alison Smithson, Venturi/Scott Brown/Izenour and Lynch/Meyr/Appleyard started to carry out experiments to raise the awareness of the impact of motorisation. Their aim was to put the subject back into the centre of the analysis and shift the perspective on transport

infrastructure from a mere problem of engineering to one of art and architecture.

In 'The View from the Road', the authors describe the driving experience as a musical notation: "a sequence played to the eyes of a captive, somewhat fearful, but partially inattentive audience, whose vision is filtered and directed forward." They point out that "vision, rather than sound or smell, is the principal sense. Touch is a secondary contributor to the experience, via the response of the car to hands and feet." In line with these observations, 'Learning from Las Vegas' suggests that the speed enabled by the automobile, by distorting a driver's perception of space, has called for a hybrid form of architecture/landscape which prioritises visual communication over other spatial qualities. Applying these ideas to a wider scale, Smithson's "AS in DS – a diary of a passenger's eye on English roads in the 70s" – marks the beginning of a new sensibility to car movement's impact on urban planning. By adopting the point of view of the car driver – looking at the urban environment from the motorway, the road, the street and from the parking-lot up to the entrance of the house – all these authors showed how the altered perception

Figure 1. Map showing London's cycling network in relationship to the city's monuments and major urban landmarks. © DSDHA



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Figure 2. We have identified a number of cycling 'characters' and grouped them into nine broad categories according to their habits, concerns and, above all, the pace at which they tend to engage with the city. To each speed corresponds a spectrum of possibilities of interactions, both with the built environment and with other road users, as well as a variety of perceived or actual risks and obstacles along one's journey. © DSDHA

of space enabled by the car had transformed architectural scale, hierarchy and symbol, whilst changing the social nature of the city. Today, while we strive to reprogram our car-centric environments to make space for other road users, it seems urgent to revisit these experiments and adapt them to the experience of cycling and walking. In this way we can develop a deeper awareness of our urban space and mould it to successfully accommodate other means of transport and mitigate the current tensions.

In London, the slow shift away from the prominence of car use begun over 45 years ago, with the campaigns against, and abandonment of the 'Ringway' proposals. In the early '80s

the GLC, under Ken Livingstone, set up a specialist planning unit to promote the introduction of cycling infrastructure. In the late '80s / early '90s the London Assessment Studies concluded that major road schemes should not be pursued and that better use should be made of the existing road network. This led to the 'Red Route' studies in the mid '90s, as well as the construction of new Underground rail capacity. In the mid to late '90s, reflecting a desire for a better urban environment (such as promoted in the city studies led by Lord Rogers), there was an increasing momentum for street-scape improvements – e.g. The Strand, Regent Street, Kensington High Street. At around this time Dutch notions of 'shared

space' or 'simplified streetscapes' began to influence urban designers/traffic engineers. An early example of which was the improvement of Kensington High Street, where guard-railing and unnecessary street furniture was removed, kerb-lines realigned and pedestrian crossings made more direct, creating a much improved and less cluttered street scene.

Yet, despite all these measures by the 2000, due to an unprecedented population surge, London was a gridlocked and polluted mess, traffic spat and snarled. Underground trains panted in hot tunnels, buses lurched in convoys. The city was (and still is) under severe pressure to use its physical space wisely and sustainably, without destroying its quality and history. At this point a combination of more incisive policies (in 2003 for instance the Central London Congestion Charging Zone was introduced) and infrastructural changes were implemented. All these measures shared the aim to rebalance traffic towards alternative means of transport to the car: from the highly sophisticated and expensive Crossrail, to the more 'ordinary' issue of making it easier to walk and cycle within the dense historic core. Technologies like trains and bicycles – which in the 19th century, before the advent of cars made them unfashionable, used to be symbols of progress and modernity – have thus been re-evaluated and given more space within a less car-centric urban landscape.

London, however, is not like Amsterdam and Copenhagen – cities with a more ordered, compact and coherent layout. The sheer scale of the UK Capital inevitably results in longer commutes: real 'journeys' taking one through different urban conditions, across the city's 32 boroughs, plus the City of London, each with its own political, administrative and physical identity, with a street pattern that changes moment by moment, straight to winding, leafy to truck-thronged, wide to narrow.

So what are the more recent infrastructural changes that London has implemented to integrate cycling? Cycle Superhighways, the most conspicuous of several measures promoted under Johnson, and Quietways – a UK invention, which join up the slack and under-used byways of the city to offer safe and un-threatening routes – make up the Central London Grid, in the attempt to make the sprawling, awkward, inconsistent city of London bike-friendly. This network complements other cycling initiatives typically located at the outskirts of the city centre, such as the Outer London Quietways and the Mini-Hollands. The latter are 'de-tuned' environments that favour cycling but allow other means of transport at moderated speed, and where rules are social rather than formal, following the model of Dutch-style infrastructure. London's network is dotted with a few Shared Space typologies, like Exhibition Road or Leonard Circus for instance. These are public spaces where road signs, traffic signals, roundabouts, crossing points and kerbs are done away with and replaced with level surfaces with minimal road markings, on which vehicles and people negotiate their individual movements. Users may feel insecure, but that's exactly the point. The sense of uncertainty tends to slow down traffic – particularly of motorised vehicles – creating environments that are generally more cycle- and pedestrian-friendly, where paths can cross and successful urbanity flourish.

In many ways London's network appears as the reversal of Dutch planning principles. Dutch cities tend to have extensive areas of Shared Space at their core: with motorists, pedestrians and cyclists acting as one and proceeding at moderated speed within the historic centre. Segregated routes, either Motorways or Cycle Superhighways constitute the 'exception'. They connect one historic city centre (essentially a mac-

Figure 3. Stress maps of the area around Leonard Circus. These maps visualise the levels of stress or tension that pedestrians (yellow map), cyclists (blue) and vehicles (red) are subject to. The more intense the colour the more stressful a particular road or junction is for each user's category. © DSDHA



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ro Shared Space) to the other and to transport infrastructures such as airports and train stations, allowing road users to move between them at greater speed. By contrast, the Cycle Superhighways and Quietways of the Central London Grid cut through the historic core; the first segregating cyclists from motorised traffic, and the latter excluding them from most of pedestrianised areas in and around London's cultural infrastructure: i.e. its major monuments, landmarks and attractions. London's 'shared spaces' are but sparse fragments in this highly segregated network. (**Fig 1**)

Some of the implications of this strategy are that:

- with the segregated lanes provided, the average speed of cyclists remains sustained across the historic core, in a way favouring braver and somewhat aggressive cyclists (the lycra-clad type), while undermining the confidence of pedestrians and less experienced or less able cyclists as well as children;
- motorists refuse to share the road by accepting the presence of cyclists, who, they think, should get out of the way and only occupy the segregated infrastructure that has been provided for them;
- the Quietways have undoubtedly created safer routes away from motorised traffic and excessive pollution. However, when cycling through them, one rarely gets to enjoy views towards iconic monuments and/or direct access to London's exciting cultural life (from markets to museums for instance), which is what makes the city attractive but also more 'legible' to both tourists and residents. It is undeniably difficult to orientate oneself through the Quietways and navigate the city without the anchor of recognisable vistas. As such these routes tend to become the exclusive 'territory' of experienced, fast-sprinting cyclists, rather than of tourists or children for instance, with the consequence that the adjective 'quite' is often ill fitted to describe them. The junctions – where Quietways intersect other transport networks – are usually a bit of a missed opportunity in this sense. Despite the access to recognisable vistas or cultural infrastructure that these junctions usually offer, the experience of travelling through such nodes is rarely enjoyable. Take for instance Blackfriars Bridge, where Quietways, multiple Cycle Superhighways' segregated routes converge and meet with highways as well as with hordes of pedestrians flocking out of the underground and railway stations. At this highly engineered segregated junction a substantial amount of road signs, traffic signals, roundabouts, crossing points and kerbs regulate the flow and dictate the pace of different transport modes whilst keeping them strictly

separated from one another. This is hardly a place of positive encounter, with tension and stress level typically very high and any sense awareness of the settings inevitably diminished – no matter how astonishing a view towards the Thames might be.

Non-segregated junctions – such as Leonard Circus – represent an alternative to this. Here the Quietways typically converge with other networks and a more diverse population of cyclists (not just the lycra-clad) negotiate their space and pace with either pedestrians or motorists. We have concentrated our study specifically on these typologies of 'shared space', which we believe are key to create a more inclusive and pleasant public space. Yet at the moment they are but 'islands' within the Central London Grid and, in part because of their sparse nature, are perceived as interruptions to the network of designated cycling and transport routes and, precisely for this, are criticised by users and stakeholders.

3. OUR METHODOLOGY

Our approach has drawn inspiration from the experiments of Smithson, Venturi/Scott-Brown and Appleyard/Lynch/Myer. We applied similar techniques to the study of a cyclist's experience of the city, or rather, of different London's cyclists – whom we have classified according to the pace at which they tend to engage with the city. Our assumption has indeed been that different speeds of motion allow very different social and aesthetic experiences of the environment (**Fig 2**). We have conducted extensive research on the ground, on foot and on our bikes; seeking to map the visual, psychological and sensorial experience of the individual in motion across London's diverse spatial conditions. We have documented desire lines; catalogued the rules broken by each and every road user; and taken note of the effect of panoramic views, street furniture, road patterns, signage, etc. on people's behaviour. We have then developed a 3-step methodology for designers to analyse a site, understand how conflict arises and then proceed to draw design proposals for shared junctions and their wider surroundings that successfully integrate cycling and other modes of transport. The 3 steps are the following:

3.1 Urban Analysis

First we understand the place of a specific junction within the wider transport network as well as in relation to the city's cultural infrastructure – its recognisable monuments and landmarks. We also map the urban elements that govern traf-

fic around that specific site (ie. one-way traffic lanes, bollards, CCTVs, traffic signs, etc.), and we record the movement of each road user to identify desire lines and predict the points where conflict might occur.

3.2 Activity Analysis

The second step is to map the uses within each building in proximity of the site – understanding where shops, bars, restaurants, theatres, gyms offices, parks, etc., are located and how the their associated activities and operating hours affect the flow of pedestrians and vehicles (particularly delivery vans). Sometimes such activities cause large stationary crowds to gather in front on their premises, sensibly reducing the available space for movement. These activities are recorded at ‘peak’ and ‘off-peak’, throughout the day/night, week or year – using observation on the ground or CCTV cameras where possible – to determine the ‘Pulse and Pace’: i.e. the varying rhythm and intensity of movement of pedestrians, cyclists and vehicles at different times of the day.

3.1 Behaviour Analysis

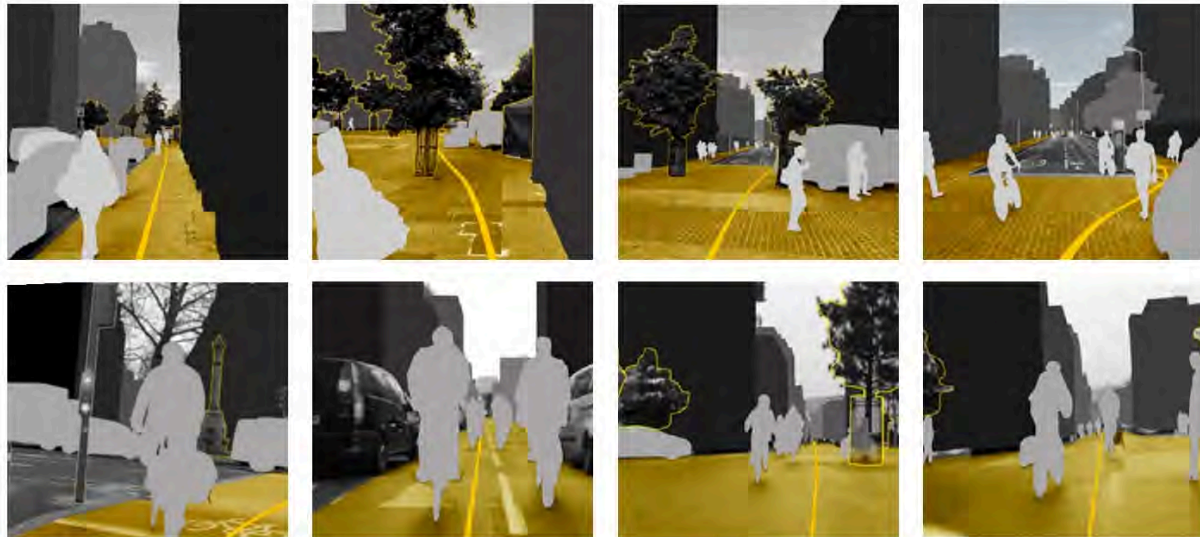
The final step is to map the stress levels of different users approaching the site (**Fig 3**): for instance a cyclists coming from a busy road, where she had to compete for space with cars and

vans, would be considerably more stressed, and typically more aggressive/reactive, than another cyclist entering the junction from a segregated route. Likewise a cyclist coming from a Cyclehighway might be considerably faster than one just leaving a canal or a towpath. It is often this disparity of mind-sets that causes conflict at a junction, as such we seek to design a ‘buffer zone’ in and around the junction that helps users to ‘decompress’ and reach the same mind set/speed so that the negotiations of space required can take place without the aid of too much signage or road infrastructure.

To create these ‘buffers’ we consider the effect of different surfaces on the users’ behaviour: a cobbled path for instance slows down bikes, but doesn’t affect pedestrians, on the other hand tarmac favours vehicles’ movement and makes drivers feel entitled to occupy space. Moreover by documenting an unfolding sequence of views for different characters journeys, we determine the ‘imageability’ of a public space I.e. how clearly the space is perceived and what psychological reactions it causes. By also using furniture and planting, we then modulate the legibility to affect the confidence (and therefore the speed) of different users groups who approach the junction. (**Fig 4**)

The key objective of this methodology is to design transport nodes that also function as a positive place of encounter, to claim back the qualities of public space that were lost to mo-

Figure 4. The visual sequence describes the experience of crossing Leonard Circus (one of the most recent shared spaces implemented in London) as a cyclist. © DSDHA



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torisation. To achieve, this it is necessary to move away from a modernist bird-eye approach to planning and the tendency to look at each junction as a technical problem to solve in isolation. As architects and urban planners we have instead to understand the city kinetically, from different perspectives, and curate each 'journey' as a complex sequence of events that, unlike the isolated experience of being in a car, incorporates social, aesthetic and physical interactions with the surrounding environment.

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BIOGRAPHY

Roberta Marcaccio teaches History and Theory of Architecture at the Architectural Association (AA) and works for the London-based studio DSDHA. In 2016, she was awarded a 2-year Research Fellowship by the Royal Commission for The Exhibition of 1851 to study cycling and transport infrastructure in London.

After studying at the Politecnico di Milano and at the AA in London, Roberta has worked in an editorial capacity at Artifice and has collaborated on the curation of several exhibitions.

Her writings have featured on Blueprint Magazine; Real Estates (Bedford Press, 2014); Erasmus Effect (Quodlibet, 2014), Milano Architettura (Skira, 2015) and AA Files (AA publications, 2017).

THE ADAPTIVE REUSE POTENTIAL OF OBSOLETE INNER-CITY CAR PARKING STRUCTURES FOR URBAN FARMING AND LOCAL FOOD SUPPLY: 3 UK CASES

Monika Szopinska-Mularz (Poland), Steffen Lehmann (Germany, Australia)

ABSTRACT

Cities are evolving in response to continuously changing forces and issues around food, energy, water and transport are relevant to their design and development. This paper explores the adaptive reuse potential of a specific type of building from the mid-20th century Modern Movement that was born out of necessity: the inner-city parking structure. Some of these large garages occupy very central and precious land. However, the potential of adapting them to different functions and today's environmental expectations can be challenging. The transformation of these increasingly redundant garages is inherently challenged through the need for new mixed-use typologies. Besides the immense embodied energy contained in these structures, there are also other criteria that need to be considered: local community concerns suggest that it is important to retain them as elements of the identity of place, guiding the decision-making process of adaptive reuse versus demolition.

While the authors investigated new use potential of up-cycling, local stakeholders and social organisations clearly indicated the role of urban farming in future cities. In the context of increasing density, technologically advanced farming installations are seen as a viable solution for retrofitting car-parking structures, including robotic hydroponics, where vegetables grow in water enriched with nutrients and minerals. The comparative multiple-site case study of car-parking structures strategically selected in 3 UK cities (Portsmouth, Bristol and Brighton) conducted through literature review, interviews, surveys, field observation and visual research will serve as a preparation for future Urban Living Labs to reuse multi-storey parking structures as a local secondary food source.

1. INTRODUCTION

In today's urbanised context, food security is the key to our standard of living and it is often the reason for people migrating from rural to urban areas. The issue of food scarcity arises

in a context where more than half of the world's population lives in urban areas. As a consequence, the speed and impact of urbanisation over the last few decades endangers food availability and stability.

There are now serious concerns regarding food security in cities and the need for developing local food systems is increasingly recognised. Urban farming is a growing phenomenon which can contribute to securing the local food supply. In the context of increasing urban densities, the permanent implementation of farming installations is being challenged and limited by the competing demands for space, increases in urban density, air pollution, soil contamination and degrading ecosystem services (Tylor Lovell, 2010). These issues indicate a need for innovative building-based solutions for developing urban farming (Specht et al., 2013). An innovative idea is to adaptively reuse existing buildings that have become obsolete in compact cities by transforming them for hydroponics (Despommier, 2011).

The directions for urban transportation systems will concur significantly to the reduction of a number of inner-city parking structures in the future (Merriman, 2016). The adaptive reuse of these increasingly redundant garages is inherently challenged through the continuity of urban change and the need for new mixed-use typologies. Different functions have competing demands for limited and precious space, but the possibility for adapting parking garages to a new function can be challenging, due to their low floor-to-floor height and today's higher environmental expectations. The development of hydroponics in these structures could become a strategy that justifies renovation versus demolition and newly build as an interim solution.

2. RESEARCH METHODS APPLIED

2.1 Methods and primary sites

The purpose of the research is to develop a better understanding of the conditions that enable the implementation of urban hydroponic farming installations in obsolete car-parking struc-

tures as an innovative form of adaptive re-use supporting local food supply. The paper presents findings from the first stage of the research including analysis of current policy for inner-city areas of Portsmouth, Bristol and Brighton and layouts of selected garages. The methodology allows for identifying planning limitations and opportunities and technical constraints for the adaptive reuse of selected inner-city car-parking structures for technologically advanced hydroponic farming operations.

2.2. Selection of cases for analysis

To achieve the main goals of the study, Portsmouth, Bristol and Brighton have been strategically selected for the comparative multiple-case study research as representative cases of coastal cities of a similar size, different population density, being a similar distance from the capital city London and located in the South England. The climatic conditions offer a potential for implementing innovative farming practices as

both an open-field and indoor agriculture. The selected locations allow for developing hydroponics to increase summer crops and a winter production that requires lower energetic input for heating, in contrast to the cooler parts of the UK. The analysis of local food supply strategies in selected cities show that the permanent implementation of agriculture is challenged through the need for new mixed-use typologies within the urban fabric. Therefore, it is substantial to explore innovative opportunities for the adaptive reuse of obsolete buildings by using them for intensive hydroponics.

In all three cases, there are serious concerns regarding the increased traffic in city centres. Current planning ordinances indicate the need for increasing urban density and compactness and developing more mixed-use areas, which aims to contribute to the urban connectivity and reduce private car use. In this context, selected parking garages are likely to become obsolete in the near future.

Figure 1. W. D. Worden, Isambard Brunel Car Park, Portsmouth, United Kingdom, Photo © Basher Eyre (cc-by-sa/2.0).





Figure 2. W. D. Worden, Isambard Brunel Car Park, Portsmouth, United Kingdom, Section XX.

3. CASE STUDY 1: PORTSMOUTH

3.1. The development of Portsmouth as a compact city

Portsmouth is one of the major urban area located on the south coast of the UK, with an estimated population of 207,100 on 40,25 km². A population density of 5028 makes Portsmouth the most densely populated urban area in the UK outside of London (The Portsmouth Plan, 2012). Despite the fact that Portsmouth is a strategic centre providing employment, health care, higher education and shopping facilities in the South Hampshire sub-region, the analysis conducted by the City Council has not identified opportunities for urban extensions. In this context, it is a challenge for Portsmouth to develop an optimal density and compactness which support the quality of life of the residents and the built and natural environment of the city.

3.2. The Isambard Brunel Parking Structure

The Isambard Brunel Car Park (Fig.1) is located in the city centre of Portsmouth. The building was designed by W. D. Worden and constructed in 1971 as a five-storey single function concrete structure where 468 parking spaces are located. Each storey of the car park is connected through a system of ramps and complemented with two concrete staircases with lifts located in the northern and southern elevations. The typical floor height is 2,90m (Fig.2). The ground level of the car park is secured by solid walls. Other levels are limited by railings, which allow for natural light to penetrate the interior.

3.3. Planning criteria analysis

3.3.1. Limitations for the adaptive reuse of the Isambard Brunel Car Park for urban farming

To accommodate the parking needs of existing and new developments, the City Centre Masterplan (2015) indicates the need to retain the Isambard Brunel Car Park as the main off-street parking. In this planning context, the adaptive reuse of the garage is a forward-looking concept, for when current planning specifications are modified.

3.3.2. Opportunities for the adaptive reuse of the Isambard Brunel Car Park for urban farming

The development of hydroponic installations could become an interim solution for the up-cycling of the Isambard Brunel Car Park, when the plans to reduce private car use and off-street parking will be put into effect. The retrofitting should focus on developing a multifunctional architecture (City Centre Masterplan, 2015), where hydroponic technology will be the driver of innovation in relation to food supply in the inner-city.

The adaptive reuse of the Isambard Brunel Car Park should deliver a high-quality green infrastructure that offers opportunities for agriculture in a dense urban environment, thus improving biodiversity and implementing new green spaces (City Centre Masterplan, 2015).

3.4. Technical criteria analysis

In order to adaptively reuse the Isambard Brunel Car Park, the structure should be modified. First, hydroponic installa-

tions are recognised as an indoor urban farming technique, which requires an enclosed space. Therefore, the elevations should be partly closed to create a place for implementing advanced hydroponics and any other additional uses.

Second, the car park is a single-function structure where each elevation is permeable. However, natural lighting is significantly limited in the central area of each layout. This central space should be designed for hydroponic installation which requires LED lighting for vegetables cultivation. The space with natural light could be adapted for the needs of additional facilities.

Third, the number of ramps and staircases in the Isambard Brunel Car Park need to be adapted to the planned functions focused on people instead of cars.

Fourth, according to technical specifications the floor-to-floor height of the car park is too low to implement additional functions such as restaurants or offices. The concrete slabs need to be taken out partially in order to have double-high spaces and voids. The architecture of the Isambard Brunel Car Park offers opportunities to implement sustainable technologies to reduce the energy use of the hydroponics, to save water resources and to recycle organic waste, thus reducing the environmental impact of the concrete architecture.

4. CASE STUDY 2: BRISTOL

4.1. The development of Bristol as a compact city

Bristol is one of the eight core cities in England and the largest urban area in the South West region, with an estimated population of 428,200 on 110,07km². According to the Bristol Development Framework (2011), Bristol's population is expected to grow to 519,800 by 2026. This expansion is projected to be accompanied by the increased traffic congestion, more urban sprawl, decreased affordability of home ownership and relatively high levels of economic exclusion.

BDF (2011) introduces urban renewal strategy that leads to the development of more compact urban form, including increased and balanced density, compactness and urban connectivity, reduced urban sprawl, promotion of low-carbon mobility and retention of urban greening.

4.2. The Prince Street Parking Structure

The Prince Street Car Park (Fig.3) is located in the Old City of Bristol. The structure was designed by Kenneth Wakeford, Jarram & Harris and constructed in 1966 as a five-storey structure where 297 car parking spaces are located. The car park was originally built for the adjacent Unicorn Hotel, now called the Bristol Hotel.



Figure 3. Wakeford, Jarram & Harris, Prince Street Car Park, Bristol, United Kingdom, Façade. Photo © Stephen Richards (cc-by-sa/2.0).

The Prince Street Car Park is a concrete structure. The east and west elevations are designed as a highly permeable geometric composition of X-components. The north elevation is the negative pattern of the east and west and the fourth side is a party wall. On the ground floor, the concrete lattice of the east and west elevations is propped up by the V-shaped supports. Each storey of the car park is connected through a system of ramps and complemented with one staircase adhered to the north elevation. The ground floor height is 3,20m and the upper typical floor height is 2,30m. The depth of the plan of the car park (29m), the type of pattern used in the cladding of elevations and the distribution of apertures limit significantly the amount of natural light inside the structure.

4.3. Planning criteria analysis

4.3.1. Limitations for the adaptive reuse of the Prince Street Car Park for urban farming

While the pedestrian-centred model of urban design is the priority in the inner-city of Bristol, the essential level of trans-

port is accepted in policies and design strategies. The Public Realm and Movement Framework (2012) proposed an inner access loop route running around the city centre as an element of rapid transit. Prince Street is the part of a system of rapid transit running through the Old City. In this context, the Prince Street Car Park may be needed as an off-street garage which accommodates the demand for parking in the inner-city.

4.3.2. Opportunities for the adaptive reuse of the Prince Street Car Park for urban farming

The mixed-use development priority in the inner-city area highlighted in BDF (2011) may become an opportunity for implementing hydroponics in the concrete car-parking. Urban farming could be implemented as the main facility in the process of adaptive reuse supported by other functions defined in BDF (2011).

SADMP (2014) highlight the role of existing inner-city markets and a need for new proposals for markets and market-related developments. Advanced hydroponics located in the Prince Street Car Park could become a secondary food source which offers the opportunity to sell crop yields locally in inner-city markets, thus limiting transportation (food miles) and packaging needs and reducing the loss of product.

4.5. Technical criteria analysis

The Prince Street Car Park and Bristol Hotel create a multiple-function structure. The up-cycling of this inner-city architecture should focus on a symbiotic relationship between the existing hotel and the planned urban farm. The development would contribute to urban sustainability by implementing a closed resource loop system, where resources from the existing hotel are used by the advanced hydroponics while the crop yields are consumed by the hotel guests. Food production could be complemented by additional functions supported by a further exchange of resources.

The three elevations should be partly closed to enable the development of hydroponics and additional facilities. The east and west permeable elevation and the north elevation being a negative pattern of the east and west are significant element characteristics of the analysed modernist architecture. However, the building is perceived as a *low quality post-war development* (Conservation Area Enhancement Statements, 1993, p.16). Therefore, further analysis in collaboration with stakeholders and the local community need to be done in order to decide if the elevation patterns should be retained as an element

ment of the identity of the place.

The arrangement of additional facilities should be analysed in relation to natural lighting and location of staircases and ramps. Hydroponic farm should be located in the central area and next to the party wall where the natural lighting is limited. The layout of ramps and staircases needs to be redesigned considering lighting and space needs of planned facilities.

The concrete slabs should be taken out partially to have double-high spaces and voids in order to meet technical requirements.

5. CASE STUDY 3: BRIGHTON & HOVE

5.1. The development of Brighton & Hove as a compact city

The administrative area of Brighton & Hove covers approximately 87,54km² with an estimated population of 273,400. By 2030, the population is expected to grow by 10.2% (London Road Central Masterplan, 2009). The compact city is located between the sea and the South Downs National Park. This surrounds became a limitation for further urbanisation, therefore it is planned to increase urban density by implementing medium rise and some tall buildings in the inner-city area. The process of urban densification is expected to be supported by new open spaces, which increases urban greenery and biodiversity.

Outside London, the region of Brighton is the strongest developed digital media and creative industries cluster. These facts put a strong pressure on the transportation system. Increased car use leads to the growing congestion, noise and poor air quality in the city (London Road Central Masterplan, 2009).

5.2. The London Road Parking Structure

The London Road Car Park (Fig. 4) is located in the London Road Central Area of Brighton. It was opened in December 1976 as a three storey garage with 530 car parking spaces. On the roof level, there are three multifamily buildings (Mayflower Square) and two sports fields.

The north-eastern and north-western elevations of the structure are designed as permeable walls with characteristic vertical concrete elements which separate the interior from the Providence Place and York Hill. The south-eastern elevation is partly permeable. The south-western elevation is hidden beneath ground level.

The plans of the car park have not been obtained yet. The presented data is the outcome of the document analysis and field observation.



Figure 4. London Road Car Park, Brighton & Hove, United Kingdom, Façade. <https://electricbrighton.com/london-road-car-park>

5.3. Planning criteria analysis

5.3.1. Limitations for the adaptive reuse of the London Road Car Park for urban farming

The London Road Central Masterplan (2009) indicates the demand for a parking garage in the area. Therefore, the development of advanced hydroponics as an adaptive reuse of London Road Car Park would cause a need for the re-allocation of the garage to the area in line with parking and transport priorities as defined in the masterplan. The alternative location of the car park could increase low carbon mobility in the London Road area and reduce the environmental impact.

5.3.2. Opportunities for the adaptive reuse of the London Road Car Park for urban farming

The London Road Central Masterplan (2009) highlights the role of the adaptive reuse of existing buildings in the in-

ner-city area as the most sustainable approach. The proposed site allocation allows for the redevelopment or replacement of the London Road Car Park within a wider comprehensive development. The adaptive reuse of the parking structure is supported by the fact that the streetscape layout and management of the Providence Place is considered poor. The implementation of urban farming as an interim function could create high-quality mixed-use development which meets sustainable design standards and is compatible with commercial quarter aspirations (London Road Central Masterplan, 2009). Moreover, urban food production in collaboration with the local community could contribute to the reduction of anti-social behaviour in the area.

5.5. Technical criteria analysis

The location of the 3 apartment buildings on the roof of the London Road Car Park offers opportunities to develop a

mixed-use building where the resources derived from architecture and agriculture establish local resource saving systems that benefit the creation of a healthy urban environment. Moreover, the implementation of hydroponics in the housing area could increase sustainability awareness, thereby contributing to sustainable community development.

To enable the implementation of hydroponics and compatible facilities the permeable elevations should be partly closed. While only two elevations are permeable, the layout design should consider the location of social uses along these elevations. The ramps and staircases need to be redeveloped to be adequate for the planned usage.

Further analysis need to be conducted when the plans of the building have been obtained.

6. DISCUSSION AND CONCLUSIONS

The analysis of planning ordinances for Portsmouth, Bristol and Brighton indicated the need to consider an alternative function for the inner-city concrete car parking structures in the future. New concepts of low-carbon mobility, increasing environmental awareness and the need for social improvements are main reasons why 'the architecture of the automobile' became a modernist utopia that is not valid anymore.

The results of this analysis show that inner-city multi-storey car parking structures can be adaptively reused for advanced urban farming when complemented by additional facilities in line with planning ordinances. This kind of architecture will contribute to the implementation of mixed-use areas, as is highly expected in compact cities. The proposed adaptive reuse has the potential to influence positively the creation of a healthy urban environment through the implementation of new green spaces, biodiversity improvement, air quality improvements and the general mitigation of the environmental impact of urban regeneration. Food production in obsolete inner-city car parking structures can limit transportation (food miles) and packaging needs and reduce the loss of product as a local secondary food source. Moreover, the developed urban farming supported by local community can contribute to the reduction of anti-social behaviour by engaging people in farming initiatives. The mixed-use development has a potential to create new business opportunities, jobs and services and bring financial benefits. Therefore, when linking up-cycling of obsolete inner-city car parking structures with urban farming, innovative environmental, social and economic impacts can arise.

The determining criteria for the adaptive reuse of the mul-

ti-storey car parks for urban farming and local food supply include:

- The technical requirements for developing urban farming and social functions (e.g. restaurants, offices). The main elements which need to be taken into consideration are permeable elevations, low floor-to-floor high, columns, ramps and staircases layout.

- The natural light exposition. This should be analysed before the arrangement of functions will be planned.

- The capability to meet sustainable design standards defined in planning documents. New kinds of low-carbon infrastructure should be implemented and supported by local energy production and innovative solutions for waste and water management.

- The potential to use and recycle resources derived from the symbiotic relationship between agriculture and architecture. The exchange of resources between advanced hydroponic farming and other facilities needs to be analysed in order to mitigate the harmful impact of urban development on the natural environment.

The further analysis need to be conducted in order to design urban hydroponic farm in one selected multi-storey car park and calculate an environmental impact of the development.

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BIOGRAPHIES

Monika Szopinska-Mularz is a PhD student at the University of Portsmouth in the Faculty of Creative and Cultural Industries. She graduated from Wroclaw University of Technology in 2010 with a Master of Architecture degree.

In October 2010, Monika took part in the Leonardo DaVinci programme, which allowed her to commence professional work as an architecture graduate in the practice of KuP Architekten in Frankfurt am Main, Germany.

From 2011 to 2015, she worked as an architect in ST Architekci, an office in Poland. In 2014, Monika passed the Polish Architect's professional examination and registered as a Chartered Architect.

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Steffen is an internationally renowned thought leader in the field of sustainable architecture and urban design principles. He is the author of 18 books and over 50 book chapters and 200 papers and articles. Steffen was invited as keynote speaker at over 80 important international conferences. For more information: www.city-futures.org.uk

BEING REAL

Catherine Croft (UK)

INTRODUCTION

How do we preserve the authenticity of significant C20 buildings, whilst acknowledging and accommodating the need for change?

Buildings change all the time. We add to them, repair them, re-plan them, and add extra stories. We change windows and roofs. Original uses become redundant, or cease to fit in the space available, so we find new uses, frequently precipitating further change.

Contemporary society has a fascination with the concept of authenticity. The word “authentic”, in English, is used as part of the branding for Slovenia’s Postojna Cave complex, and its having its moment in popular culture too, where “the power of being real” is celebrated by advertisers and editorial content across a wide range of media. I cite two examples here (both ones targeted at young women, but other audiences are receiving the same message; authenticity the necessary antidote to “fake news”). The first is a women’s/girls top from High Street shop H&M, with the slogan “authentic” across the chest as the only form of embellishment. The second is the editorial to *Stylist*, a free weekly magazine which starts out by stating that “Authenticity’ and ‘identity’ have become buzzwords for 2018” and singles out classist and historian Mary Beard as someone whose “authenticity” makes her a “real role model”. (Smosarski, 2018) This paper considers three aspects of authenticity: authenticity of materiality, authenticity of setting/location and authenticity of use, as parameters for assessing the success of C20 conservation projects. It looks at a number of recent projects (largely in the UK) which have chosen to prioritise one of these three types of authenticity over the others, and others which have apparently regarded at least one type as largely insignificant. It also examines the success of each project in preserving authenticity, has the emphasis been justified? Has the overall authenticity been compromised as a result of favouring one aspect, or has a good balance been achieved? It further acknowledges that a more complex appreciation of what constitutes authenticity may lead to richer conservation schemes.

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ASSESSING SIGNIFICANCE

“The reason why society places a value on heritage assets beyond their mere utility has been explored by English Heritage at a more philosophical level in *Conservation Principles*”, says the UK’s lead body on historic preservation. *Conservation Principles* (originally published 23 April 2008) identifies four types of heritage value that an asset may hold: aesthetic, communal, historic and evidential value. These are further explained as follows:

Evidential value: the potential of a place to yield evidence about past human activity.

Historical value: the ways in which past people, events and aspects of life can be connected through a place to the present - it tends to be illustrative or associative.

Aesthetic value: the ways in which people draw sensory and intellectual stimulation from a place.

Communal value: the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory.

However a recent consultation on proposals to update this document suggests that instead of considering these four values, significance should be assessed under the following four headings: “archaeological interest, architectural interest, artistic interest and historic interest.” And notes that “A heritage asset’s significance may be expressed under more than one heading and sometimes under all four.” (*Conservation Principles Consultation Draft*) This consultation suggests that the current matrix is not proving satisfactory in the two-stage process of conservation, which comprises firstly identifying significance and secondly then prioritising what aspects of that significance should be preserved when managing change. I believe that it is a particularly poor fit when applied to C20 buildings, and that the types of authenticity cited above are a more helpful alternative.

The three types of authenticity specified are in part a reaction to “some of” the reasons to the debate around the desire to be able to retain aspects of intangible heritage of C20 buildings,

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particularly in discussions about social housing where the extent to which its original function as state funded, subsidized, low cost accommodation is intrinsic to its significance has received considerable attention.

THREE TYPES OF AUTHENTICITY

1. Authenticity of Use

The extent to which the original use of a building is significant is contested. Official government advice in England has been repeatedly revised, moving from an endorsement of the advisability of retaining original use in 1987, to a preference for the “optimum viable use” in 2010.

One example of a case where retaining the original use has been prioritised is the recent renovation of The Leicester University Engineering Building (Stirling and Gowan., 1961-3 listed Grade II). This was recently reglazed to an enhanced performance specification in order to allow its continued use by the faculty of Engineering. In fact the way in which Engineering is taught, and the nature of the subject itself, has evolved considerably since the early 1960s. there has been a shift away from large scale modelling equipment, such as hydraulic tanks, to computer Modelling king of structural scenar-

ios. Whilst the original building was essentially a drafty shed, which staff would periodically visit to check on the progress of experiments, what is now needed is more space where laptops can be used for longer periods of time, requiring lower floor to ceiling heights, but much greater environmental control to ensure a pleasant constant working environment. It could be argued that an alternative use which required a draughty shed might have been a better fit than continued use by the department, which has necessitated the complete replacement of all the single glazing with sealed double glazing panels, and suggestions made included bar/performance space for the student union. However, the high tech aesthetics, and the experimental nature of the original design were felt to embody the ethos of the Department, and led to the chosen strategy, in combination with considerations of location on campus and costs. The work was undertaken by a team led by Arup (Pearson, 2017).

In contrast, there has been considerable unease and opposition to the proposal (now underway) for the conversion of Erno Goldfinger’s Balfour Tower from social housing to luxury private housing. This has been justified by the necessities of funding the refurbishment of the whole estate. However it seems particularly regrettable that although the flats in the

Government advice on best use for historic buildings in England

Circular 8/87	Department of Environment		
PPG15	Department of the Environment PPG 15 Department of National Heritage	September 1994	2.18 New uses may often be the key to a building’s or area’s preservation,... The Secretary of State is not generally in favour of tightening development controls over changes of use as a specific instrument of conservation policy... Patterns of economic activity inevitably change over time, and it would be unrealistic to seek to prevent such change by the use of planning controls.
Planning policy statement 5 Practice Guide	Communities and Local Government, the Department for Culture, Media and Sport (DCMS) and English Heritage.	2010	The optimum viable use is not necessarily the most profitable one. It might be the original use, but that may no longer be economically viable or even the most compatible with the long-term conservation of the asset.



"Authentic" slogan sweat shirt H&M Oxford Circus, London, 2017.
Photo: the author

tower will now be marketed as works of a major post-war master, they will have been completely refitted with new materials.

Brixton Market provides another insight into the difficulties of retaining authenticity of use. This complex of shopping arcades was first listed 31-Mar-2010, following the intervention of the local Member of Parliament, having previously

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been turned down. The decisive factor in the re-assessment was the specificity of its use from the 1960s to the present day: the list description notes that:

"the well-known Brixton Market complex formed the commercial and social heart of the extensive Afro-Caribbean community that settled in Brixton after WWII. The successful adoption of the markets is the clearest architectural manifestation of the major wave of immigration that had such an important impact on the cultural and social landscape of post-war Britain, and is thus a site with considerable historical resonance. (2018)

However, although listing has prevented demolition, gentrification has followed swiftly, with most of the Afro-Caribbean businesses being replaced with hipster food stalls serving a predominately white middle class clientele.

These examples show that authenticity of use is extremely hard to legislate to preserve, and that "use" is not a static concept, but one that evolves, often quite radically, over time. Consistent and unchanging use would necessitate static user groups, with unchanging requirements in terms of spatial provision, environmental and comfort levels as well as symbolic messaging from the building.

2. Authenticity of setting/location

The Franja Partisan Hospital is a cluster of wooden buildings in the narrow, barely accessible Pasica gorge. In the western part of Slovenia, in the municipality of Cerklje, near the village of Dolenji Novaki. The huts were gradually erected from December 1943 to May 1945 and the hospital became amongst the best equipped clandestine partisan hospitals, with an operating room, X-ray apparatus, and a small hydro-electric plant. Security was of crucial importance so the wounded were blindfolded and carried to the hospital, most often at night. Still preserved in the steep walls rising above the stream are several fortified bunkers, housed in natural caves (2018)

On 18 September 2007 the site was badly damaged in a flood after severe torrential rains. (2018). It was reconstructed and completely rebuilt by 2010, and has since been reopened for visitors. Given the primary importance of the location to the construction of the hospital, and the impact this makes on visitors, this seems a successful response.

In contrast the former Commonwealth Institute building in Kensington had a setting which was intrinsic to its programme. The main exhibition space was reached through a landscaped garden which took visitors from the main road over a series of pools, (mirroring the crossing of seas to reach

individual Commonwealth countries. It also acted as a place of contemplation and enabled views of the spectacular roof form to be seen from both the city and the park behind. This setting has been totally lost in the recent remodelling of the site, which has seen the erection of three large residential blocks designed by OMA.

The Excalibur Estate in the London borough of Lewisham comprised 187 houses and a prefab church, built between 1945 and 1946 by Italian and German prisoners of war on land formerly intended as an open space amenity for the adjacent Downham Estate. The new estate was named Excalibur in a continuation of the theme of the Downham Estate in which the roads were named after the Knights of the Round Table; thus the Excalibur Estate had streets named after Baudwin, Mordred, Pelinore, Ector, Wentland, Meliot and Persant. Several prefabs have been preserved in museum settings, elsewhere in the UK but although when considered for listing Excalibur was the largest surviving estate of “prefabs” in England only six of the Uni-Seco prefabricated houses here were listed. The scale of the Estate, which was a record of the extent of bombing in the locality and the urgency of the housing need, is not preserved, although the listing description specifically refers to the “* special interest as part of the largest surviving post-war prefab estate in England, a unique example of prefab estate planning on a large scale;”.

These examples show how physical setting, and the geography of landscape, may not only determine the form and layout of buildings, and their reasons for coming into existence where they did, but also that the larger context in which buildings are located may be of primary significance, and that without that context little meaning can be derived from the preserved object.

3. Authenticity of materiality

i. C20 Building Services Whilst Authenticity of Materiality encompasses all aspects of the physical materiality of a building, there is one area which deserves particular consideration when dealing with C20 buildings. We replace building services on a regular cycle, and expect that services will have a shorter life than that of a building. This has greatest impact for C20 buildings, where services make up the greatest percentage of the fabric of a building, are generally essential to its ability to function in a specific location, frequently support specialist uses and are designed in response to those uses. Whereas the Bakelite plug sockets of a C18th country house might evoke nostalgia for the dying days of Downton Abbey

lifestyle, 1960s fluorescent tubes or air-conditioning ducts and plant have few fans and are accorded little value.

As Reyner Banham pointed out in the 60s, “the mechanical environmental controls are ... obviously and spectacularly important, both as a manifestation of changed expectations and as an irrevocable modification to the ancient primacy of structure, yet they are the least studied” (Banham, 1969) p.13. Not only are they little studied, but very often they are stripped out and thrown away without recording. This “importance is” increasingly being recognised by contemporary historians, for instance Dr Barnabus Calder’s recent work on Brutalist architecture acknowledges that “new services were as influential as structural concrete and steel in creating the distinctive architecture and urban forms of modernity” (Calder, 2018) It therefore seems likely that we will begin to accord greater levels of significance to building services. However this does not necessarily mean that we will seek to preserve them, but rather we will need to acknowledge the magnitude of their loss in those cases where they cannot be adapted to deliver adequate contemporary levels of comfort or energy efficiency. The need to balance heritage issues and environmental concerns is already acknowledged in paragraph HE 1.3 of PPS5 which notes that *Where conflict between climate change objectives and the conservation of heritage assets is unavoidable, the public benefit of mitigating the effects of climate change should be weighed against any harm to the significance of heritage assets in accordance with the development management principles in this PPS and national planning policy on climate change.*

Banham illustrates the Queen Elisabeth Hall on the London’s South Bank noting that “Air intake grilles and upcast exhausts form conspicuous features There can be few public buildings in which the main primary air distribution is made so rhetorically manifest” p.257-60 This Brutalist concert hall, together with the adjacent Purcell Room and Hayward Gallery have recently been conserved by architects Feilden Clegg Bradley. Whilst their initial scheme sought to dramatically compromise the setting of the building by adding glass block extensions, and would have introduced more commercial space into a previously public funded arts venue, the works finally carried out have had an exemplary focus on the primacy of not just the architectural form of the building, but on the role of its building services, which are inextricably linked. Not only has the performance of air handling equipment improved considerably since the early 1960s, but comfort levels required have notably increased. Both visual art installations and concert performers also have increased demands for technical support for their work.

Banham unpacks his terminology in the above paragraph noting *“the word ‘rhetorically’ is used advisedly, since the making manifest has a large element of symbolism in it. Although the externally visible casings do in fact contain air on the move the visible concrete gives only an approximate idea of the true forms of the metal ducting within, which in many cases is quite a loose fit inside, with room for service engineers to crawl* (2018) The conservation scheme minimises physical alterations and acknowledges the primacy of the services to the original design concept.

ii. Beyond Building Services

Although services are the elements most likely to be stripped out as part of a refurbishment, many other parts of C20 buildings are also considered of limited value and appropriate to dispose of. The regeneration of Park Hill flats in Sheffield (Sheffield City Council Architect's Department 1957-61) has been an interesting case, in that works to this extremely large estate have proceeded very slowly, and that public attitudes to Brutlist architecture have evolved over this timespan. The same developers, Urban Splash, have remained with the project, but whilst the first phase (by architects Studio Egret West, Hawkins Brown and Grant Associates, 2006) retained nothing but the concrete frame of the building, replacing the original brick in-fill panels with coloured aluminium ones and larger areas of glazing, as well as rebuilding all other internal and external walls as well as surface finishes and fittings, the scheme currently about to be implemented on site is much more reticent. Mikhail Riches Phase 2, 2018, sees the brick panels in particular as part of the essential materiality of the building, and seeks to retain more of the atmosphere of the building as a 1950s artefact, by retaining more original material (2018). Sadly the current proposals for the refurbishment of Erno Goldfinger's Balfron Tower in East London, have been opposed by the C20 on the grounds that they follow the model of the earlier phase of Park Hill, seeing the sculptural form of the building as skeleton on which to hang an invented re-imagining of Brutalist architecture, with a new palate of materials. Although the architects claim that “one of each of the six flat typologies will be reinstated as per Goldfinger's original layouts. By doing so, the architect's original vision will be preserved for future generations” (egretwestbalfron, 2018) it will be their version of Goldfinger's vision that future generations will have access to, and the materiality of the original will be lost.

CONCLUSION

Many of the most destructive schemes for the conservation of C20 buildings have been justified as ones that respected the

original architect's intention, or design ethos. Of the values identified by Historic England “Aesthetic value: the ways in which people draw sensory and intellectual stimulation from a place” has generally been seen as most relevant to C20 buildings, and with historical analysis of the period often still nascent and without consensus, the architect's own assessment of the intellectual content of their building has been revered. In some instances articulation of this is derived from the written or recorded words of the architect, in others original architects, or more junior members of the design team have been invited back to recall past perceptions, or even project forward, asking “what would X have done”, perhaps faced with a radically new set of new circumstances, the availability of new materials, and access to a previously unavailable budget.

Sometimes, in contrast to the respect accorded buildings of previous centuries, C20 structures are seen as the imaginative raw material for new invention, as something incomplete in themselves. It is in the light of these narratives that assessing success of conservation of C20 architecture in terms of authenticity, and subdividing this assessment into the three components discussed may lead to more rigorous analysis and better future outcomes.

POSTSCRIPT

With “Heygate Bridge, In Memory of the Future” artist Tom Wolseley proposed gilding a concrete bridge, a surviving fragment of this large Greater London Council housing estate completed in 1974, which has recently been controversially demolished and redeveloped by Lend Lease. Protesters are incensed by the resultant reduction in publicly affordable housing on the site, and the dispersal of the original community. Concern over loss of heritage significance was slim in comparison to the public outcry over the political and social agenda, and the estate was neither listed nor part of a conservation area. However with hindsight, and in the subsequent debate around the demolition of the Smithson's Robin Hood Garden's Estate, The Heygate's posthumous reputation is being re-evaluated. “Heygate Bridge” is part of that re-evaluation process. It has strong and powerful resonance, perhaps because it challenges us to consider the three components of authenticity identified above

Authenticity of materiality:

There is no more “authentic” material than gold, in terms of value and reliability. However, the gold leaf also represents the superficial bling of the lightweight cladding of many of

Fig 1 Authenticity matrix applied to recent projects

site	Authenticity of materiality	Authenticity of setting/ location	Authenticity of use	Success of project given opportunities
Leicester University Engineering Building	Glazed roof of laboratory block replaced in double glazing	Maintained	Remains main venue for Engineering department and flagship building for the university	excellent
Battersea Power Station	Much original fabric lost due to long-term decay. Iconic chimneys reconstructed in facsimile	Extremely high density development in very close proximity, relationship to riverside compromised	Power station use redundant, attempt to retain function as landmark compromised by development	Poor, final completion still awaited but part of scheme already runner up for "Carbuncle Cup" in 2017
Commonwealth Institute Building	Only the roof structure of the main block retained	Setting to both park and High street compromised by new residential blocks. Ancillary block and significant landscape destroyed	Original use no longer relevant due to changing nature of Commonwealth. Museum use retained, but commercial residential swamps it.	Poor, especially given previous HLF investment and original endowment
Balfour Tower	Everything thing except concrete frame destroyed	Some alterations to landscaping to reflect security concerns and amenity expectations of new private residents. Lack of design cohesion with other parts of the estate	Controversial sale of tower block to private developer to fund refurbishment of rest of estate as continued social housing	Given location and significance of building, there would have been a market for flats with authentic conservative repair. Loss of social housing controversial
Franja Partisan Hospital	All original material lost, like for like replacement	Paramount and achieved	Use only necessary in extreme wartime conditions	Excellent, power of setting justifies replication after flood
Park Hill phase 1	Everything thing except concrete frame destroyed	New panel system dominates façade, streets in the sky reduced in width	Remains as housing with social housing unit spread within private ones	A compromise : necessary to rebrand a failing estate at the time of listing
Park Hill phase 2	Original frame infill retained	Some concern that treating phase 2 differently from phase 1 will reduce the overall uniformity of the whole site, and that continuing in the same mode would have been preferable	Some parts converted to social/community use/ student housing	Excellent demonstration of how evolving attitudes to this building in particular and Brutalism have led to a revised approach
Royal National Theatre	Careful minimal repair of concrete	Increased development and intense pedestrian use of the South Bank has fundamentally changed the setting	Extension to rear allows theatre production to remain on site and to be newly viewable by visitors	Well balanced response



Heygate Bridge, In Memory of the Future Proposal for an art work, by Tom Wolseley Image copyright the artist permission given

the replacement buildings on the site, and it covers the concrete, which has its own authenticity (a structural material without covering).

AUTHENTICITY OF SETTING/LOCATION

The gold is spectacularly unsuited to the location as it is an inherently fragile surface and this is an area with a reputation for high levels of street crime. It becomes a manifestation of the in Outing of new money into the area and a critique of superficiality and waste.

Authenticity of use:

The application of gold leaf underscores the loss of use. Gold is not a practical surface to walk on, but as the two parts of the estate it once linked are now both gone, there is no need for it.

BIOGRAPHY

Catherine Croft has been Director of C20 Society in the UK for over ten years, before which she worked for English Heritage (now Historic England) and the Theatres Trust. She is a leading campaigner for C20 architecture in the UK, with a high media profile. She is author of "Concrete Architecture", has contributed to many other books, and writes for a range of professional and mainstream publications, as well as teaching on many of the historic building conservation courses in the UK. She studied Architecture at Cambridge University, Material Culture in the USA (University of Delaware) and Conservation at the Architectural Association. She is involved in the Getty's Preservation of Modern Architecture and Keeping it Modern programmes, and set up and runs the Conservation of Historic Concrete course at West Dean.

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Session 15 MODERNITY AND POLITICAL UPHEAVAL

Session Chair: Yoshiyuki Yamana (Japan)



In this session, through four presentations on modernity during political transition after the Second World War in four countries or regions; Georgia, Dubai, South Africa and Brazil, it will become possible to discuss more concretely and more deeply the resilience of modern architecture as a cultural living heritage.

The first paper is a report on the postwar modern architecture of Georgia. Located in Eastern Europe or West Asia, Georgia is on the east coast of the Black Sea at the southern foot of the Caucasus Mountains and adjacent to Russia to the north. This geographical condition has caused Georgia to be affected by the political balance of the country over the twentieth century. This paper highlights the changes in recreation facilities due to social and political change in Georgia following two parallel issues; firstly the post-World War II architectural development in Georgian spa localities, and secondly the adaptation of these facilities into permanent living sites for internally displaced persons due to ethnic conflicts in the region at the beginning of the 1990's.

The second paper reveals the political motivations behind the design choices of English architect John Harris in the construction of a new city "Dubai" that suddenly appeared in the desert in the twentieth century. Dubai, an important base to India, became a protectorate of the United Kingdom at the same time as the other emirates in 1853, and remained a small town as a transit city for maritime transportation until the 1960s. Discovery of oil fields at the end of the 1960s helped accelerate the early development toward an International Business City after the founding of Dubai in 1971. This paper not only reveals what architects have designed with the intention of political power during the founding of Dubai, but also explains the privileged involvement of British enterprises and professionals in the construction of all its new essential infrastructures. Privileged and lasting commercial relations further consolidated this long-term political relationship. Due to a lack of oil reserves Dubai has been forced to move away from its oil-dependent economy, especially in

the mid-1980s, as an economic policy to aggressively promote "diversification of industries," raising the country's financial and distribution roles in the Middle East. While Dubai's economic (or political) base is changing, it is interesting to continue to see how infrastructure including architecture will hold value as cultural heritage in the future.

The third paper reports on changes in the environmental state of the apartment buildings of the modern movement in the transition of apartheid in South Africa, using the case study of Aiton Court in Hillbrow, located just north of the Johannesburg city centre. It explores how the modernist built environment has evolved, adapted, accommodated and possibly even stimulated the continuously changing Hillbrow community. Completed as rental apartments for young city dwellers, between 1937 and 1938, the original occupants included artists and architects. But later in its life the building was one of the first to accept non-white occupants, housed anti-apartheid activists and was eventually high jacked by its tenants due to neglect by its' owners. The environment surrounding this building changes under apartheid policy but continued to respond to the social situation. The building was restored in 2014 and once again houses a vibrant community. It can be said that this transition as a living heritage shows the resilience of this building to the social environment.

The fourth paper focusses on the transition of the social position of the CTA (Aeronautical Technology Centre) designed in 1947 by architect Oscar Niemeyer caused by political transition in Brazil since the Second World War and is nowadays being considered for nomination as a national heritage site. With the defeat of Nazism and Fascism, the end of World War II fueled the expansion of civil rights and democratic forms of government. Brazil also witnessed the demise of the long dictatorship of Getúlio Vargas at the end of the global conflict. General elections were held for a constituent assembly and the country witnessed the restoration of democratic freedoms and free party association. Despite the rise of democratic rule, newly elected President Eurico Gaspar Dutra, on

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15IDC Metamorphosis Paper Presentation

hearing of the results of the contest, vetoed the selection of Oscar Niemeyer on the grounds that he was a Communist and the CTA project was a matter of national security. By Coup d'état in 1964, supported by the United States, General Castelo Branco defeated Joan Golard and established a military dictatorship followed by an industrialization policy that included pro-Communist policies and the introduction of foreign capital. Ernesto Gaiseu, who became president in 1974, made a transition to a military regime in response to national complaint, and president Joan Figueiredo, who took office in 1979, pledged to transform the Ministry of Civil Affairs. The political system of Brazil in the 1970s changed. A considerable part of CTA was subsequently constructed in the 1970s, through projects carried out by other architects. Although revisions were made to the original Niemeyer team's plan, most of the major aspects in the urban configuration were left intact. Despite the overall success of the project, and Niemeyer's diligent supervision of its initial phases, the architect ended his collaboration in the early 1950s, ostensibly due to a series of disputes during the design phase and with specialists involved in the Motor and Aerodynamics Laboratories.

With the beginning of a new era the architecture of the modern movement was born as a symbol of a new social system. And the architecture of the modern movement as a cultural heritage is often evaluated as a part of the cultural significance of the time when the building was built. (As in the fourth case, when the project takes a long time to build, the political system has changed in the meantime.) However, architecture continues to exist longer than changes in the social system caused by political change, and it is often that the meaning of the architecture as a cultural heritage changes too.

BIOGRAPHY

Yoshiyuki Yamana was born in Tokyo in 1966. He graduated at the Tokio University of Science in 1990. Between 1990-1994 he was working in Koyama Atelier (Tokyo). Between 1994-2002 he studied and worked in Paris, Ecole Nationale Supérieure d'Architecture de Paris-Belleville Architecte diplômé, Atelier Henri CIRIANI, Université Paris 1 Panthéon-Sorbonne, maîtres de conférences (Ecole nationale supérieure d'architecture de Nantes); Ph.D (Histoire de l'art), Architecte DPLG. Since 2002 he has been a Professor at the Tokyo University of Science, Faculty of Science and Technology, Department of Architecture. He is Advisory Board member/ Docomomo International, Member/ Docomomo Japan, Co-Founder/ mASEANa, Visiting professor / Kanazawa Institute of Technologies, International Expert committee Member / UNESCO World Heritage: Architectural work of Le Corbusier – An outstanding contribution to the Modern Movement, Member / ICOMOS ISC20c, Board member / ICOMOS Japan, Visiting Fellows, Member / JIA, AIJ.

PERMANENT RECREATION – THE FORMER SPA SANATORIUMS TRANSFORMATION INTO PERMANENT SHELTER OF INTERNALLY DISPLACED PERSONS IN THE REPUBLIC OF GEORGIA

Martin Zaiček (Slovakia), Andrea Kalinova (Slovakia), Nano Zazanashvili (Georgia)

INTRODUCTION

It is been almost decade since Georgia, the South Caucasus republic become popular tourist destination. This exotic fringe of the former Soviet Union remained for decades remote place associated with ethnical conflicts. A wide range of modern sanatoriums not in their original use nor design, but socially struggled rebuild environments of involuntary permanent recreants. This remained on the fringe of the interest of both tourists and architectural research.

THE ROOTS OF GEORGIAN ARCHITECTURE

Georgian society is and thru the past centuries always was connected to the European cultural context. Thru the centuries Georgian culture was due to its geographical location influenced by Christian, Persian, Arabic, and Ottoman culture. Since the 19th century, Russian culture slowly ruled the region. By 1921 Georgia and the rest of South Caucasus became a part of Soviet Union.¹ The next political, cultural as well as architectural tendency get under the direction of Moscow. By 1920's and 1930's there were several attempts to direct architecture forward progressive modern movement (constructivist) style, but compared to the situation in the Central European countries, the rise up of modern movement had no time to developed properly. In the end of 1920's, country was forced to introduce official art and architectural style of socialist realism. Georgia had no direct contacts to western European discourse of modern movement, but still architects were able to study new trends. Khrushchev's de-Stalinization of USSR² in the late 50's and beginning of 60's has a strong impact on soviet architecture. In the need for cheaper and more efficient building process was introduced the term of "housing industrialization". There was no more need for Socialist realism aesthetics and its inefficiency what officially declared open way "back" to the roots of international modern style. Due to this, late 60's and 70's represents the most successful era of soviet architectural design as well as for Georgian architecture.

The design process and projection was organized in central state owned projection companies. Gruzgiprogorstroi was central projection company responsible for design of public building and cultural heritage restoration projects, other big company was Gorproject responsible for housing development and urban planning. Rural development projection was organized through Gruzgiproselstroi. Similar organization of the projection process was in every country of the East block (e.g. Czechoslovakia - Stavoprojekt). Even the work in the centralized projection companies was collective, the authorship and architectural creativity was respected. Late 1960's and 1970's opened the way to get on the train of European modern movement tradition. One of the best examples of this period in architecture is undoubtedly the Ministry of Highways in Tbilisi.³

ARCHITECTURE OF COLLECTIVE RECREATION

Utopia of collective recreation was developed in the frames of postwar social welfare state politics on the both sides of Iron curtain. In the Soviet Union the idea of collective recreation, or recreation for the masses was implemented right after the establishment of the Bolshevik power. Recreation became one of the central aspect of the Soviet healthcare policy. Recreation served the wellbeing and productivity of workers. The roots of modern recreation goes to the interwar period in Italy and Central European countries, where the discussion about the typology of the recreation was one of the main themes of the theoretical work and architectural practice.

While countries gifted with a sea coast, such a Yugoslavia, Bulgaria or Romania were creating summer resorts for the working class, other inland countries such a Czechoslovakia and Soviet republic of Georgia rich in hot mineral springs became hubs of institutionalized health recreation.⁴ The idea of collective recreation in healing spa resorts was the render of the ideal socialist society - so the spa resort architecture representing this utopia.

While on the West, this idea was abandoned already in the beginning of the 1980's, in the countries of Eastern Europe it

continued to develop till the fall of the communist utopia. Today, these buildings are abandoned both physically and mentally.⁵ Even though in the region of Central Europe spa resorts build during the Socialist era are still in operation, the crucial idea behind – their social/healthcare/reproductive purpose – is disappearing under the pressure of the Neo-Liberal economics. Thus, during the last two decades the faith in this architecture went through different trajectories of transformation. In Georgia the state of the deconstruction of this utopia gets dystopian character. It opens the question of value, significance and function of architectural heritage of the modern movement when confronted by political and social conflicts.

KURORTPROJECT AND ITS MONUMENTS OF COLLECTIVE RECREATION

During the decades, the specialized projection was slowly excluded from the central projection office and delegate onto

autonomous specialized projection institutes. Such a state owned projection companies fulfilled the needs for more technically and typologically specified investments. In the 1960's was in many countries excluded specialized projection for healthcare sector and healing spas resorts.⁶ In USSR such a projection institute was founded in 1967. In Moscow based central projection and research institute "Kurortprojekt" was established by the federal central council of profession unions.⁷ Under the Moscow Kurortprojekt, there was other three institutes based in Kiev, Sochi and the city of Piatigorsk⁸ in Stavropol Krai and another 9 branch offices in other Soviet cities, among them one in Tbilisi.

In the core of a universal health care system which was partly introduced in the Soviet Union already in the late 1920's⁹ is a crucial system of prevention, where healing spas both balneological and climatic played the main role. Institutionalized healing spa recreation differs from family recreation. While

1. photo by Andrea Kalinová, Sanatorium Likani III. in Borjomi, Architect: Merab Chkhenkeli, Kurortprojekt Tbilisi, 1969 - 1976



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2. photo by Andrea Kalinová, Sanatorium Aia in Tskaltubo, architect not mentioned

seashore resorts in Croatia, Bulgaria, Romania but even resorts developed during the development of the social welfare state in France or other Western European countries¹⁰ were designed for and operated for family recreation. Healing resorts were always meant to be a place for individual recreation. The worker or a person with health complications was sent to spa for recreation lasting not less than 21 days. People from different corners of the USSR were interacting in standard double, three or more bed room. Sanatorium complexes were designed usually in capacity 250 - 600 beds. Accommodation, food preparation, dining rooms, social and cultural facilities like cinema theaters and optional healthcare departments were organized in one mono-block.

RESORTS IN GEORGIAN SSR

In 1928 was founded scientific research Institute of Health resort science and Physiotherapy of the Republican associa-

tion Gruzkurort under the Council of Ministers of the Georgian SSR. This institution since its establishment was responsible for scientific research of balneological potential of Georgian mineral resources. This institution was a decision maker for the future development of the spas in Georgia. Biggest spa locality in Georgia and one of the biggest in USSR was Tskaltubo in Imereti region, West Georgia. In Tskaltubo spa resort 22 sanatoriums were in operation before the fall of the USSR. The bed capacity of this resorts reached approximately 5000 beds with a year capacity up to 100 000 guests a year.¹¹ The resort was mostly developed in the post-war period. Kurortprojekt played the important role in this effort, especially thru the personality of the architect Ioseb (Soso) Zaalishvili, who is the author of the Tskaltubo master-plan. Sanatoriums in Tskaltubo were realized mostly in the style of Socialist realism. The concept of urbanism was arranging the individual recreational monumental palaces

(250-600 beds) separated from each other into the circle composed around the central park area, where the hot springs were situated. Architecture of modernism entered the resort in the end of 1960's. The best example is large Sanatorium Sakartvelo with 600 beds opened in 1987, designed by architects Merab Chkhenkeli, R. Janashia.¹²

Other famous locality is Borjomi in Central Georgia. This place famous by the bottled mineral water was developed already during the Tsar period. Some of the most successful examples of the spa architecture in this locality are Composer's Union House in Borjomi (1973) by architects Sh. Davitashvili (Head of the project), N. Solovyova, M. Juruli, G. Metonidze, N. Karichashvili¹³ and Sanatorium Likani III (1969-1976) by Merab Chkhenkeli. Another interesting example of the Kurortproject production for Georgian healing spa development was the project for Sanatorium Mountain Valley in Borjomi. The realized structure constructed in the

late 1970's by architect Ioseb (Soso) Zaalishvili was only a fragment of the complex with the capacity 2000 guest.¹⁴ Several high rise dormitories arranged into the shape on a sloped hill with the structural facade was composed on both sides of the river Mtkvari (Kura) in the deep valley.

Georgian Kurortporoject was responsible for sea resorts development as well. This both warm and subtropical seashore was a precious place during the Soviet time, where millions of recreants from isolated part of the world could have spent summer holidays or have had special health treatment. According to this, the coastline mostly in the Autonomous republic of Abkhazia was developed to provide modern recreational and therapeutical facilities. In Gagra, the most known resort of Abkhazian shore was constructed several therapeutical facilities of the international importance. The steep slopes of the tropical like mountains influenced original design of the most of curative houses in this areal like Sanato-

3. photo by Andrea Kalinová, Sanatorium Sakartvelo in Tskaltubo, Architect: Chkhenkeli, Kurortprojekt Tbilisi, 1974 (initial project) - 1986



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4. photo by Andrea Kalinová, Bath number 8, Tskaltubo, Architect Joseb Zaalashvili, Kurortprojekt Tbilisi, mid. 1960's

rium Solnechni designed by architects R. Kiknadze, G. Metreveli and M. Chachanidze in 1979, Holiday home build for Union of Architects (1980, V. Abramashvili, R. Bairamashvili, I. Kaviashvili and D. Modbedadze) and Climatological rehabilitation center of Georgian SSR ministry of Healthcare. (1985, A. Bakhtadze, M. Laitadze, Z. Mamaladze, V. Mikeladze). One of the most famous Black sea resorts is situated 20 km from Gagra in Bichvinta (Pitsunda). The design of the resort of the international importance was searched by the architectural contest in 1960.¹⁵ The current, almost intact shape of the complex of the hotels with the capacity of 3000 beds was design by famous Russian architect Michail Vasilievitch Posokhin.¹⁶ The economic problems of the USSR in the late 1980's advance signal of the later tragic events left many courageous project unrealized like the planned resorts in the Abkhazian city Ochamchire (designed by Ioseb Zaalishvili).

BREAKINGPOINT

The year 1992 is the breakpoint in Georgian modern history. Is the year which divide Georgian 20th century into two autonomous parts. After seventy years as part of Soviet Union suddenly Georgia has become independent sovereign state. In this year economy of the country decreased to one fourth of 1988 level. Unemployment and money inflation raised into astronomic rates. Social deprivation led to political crisis which opened the way to civil war in the 1992 in Tbilisi, and immediately led to war in Abkhazia in the years of 1992-1994. Due to war, 200 thousand people were forced to move from Abkhazia, located on the coastline of the Black sea, to the inland regions of Georgia. Many of the migrants were temporarily accommodated in the modern hotels, dormitories or healing spa resort developments. This people got the status of IDP's.¹⁷ What seemed to be a short political crisis occurred to become an already 25 year lasting frozen conflict.

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FROM HEALTHCARE TO SOCIAL CARE

In the year 1992, the sanatoriums were owned by state organization Janmrteloba, which was central state health insurance company based in Tbilisi. In autumn 1992, the ordered was given to the directors of the sanatoriums and other state-owned facilities with the accommodation capacity like hotels to open doors to refugees seeking for a shelter. The streams of the refugees were not organized and economically struggled society had no plan and capacity to solve the problem in another way. Till 1993, the hotels and sanatorium used to take care of all their new "clients". Later when people realized that the situation with their resettlement will not be solved, sanatoriums stopped to serve the new inhabitants and they got the permission to stay. The standard double room in the healing spa sanatorium has in average 16 square meters. This place was given to arch one family not counting of the amount of people in one room. The people started to take care of themselves on their own, customizing their new homes. Started gardening outside and refurbishing the rooms with the additional kitchen in the loggias.

THE BUILDING'S TRANSFORMATION

The whole process of transformation was unorganized action. The material and quality of added structures varied from simple wooden, plywood or sheet metal to brick walled structures. People to improve their living standards use the available materials in the locality. In some cases as a source of material was used the surrounding social, cultural or health-care facilities. The strategies of the transformations were more detailed in the case of the IDP's settlements of 2008 Russian - Georgian war.¹⁸ The actual condition of the building varies from place to place. But generally the bigger is the original sanatorium, the worst is its current physical state. Especially the former common spaces like dining rooms, administrative parts, kitchen and balneology, cinema theaters, these places were abandoned or robbed.

On the other hand, also big sanatorium "Aia" was still in the more or less good shape. In general: Physical state of the former sanatoriums in Tskaltubo is bad and without any basic repair or sustain. This may be caused also by economic situation of the locality where huge unemployment is on face. In 1992-1993 when the sanatoriums were changed into permanent IDP's shelter, nobody was thinking about the economic and social sustainability of the communities.

The most of the sanatoriums are currently in the state which does not allow the reconstruction to its original form or use.

These buildings are un-reconstructable like the one of the largest Georgian sanatorium Sakartvelo in Tskaltubo, where in some moments up to 1000 people lived in slum like conditions. Today in Tskaltubo around 10 000 IDP's are still living what means around 2000-3000 families. Originally in Tskaltubo 22 sanatoriums and one Inturist Hotel were operating. From this number only one sanatorium operates in its original form. This former Army's Sanatorium is now privatized as spa resort. Two former resorts decayed into the heap of ruins and the rest 19 buildings function mostly as IDP's housing.

CONCLUSION

Georgia was for decades associated with political destabilization, war in Abkhazia and armed conflicts in South Ossetia. Architectural heritage of this country was overlooked. Last decade Georgia did a lot of political and economic reforms which stabilized the country and open the way to European integration. Due to thousands of years of following European way of thinking, Georgia deserved to be observed as part of European story. Architecture as the most ongoing aspect of each culture is one of the points where to start our observation.

What seemed to be a short political crisis in 1992-1993 occurred to become an already 25 year lasting frozen conflict. Due to this conflict, in a short period of time, the original buildings, developed during the Soviet era for institutionalized collective spa recreation was by random, DIY participation process re-designed into the new permanent collective housing. The modern movement architecture was transformed under the critical social pressure. Uniqueness and utopia embodied in the architecture of collective recreation was swiped by social as well as political transformations.

The purpose of unknown architectural heritage designed by the specialized projection institute Kurortprojekt and build on the fringe of the Soviet Union is in contrast with its current transformed state. It follows the processes and strategies of its post-traumatic transformations and its re-use due to historical social crisis. In this context, the title does not only refer to recreation as tourism, but to the original meaning of the word re-creation as re-modeling or adaptation. It opens the question of value, significance and function of architectural heritage of the modern movement when confronted by political and social conflicts. The presented research does not simply think about the physical state of Georgian spa architectural heritage, but examines social, political and economic ideas and realities behind it and behind the utopia of collective recreation.

- 1 *The Socialist Soviet Republic of Georgia was established on February 25, 1921*, Cornell, Svante E. (2001), *Small Nations and Great Powers: A Study of Ethnopolitical Conflict in the Caucasus*, London: Curzon Press
- 2 The crimes of the Stalin era, special report to the 20th congress of the Communist Party of the Soviet Union. (1956). <https://archive.org/details/TheCrimesOfTheStalinEraSpecialReportToThe20thCongressOfThe on 14.02.2015>
- 3 Probably the well known architectural structure of Georgia recognized in the whole world was designed in 1973 by architect G. Chakhava, Z. Janaghania, T. Tkhlilava, W. Kimberg. Ed: Joana Warsza, Ministry of Highways: A Guide to the Performative Architecture of Tbilisi. Warsaw: The Other Space Foundation, 2011. p. 23-34
- 4 Georgia is one of the fews in the world where both sea recreation and healing spa recreation is possible.
- 5 E. Beyerm A., Hagemann., M. Zinganel, *Holidays after the fall: Seaside architecture and Urbanism in Bulgaria and Croatia*. Berlin: Verlag, 2017.
- 6 Проектно-изыскательский эскизный проект проектного института 1967 году ектельский моду ектельский Советом ектельский сиональски йзовн (ВЦСПС). <http://www.kurortproject.ru/main, 23.01.2018>
- 7 I.e.g. Zdravoprojekt in Czechoslovakia see: M., Zaiček, *Late modernism in the Slovak spa localities*, Architecture and Urbanism
- 8 Piatigorst is the city situated in the famous Soviet healing spas region known as Caucasian mineral waters. The region consists of the known spa resorts as Mineralnye Vody, Kislovodsk or Zheleznovodsk.
- 9 A. Newsholme, J. A. Kingsbury, *Red Health: Socialized health in Soviet Russia*. New York: Doubleday Doran & co. 1933. Even the roots of universal health system in USSR goes back to 1920's only in 1969 was spread equally also for rural citizens.
- 10 E. Beyerm A., Hagemann., M. Zinganel, *Holidays after the fall: Seaside architecture and Urbanism in Bulgaria and Croatia*. Berlin: Verlag, 2017.
- 11 Ed: E.N. Tazov, *Курортны; энциклопедический словарь (Healing spa encyklopedic dictionary)*. Moscow: Sovetskaja encyklopedija, 1983 p. 376
- 12 In: Kvirkvelia T., Mgaloblishvili N., *Architecture of the Soviet Georgia*, Moscow 1986, p. 223
- 13 Project of the recreational facility was developed in the projection institute Sakkalakmshensakhproekti, Catalogue of the project institute Sakkalakmshensakhproekti, 1984; 2. Sakkalakmshensakhproekti 1934-1984
- 14 Source: Interview with the son of Joseb Zaalashvili, architect Mamuka Zaalashvili on 01.11.2017
- 15 The Pitsunda resort 1959-1967, architects: 1959—67, архитектор п. В. Посохин, А. А. Мидоянц, В. А. Свирский, Ю. В. Попов, инженер н. Я. Школьников, В. С. Николаев in <https://dic.academic.ru/dic.nsf/bse/120789//bse/12 24.01.2018>
- 16 Mikhail Vassilievitch Possokhine 1910-1989, from 1960-1982 The Chief architect of the city of Moscow. His work include the current Moscow monument as the New Arbat Avenue (1962-1968), Comecon Headquarter (1969), USSR Expo pavilion in Montreal 1967 and Osaka 1970.
- 17 Internally displaced persons are people who were involuntarily forced to flee their homes but remained within the boundaries of their country. 1st big migration wave was a result of the war in Abkhazia in 1992-1993, which forced approximately 200 thousand Georgians to leave their homes and resettle in other parts of the country. The second wave was a consequence of the Russian - Georgian war in August 2008. Various sources give various numbers of IDPs from South Ossetia. They are between 22,000 and 25,000. (Georgian ombudsman, Report on the state of the rights of IDPs and people damaged during the conflict,

18 N. Zazanashvili, *Dwelling Adaptations in the Settlements of Internally displaced persons*. In: *From Private to Public: Transformation of Social Spaces in the South Caucasus*. Tbilisi: Heinrich Boell Foundation, 2015. p. 47-67

The interdisciplinary research group consists of two theoreticians of architecture Martin Zaiček, Nano Zazanashvili and a photographer Andrea Kalinova. Since 2015 they have been researching the IDP's homes located in the former spa sanatoriums in the Georgian spa former sanatoriums.

Nano Zazanashvili (1984) has graduated Tbilisi State Academy of Arts, Faculty of Architecture in 2007 and defended her Master's degree in architecture sciences at the Georgian Technical University in 2009. She is currently working as a freelancer architecture historian and urban researcher. Since 2011 is a co-founder of Docomomo Georgia – Georgia National Chapter of the International Committee for Documentation and Conservation of Buildings, Sites and Neighborhoods of the Modern Movement. Her research experience covers areas related to architectural self-adaptation processes, urban transformation, Soviet urban planning and Architecture, cultural heritage legislation.

Andrea Kalinová (1980) is a graduate of Milota Havránková's Art Photography Studio at the Academy of Fine Arts and Design, where she has also completed a doctoral study at the Department of Intermedia with dissertation work: „Artistic strategies as methods used to support and preserve endangered architectural heritage“. In her work she is concerned with local memory and the revitalisation of forgotten spaces. In 2011 she initiated the Abandoned (re)creation project, which engages in the popularisation of threatened 20th century architecture, especially in the spa town of Trenčianske Teplice. www.andreakalinova.net

JOHN HARRIS AND DUBAI. POLITICAL INSIGHTS, URBAN PLANNING AND ARCHITECTURAL LANDMARKS

Tiziano Aglieri Rinella (Italy, Dubai), Rubén Garcia Rubio (Spain, Dubai)

ABSTRACT

Only 50 years ago, Dubai was a small village of fishermen and shopkeepers, lacking paved roads, running water and with few telephone lines. Today, it's a fascinating and glimmering young city projected to the future. This rapid transformation has been the result of a complex set of economic and social dynamics and of strategic political choices. The sudden discovery of oil in the 60s was a turning point in the history of the city, as well as the raise to the power of Sheikh Rashid II bin Saeed Al Maktoum, which through the British architect John Harris, settled the first leading guidelines for the future expansion of Dubai.

Reliable advisor of the Sheikh, Harris was the author of the first masterplans in the 60s and 70s, an initial attempt to govern the city's rapid growth and to establish a network of modern infrastructures. Formed under a Modernist sway at the AA in London, Harris was the designer of many of the first Dubai's most prominent buildings, such as hospitals, banks, hotels, till one of its first urban landmarks: World Trade Centre, built in 1979.

This paper will attempt to unfold the political motivations behind the design choices undertaken by John Harris, which following Sheikh Rashid's aspirations prepared Dubai to become a global city during the following decades.

1. INTRODUCTION

Only 60 years ago, before the discovery of oil, Dubai was just a small village of traders and fishermen. In that time the city counted about 25.000 inhabitants settled along the Creek. Today, Dubai is a glittering ultra-modern city projected to the future, populated by more than 3.000.000 people¹ and featuring a number of visionary projects. Its fast growth was initially governed by masterplans designed by British architect John R. Harris (1919-2008) that traced the guidelines for its future expansion, settling a lasting imprinting to the city's shape. Harris also designed some of its first fundamental architectural landmarks.

The raise to the power of Sheikh Rashid II bin Saeed Al Maktoum (1912-90) as Ruler of Dubai in 1958, brought new

Fig. 1. John R. Harris and Partners, left: First master plan for Dubai, Dubai, UAE, 1959-61. Right: Dubai Development Plan Review, Dubai, UAE, 1971.
© John R. Harris and Partners



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Fig. 2. John R. Harris and Partners, National Bank of Dubai, Dubai, UAE, 1979. © John R. Harris and Partners

ideas for the country development, and among them, a special focus was given on the city's urban planning. By this time, Dubai was lacking a basic level of infrastructures, with few paved roads, and almost no public services.² The city was formed by three small agglomerations of buildings, clustered on the two sides of the Creek: Bur Dubai, Shindaga and Deira. Beyond these settlements, the city dispersed towards the desert with light and semi-permanent dwellings (huts called Barasti).³ This was the scenario found by John Harris when he met Sheikh Rashid in 1959, when the young -and then unknown- British architect started his long-life relation with Dubai and the UAE.

World War II determined the course of Harris's youth and training⁴. He joined the School of Architecture of the Architectural Association in London in 1937 but his studies were interrupted only two years later when he enlisted in the military. First commissioned in London, Harris finally was sent to Hong Kong where was captured after Christmas 1941, and where he spent more than three years in prisons camps. A captivity time that the architect used "to contemplate and to absorb the varied effects of climate on man and his buildings."⁵ Once released in September 1945, Harris resumed his studies at the AA a few months later. There, he met his future wife and partner Jill, and both opened a joint office soon after their graduation. During the first years, the office survived with small commissions but enough to allow them to participate to architectural competitions. In fact, it was one competition, the State Hospital in Doha, the turning point of Harris' life as with this commission he started his international career and close relation with the Arab world.⁶

Although he delivered projects in other emirates of the UAE, from Abu Dhabi to Sharjah and Fujairah, Dubai was the most important and an extraordinary design challenge for Harris, that was the privileged interpreter of the Sheikh's vision for the future of the nation.

Drawing a city on an empty sand canvas was an act of political willingness. The aim of the paper is to demonstrate how the design choices of Harris' masterplans and the accurate design and placement of some strategic architectural landmarks throughout the emirate were a powerful political tool aimed at achieving the Sheikh's expectations, establishing the fundamentals of a forthcoming urban balance.

2. PLANNING THE CITY

When Sheikh Rashid became the Ruler, Dubai had already started to become relevant in the area due to its growth as a

trade center. Sheikh Rashid promptly understood the need to establish the guidelines of Dubai's urban development and to provide modern facilities for the city's growing.⁷ A fortuitous meeting between Harris and the British's highest ranking in Dubai – Donald Hawley- during a party in London,⁸ allowed the young architect to be introduced to Sheikh Rashid, who immediately commissioned him the first master plan for Dubai (1959-61).
The aim of the first Harris' master plan was double.⁹ It had to provide the essential basic infrastructures to the city, especially the road system, and it was intended to establish a zoning plan, even if finally it was just reduced to a series of recommendations of density and land use. It was meant to plan the future expansion of Dubai while preserving the old core as city center. The main achievement of Harris' plan was therefore to draw some master lines for a reasonable extension of the city from the old center to the desert.¹⁰

The discovery of oil in 1966, made this first plan suddenly outdated and insufficient to control the rapid growth of Dubai and Harris was requested to upgrade it in 1971. The new plan continued with the spirit of the previous one as it mainly drawn an extension of the road systems and a land zoning. It considered again the Creek as key element of the urban composition and provided new expansion areas along the coast, both towards north-east and south-west, in addition to some new insertions.
Nevertheless, political and economic issues led Sheikh Rashid to disregard some of Harris' master plan previsions.¹¹ Among them, the most important concerned the establishment of UAE as a new country in 1971. By that time, the borders of the different emirates were not yet well defined and Sheikh Rashid decided to build an important infrastructure, Port Jebel Ali, to mark the limits with the emirate of Abu Dhabi. This element not only fixed a border but also marked the di-

Fig. 3. John R. Harris and Partners, Dubai International Trade Center, Dubai, UAE, 1979. © John R. Harris and Partners



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rection of the city growth along the coastline. This direction was further highlighted with a new landmark built in a desert area between the old city and the new port, Harris' Dubai World Trade Center (1975-79).

3. BUILDINGS THE ESSENTIALS

Shortly after the Dubai master plan, the Sheikh commissioned the British architect also to design the extension of the existing Al Maktoum Hospital. The Doha State Hospital had been the first important commission for Harris' office only a few months before, this typology will become a distinguished feature of his office. Actually, Al Maktoum Hospital was a ten-years successive modest construction to extend a previous small shed.¹² However, Harris finally built two of the most important hospitals of Dubai: the Rashid Hospital (1973-76) and the (new) Dubai Hospital (1976-82). The first one follows a traditional scheme of a low-rise building which structure is based on a cross of long corridors and the sum of small units around a courtyard. While the second one, first prize in an international competition, follows a modern scheme with a two-level podium for administrative and medical departments plus a 14-stories rhomboid tower for the bedrooms. Harris also designed a several other buildings related with healthcare, such as the Department of Health and Medical Services (using an interesting plan with hexagonal volumes and recessed windows) or the proposal for the Phased Development Hospital in Dubai (based on a diagonal geometry), and other proposals for Abu Dhabi, Sharjah and Fujairah.

Once the city's the basic structures were established, Harris was required to design other buildings typologies. Among them, offices played a prominent role due to the Dubai International Trade Center (DITC) complex (this project will be examined in the following section). Harris built some of most symbolic offices in the country as the British Ambassador's Chancery in Abu Dhabi (1977) or the awarded proposal for the Diwan of the Emir of Dubai (1984-90), even if this last was very influenced by the picturesqueness of the nearby Bastakya historical district. Two non-awarded offices projects are also interesting: the complex section of the pyramid-shape proposal for the Diwan in Abu Dhabi and the *lecorbuserian* deep facade for the Municipality Building competition.

Other significant buildings designed by Harris were banks and hotels. He designed two buildings (nowadays demolished) for the National Bank of Dubai, the headquarters (1979) and the Abra Point branch. Both were located on the creek edge and two of them tried to combine the modernity and the interna-

tional style with traditional aspects due to their position in the old center of Dubai. The architect showed a similar attitude designing the Dubai Hilton Hotel (1975-78/2007) and the Dubai Metropolitan Hotel (both also demolished). In this case the buildings were far away from the city center. Nevertheless, both tried to establish a relation with their contexts: in the first case, as a part of the DITC complex; in the second, creating an artificial landscape for a leisure resort. Despite the different typology of these buildings, all tried to highlight an image of modernity for the young country.

Harris's projects also involved other typologies such as education, residential, sports or landscape. Al Itihad School in Dubai (1978) was the only educational building in the country, although his office designed also others in the region, and deserves a special attention. Actually, the project is a kind of "masterplan" for four schools (infants, junior, middle and senior) where the different units are positioned around a common courtyard. All these units are designed to foster open-air teaching spaces and relations between them, thus shading systems were carefully designed. The office was also involved on residential projects, both apartments and single houses, where their research focused on materials, building systems and plan optimization. Examples are a few important houses like the British and the American Ambassador's Residences in Abu Dhabi, although some residential buildings were more interesting, like the three 15-stories residential blocks at the DITC or a residence for an oil company in Abu Dhabi. Harris also designed some sport complex, a stadium in Dubai and a polo club in Sharjah, and a few non-awarded landscape proposals for public spaces along the creek and on the roundabout of the DITC.

4. DITC, A MILESTONE FOR A NEW NATION

Amongst Harris' projects, one work emerges above all: the Dubai International Trade Center (DITC, 1973-79).¹³ The building was conceived for a totally empty area, a desert area five kilometers away from the city center in that time.

This choice was a deliberate Ruler's decision, which wanted to create strategic landmarks spread on the Emirate's land as "magnets" able to attract future development¹⁴.

This decision was rather criticized on that time, but in hindsight it was very provident, as nowadays the Trade Center is a central landmark of the new center of the "new" Dubai, in one of the area with the highest density of hi-rise buildings between DIFC¹⁵, the Sheikh Zayed Road and the new Downtown area.

However, in that time the Trade Centre was standing alone in the middle of a sand plain next to the former highway to Abu Dhabi (today Sheik Zayed Road).

Initially, Harris proposed a horizontal scheme with low-rise connected buildings using a decreasing or increasing section to control the sunlight.¹⁶ In a second phase, he kept this scheme for the secondary buildings of the complex and the main project feature became a tower.

The final built project featured 4 main elements placed around a large ramp giving access to a pedestrian area on a raised level.

One of the buildings was the Dubai Hilton, a luxury hotel (built between 1975 and 1978, demolished in 2007) with 348 guestrooms placed around an atrium built with prefabricated components and featuring a deep façade with recessed shaded windows. Another building was a conference and ex-

hibition center adaptable for sport activities and a last element a car park deck. The main building of the composition was a 39-storeyed tower, diagonally oriented north-south to control the sunlight.

The central core of the tower included staircases and elevators, and also acted as a main structural element within the façade. This thick façade is one of the most characterizing elements of the tower, as its depth prevents direct sunlight from penetrating the building, by means of shading prefabricated elements in light-coloured concrete.

For more than 30 years, the Trade Centre was the tallest building in the Middle East (John Harris had also designed all the previous tallest buildings in Dubai: the National Bank of Dubai in 1969 and the Dubai Hospital in 1979).

As Todd Reisz affirms, the Sheikh's aim was not only to build a tower, but a symbol for the new nation¹⁷. Queen Elizabeth

Fig. 4. Queen Elizabeth, Sheikh Rashid and John R. Harris during the opening of the Dubai International Trade Center, Dubai, UAE, 1979.
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in person inaugurated the Trade Center with great media coverage, and the most important newspapers and magazines broadly covered the event worldwide. The Trade Centre tower was the very first skyscraper of the Middle East and soon became the most famous landmark of Dubai, being reproduced on the 100 Dirhams banknote and taking on the same role played in recent times by celebrated buildings such as the Burj El Arab or the Burj Khalifa.

The presence of the Queen underlined the privileged political and commercial relationship between UK and UAE, and gave to Dubai international notoriety. The political and cultural sway of the Anglo-Saxon world was an indisputable constant of the new country, which in the following years will absorb behaviours and aspirations from both the British and American culture.

5. CONCLUSION

It is evident, from the context in which the nation was founded in 1971, that the United Arab Emirates were born under the continuative sway of the United Kingdom. The development of the young Arab nation was constantly followed and co-supervised by the British government, and this explains the privileged involvement of British enterprises and professionals in the construction of all its new essential infrastructures. Privileged and lasting commercial relations further consolidated this long-term political relationship.

The chance encounter between John Harris and Donald Hawley, the British "highest ranking in Dubai", opened him the direct contact to Sheikh Rashid, in an epoch in which the ruler strongly needed his professional services. Harris was an able interpreter of the Sheikh's aspirations and was proficient in advising him to establish suitable solutions for the future expansion of Dubai. Once earned the Sheikh's confidence, he was appointed to design some essential landmarks of the new city, realizing the ruler's aspiration to punctuate the city creating landmarks ("magnets") able to attract future development and establishing the leading guidelines for the growth of the diffused urban fabric. This decision responded to a precise political issue: appropriation of land in order to establish clear borders among the different Emirates, that in the first years after the foundation of the UAE were still object of disputes. In this context, for instance, building the commercial port of Jebel Ali on the opposite side of the coastline and very far away from Dubai's city centre, was intended to permanently set the border with the adjacent emirate of Abu Dhabi.

Amongst the many significant projects, the Trade Centre has been certainly the most symbolic landmark, expressing the ambitious aspirations of a new nation and giving to Dubai international notoriety. This building shifted the barycentre of the city to new area that nowadays with its outstanding skyline represents the new vibrating heart of the business core.

John Harris was one of the most meaningful architects who first introduced modern architecture in the Gulf region and UAE, particularly in Dubai. He was a refined interpreter of a revised modernism able to absorb formal elements and solutions of the traditional Arab architecture within a modern language. Besides, thanks to his long experience in the region, his architecture was able to deal with the local harsh climatic conditions, featuring efficient deep facades and shading systems. Amongst the architects working in Dubai in the same period, Harris was certainly the only one to have an extensive and long-term vision, which he shared with Sheikh Rashid. He was the trustworthy advisor of the sheikh, leading him in the most important political choices of urban planning, that settled a lasting imprinting to shape the vibrant international metropolis nowadays proudly presenting itself to the global scene.

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1 Government of Dubai, "Population Clock", <https://www.dsc.gov.ae/en-us>. (accessed on January 10th 2018)

2 Frauke Heards-Bey, *From Trucial States to United Arab Emirates*, London, Longman, 1982, 242. AMO/ Todd Reisz, Kayoko Ota, "Drawn in the Sand. John Harris, Dubai's Pioneering Modernist," *Volume#12: Al Manakh 1*, Amsterdam, Archis, 2007, 154-55.

3 The first house in concrete blocks dates from this period. Previously, wealthier houses were built in mud or coral Stone, or the most humble ones, with palm branches. Erhard F. Gabriel, *The Dubai Handbook*, Ahrensburg, Institute for Applied Economic Geography, 1988, 9; Yasser Elsheshtawy, *Dubai: behind an urban spectacle*, Londres: Routledge, 2009, 107.

4 Anthony Edwin James Morris, *John R. Harris Architects*, Westerham, Hurwood Press, 1984, 3-4.

5 Harris's friend Maxwell Fry and Morris, as well as his son Mark Harris, try to look on the positive side of the captivity as an important architectural lesson. Anthony Edwin James Morris, *John R. Harris Architects*, vii, 5. AMO/ Todd Reisz, Kayoko Ota, "Drawn in the Sand. John Harris, Dubai's Pioneering Modernist," 154.

6 Nevertheless, this was not the first commission in the Middle East as he also designed the new Building Research Laboratories in Kuwait in 1952. Anthony Edwin James Morris, *John R. Harris Architects*, 8; AMO/ Todd Reisz, Kayoko Ota, "Drawn in the Sand. John Harris, Dubai's Pioneering Modernist," 154.

7 "What is good for the merchants, is good for Dubai" claimed the Sheikh Rashid during one of his first sessions in his Majlis. Graeme Wilson, *Rashid's Legacy: The Genesis of the Maktoum Family and the History of Dubai*, London, Media Prima, 2006.

8 There are several texts which remember the story, for example: Todd Reisz, "1960 Dubai Master Plan," *Lest We Forget: Structures of Memory in the UAE*, Venice, National Pavilion United Arab Emirates, 2014, 112-13. "Dubai: growth and change," London, *The Architectural Review*, vol. CLXI n° 694, June 1977, 384. AMO/Todd Reisz, Kayoko Ota, "Drawn in the Sand. John Harris, Dubai's Pioneering Modernist," 154 and 159.

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11 For example, the small quantity of oil finally discovered, the high cost of land in the areas adjacent to the old city and the lack of a clear system of urban regulations, erased part of Harris' plan. Todd Reisz, "Future Flyovers. Dubai in 1971," London, *Architectural Design*, n°233, January-February 2015, 100-05.

12 Anthony Edwin James Morris, *John R. Harris Architects*, 8.

13 Anthony Edwin James Morris, *John R. Harris Architects*, 35. Todd Reisz, "World Trade Center Myth," *Lest We Forget: Structures of Memory in the UAE*, Venice, National Pavilion United Arab Emirates, 2014, 85-86. AMO/Todd Reisz, Kayoko Ota, "Drawn in the Sand. John Harris, Dubai's Pioneering Modernist," 155 and 162. "John Harris, Dubai's Master Planner 1960s-70s," accessed on January 22, 2018, <http://www.dubaiaisitedtobe.com/pagesnew/JohnHarrisMasterPlanner.shtml>

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16 Anthony Edwin James Morris, *John R. Harris Architects*, 34.

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BIOGRAPHIES

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THE PLACE OF MODERNISM – ARCHITECTURE, POLITICS AND SOCIETY IN JOHANNESBURG

Brendan Hart (South Africa)

ABSTRACT

Hillbrow, located just to the north of the Johannesburg city centre, is an area of predominantly modernist high rise apartment buildings dating from the 1930's to the 1960's. A little over one square kilometre in size it has some of the Africa's highest population densities. Hillbrow is also home to the eponymous "Hillbrow Modern" architectural style, a local derivative of international style modernism.

Under Apartheid, Hillbrow was home to vibrant, cosmopolitan urban white community. Economics, as well as the community's relative liberality, allowed the area to become one of the first in the country where the Apartheid States harsh segregation laws were challenged, with people of different races illegally occupy apartments.

Using the case study of Aiton Court, this paper aims to explore how the modernist built environment has evolved, adapted, accommodated and possibly even stimulated the continuously changing Hillbrow community. Completed between 1937 and 1938 it is an early example of an international style modernist building in Hillbrow. Aiton Courts history parallels that of Hillbrow. Completed as rental apartments for young city dwellers, the original occupants included artists and architects. Later in its life the building was one of the first to accept non-white occupants, housed anti-apartheid activists and was eventually high jacked by its tenants due to neglect of its owners. The building was restored in 2014 and once again houses vibrant community including a thriving mosque. While the architecture has proved to be extremely resilient and remained amazingly intact it has allowed for continuous change and still serves its varied occupants.

INTRODUCTION

Hillbrow is a notorious inner city suburb of Johannesburg. Originally developed in the 1890's as an upmarket residential area, greater Hillbrow is now made up of what is probably the largest concentration of modernist high rise apartment buildings in South Africa, dating largely from the 1930's to the

1960's. The area also has one of the world's highest population densities of 69,000 people per square kilometre (Census 2011) (compared for example with the average population densities of Dhaka at 28,000 or Paris at 21,000 people per square kilometre).

Despite its high levels of crime and poverty Hillbrow has become home to a cosmopolitan pan African community and is often seen as an entry point into the city of Johannesburg for new immigrants, both nationally and internationally.

MODERNISM IN SOUTH AFRICA

Johannesburg, in particular the School of Architecture at the University of the Witwatersrand, was the epicentre for the emergence of modernist architectural thinking in South Africa. The school, through lecturer Rex Martienssen, had in the early 1930's become exposed to the architecture of the CIAM. Martienssen developed a relationship with le Corbusier with the latter naming the group of young avant garde architects that emerged around him as the *Groupe Transvaal*, dedicating his second volume of his *Oeuvre Complete* to them (Le Corbusier 1935, Herbert 1975).

Initially the works by these architects (including the likes of Martienssen, Fassler, Cooke, Hansen, Le Roith, Jonas etc.) followed closely the international model to which they had been exposed, producing white framed apartment buildings and villas dotted across the Highveld landscape. Over time however the style of architecture evolved, responding to local conditions and materiality. Martienssen's own house, dating from 1939, signalled a shift in the emergence of the local modernist vernacular. The new style, characterised by its use of articulated concrete framing and expressive face brick work, was widely adopted by architects and speculative developers. Its extensive use in the design of the modernist high rise apartment buildings of Hillbrow led it being named "Hillbrow Modern", with historian Nicholas Pevsner describing in in the *Architectural Review* in 1953 as "a little Brazil within the commonwealth" (Prinsloo 1995).

SOCIAL HISTORY OF HILLBROW

Hillbrow has always been seen as a liberal, cosmopolitan urban environment. Its modernist building stock was speculatively developed to house European immigrants fleeing the instability of inter and post war Europe as well as young, white, city dwellers. The area became the heart of the cities café society and nightlife.

The apartheid state (1948 – 1994) introduced a number of policies legislating racial segregation in South Africa. The Group Areas Act (Act number 41 of 1950) created physical separation between races, restricting living and the ownership of property for non-white South Africans. Johannesburg effectively became a “whites only” city with the movement of non-white residents highly controlled and administered by a system of passes¹. Non-white residents were restricted to living in geographically limited and largely peripheral dormitory townships².

An acute housing shortage in the 1970's, coupled with the prohibitive distances that they needed to travel to their places of work within the city, prompted a number of upper middle class Indian and coloured (mixed race) families to begin to move into what were then classified as “white only group areas”. The descriptive term “greying” was introduced to describe this process of the active, although undercover, breaking of the law (Beavon 2004:213). In Johannesburg greying started in the inner city suburb of Hillbrow (Pickard-Cambridge 1988:1). The main reason for these individuals and families breaking the Apartheid state's laws of segregation were economic rather than ideological. The housing shortage in coloured (mixed race) and Indian group areas was coupled with an oversupply of housing in white group areas (ibid: 3). Hillbrow in particular had, by the 1970's, an excess of unoccupied apartment created by uninhibited speculative development by private property owners during the economic boom of the 1960's³.

Image 1 – Airon court shortly after completion in 1938 (Photograph courtesy of Julian Cooke)



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Image 2 – The internal courtyard after the building was high jacked by tenants
(Photograph courtesy of Mayat Hart Architects)

The high cost of accommodation in the limited number of apartments in the centrally located Indian Group area of Fordsburg as well as the high transport costs from outlying areas made the risks associated with breaking the law economically justifiable. The illegal tenants, and later owners, made use of a white 'nominee' as a means of circumventing the law with the lease of the flat or ownership of the property being under the name of the nominee. Nominees were occasionally paid, but acting as a nominee was often done as an act of resistance on their part (ibid: 1). Landlords were also often complacent with flats in their under occupied buildings now being rented out at an often inflated price. The defiance and success of these early residents encouraged black African tenants to follow suit by the 1980's.

The government tried to take action against illegal residents, mostly in response to complaints. Legal action was met with

strong resistance on numerous fronts with the formation of Act-Stop, an organisation set up to fight or delay evictions, increasing the cost and inconvenience to the government (ibid: vii, 2, 5). A 1982 Supreme Court ruling won by ActStop against the State stated that a resident could not be evicted unless suitable alternative housing was supplied. The backlog in the supply of housing for the Indian and coloured community made this impossible, effectively opening the doors to more people moving into white group areas (ibid, Beavon 2004:219).

The repeal of the Group Areas Act in 1991 and the end of Apartheid led to the further expansion of the cosmopolitan multiracial community that already had a strong foothold in the area.

'Greying' was one of a number of processes affecting the modernist landscape of Hillbrow. The unaffordable rents that unscrupulous land lords charged the illegal tenants led to practices of sub-letting and overcrowding, leading to strain on existing building services. This was often coupled with the failing of maintenance and general neglect of buildings. This led to a cycle of capital flight, tenant flight and greater neglect of Hillbrow (Silverman 2014). By the 1990's the decay had become endemic, with entire buildings being 'hijacked' and portions of greater Hillbrow being considered an urban slum.

THE PLACE OF MODERNISM – AITON COURT AS A CASE STUDY

Throughout its turbulent history, Hillbrow's characteristic high rise modernist building stock has remained, relatively unchanged. Around these buildings, society and the city has changed. They have been the inadvertent ground for political resistance and social evolution. What about these buildings that allows them to remain, as a minimum, functionally relevant?

Aiton Court, designed and built between 1937 and 1938, is an early example of the Transvaal Groups modernist approach. The building was designed by the pioneering young architects Angus Stewart and Bernard Cooke, both graduates of the school of architecture at the University of the Witwatersrand. Aiton Court is typical of early international style modernism and Corbusean principles, predating and influencing much of the later 'Hillbrow Modern' apartment building that developed around it. Fitting onto a former fifty by one hundred foot suburban stand, the building is made up of two parallel north facing blocks – a four storey block on the northern street edge and an eight storey block on the south. The height difference and courtyard between the blocks allowed sun into lower floors of rear building even in winter months, but relied

on adjacent buildings being relatively low. A taller building was built in the 1960's to the east, closing off the courtyard. The front block was raised on piloti and rests on a podium that is raised above street level, creating a subtle threshold between the public street and private courtyard. This space also allowed for a street facing caretakers flat overlooking the entrance foyer. From here you access the courtyard with fountain or access the apartments via glazed staircase and lift tower which links the two blocks.

The apartments, studio flats with an enclosed kitchen and bathroom, were designed for maximum occupancy levels with the upper levels of the south block containing rooms with shared ablutions. The roof of the northern block housed

a Corbusien solarium while that of the higher southern block housed room to accommodate black domestic staff, closed off and out of sight of the residents. The building was rendered in plaster, painted white, with a rich palette of colours used to articulate the repetitive modulation of its facade. Internationally very well received, the building published in the South African Architectural Record in 1938 followed by the Architectural Review and l'Architecture d'Aujourd'hui in 1939.

SOCIAL EVOLUTION OF AITON COURT

Aiton Court was a speculative development, with its high density, light structure and repetitive elements making it economical to build⁴. Despite this it attracted a culturally rich

Image 3 – The building after restoration now surrounded by 1960's high rise apartment (Photograph courtesy of Mayat Hart Architects)



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community of tenants including artists and architects. Post Second World War saw a building boom in Hillbrow, with early apartment buildings such as Aiton Court being dwarfed by taller and taller new buildings. Older buildings, often individually or family owned, could not compete financially with the larger corporately developed and agent managed buildings with maintenance becoming increasingly difficult. Under new ownership in the 1970's and 1980's, the building was used to house sex workers as well as being one of the first buildings in Hillbrow to (illegally) accept coloured, Indian and African tenants. It was during this time that the Rawat family moved into the building. Initially as tenants taking advantage of the buildings relaxed policies on race. They were eventually able to buy the building in the mid 1980's, cleaning up the building and making it a more desirable place to live. It was under their ownership that the building became a site of resistance. Some apartments were given to hiding political operatives from the police, while the fountain courtyard became the location for fund raising for ActStop's legal costs and political meetings for operatives hiding in the building. In addition to this, two of the courtyard facing apartments were converted to function as an Islamic prayer facility, the Hidayat Jamaat Khanna, with well attended Friday prayers spilling out into the adjacent courtyard. Well managed until the 1990's the building fell into decline after the death of the owner. Unable to maintain the building it was sold off circa 2000. The continuing decline of the building left it in a crumbling state of disrepair, culminating with its hijacking by tenants in 2012, shortly after its purchase by Trafalgar Property Management.

CONSERVATION & RESTORATION

Trafalgar Property Management owns a number of buildings around Aiton Court and wanted to repair the building which had become an eyesore in area. Due to the buildings heritage value (although not officially declared a heritage site) they approached Mayat Hart Architects to oversee the work. The firm saw the building as a unique opportunity for teaching, learning and exploring means of conservation appropriate to the often difficult context of the Johannesburg inner city. Initially students from the School of Architecture at the University of the Witwatersrand were brought in to document the building. Their documentation included understanding the people and how they occupied the building. What adaptations had been made and how did they take control of their physical space. Permanent changes were found to be limited⁵

with adaptations done through temporary partitioning or furniture placement. Failures were examined, understood and were found to be largely technological and systemic rather than design or ideological.

For the property owner, the heritage of the building was not seen as being of value. The building was purchased as a commercial concern and all decisions needed to make financial sense. The building functions as affordable rental housing for lower income residents. As such the renovation and restoration budget was extremely low (around €900 – €1100 per apartment) with conservation needs having to be balanced with commercial realities. The resulting process can best be described as sitting somewhere between repair and the traditional understanding of restoration. It can be explained as a critical approach to conservation where each decision needed to be weighed up in terms of its value to both the history and value of the architecture, the community who will use it and

Image 4 - Detail of the modulated street facing façade with cantilevered balconies (Photograph courtesy of Mayat Hart Architects)



the owners' financial imperative. What was developed could possibly be seen as a new model of how inner city regeneration can be balanced with heritage responsibilities and commercial needs, a form of austerity conservation.

The limited budget was used to work in the interest of conservation with the repair, restoration and reuse of original fabric favoured over replacement. After urgent structural repair and the replacement of severely deteriorated services, the reinstatement of the buildings public realm was prioritised. Paint colours, through a process of archival research and on site investigations, were returned to the original colour scheme and the internal courtyard restored to its 1930's layout including its water feature, now doubling as a gathering space for the prayer facility. Other layers of adaptation were stripped out only where it could be seen that they did not add value to the functioning of the building. Where retained these were however subtly marked through colour so as to be legible as not part of the original design intent. This allows the building to exist in two worlds – both the historic and the adapted present. The restoration is as much an accumulation and layering of history as it is a snap shot of the building as originally designed.

Adaptations such as the prayer facilities were retained. Looking back at the history of the building it was often at its most successful when it functioned as a community. This facility, having been part of the building for over 30 years was integral to its functioning and can be seen as the heart of its community. While initially reluctant due to the financial implications, the owner was convinced that it would actually add value to the property, attracting a better type of tenant and making the building more desirable.

INHERENT VALUES

What became clear through the process of repair and restoration is the inherent value of the design of the building itself. This extends beyond its bricks and mortar or replacement value. The building demonstrates the universality of early modernist design and the adaptability and flexibility that this allows for dramatically different users. While the architecture has proved to be extremely resilient and remained amazingly intact it has allowed for continuous change and still serves its varied occupants. This is allowed by the buildings modernist design principles, themselves inherently efficient and rational.

These buildings were designed as commercial ventures. Who better then to take charge of their rebirth than commercial investors? In a city that has concerns over poverty and urban

decay let the regeneration drive in areas such as Hillbrow be commercially driven (possibly with some government incentives). While the investments in buildings are made as a commercial decisions, they can be done in a way that best serves the architectural value and historic value and significance. Beyond all of this the quality of the design, particularly that of the public realm, allows the building to build a community within it.

CONCLUSION

Although Aiton Court is a single example of a successful rebirth of an important modernist apartment building, it is one of many such buildings that exist in both Hillbrow and Johannesburg. It demonstrates how the commercial viability of these buildings can be met while still retaining their original modernist intents and their inherent value. In a city (and country) which has numerous social issues the conservation and protection of architectural heritage is often not seen as a priority and does not often feature as part of urban regeneration schemes. This is short sighted as governmental and city support may be the catalyst that is needed to enable the private sector to take on this role. Conservation, social and commercial needs are not mutually exclusive. They can (and should) meet, support and enable each other.

NOTES

1 The one anomalies of this system was the accommodation for largely black domestic staff located in white residential areas. In Hillbrow this was forced up onto roof tops of buildings, where typically a penthouse or solarium would have been located. This kept the non-white residents off the street and out of sight, creating what was colloquially termed "locations in the sky".

2 A number of these dormitory townships were ironically planned using modernist city planning principles with principles such as the separation of function or the introduction and integration of green spaces being perverted and used as tools of state control and segregation.

3 Increasing isolation of Apartheid South Africa from the 1960's onwards made international investment difficult. This led to large domestic investment, often in brick and mortar developments. A substantial part of Johannesburg's modernist building stock dates from this period.

4 While the architectural language may have evolved with the introduction of face brick and less reliance on typical early modernist architectural language, the speculative apartment of Hillbrow continued the use of compact repeated floor plans, high densities, concrete frames structures and glazed, often full height, steel framed windows.

5 Except for the two apartments that were converted into the prayer facility. For these the two apartments were joined through the demolition of the non-load bearing party wall, kitchens stripped out and ablutions adapted.

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BIOGRAPHY

Brendan Hart is a lecturer in design and the history of architecture and urbanism at the University of the Witwatersrand, Johannesburg. In addition to his professional architectural degrees Brendan holds a Masters in the Conservation of the Built Environment from the University of Cape Town. He is a founding partner, with Yasmin Mayat, of the award winning Mayat Hart Architects. The diverse work of the practice focuses on the creating and understanding of architectural and spatial interventions rooted in both context, historical narratives and the complex realities of heritage and identity in contemporary South Africa.

NEW APPROACHES TO EXPANDING NIEMEYER'S CTA DESIGN

Marcos José Carrilho (Brazil)

INTRODUCTION

Efforts to modernize Brazil began in the 1930s. During World War II, strategic state policies were implemented that aimed to improve resources for the Brazilian army and the Ministry of Aeronautics was created. One high ranking Aeronautical officer, Major Casimiro Montenegro, played a singular role, leading most of the initiatives to establish a new institute that revolved around training personnel and developing technology. In 1943, he visited certain American military facilities including Wright Field in Ohio, which left him quite impressed with American achievements on aeronautical military production. After, he became convinced that the local development of aeronautics could only be accomplished by emulating, on Brazilian territory, some of the successful institutions he had known in United States. Soon after, he contacted scholars at the Massachusetts Institute of Technology (MIT), eventually inviting one expert, Professor Richard Herbert Smith, to collaborate on his project. Sometime later, Smith delivered a lecture, in Rio de Janeiro, presenting his proposal for the new institute.

As a result of those initiatives, in 1947, the Brazilian Ministry of Aeronautics hosted a short list design competition for the Aeronautical Technology Centre (CTA)¹. Its scope included a school for research and professional training, laboratories, residential housing, sports and administration areas. Five architectural firms were invited to participate in the competition, including: Affonso Eduardo Reidy; Marcelo Roberto; Oscar Soares Niemeyer; Benedito de Barros and Companhia Brasileira de Engenharia, whose architects were Ermínio Andrade Silva, Flávio Amílcar do Nascimento e Edvaldo Vasconcelos.

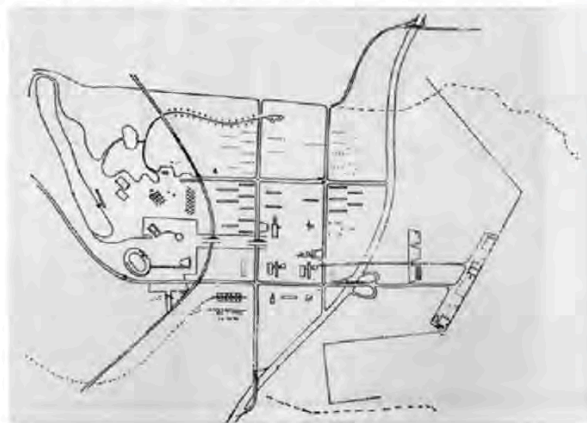
Oscar Niemeyer's team won the commission.

Built in the late 1940s and early 1950s, this project, a small town in fact, was well received by international critics, as Stamo Papadakis's 1951 book *The Work of Oscar Niemeyer* shows. An earlier article in *The Architectural Forum* outlined its main features:

"At every level, the drawings show his confident yet unobtrusive mastery of plan and structure. (...) His sketches show not only how the various elements were disposed for ease of circulation but also how these same elements were studied for visual relationships. Here a highly developed set of esthetic criteria is evident. The individual buildings – all of them reinforced concrete in the plastic tradition of Freysinet and Maillart – are so related that from any point of view they afford lyrical and daring compositions"².

Now, more than sixty years after it opened, the CTA is being considered for nomination as a national heritage site. The institution's archives are rich and fodder a new appraisal of its buildings and urban designs, which I have endeavored to do. The first and most intriguing revelation of my studies is the striking similarity of some of the urban plans submitted to the competition by the contenders Oscar Niemeyer (Fig.1) and Affonso Eduardo Reidy (Fig. 2). Both proposals undoubtedly used as a model the design Le Corbusier presented in 1936 for the Universidade do Brasil campus. Unlike North American and cer-

Fig. 1. Oscar Niemeyer, CTA urban plan preliminary study, São José dos Campos, SP, Brazil, 1947, CTA Archives.



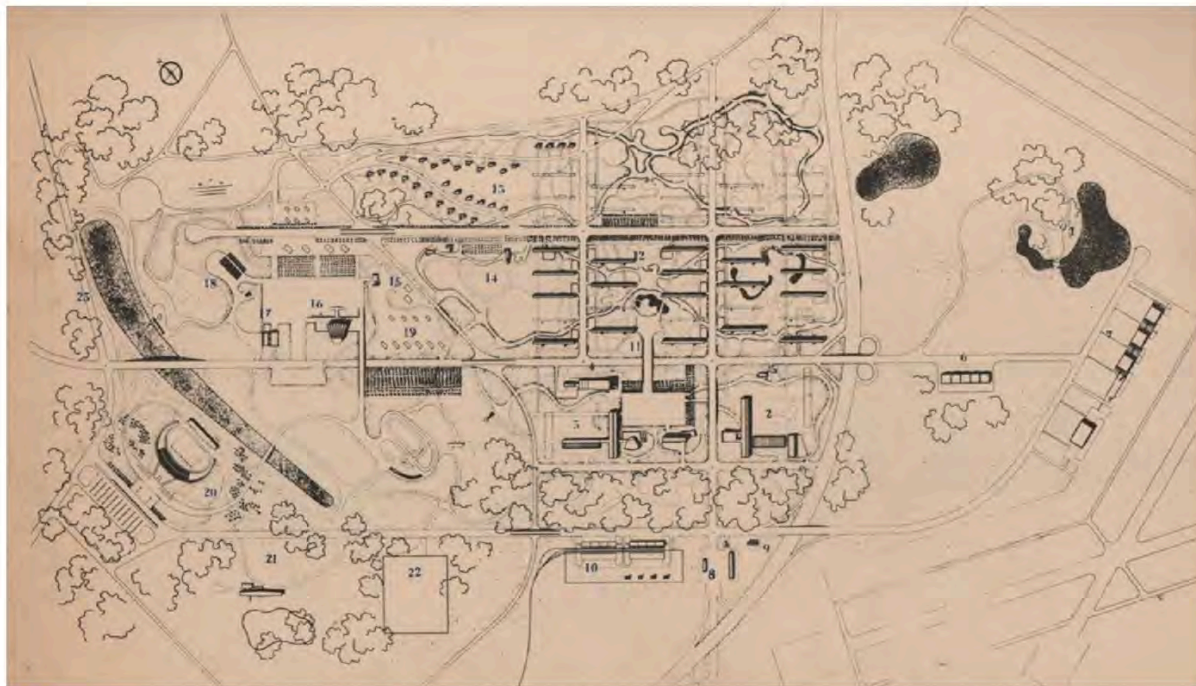


Fig. 2. Affonso Eduardo Reidy, CTA urban plan, São José dos Campos, SP, Brazil, 1947, *Arquitetura e Engenharia* # 5, 1947, p. 70.

tain South American universities, which have a long tradition, Brazilian universities were only first established in the early twentieth century. There were no immediate references or familiar examples to guide approaches to the initial design. That is why the previous experience Le Corbusier's team acquired when he came to Rio de Janeiro, in 1936, undoubtedly constituted the main reference for those two younger architects.

Despite the similarities and despite the quality and overall development of Reidy's submission, the jury in charge of the competition awarded Niemeyer's proposal first prize, granting second prize to another competitor, the Marcelo Roberto team, which presented a different approach mainly based on functional concern and careful landscape design. The others contenders were all placed in third place no matter the differences they presented. Reidy's proposal deserved only a brief consideration concerning its resemblance with the winning proposal, even suggesting a deliberate intention to avoid any comparison.

Another aspect to point out is the adjustments that were necessary to have the design comply with the site's actual conditions.

POLITICAL DIFFICULTIES

The project continued to be faced with unforeseen circumstances, despite the relevance of the institution's intentions and the efforts that had already been undertaken.

With the defeat of Nazism and fascism, the end of World War II fueled the expansion of civil rights and democratic forms of government. Brazil also witnessed the demise of the long dictatorship of Getúlio Vargas, at the end of the global conflict. General elections were held for a constituent assembly and the country witnessed the restoration of democratic freedoms and free party association. Despite the rise of democratic rule, newly elected President Eurico Gaspar Dutra, on hearing of the results of the contest, vetoed the selection of Oscar Niemeyer on the grounds that he was a Communist and the CTA project was a matter of national security.

Such events were not unprecedented over the course of the architect's career. A similar episode occurred when Niemeyer was invited by Yale University's Department of Architecture.³ Ultimately, he was forced to decline the invitation because the U.S. government refused to grant him a visa. The same

situation was repeated when the team in charge of the United Nations design project was formed. Niemeyer was nominated to participate on a 10-member Board of Design Consultants, but was again denied a visa by the U.S. State Department. Thanks to negotiations between the U.N.'s first Secretary-General, Trygve Halvdan Lie, and Secretary of State James F. Byrnes, a visa was eventually issued to Niemeyer so that he could work on the U.N. headquarters project.⁴ Despite the achievements in liberating various nations from the yoke of totalitarian regimes, and the considerable expansion of democratic freedoms, a new period of international tensions unfolded in the form of the so-called "Cold War."

Within this framework, the initiatives of Commander Casimiro Montenegro would ultimately prove decisive. Convinced that the proper choice had been made by the CTA project committee, Montenegro defied the principles of military hierarchy and protocol, and decided to carry out the construction of the Niemeyer project. He called the architect into his office and suggested the appointment of a second "proxy architect," someone who could sign a contract with the Ministry of Aeronautics, circumvent a presidential veto, and thus ensure that the project would be completed following Niemeyer's designs. Niemeyer agreed and indicated two of his collaborators, the engineer Fernando Saturnino de Brito and the architect Rosendo Mourão. The continuity of the design plans was thereby secured and the project proceeded with the informal participation of the architect.

After these agreements were reached, a series of revisions ensued, which were aimed at adapting the overall design of the project to the actual conditions of its completion.

Fig. 3. Oscar Niemeyer, First review of CTA urban plan, model photography, 1948, CTA Archives.



Marcos José Carrilho New Approaches to Expanding Niemeyer's CTA Design

DESIGN REVISION

Consequently, Niemeyer's proposal underwent at least two successive revisions. The first one is due to the new layout of the large highway that was then being built, to connect the cities of São Paulo and Rio de Janeiro. The resulting division of the site by the road was certainly one of the reasons why a very important part of the design was never realized. The recreation area, which comprised, among other buildings, a stadium and a theatre, was meant to integrate the CTA and the city of São José dos Campos. That aim was never achieved (Fig. 3).

The second revision had to do with the actual construction plan carried out. In addition to relocating the highway, the changes to the project were also due to new factors revealed by more rigorous research into terrain composition, which was less resistant than initially foreseen, and as a result of budgetary constraints. Thus, in addition to the overhaul of the general plan, a number of buildings were subjected to modifications. Important units such as the buildings of the Professional School and the Preparatory School were subjected to successive revisions until reaching their final version, when they were merged into a single unit, called the Technological Institute of Aeronautics (ITA) (Fig. 4).

Some amenities of the complex, such as the lake initially planned for the recreational area, were inserted into the central nucleus. A simple dam was built for the river, thus creating a small reservoir to which a restaurant and administration building were added along its shores.

The residential areas also underwent revisions, maintaining the same orientation and layout as the orthogonal grid of the main traffic arteries. That resulted in the large quadrangles that now characterize these areas.

The sports plaza and recreational area, although more modest, were incorporated along the edges of this perimeter, next to the highway, and were thus accessible by a road that led directly to the lake.

The Aerodynamics and Motor Laboratories complete the main elements of the complex, the implementation of which was not clearly defined in the initial plan. These two iconic buildings were situated near the airport. Together with the Structural Engineering Laboratory, these units comprise the repertoire of industrial buildings, echoing the convergence between Oscar Niemeyer's formal speculations and the inescapable functional requirements of these facilities.

However, not everything that had been planned in the competition proposal wound up being built. A considerable part

was subsequently constructed in the 1970s, through projects carried out by other architects. Although revisions were made to the original Niemeyer team's plan, most of the major aspects in the urban configuration were left intact.

Despite the overall success of the project, and Niemeyer's diligent supervision of its initial phases, the architect ended his collaboration in the early 1950s, ostensibly due to a series of disputes during the design phase and with specialists involved in the Motor and Aerodynamics Laboratories. Nevertheless, as Diaféria and Mello have noted:

"His departure, however, must also be understood within the context of the increased demand at the Niemeyer office, which was then inundated with commissions from the São Paulo and Minas Gerais real estate markets and the festivities marking the Fourth Centenary of São Paulo".⁵

Although the final urban design presents differences from the preliminary studies, most of the main aspects of the original conception were maintained. The buildings design, as well, were subject to revision. Nevertheless, they retained an expressive value and a strong freshness in their formal innovations. They also anticipated urban solutions; in particular, the arrangement of rows of residences, which would later be drawn on for some of Brasília's housing groups.

CLOSING COMMENTS

Although incomplete, this research center built at the end of the 1940s would lead to the definitive transfer of the academic programs formerly based in the city of Rio de Janeiro to this new location in São José dos Campos. There, Casimiro Montenegro would bring together a wide range of highly skilled instructors from across the globe, who were tasked with developing the most important Brazilian technological center, which in the course of the next decade would acquire considerable renown among international academic institutions.

From an initial political standpoint, the vicissitudes Oscar Niemeyer experienced seem to arouse the greatest attention because they limited the free exercise of his professional activities. However, in this specific context, the most relevant political aspect was undoubtedly the ongoing support of Casimiro Montenegro, both in circumventing the presidential veto imposed on the architect, in assuming high-risk commitments, and in avoiding a range of successive crises and obstacles in the construction phases of the CTA. With his characteristic discreet skill, Montenegro – a man of conservative trend – was able to confront all of the difficulties that stood before the project's completion.

Seventy years after its initial creation, new challenges have arisen in relation to the expansion and multiplication of edifices,

Fig. 4. Oscar Niemeyer, Aerial view of Aeronautics Technology Institute, 1950 circa, CTA Archives.



which are originally based, as I have attempted to demonstrate, on projects of tremendous quality and significance. Despite the renovation of residential units and the pressure to update laboratories and expand academic buildings, the site as a whole has been largely conserved up to now. However, new plans to improve the CTA have been adopted and aim to double the capacity of both the academic and research facilities. Detached from mid 20th century priorities, this review of recently compiled documents concerning the design competition, its results and developments will surely enhance knowledge about the CTA's historical context as well as its urban and architectural achievements. The demands of expansion, on the other hand, will certainly challenge conservation norms, which need to be properly addressed.

NOTES

- 1 CTA urban plan, São José dos Campos, SP, Brazil, 1947, *Arquitetura e Engenharia* # 5, 1947, p. 21-23.
- 2 The Architectural Forum, v. 87, n.47, p.76.
- 3 Carley, Rachel D., *Tomorrow is Here: New Haven and the Modern Movement*, Report for The New Preservation Trust, June 2008: "The significance of Yale's role in cultivating modern designers revolved largely around the Department of Architecture, located within the former School of Art and Architecture, where forwarding the modernist agenda was as much an intellectual process as anything else. Previously, in the late 1920s, the school had established an innovative "visiting critics program" in order to expose its students to a wide range of contemporary points of view and also provide advanced students the opportunity to work with leading architects. The program helped to emancipate the visual art schools from a period of pre-war doldrums by attracting a cycle of personalities and egos responsible for turning the design departments into an animated forum for the exchange of ideas. When Oscar Niemeyer, the Brazilian modernist originally selected to be the first visiting critic in architecture, had to decline the invitation because of visa problems, Louis Kahn arrived in 1947 to fill that role. (Patricia Cummings Loud, *The Art Museums of Louis I. Kahn*, (Durham, NC: Duke University Press, 1989), 52)."
- 4 Moraes, Casimiro Montenegro, 2006, p. 134.
- 5 DIAFERIA, Claudio & MELLO, Joana, Relatório para o estudo do Centro Tecnológico da Aeronáutica, Superintendência Regional do IPHAH/SP, 2009, p. 27.

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Session 16 EDUCATING FOR PRESERVATION AND REUSE

Session Chair: Wessel de Jonge (The Netherlands)



The training of young professionals to become active in the conservation and adaptive reuse of modern heritage is one of the focus points of the DOCOMOMO community since many years. A recent survey by the DOCOMOMO ISC / Education & Training, in cooperation with the Getty Conservation Institute, revealed that worldwide, education in modern architecture preservation is only included in the curriculum of a few architectural schools, though numbers are increasing. This session is set up to explore and discuss various challenges related to the training in “modern conservation” based on experiences at various course levels at the Politecnico di Milano (I), Belgrano University in Buenos Aires (AR), Coimbra University and IST Lisbon (P), Technion Haifa (IL), Bundesdenkmalamt/TU Vienna (AT), Hochschule OWL Detmold (D), University of Antwerp (B), TU Istanbul (TR) and TU Delft (NL), the latter offering a full 2-year Master’s curriculum on modern heritage.

One of the major challenges in educating professionals in modern conservation is the interpretation of the cultural values of structures that have been erected in the recent past, whether icons or ordinary buildings. The value assessment of modern icons of the pre-Second World War period, which have been the focus of DOCOMOMO in the first decade, is addressed by Wolfgang Salcher in his reflection on the richness of the Jože Plečnik’s architectural heritage in Vienna, the canonical status of which may prove to be a stumbling block for students rather than invite them to innovative intervention. On the other hand, the military bases within the urban settlements of Israel are mostly not even listed. Iris Kashman and Oren Ben Avraham explain how their students, confronted with such “ordinary” buildings, are challenged to take position when it comes to the cultural value of these structures in developing projects for adaptive reuse.

Modern conservation is a dynamic and innovative field of architecture that deals with the architectural re-interpretation, adaptive reuse and restoration of recent buildings. But today it requires a critical reflection on the conceptual and

methodological changes in view of the increasing complexity of the present context. The complex technical nature of many modern structures is already a challenge in itself but increasingly so in view of reducing the use of non-renewable energy and resources when renovating them for a second lease of life. The number of structures that are valued as recent heritage is ever increasing, particularly in the field of housing. Their sheer volume also requires the students to be critical in assessing their cultural value, as not everything can, nor needs to be kept. Making decisions is key to the design process that we want to teach our students as future professional. The preservation of housing areas as cultural heritage does not allow an approach of “musealisation”, as it is the living habitat of large numbers of people and social aspects need to be addressed at the same time. This session therefore explores the importance of an interdisciplinary approach and the relevance of the social dimension of conservation: it implies to deal with the value of modernity for the memory of the community that in turn can be involved in preserving the values of modernity in the environment they are inhabiting.

Architectural design education must address these critical issues as a strategic content that anticipates a more appropriate approach in practice. This session further explores how this can best be achieved in terms of the choice of topics and the format of such education. Gonçalo Canto Moniz, Andrea Canziani and Carolina Quiroga, in their paper on learning about reuse, compare the educational approach and methodology in regular master’s courses in Portugal, Italy and Argentina, dealing with social programs such as housing and schools. Another important tool in educating architecture students in the field of modern conservation is the design workshop. On the basis of a European Erasmus programme, Marcel Melenhorst and Francisco Teixeira Bastos present a series of four re-design workshops addressing various scale levels and methodological approaches.

Guided by the themes of cultural value assessment and educational methodology this session’s debate will invite the

speakers and the audience alike to provide further in-depth analyses for us to learn from. Also we hope to present some first results of the worldwide DOCOMOMO ISC / E&T survey to be discussed during the session.

Prior to the Conference there will be a five day design workshop for architectural Master's students on the conservation and adaptive reuse of standardized school buildings in Slovenia. The workshop will take place in the Majda Vrhovnik Primary School, right next to the DOCOMOMO Conference venue Cankarjev Dom, and visitors are welcome. The results of the student's work will be shown in the lobbies during the conference. More information from: <http://docomomo2018.si/index.php/student-workshop>

BIOGRAPHY

The architect **Wessel de Jonge** is a full professor of Heritage & Design at the Faculty of Architecture, TU Delft, the Netherlands. He was the co-founder of DOCOMOMO International, chair of their ISC/Technology and editor of the DOCOMOMO Journal. He has widely published on the theory of (re-)design and his experience with modern heritage preservation. Wessel de Jonge Architects developed an expertise in conservation, adaptive reuse and extension of 20C heritage, including 'Zonnestraal' Sanatorium (Hilversum 1928-31, with Henket Architects) and the master planning for the Van Nelle Factory (Rotterdam 1928-31) prior to its listing as UNESCO World Heritage in 2014.

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HOW MODERN WAS PLEČNIK AND WHAT CAN WE LEARN FROM HIM TODAY? HIS FAMOUS BUILDINGS IN VIENNA THEN AND NOW

Wolfgang H. Salcher (Austria)

ABSTRACT

As a student and employee of Otto Wagner, Jože Plečnik (1872-1957) experienced firsthand the transition in Vienna from historicism through Art Nouveau to modernism. Although a protagonist of modernism from the very beginning, he was also one of its critics. With his statement that “what is impractical can never be beautiful” Wagner was an advocate of modern “functionalist” architecture and objectivity. But for Plečnik, a one-sided focus on functionality was unsatisfactory. He formulated his criticism drastically: “The modernists work without a conscience.”

Plečnik transformed architecture. But his style was also disliked and rejected. For the avant-garde Plečnik was too outdated because he used historical references and took the historical context into account, while for the conservatives he was too unconventional, too radical, too deviant and too modern.

Plečnik emancipated himself from Otto Wagner and sought his own way, which – like the path taken by Antoni Gaudí – was ridiculed, just ignored or forgotten for a long time. His numerous projects in Vienna offer many starting points for an exploration of his architectural principles and can help us to better understand his complete works. The Zacherl House and the Church of the Holy Spirit, the first exposed concrete church in Europe, are regarded today as outstanding works. Plečnik wanted to fulfil a humanistic mission, to make the world a better place with his architecture, while never denying the past – an approach that could still be most beneficial today.

“The modernists work without conscience.”

Jože Plečnik

Born in Ljubljana in 1872, architect Jože Plečnik studied and worked with one of the most important pioneers of modern architecture, Otto Wagner (1841–1918). His acquaintance with Wagner coincided with the most decisive phase in the development of modern architecture in Vienna. Vienna is

celebrating modernism in 2018 because four of its most important protagonists – Gustav Klimt, Egon Schiele, Otto Wagner and Koloman Moser – died 100 years ago. As well as these pioneers there were numerous other major members of the avant-garde who played a leading role in making this period such an important time for art and architecture, such as Josef Hoffmann, Adolf Loos, Joseph-Maria Olbrich etc. Plečnik was one of these and an important forerunner at the beginning of the modern movement. In 1901 he joined the Vienna Secession.

Otto Wagner’s development followed a path that led from historicism via Art Nouveau to modernism. At the age of 70, he carried out his most modern buildings and argued impassionedly for an end to eclecticism and for a “modern” style. At the age of 22 Plečnik worked in Wagner’s studio. From the beginning Plečnik followed the crucial phase of the transition from historicism to modernism.

Unlike Wagner, who in his old age still positioned himself as a pioneer of modernism, Plečnik seems to have had his “most modern” phase in Vienna, while still young. His buildings in Vienna still illustrate this, even though some of them have experienced an eventful history and have been subject to dramatic changes or the introduction of new uses.

The Zacherl House in the 1st district of Vienna, a residential and business building designed by Plečnik and built from 1903-1905, is a recognized milestone in the development of modern architecture (**Fig. 1**). Plečnik was only 28 years old when he won the competition for this building. In his first design in 1900 he still worked on ornamental-floral designs for the facade, similar to Otto Wagner’s Majolica House (1898) or the floral pattern that he used for his own Villa Langer (1901). In a later design from 1903 Plečnik changed the facade to an ornamental rectangular frame. The plants and flowers had disappeared. It seems as if he had already left Art Nouveau behind him.

The building’s structural shell had already been completed, when the client and Plečnik decided against the originally

planned tiled facade in favour of a different, more expensive version – a granite facade. Because the granite panels required a thicker facade construction than the originally planned ceramic tiling, five centimetres of the completed, 60-centimetre thick brick facade walls had to be chiselled away by hand across the entire facade.² This indicates just how important this new appearance was for both client and architect.

Vienna's first curtain-wall facing with a continuous granite surface and without ornament was a sensation. In a short space of time the Zacherl House with its elegant functional modernity and its severe, innovative appearance became

known as a bastion of modernism. Its shiny, almost reflective facade anticipates later glass curtain walls.

For Plečnik himself, the Zacherl House was a masterpiece, the magnum opus, one that occurred at an early point in his career. With its compositional logic and avant-garde qualities the Zacherl House still seems his most modern building.

One of the many special features of the staircase designed by Plečnik is his use of parquet, which, unlike the standard application, he used to clad the walls.

In the course of a conversion of part of the Zacherl House in 2017 to create premises for a new branch bank, the designers

Figure 1. Jože Plečnik, Zacherl House, Vienna, Austria, 1900-1905, © BDA, Neubauer, 2013



Wolfgang H. Salcher How Modern was Plečnik

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were inspired by this and in their design of the bank interior they used parquet as the wall cladding. The result is not just a clever reference to the original building but demonstrates that Plečnik's ideas still look contemporary today.

In 1952, i.e. still during Plečnik's lifetime (1872-1957), the Zacherl House was declared a listed building.

In the Villa Graßberger (1908), Plečnik laid the foundations for a new, functionally oriented architecture. It consists of cube-like structures. The experiments with the floor plan, but also the modern flat roof ("*Holzementdach*"), point clearly in the direction of functionalism.

However, this building underwent major changes. Economic exploitation and lack of understanding almost destroyed the villa. In 1958 serious changes were made. The house was given a hipped roof, completely changing its appearance. In 1982, an extension was added on the garden side of the almost square floor plan (18 x 16.5 meters).

The building was used by Caritas, a charitable organisation of the Archdiocese of Vienna, until 1997. It was then sold and plans were soon made to demolish it, and to build a large housing complex in its place. But at the last moment the villa was protected by classifying it as a historical monument. In 1997 there were plans to offer it to the Slovenian embassy as a headquarters.

From 2004 to 2006 a new private owner with a keen appreciation of art had the extension demolished, removed the hipped roof and also reconstructed the facade. The commitment to restoring Plečnik's original design meant that the new owner lost many square metre of floor space. But it proved possible to give the house back its original appearance.

Plečnik's central corridors with the staircase are remarkable. They cover one third of the total floor area. These communication areas were intended to stimulate family life. And this still works today.

The young Plečnik achieved a pioneering work in the field of sacral architecture with the Church of the Holy Spirit in Vienna, the first exposed concrete church in Europe (1908-1913).

In 1908 he was commissioned to plan the church in the poor working-class district. One of his first designs for the church facade recalls buildings by Frank Lloyd Wright, in particular the Unity Church in Oak Park (1905-1908), also made of exposed concrete. Plečnik's design as finally executed has a portico built of rough tamped concrete. Not everyone was happy with archaic effect made by the material. The heir to the throne, Archduke Franz Ferdinand, known for his conservative ideas about art, was appalled. He described the



Figure 2. Jože Plečnik, Church of the Holy Spirit, Vienna, Austria, 1908-1913, concrete columns and capitals in the crypt. © BDA, Neubauer, 2018

church as a "horse stables" and a "Russian baths". It should perhaps be said that the Archduke had earlier criticized Otto Wagner's Church at Steinhof (1904-1907), which nowadays is considered one of the most important Art Nouveau churches in the world.

The contrast between Plečnik's church and Wagner's Steinhof Church, which was completed earlier, could hardly be greater. Although Wagner also used concrete for some parts of his church, the concrete was used hidden, not visible.

Plečnik also criticized the Church at Steinhof: "Better no art than such art!"²³ Plečnik's church can be seen as a radical response to Otto Wagner. He emancipated himself from Wagner. In the field of concrete Plečnik was a pioneer. The almost square church space (30 x 27 meters) lacks the traditional pillars separating the side aisles and central nave. He achieved this by using reinforced concrete beams that span more than 21 metres. The lower structure of the Zacherl House (1903-1905) also uses reinforced concrete beams. Adolf Loos also

employed a concrete structure for his famous house at Michaelerplatz (1910) but – unlike in Plečnik's church – the concrete is not visible.

It is in the crypt in particular that Plečnik's use of concrete comes into its own. The concrete columns and capitals (**Fig. 2**) focus on structural design, the art of assembling, somewhat similar to Gaudí's stone columns in the Crypt of Colònia Güell (1908-1915). Plečnik's slender columns in the crypt can also be seen as precursors of the mushroom columns developed by a short time later by Robert Maillart. In formal terms the angular capitals seem to refer to the forms used in Czech Cubism (1912-1914).

Plečnik's church suggests comparisons with other concrete churches, e.g. Perret's Notre-Dame du Raincy (1923), Karl Moser's St. Anthony's Church in Basel, the new Kaiser Wilhelm Memorial Church by Egon Eiermann in Berlin (1959-61) or the Wotrubach Church (1974), another concrete masterpiece in Vienna. Concrete had already been used for the

church of Saint-Jean-de-Montmartre (1894-1904) in Paris, but externally only exposed brickwork is visible.

One of Plečnik's most significant designs was never executed, as the municipal authorities rejected his plan (1910) for a reinforced concrete facade for "aesthetic reasons". Plečnik designed a facade for the storage and office space of the Stollwerk Company in Vienna (**Fig. 3**). The clarity and modernity of the design is reminiscent of works by the French architect Auguste Perret (1874-1954), one of the pioneers in the architectural use of reinforced concrete.

When first unveiled another Viennese project by Plečnik was subject to criticism. A strict, puritanical priest complained about the excessive and immoral nudity of the putti on the St Charles Borromeo Fountain (1906-1909). The space around the fountain is remarkable. Plečnik took the unusual step of lowering the ground around the fountain below street level to create a more intimate environment. He shielded this new space from the surrounding streets by means of a low wall and poplar trees. In this

Figure 3. Jože Plečnik, company Stollwerk, Vienna, Austria, 1910, plan for a reinforced concrete facade. © Kosta Strajnić (*Josip Plečnik*, Zagreb 1920, Fig. 10)



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way Plečnik creates a “public square in the square”⁴, which is embedded most successfully in the urban fabric. This seems to anticipate his later urbanist interventions in Prague and Ljubljana and his position in urban planning between the Austrian urban theorist Camillo Sitte (1843-1903) and Otto Wagner.

Immediately after founding his own studio in Vienna in 1900, Plečnik planned the Villa Langer (1900-1901). He wanted it to be “exceptional”. The most striking aspect is the street facade with modern bay windows and ornamental plaster roses, which is influenced by the international Art Nouveau style. The highly ornamental surface decoration consists of wavy vertical lines incised in the plaster and round floral ornament. The windows are of different shapes and sizes.

In 2000 this building was chosen for a European Union research project with the participation of institutes in Brussels, Genoa and Vienna, because its design expresses one of the most obvious links between the Austrian Jugendstil and the respective styles in Western Europe. This European cultural heritage programme is intended to encourage the conservation and restoration and the development of best practice in the preservation. The goal of the investigation was to study and document details of its original design and of the materials used in order to discover the best restoration method for the facade and to retain as much of the original as possible. The studies and scientific analysis on the surfaces were supplemented with test areas of cleaning (micro-sandblasting, poultices and laser), consolidation and repair.

This building has been under a protection order since 1980. From 1901 Plečnik planned the House in Steggasse for the same client, Langer. His building on the new boulevard, Wienzeile, is only a short distance away from Wagner’s famous Art Nouveau *Wienzeilenhäuser* (1898) and the exhibition building for the Vienna Secession (1898), the first major building designed by Joseph Maria Olbrich (1867-1908), who – like Plečnik – also worked for Otto Wagner from 1893.

Plečnik planned two tower-like, vertically structured cubes with similar floor plans and without an emphasised piano nobile. He may well have been influenced by the tall buildings of the “Chicago School”.

He used balconies that are continued around the corner of the building, a motif later to become one of the hallmarks of modern architecture. In using glass floors for the balconies he shared the enthusiasm for glass at that time. One thinks here of Otto Wagner’s glass bathtub (1898) or the glass floors in Wagner’s Postal Savings Bank (1904-1912) and in his Län-derbank (1884).



Figure 4. Jože Plečnik, House in Steggasse, Vienna, Austria, 1901-1902, © BDA, Neubauer, 2013

The clarity and uniformity of the House in Steggasse are captivating. It has been a listed building since 1980. During the last restoration around 2011, the original white colour of two balconies, as revealed by an analysis of the metal, was restored. Unfortunately the reconstruction of the undulating ornament on the upper areas of façade, part of which is missing, was not implemented by the owner at the time despite funding commitments by public authorities. But it has been possible to restore the decorative elements at eaves level made of zinc sheet and zinc castings.

The industrialist Zacherl put Plečnik in charge of planning a new project, the children’s asylum in Lacknergasse (1907-1908). With a reinforced concrete structure this building impresses with its successful floor plans and its simplicity. Here

too, there are glass floors in the corridors, as in the Zacherl House. Today the building is a Caritas centre for homeless people. It has been under a protection order since 1985.

Plečnik designed a marble altar table and a modern candlestick (1914) for a chapel donated by the Zacherl family in the church of the Döbling Carmelite Monastery. He dispensed with any ornamentation or profiling of the altar, so that the structure and marking of the stone could exert its full impact, similar to Adolf Loos's building on Michaelerplatz (1910).

We should not, of course, forget Plečnik's design work for Otto Wagner's major project, the "Stadtbahn", Vienna's metropolitan railway (1894-1901) and suburban line, one of the largest infrastructure projects in Vienna. From 1894 Plečnik worked for Wagner's office on the Stadtbahn system, which included the station buildings, bridges and viaducts for the elevated sections of the line.

Plečnik's Viennese buildings described here are not only important as part of his oeuvre, they also reflect the rapid changes during a turbulent time, just before the assassination of Archduke Franz Ferdinand of Austria in Sarajevo in June 1914, which led to the outbreak of the First World War and, in 1918, the collapse of the Habsburg Monarchy. People like Bertha von Suttner, Arnold Schönberg, Alban Berg, Anton Webern, Theodor Herzl, Stefan Zweig, Karl Kraus, Arthur Schnitzler, Gustav Mahler, Ludwig Wittgenstein, Oskar Kokoschka, Robert Musil, Hugo von Hofmannsthal, Sigmund Freud or Alois Riegl were among his contemporaries in Vienna. The amazing cast of characters that gathered in Vienna at that time, including Plečnik, contributed to a monumental paradigm shift. In the field of architecture, Art Nouveau flourished and Sachlichkeit (objectivity) and Zweckform (functional form) emerged.

Plečnik was sceptical of the euphoria about the design principles of functionalism. In 1913, he wrote in a letter: "... The new architecture ... is smooth, cold, hygienic – but it lacks a heart – and love ...".⁵ He had the impression that modernism only changed the outward appearance, but did not fulfil a humanistic mission. In his buildings Plečnik always poses the question between a one-sided functionalist and a formal direction. Which side is of greater value? His answer can be found in his buildings in Vienna, Prague and Ljubljana.

Like Antoni Gaudí (1852-1926) or Josef Frank (1885-1967), Plečnik remained critical of modernism and functionalism. That was probably the reason why postmodernists first re-discovered him in the 1980s, even though Plečnik himself stood at the beginning of the modern movement. Plečnik could be

attributed an early postmodern attitude, but without any of postmodernism's irony or cynical distance to history.⁶

"What we build will be used." Architect Hans Hollein noted this quite self-confidently in 1963. In postmodernism, not everything had to be useful, functional and practical.

Plečnik renounced doctrinaire purism and striking formal unity. He created a critical alternative to 20th century functionalism. Plečnik's buildings in Vienna show us that he was always a critical observer and that, having emancipated himself from Wagner, he developed his own approach. The confrontation with modernism should not be reduced to formalisms, but should be characterized by an attempt to seek the true goals of modernism, even today. The solution is not necessarily predetermined, but open.

What should a new way of living look like today? What makes life better, sustainable and more enjoyable for all? We need more new ideas for the future.

And we can also learn from the past and present, as Josef Frank put it: "Our time is the whole historical time known to us."⁷

PLEČNIK - EDUCATING FOR PRESERVATION AND REUSE

Just as Plečnik acquired his knowledge through studying, architecture students today can learn about architecture, preservation and reuse by examining Plečnik's buildings and works. One example is the diploma thesis on Plečnik's children's asylum in Lacknergasse in 2011. Scientific works like this provide an important basis for restoration and repair decisions or for use-related adaptations.

Practical or hypothetical projects can be edited by the students when designing, for example converting and redesigning a protected building. During lectures and excursions the adaptation and latest reuse projects of 20th century architecture in Vienna are discussed.

There are also university research projects that are important in conservation. In the training of the restorers and conservators in the universities modern buildings and materials are also a focus.

Plečnik made a study trip to Italy in 1898-1899, a journey that had a lasting influence on him. Even today, students from all over the world make study trips to Vienna to look at the buildings by Plečnik, Wagner or Loos.

Just as Otto Wagner passed on his knowledge to Plečnik, Plečnik later passed on his knowledge to students. Although he was repeatedly proposed as Otto Wagner's successor at the Academy of Fine Arts in Vienna, the heir to the throne, Franz

Ferdinand, did not confirm Plečnik's professorship. Plečnik therefore taught successfully for many years in Prague and Ljubljana. Some of his students later worked in the atelier run by the architects Le Corbusier and Pierre Jeanneret in Paris.

ACKNOWLEDGMENT

The European Heritage Day, created in 1984 in France, is a great communication tool. The throngs that visit Plečnik's buildings during the annual European Heritage Days in Vienna show that his oeuvre, one hundred years later, is still attractive. The crowds of visitors to the Zacherl House even created traffic problems in the streets of the inner city.

As part of a university course at the Vienna University of Technology (TU Wien), Institute of History of Art, Building Archaeology and Restoration, Dept. Monument Preservation and Building in Existing Structures, students learn different strategies for communicating the value and meaning of a monument to a wider audience. The course takes place in cooperation with the Federal Monuments Authority Austria in Vienna. It is about heritage mediation. On European Heritage Day in Vienna, held each year at the end of September, the participants in the seminar will have the opportunity to really test their mediation concepts.

Exhibitions such as the one about Plečnik at the Centre Georges Pompidou in Paris in 1986, or the Plečnik exhibitions in Vienna's Ringturm in 2006 and 2016, help to broaden the topic.

Fortunately, there are numerous ways to approach Plečnik today. Many of Plečnik's most important buildings were already completed one hundred years ago. That is why we can celebrate Plečnik in 2018 and learn much more from him. He attempted nothing less than to search for both the foundations and the future of architecture.

NOTES

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3 Prelovšek, *Wiener Arbeiten*, 145

4 Jörg Stabenow, *Jože Plečnik, Städtebau im Schatten der Moderne*, Braunschweig, Vieweg, 1996, 34

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BIOGRAPHY

Wolfgang H. Salcher is architect at the Federal Monuments Authority Austria (Bundesdenkmalamt) in Vienna since 2003, responsible for the preservation and conservation of buildings by e.g. Otto Wagner, Adolf Loos, Jože Plečnik, Joseph Maria Olbrich, Karl Schwanzer, Hans Hollein. Previously, he worked in architecture offices in Austria, Italy and Germany, and at the Institut français d'architecture (IFA) in Paris. Salcher taught at the University of Innsbruck and worked on the reconstruction-project of the Antoni Gaudí church at the Colònia Güell near Barcelona. Salcher wrote on concrete conservation and postwar architecture and organized international symposia on Postwar-Modernism.

DISSOLVING “URBAN TIME BUBBLES”: INTEGRATING MODERN MILITARY HERITAGE WITHIN THE CONTEMPORARY CITY

Iris Kashman, Oren Ben Avraham (Israel)

ABSTRACT

In Israel, a country where 39 percent of the lands are under military jurisdiction, many army bases are located in the midst of the urban fabric. These bases were mostly built in the first half of the twentieth century and stayed in the hands of different security and government agencies ever since.

Owing to rising real estate values, we face today a fascinating phenomenon with the relocation of several bases, which we refer to as “time bubbles,” and the need to integrate their architectural heritage into the contemporary cities. We investigated different approaches to this task through the work of our fifth-year architecture students at the Faculty of Architecture and Town Planning, Technion – Israel Institute of Technology.

The paper presents proposals developed in our studio unit for the following three sites: a Tegar fort (1940), which still serves as a police station in the city of Ramat Gan; a British war refugees’ camp (1936), which later became a mental institution in the city of Bat Yam; and a bunker (1956), which currently stands deserted in Tel Aviv. All the proposals investigate the cultural and political values inherent in the structures’ historical fabric and strive to rework them into relevant urban focal points.

KEYWORDS

Urbanity; Urban design; Identity; Society; Culture; Politics; Reuse

INTRODUCTION

In Israel, where 39 percent of the lands are under military jurisdiction, many army bases are located within the urban fabric—a stunning example of the “borderline disorder”¹ characterizing the Israeli-built sphere. These bases, which serve as headquarters, offices, barracks, etc., for different army units, are of primarily three origins: (1) German Templar settlements, built from the 1870s to the 1930s, that were confiscated by the British Mandate for Palestine during World War II and reused for the mandate’s military and gov-

ernmental buildings²; (2) bases built by the British from the 1920s to the late 1940s that were transferred to, and put to similar use by, the young Israeli state when it won independence (1947); and (3) bases and military utilitarian structures that were built in the city centers after independence (in the 1950s) for the Israeli security forces.

Continuing government land ownership over these sites permitted them to be retained and used as army, police, and other public institutional facilities. But owing to rising real estate values, especially in cities in the center of Israel and the Tel Aviv metropolitan area, some of the bases are being relocated to the country’s periphery³. As the compounds’ fences are taken down, they remain as “urban time bubbles” within the framework of the ever-evolving city.

We find the metaphor of a bubble appropriate here for a number of reasons. First, the city street grid surrounds the base but does not infiltrate it, thus creating gaps in the continuity of human movement through this area of the city. Second, because entire lands of the compound belong to a single owner, the parcels were not divided, and the buildings were laid out in a campus-like pattern. Third, the architectural typologies evolving in other city parts—for example, the 1950s–1960s public housing blocks that dominate many cityscapes in Israel—are missing from these bases. And fourth, the uniformity of land uses within the camps allows only a small portion of the public within their gates.

As new master plans are being drafted to open up these sites and integrate them within the “civilian” city, the question arises of what their significance is and what values they should represent. Surely there are buildings worth saving within their framework; the Architecture of War, as Jean-Louis Cohen suggested, is never a pause in architectural development but rather a transformative stage fascinating to explore⁴. The architectural heritage of the bases include representations of numerous periods and styles: German Templar residential and institutional architecture (1870s–1930s) with additions retrofitting them into military use; British architecture (most-

ly 1920s-1940s), providing what Fuchs claims to be “a unique example of British handling of Modernism in the inter-war period placed in a colonial context”⁵; and early-Israeli architecture of the late-Modern style, with its excessive use of concrete and touches of Brutalism⁶. But even more than the architectural values, we find the bases encompassing historic urban values as they tell the story of the development of the Israeli state through an ongoing military conflict that has been shaping society and culture in the most profound and unsettling ways possible.

We sought to investigate different approaches to assimilating this military heritage into the contemporary city through discussions with our fifth-year architecture students at the Faculty of Architecture and Town Planning, Technion – Israel Institute of Technology. Our studio unit, named Cities through Time, is dedicated to rethinking Israeli Modern architecture through the processes of preservation and urban design.

Before elaborating on the three projects that will serve as our study cases for this paper, it is worthwhile to discuss two real-life examples of the urban process explained above: the evacuation of southern part of the Kirya military and government base in Tel Aviv (beginning 2005), and the evacuation of the base of Sarafand near Rishon Le’Zion (currently undergoing construction).

The Kirya base, located in the middle of Tel Aviv, contains national-level military facilities. Its southern portion, a compound of about seven hectares, includes many buildings of German, British, and Israeli origins. The masterplan that was drafted by the end of the twentieth century for this site’s evacuation focused almost entirely on preserving the earlier phase of the site as a German agricultural settlement from the 1880s to the 1930s. The later buildings and additions were demolished to make room for a wide public park. The German houses underwent exhaustive preservation and reconstruction, and almost all of their interiors were retrofitted as stores. The entire site was marketed as a historic open shopping mall/theme park⁷. But despite its central location, the site is still considered ex-territorial to the city and not a place one would wish to wander into accidentally. Furthermore, the intense commercialization of the area distorts the historic context and complex narratives of the site.

Sarafand was the biggest army camp for the British Mandate in Palestine⁸. Buildings in this base include Modernist water and watch towers, housing, and supplementary facilities such as a cinema for officers and soldiers. The base’s new master-

plan (2015) proposes high-rise residential towers. The historic buildings either fit as singular lots in between the high-rises or serve as “pavilions” in a newly constructed park. Here, too, is what we regard as a missed opportunity to enrich the cityscape while respecting the historic layers.

STUDY CASES

We now present architectural proposals for three different urban “time bubbles”, developed by our students through the final year of their architectural studies. It is important to note that our studio unit curriculum requires each student to choose his or her own personal topic and research agenda for the final project. Unlike other studios that deal with built heritage where the professors choose the project’s site, thus already affirming its significance, we expect students to form their own understanding of what heritage is and then establish their choice of project site by evaluating the site’s cultural values and applying them to form their design strategy.

We strongly believe that this methodology, which requires research and analysis of the site’s unique urban context and historic, architectural, social, and technological values prior to intervention, is essential not only to students who will later specialize in the historic preservation of sites that receive legal recognition as landmarks, but also to any architect who will design within historic contexts and existing urban environments.

1.1. A Fort

The Tegar fort is a network of about sixty large concrete forts that were built throughout the country by the British circa 1940 as part of reorganization of the Mandate Police after the Arab Revolt of 1936-1939. Their modern functional design, though derived from military pragmatism, combined local Arab architectural influences with Modernist motifs⁹.

The Tegar of Ramat Gan, like other forts in this network, was located on a strategic spot controlling the road from Jaffa to Petah Tiqwa and surrounded by agricultural fields and rural houses. Articulated as a rectangular concrete structure, the fort enclosed two courts on split levels, with watchtowers in its opposite corners aimed at maximizing its peripheral defence. It contained a standard police station programme, such as inquiry and detention rooms, along with housing for the local policemen and their families who were denounced by their own communities for collaborating with the British¹⁰. In 1947 the Tegar fort of Ramat Gan became the city’s main police station. Through the years, the urban fabric around the

fort became denser, and the road adjacent to it became one of the most vibrant traffic arteries of Ramat Gan. Yet the Tegart remained shut off and isolated from urban life.

As the police are about to evacuate the compound soon, a plan proposes the building's full preservation as a physical and functional closed unit and the erection of a forty-floor residential

tower right beside it (devised by the transferred building rights from the Tegart's lot). Similar to the Tegart, the contemporary tower is designed as an isolated, introverted structure that makes use of its surroundings only as scenery. No connection is made between the closed yard inside the fort and the new wind-driven "plaza" in front of the tower.

Figure 1. An alternative plan for the Tegart fort of Ramat Gan and its surroundings: a hierarchy of open spaces instead of seclusion. © Yuval Attias.



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This critical reading was provided by the alternative design of student Yuval Attias. Undertaking the challenge of retaining the density of the approved plan, Attias preserves the value of the Tegar as a protective architectural entity within the hectic city while at the same time leveraging this opportunity to integrate its structures within the civilian urban life. She finds the Tegar's original idea of combining housing as part of the fort especially valuable, and she articulates a multiuse complex with a variety of dwelling units, some of them on top of the historic back wing of the building, and community spaces on the ground floor. She also creates a flow of urban open spaces of different hierarchies that intelligently intertwine through the fortified wall of the fort (Fig. 1)—an urban commercial public square, to a community courtyard within the Tegar, and onto an introverted court designed primarily for the neighbouring residents.

1.2. A Bunker

In the mid 1950s, north of the Yarkon River, which defined Tel Aviv's urban boundary at that time, an enormous bunker—the size of a soccer field and forty meters high—was constructed using German reparations money and design. Although it was never used for its intended purpose—a war-time power station and a fallout shelter for the Israeli government¹¹—the bunker remained concealed underground, tucked away from the city growing around it.

In 2000, another plan materialized for this site: a museum dedicated to the memory of Yitzhak Rabin, Israel's prime minister who was assassinated five years earlier for conducting peace talks with the Palestinians. The monumental building, under the design of Canadian architect Moshe Safdie, used the bunker as its foundations. The earth slope that pre-

Figure 2. Rabin Center, southern façade, constructed on top of a bunker, architect: Moshe Safdie. © Chen Einhorn.





Figure 3. The proposal for the bunker's interior. © Chen Einhorn.

viously concealed it was cleared off, and the bunker's exposed concrete wall facing the Yarkon River and public park was masked with stone (Fig. 2). The bunker remains hidden, and there is no access to its huge hall.

For her project, student Chen Einhorn challenges this site's destiny. She regards the bunker as valuable for its part in forming the city's narrative and preventing its expansion north of the Yarkon River for many years. She proposes a different role for the bunker in everyday life while giving architectural form to the constant tension between war and peace in Israeli civilian life and built sphere. Einhorn suggests opening the bunker to the city by inserting a public pathway into its dramatic space; the pathway climbs from the greenery of the Yarkon Park, up through the Rabin Center that was constructed on top of the bunker, and on to the residential neighbourhood on its north end. The canals that were used for pouring cooling water for the power station's turbines are retrofitted along the new path, and new public spaces are designed along its length (Fig. 3), delicately transforming the dark bunker into an urban sanctuary.

1.3. Abarbanel

Abarbanel is a notorious psychiatric hospital in the heart of the city of Bat Yam. The compound was established by the British in 1936 as a refugee camp for Arabs who were evacuated from Jaffa during the Arab Revolt. Situated away from any settlement, the site was used as a detention camp during World War II (1939-1945) and was later converted into a mental institution. During the last decades, the neighbouring city of Bat Yam grew significantly and reached the compound's walls eventually surrounding it. But Abarbanel remained a space of exclusion¹² and is facing today municipal attempts to evacuate it. Through the years, new architectural layers were added to the mandatory linear buildings; most significant are the wards and dining structures of Brutalist style that, together with the eucalyptus and ficus trees densely planted by the British, create a secret gardenlike quality.

Urban renewal plans for residential towers on the outskirts of Abarbanel, promoted by the city, emphasise the unique role the site can have in the framework of the future city. These plans motivated student Elina Gardashnik to propose a medi-

ating system that dissolves the strict border between the city and the mentally ill. Working primarily in sections as her design tool, Gardashnik uses the historic landscape as both a connecting and barrier tissue between the existing and new buildings and between the patients and other city residents (Fig. 4). The design allows public access to the compound's gardens and historic architecture while simultaneously providing a variety of care conditions for the different types of institutional patients.

CONCLUSION

These three projects exemplify an educational process dealing with heritage that perhaps has little architectural value but possess rich historic, social, and urban value. We believe that, through their work, the students realize that the everyday

characteristics of these sites, while allowing more room for personal interpretation through the design of additions and retrofits to address the needs of the city today, still contribute to an understanding of the culture and urban formation of cities in Israel, for better or for worse.

We see the evacuation of former army and government bases as an exceptional opportunity for Israeli cities as they gain new spaces for development in prime locations. But this gain often reveals a missed opportunity when it fails to deal with the complex narratives of the military heritage left behind. The work developed in our studio shows that the design proposals that produce valuable alternatives are the ones that create a dialogue between the intrinsic value of the bubble and the need to permit entry to new users and projections of the contemporary city.

Figure 4. The complex spaces vision suggested for Abarbanel. © Elina Gardashnik



NOTES

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BIOGRAPHIES

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LEARNING TO REUSE MODERNITY: THE EDUCATIONAL CHALLENGE

Gonçalo Canto Moniz (Portugal), Andrea Canziani (Italy), Carolina Quiroga (Argentina)

ABSTRACT

After three decades since the founding of DOCOMOMO, education continues to be an essential matter when thinking about the future of modern heritage, but today it requires a critical reflection on the conceptual and methodological changes we need to face in the present context of complexity. Modern Architecture is now crossing a paradigmatic time not only because of its inevitable degradation but because of the impact of these new scenarios that force us to rethink their conservation and reuse, considering both their special constructive condition and specific functionality and the role in the collective memory as recent heritage. Architectural design education must address these critical issues as a strategic content that anticipates a more appropriate practice. The conservation and the reuse of modern buildings are still out of most schools of architecture. This paper presents three different and complementary didactic experiences developed in Europe and South-America: Mindful design for updating mass housing neighbourhoods (Politecnico di Milano, Italy), Experimental re-design to integrate modern single housing to contemporary life (University of Belgrano, Argentina) and Participatory design to open up a modern school building to the neighbourhood (University of Coimbra, Portugal). They highlight the relevance of confronting the students with issues like history and memory, and their importance even for apparently ordinary buildings, not only for modern iconic monuments. The results also prove the relevance of an interdisciplinary approach and the relevance of the social dimension of conservation, because it implies to deal with the value of modernity for the memory of the community that can be involved in keeping the values of the modernity they are inhabiting.

INTRODUCTION

After three decades since the founding of DOCOMOMO, education continues to be a crucial element for the future of modern heritage.

Education means learning what we do not know and un-learning what we suppose to know. In the educational processes we foster our critical thinking on what could belong to our cultural heritage. The conceptual and methodological changes, coming from our current context of complexity, challenge our established beliefs on what is heritage and how to deal with it.

Modern Architecture is crossing a paradigmatic time because of its inevitable degradation and because of the new scenarios that drive any intervention in the built environment: changing of urban dynamics, environmental requirements, new social behaviours, technological advancement, users' expectations.

As we know, its special constructive condition imposes a pertinent research on technological systems and solutions. At the same time also its specific rational/functional nature demands creative and appropriate strategies for adaptive re-use and asks for mindful design methodologies.

Architectural design education must address these critical issues as a strategic content of any professional practice, because the built environment of the last century will be more and more the field of practice of the contemporary architects, but the reuse of modern buildings is still not present in most schools of architecture. Thus, this paper presents three different didactic experiences, in three different countries and University courses, to reflect about the new educational challenges involved in the reuse of modern heritage.

1. MINDFUL DESIGN FOR UPDATING MASS HOUSING NEIGHBOURHOODS

At Politecnico di Milano we have been experiencing the educational potentialities connected with the modern heritage in one of the three Architectural Preservation Studios in the first year of the Architectural Master's course. The course gathers international students with very different bachelor backgrounds.

One of the latest case studies is the Harrar-Dessìè neighbourhood in Milano, part of *INA Casa* program of reconstruction after the Second World War, designed and built between

1950 and 1955 by some of the best Italian architects of that period, namely Luigi Figini, Gino Pollini, Gio Ponti, with P. Bottoni, M. Tevarotto, P. Chessa, V. Latis, G. Latis, G. Reggìo, A. Rosselli, M. Tedeschi, T. V. Bassanesi, L. Ghò, M. Morini, C. Villa. (fig.1)

The conservation of modernist neighbourhoods is a very effective subject because it deals with some of the most difficult questions that modern heritage is offering, both to theory and practice.

First of all, we are facing the need of conserving something that is not so well defined. Are we sure about what a neighbourhood is made of? Let's think about thresholds: where is the border of a neighbourhood? it is made by buildings, of course, but also by open spaces and distribution spaces like the streets, that belong at the same time to the city around it. Let's think about the reception: it does not deal with some old iconic architecture, but with a recent one, that is worthy, but that has usually lost newness and has lowered its architectural qualities. So students have to face the spatial and temporal boundaries of modern heritage.

Besides, a neighbourhood is also made of people. It's a community in relation with an urban and social context, as any anthropologist and urban sociologist would tell us. Of course as architects we can only work on the tangible material part, but we are aware that if the intervention does not consider all those intangible aspect of living, probably our conservation plan will be condemned to failure.

Moreover, the "greater numbers" -i.e. the large scale- make the application of any trivial equation between restoration and musealisation impossible. As for the neighbourhoods, the conservation challenge is controlling the evolution, something like establishing a governance for the equilibrium between the heritage arguments and the ever changing living necessities, so that the musealisation or any fundamentalist conservation practice is not applicable. The acknowledgment of such a nature doesn't mean that we are forced to accept every change, unless we are going to accept that the sum of many small changes, due to the most diverse and (sometimes) very legitimate needs, will destroy step-by-step the heritage that we want to preserve.

The educational challenge for the teaching staff is to help in developing all the useful knowledge - theoretical frame of restoration, contemporary debate on modern heritage, historical research on the case studies - in a very short time: a semester ranging from 132 to 185 hours.

The main assignment of Architectural Preservation is integrated by an Advanced Survey to analyse the building and a Restoration Criticism to understand theoretical issues. Moreover, two workshops (video and photo), directed by external professionals, are the tools for collecting information on expressed needs - by video interviews - and unexpressed needs - by photo survey of homes and living spaces. Most of the classroom time is devoted to collective reviews. The idea is that the design phase can be very effective if students are giv-

Fig 1. Mindful design. HararDessìè Neighbourhood, INA Casa Program (masterplan L. Figini; G. Pollini Gino; G. Ponti, 1950-55).

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en the time to move back and forth between preservation theory and practice. During this process, they have an opportunity to test and re-evaluate the solutions they designed: it is reflection in action, as in Donald Shon's "reflective practitioner". Such a mindful design process invites students to think while acting and to continuously modify their interventions by looking at the consequences of their actions. The theoretical texts are used as a support during the studio, using the so-called flipped classroom method: no lectures on texts, but collective discussions after the study of the text at home.

The educational challenge for the student is designing an adaptive reuse project for a modernist neighbourhood, driven by various assumptions: What will happen if we are considering an entire neighbourhood as being listed? What will happen if the retrofitting must deal with very important historical heritage? How far can we head for radical design changes, like e.g. Lacaton and Vassal's famous interventions on mass housing? Can we bring back the lost architectural qualities and will it be enough?

Unfortunately, it is the first encounter of the students with built heritage and they easily forget cultural needs. Their concerns must be diverted away from stereotypical and false users' needs, recognizing them as such and proposing redefinition of users' expectation.

The didactic experience demonstrates that the more and closer the students look at the architecture and know its historical background, the more they value it and they are able to develop sound proposals also in a short time.

2. EXPERIMENTAL RE-DESIGN TO INTEGRATE SINGLE MODERN HOUSING TO CONTEMPORARY LIFE

A second didactic experience highlights another key issue: the experimental design as a required approach to the reuse project to reflect and operate in complex contemporary scenarios. The Conservation and Re-use course at the Faculty of Architecture and Urbanism of Belgrano University (Buenos Aires, Argentina) has been the first local course focused on training undergraduate architecture students to intervene with modern heritage since 2008. It is worth mentioning that since 2016 the course has gone from being an elective to being part of the curricula of the architecture career representing a great contribution to the conservation of Modern Movement heritage.

Modernity implies a new perspective for urbanism and architecture to improve individual and collective life. The same

experimental spirit today can guide pedagogical strategies to teach their assessment and conservation. In this sense, the course is conceived as a laboratory of experimentation, that is, based on the notion of opening to new fields of knowledge promoting creativity as the research that requires intervention in pre-existing types of architecture.

Modern houses are one of the topics of study that demonstrates this educational need. Since the 1930's, many neighbourhoods of Buenos Aires have defined their identity from the single-family houses of simple and pure forms built by renown as well as anonymous architects. In the last decades, these areas were transformed by growing in scale, increasing density or changing their residential character. As a consequence many valuable examples were demolished and others reconverted, usually with inappropriate interventions. Despite this, they are still part of the neighbourhood townscape and keep alive the memory of what modernity means for domestic life.

One of these cases worked on by the students is the house for Dr. Ramón Columba, a recognized cartoonist and writer, designed by engineer Antonio U. Vilar in 1940. It is a good example of the application of the modern design concepts: a pure and clear-cut volume with a rational concrete structure and metal and glass facades. It is also functionally innovative by representing a new style of life where the traditional program of housing is combined with working spaces. Vilar makes good use of the conditions of the sloping corner site by leaning the volume of the house along the largest side of the plot and placing public areas in the upper levels, thus achieving a suitable orientation and a better relation with outer spaces.

Located in the Belgrano neighbourhood, the urban fragment of the house underwent great transformations. Due to real estate pressure, most of the academic and modern single houses on the block were replaced by residential towers. Other functions were also incorporated in the area: a large number of embassies, educational institutions and services to supply the growing population. In 1976 the house was transformed to host an architecture office. In order to adapt to the new use some changes were introduced, altering some concepts of the original project: the open galleries were closed and new partitions and air conditioning systems were included, which strongly modified the interior spaces.

This conflictive situation provided space to investigate new concepts of programmatic networks to integrate this valuable architecture example to the current urban and social dynamics. On the architectural scale, the exercise allows us to ex-

plore the articulation between modern and contemporary design concepts. This implied maintaining the spatial and organizational structure of the building and, simultaneously, operating with new design criteria such as flexibility, adaptation and mutation.

A particularity in teaching how to intervene in these houses is their good constructive condition. Modernity arose late in

Argentina yet with construction companies with great experience in new materials, unlike in Europe where many early modern buildings were technological tests. However, the material experimentation must be confronted with present environmental demands and resource scarcity as far as criteria of energy self-sufficiency, reuse of materials, greening, low maintenance, among others are concerned. (Fig. 2)

Fig 2. Experimental design. Columba House (Antonio U. Vilar, 1940). © Original state: Revista Nuestra Arquitectura, Noviembre 1943. Current state: Carolina Quiroga.



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During the process, the didactic strategies were based on the feedback of the theoretical, historical and technical corpus of the conservation with the skills inherent to the architectural learning -coherence between concept, operation and materialization, formal and spatial management- grounded in the notion of learning by doing and its potential to reflect in and on action (Schön, Cunningham). Thus, students can understand the patrimonial field and the architectural design not as antagonistic pairs but as a same dimension that address memory values, current challenges and future opportunities for the legacy of the Modern Movement.

3. PARTICIPATORY DESIGN TO OPEN MODERN SCHOOL BUILDING TO THE NEIGHBOURHOOD

The reuse of modern buildings has to take the original building in consideration and also the community that used it. The use is essential to understand the reuse and its potential for the urban regeneration. If modern architecture was designed within the framework of the modern city, its reuse is an opportunity to rethink its relation with the urban and social context. This reuse will offer a new opportunity for the building and for the city, that should look, like Janus, to the past, in order to integrate the collective memories, and to the future, promoting new opportunities for the life of the community.

At the University of Coimbra, the Design Studio 1C on Reuse of Modern Buildings of the Master's programme in Architecture is focused on the social approach to architecture in articulation with the courses on Anthropology, to dialogue with people; on Geography, to understand the territory; on Construction to analyse the buildings. This interdisciplinary process opens the possibility of using social methods in the design process, enabling architects to combine the architectural design methods with the social ones, such as photo elicitation, design thinking or participatory workshops. The implementation of this pedagogical methodology of training architecture students with social skills is based on the reuse of educational buildings due to their social and urban potential. School buildings have been key facilities in the construction of modern neighbourhoods, stressing the social commitment of the modern society and the city. The cities' expansion was designed through neighbourhood units in order to function as small cities. Nevertheless, most of the schools buildings end as closed structures, to answer to the security obsession that is taking control of our society. Taking Herman Hertzberger's (2008) ideas and practices as reference, the great challenge for our modern schools is to open them up to the com-

munity, either sharing their facilities with the neighbours and the parents, or using other urban facilities for the students' activities. Thus, we have been challenging the architecture students and the primary school pupils to think the school as a small city, but also to think the city as a big school.

This approach requires an open mind to explore new possibilities, but also to develop other ways of designing a building in order to promote solutions that are designed together, starting with the living experience and the contact with the intangible aspects until the technical knowledge. The design methods are no longer the architectural ones, but mixtures of methods that are also imported from the social and human sciences, considering the necessity to engage the stakeholders in the design process.

In the academic year 2017-18, students have been working in the Norton de Matos neighbourhood that was planned and built in the 1940s to receive the population that was taken out from the city centre due to the construction of the new university campus. This urban project was also part of the urban plan designed by Étienne de Gröer and Januário Godinho for Coimbra modern city, where new neighbourhoods for housing, industry and services were placed around the city centre. Norton de Matos was built in two moments, firstly as a garden city with private houses, in the 1940s, and secondly as a modern city with housing blocks, in the 1960s. An urban avenue with a church, a social centre and a primary school should link these two environments.

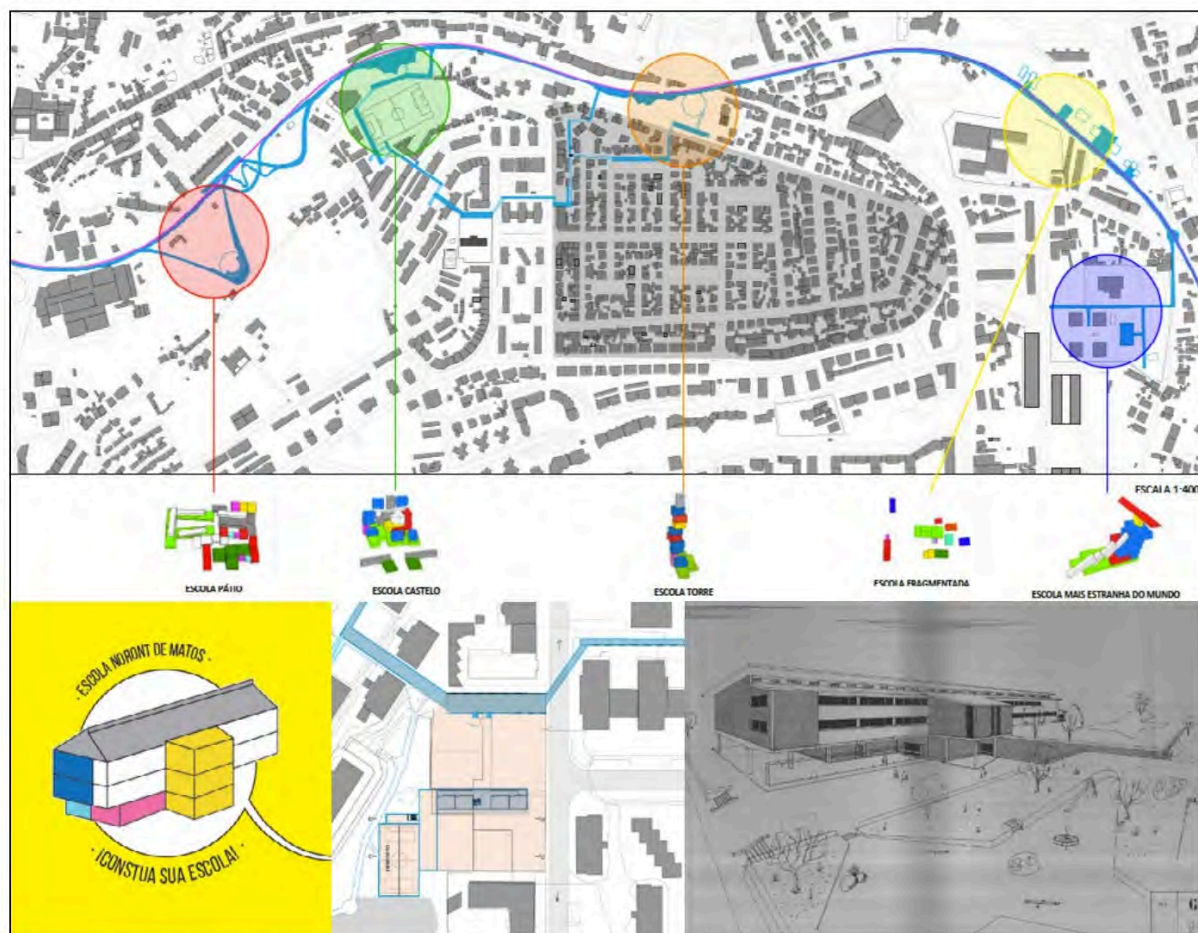
The school was designed by José Plácido dos Santos and built in 1970 at the top of the avenue, taking the place of the church, putting in evidence its social role for the community. The modern block was implemented in the centre of the plot opening the yard to the city, but soon it became limited by a fence, protecting the pupils from the community. The pedagogical activities are organized in rows of classrooms divided between male and female, according to the fascist regime, Estado Novo, that governed Portugal until 1974. The schools facilities were completed with a canteen and a library, organized recently in one of the vacant classrooms.

Students were challenged to rethink the school not only in physical and pedagogical terms, but also in urban ones, exploring the relation with the community. Organized in groups of four, students prepared a session to dialogue with primary schools pupils in order to understand their relation with the community, about five themes – History, Participation, Programme, Pedagogy, and Educational Spaces. The activities were developed under supervision of the Anthropol-

ogy teacher who introduced student to participatory issues and methods, namely the one that activates their memories. The activities were also prepared with the main goal of generating products that could be assimilated in the design process. The history group brought images of the urban spaces and asked students to draw the activities they used to or could do there and to write about them. From the workshop merged the idea that there is a strong unity in the 1970s urban area, namely on the relation between the housing blocks and the school. So the group explored the idea of a continuous public space

that should create a new topography for the neighbourhood. The participatory group developed a toy, associating the school spaces to wood blocks, and asked the students to build a school with those blocks on an aerial photograph of the neighbourhood. Students proposed several schools that were reinvented in strategic points, along the train line that defines the north limit of “Bairro” Norton de Matos. (fig.3) The educational spaces group promoted activities in the public squares of the neighbourhood, where students could talk about their relation with the squares and draw new activities

Fig 3. Participatory design. Norton do Matos Neighbourhood (Januário Godinho, 1940) and Primary School (João Plácido dos Santos, 1970).
© Original drawing: Coimbra Municipality Archive. Recent drawings: students of the Design Studio 1C on Reuse of Modern Buildings, University of Coimbra.



to do there. Architecture students proposed an infrastructure to articulate all the squares and the school through an “educational” pathway.

Memories and experiences of the pupils became design themes to reinvent the city as school, as an informal pedagogical space that crosses the fences of the school walls in close relation to the community.

CONCLUSION

The example of these three programmes, developed autonomously in different contexts, with different students' backgrounds, highlighted the common relevance of confronting the students with issues like: Which is the social and cultural contribution of the architectural heritage? What can we learn from the Modern Movement ideals of equality and progress, nowadays still perceivable through its built legacy? Are we allowed to erase those values only because sometimes we deal with ordinary buildings and not with intentional monuments? How can we reuse a building without losing its modern character? How is this modernity itself a design tool? For example, a significant issue lies in the expansion of the concept of heritage. Education in adaptive re-use must confront students with neighbourhoods, urban fragments and apparently ordinary buildings, not only with modern iconic monuments. That implies to leave any idea of musealisation and understand that the patrimonial field and architectural design are not antagonistic pairs. The presented experiences spotlight the relevance to debate the role of memory in the transformation process and, therefore, in the educational process. These questions today represent very crucial didactic challenges for the architectural education. The students can learn from that, partly based on their previous knowledge of topics related to history and heritage, and partly by developing these topics - or by learning them from scratch - depending on the amount of time they have in the course. Therefore, short courses of one semester are less effective than the ones of a full academic year.

A very important goal for the effectiveness of the didactic experience and its relationship with reality is the expansion of the traditional topics of teaching to anticipate social, technological and managerial variables that are involved in the practice of conservation. That implies in didactic terms, to promote teamwork and interdisciplinary, to manage the different social actors involved in the project, to understand the design as a space for critical reflection and experimentation, among others. The students learn to deal with the social dimension

of conservation, another key educational challenge, as it implies dealing on the one hand with the value of modernity for the history and for the communities' memory and, on the other hand, with the unaware expectations of users. Likewise, social participation needs to be addressed not only for the dissemination of knowledge, but also for integrating the inhabitants as conscious and sensible participatory actors in the processes of conservation.

Education for the conservation of the legacy of modernity is still a subject open to explore new strategies that assume current social, environmental and technological changes. To accept this challenge of dealing with modern heritage's values at the different levels of architectural education may allow professionals to better understand the social role of the discipline both for a sustainable development of the built environment and for reflecting on identity, memory and culture.

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BIOGRAPHIES

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CONTRIBUTIONS OF ACADEMIC WORKSHOPS TO THE DISCUSSION ON THE REUSE OF MODERNIST BUILDINGS

Michel Melenhorst (Germany), Francisco Teixeira Bastos (Portugal)

ABSTRACT

The objective of this paper is to discuss the importance of involving architecture master's students in the reuse of modernist buildings. Involving them, as future architects, to intervene in modern architectural and urban tissues, but also to disseminate their experiences and results to a wider audience, with the aim of including the community in this delicate cultural issue. The physical, economical and social pressure on urban areas from the 20th century is causing an ongoing destruction of neighbourhoods, quarters and buildings, and concomitantly, the loss of specific cultural elements and environments.

Reuse of Modernist Buildings, Design Tools for Sustainable Transformation (RMB), a European project developed within the ERASMUS +program, is contributing to the urgent acceleration of the transformation of the EU Modern Movement period building stock by compiling an educational master's programme that exclusively addresses this issue. At the core of the education proposed by RMB are the International Workshops, with all the university partners from Germany, Belgium, Turkey and Portugal. The workshops help students to develop specific competencies and expertise, combined with a broad spectrum of critical knowledge and interpersonal skills.

The paper presents a description of 1) the RMB workshop 2) proposed typology and methodology 3) four different RMB workshop tests and 4) conclusions, ending with insights on how critical thinking resulting from this action could be integrated and improve new participatory action, thus achieving actual societal and political awareness regarding the reuse of modernist buildings.

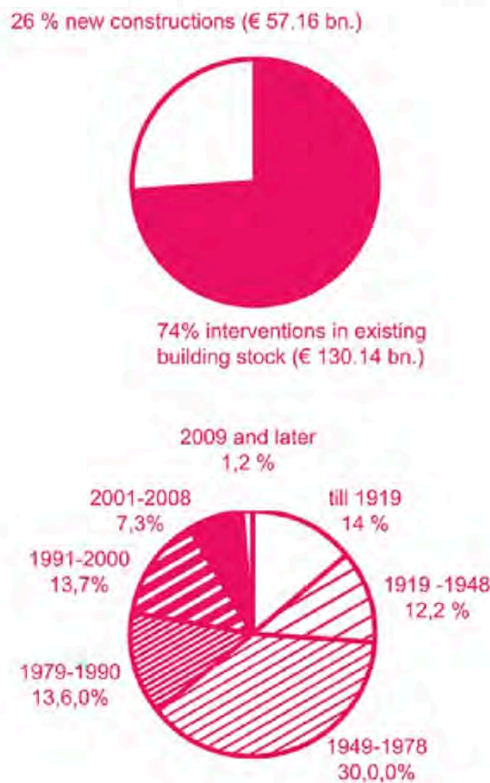
Keywords: reuse, modernist buildings, international workshops, teaching, Erasmus

1. INTRODUCTION

An architect's work changes along with changes in society. While designing new buildings has traditionally been the

main task of architects, recently, the reuse and maintenance of buildings has far overtaken the volume of new buildings. Buildings constructed after the Second World War are a special segment in this reuse undertaking.

Fig. 1. New construction versus intervention in existing buildings in housing construction in Germany in 2014, and the year of construction as percentage of the housing stock in Germany. The first figure is indicative for many other countries as well. Figures from Bundesstiftung Baukultur, design: Heimann und Schwantes. Source: Statista GmbH.



15IDC Metamorphosis Paper Presentation

Despite this huge transformation volume and its impact on our environment, in architectural education, the question of reuse is often considered as a purely technical one, or as a task for the construction companies only, ensuing in an unsatisfactory quality level for many refurbishments and transformations.

RMB, reuse of modernist buildings, aims to better prepare students in architecture and architecture-related fields for these tasks. To this end, RMB is initiating an educational framework of common definitions, approaches and methodologies at a European level, based on existing research, educational practices and reference projects. Over the period from September 2016 until August 2019, RMB is preparing and developing a two-year joint master's programme on the reuse of modernist buildings.

RMB is unique in its focus on the reuse of modernist architecture. Neighbourhoods, quarters and buildings from this era are in danger of demolition, risking the loss of specific cultural elements and environments. The following partners are participating in RMB:

- Hochschule Ostwestfalen Lippe (coordinator), Detmold Germany (OWL UAS)
- University of Antwerp, Belgium (UA)
- Istanbul Technical University, Turkey (ITÜ)
- Instituto Superior Técnico, Lisbon Portugal (IST)
- Universidade de Coimbra, Portugal (UC)
- Docomomo international (DI)

Fig. 2. The RMB curriculum. Figure by the authors.

Curriculum RMB	Reference	Semester / SWS				
		CR	1	2	3	4
Modules running over 3, semesters , e-learning						
History of modernism (UA/All)	RMB 1	6	2	2	2	
Re-Use theory and backgrounds (UA/All)	RMB 2	6	2	2	2	
Energy and climate (IST/All)	RMB 3	6	2	2	2	
Urban open space and infrastructure (HS-OWL/All)	RMB 4	6				
Project Modules on site, starts with 1 week workshop						
NW Europe, Re-use and interior design (HS OWL/ UA)	RMB 7	12	12			
SW Europe, Re-use social and urban design (IST/UC)	RMB 10	12		12		
SE Europe, Re-use structural and integrated design (ITÜ)	RMB 13	12			12	
Semester specialised modules, on site						
Typological comparisons (HS-OWL)	RMB 5	6	6			
Research and methodology, documentation and analysis (UA)	RMB 6	6	6			
Assessment of modernist buildings in use (IST)	RMB 8	6		6		
Social aspects of re-use (UC)	RMB 9	6		6		
Building structure systems (ITÜ)	RMB 11	6			6	
Building construction (ITÜ)	RMB 12	6			6	
Master thesis, presentation and colloquium (All)	RMB 14	30				
Sum CR		120				

2. RMB WORKSHOP

Educating students for reuse and refurbishment is different from training them to design new buildings; there is no *tabula rasa*.

- There is a physical presence: the building, whether in a good or bad technical state, or of excellent or mediocre architectural quality, is already there.
- The building is often in use: there are users, inhabitants and owners.
- The building is part of our collective memory: it is rooted in its environment and has undergone contextual changes.

In the workshop, we can work with all these aspects. Therefore, in RMB, every semester's design project starts with an intensive workshop on site. Distributed over three semesters, the work-

shops will be located near of one of the RMB partners in North West Europe (UA/ OWL UAS), South West Europe (IST/ UA), and South East Europe (ITÜ/ partner school).

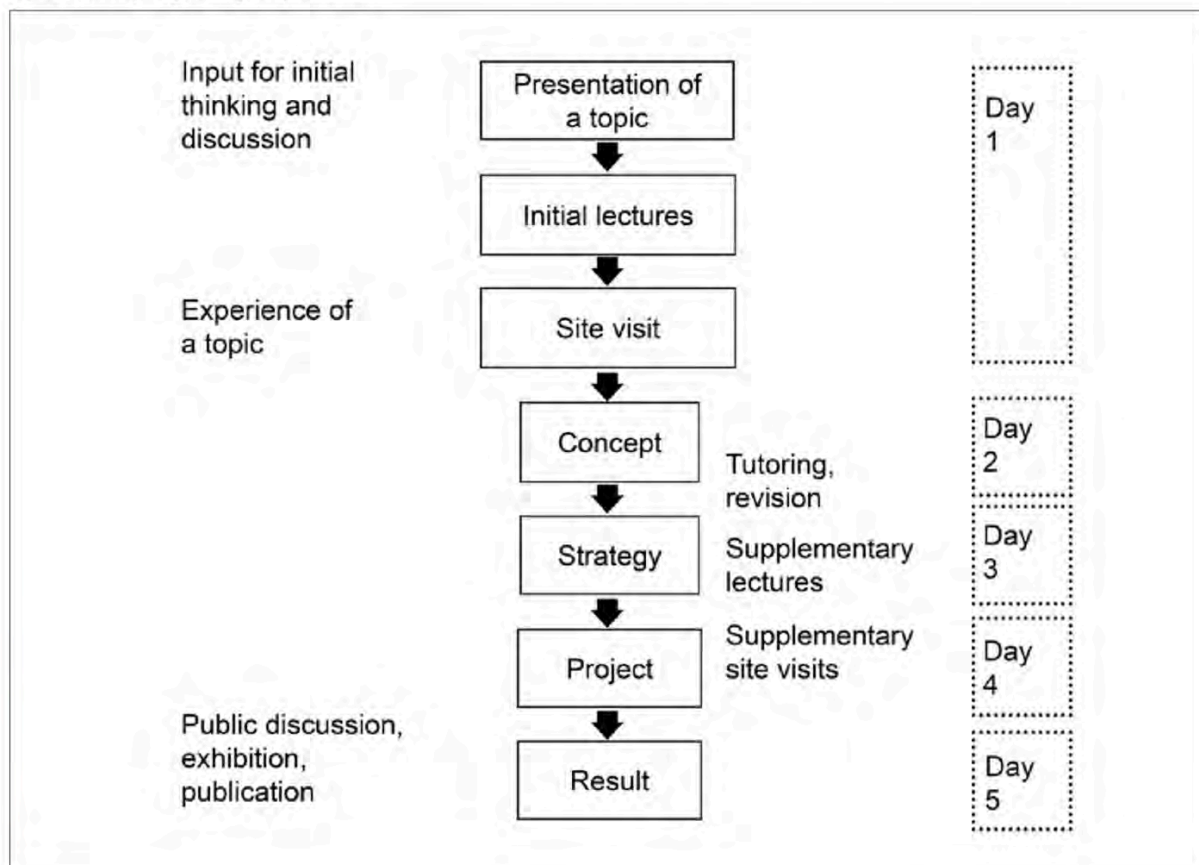
The building analysis necessitates visiting the building, feeling its substance and meeting its users. Its current state can be compared with the original state. The real building inspires students; they feel the actual spaces, which is essential for a multi-layered interpretation and design.

The workshop is the ultimate format for learning by doing. In RMB, we use the project start-up phase to test workshops.

3. WORKSHOPS IN ARCHITECTURAL EDUCATION

Many architecture students and learners are enthusiastic about learning by doing; reflecting and thinking along the

Fig. 3. Workshop diagram. Figure by the authors.



way, finding solutions based on action [1,2,3], and experiencing the transformation, from observation to experimentation to an actual proposal.

Brooks-Harris [4] defined a workshop as "...a short-term learning experience that encourages active, experiential learning and uses a variety of learning activities to meet the needs of diverse learners". The focus of a workshop lies on problem-solving, skill and knowledge building, personal awareness and self-improvement.

In the past two years, we organised RMB workshops and participated in workshops organised by others. We refined the general workshop structure, becoming more precise in incorporating assignment-related aspects.

The goal of the workshop is to challenge students with non-conventional, reuse-related architectural design problems regarding modernist buildings. The workshop is a flexible format for responding to new topics and developments in society [5]. It is a project-based learning strategy to develop students' skills and design-thinking capacities, their ability to critically reflect on the implications and potentials of their proposals and apply knowledge in creative and socially meaningful re-

sponses to design problems, while applying and balancing analytical, synthetic and practical reasoning [6].

In the workshop, all the participants (students and tutors) enter a reflexive process, fostering the group's own design and problem-solving strategies in such a way as to create new, interesting and consistent ideas, assessing their implications and testing them, and transforming theory into practice and abstract ideas into real creations [7].

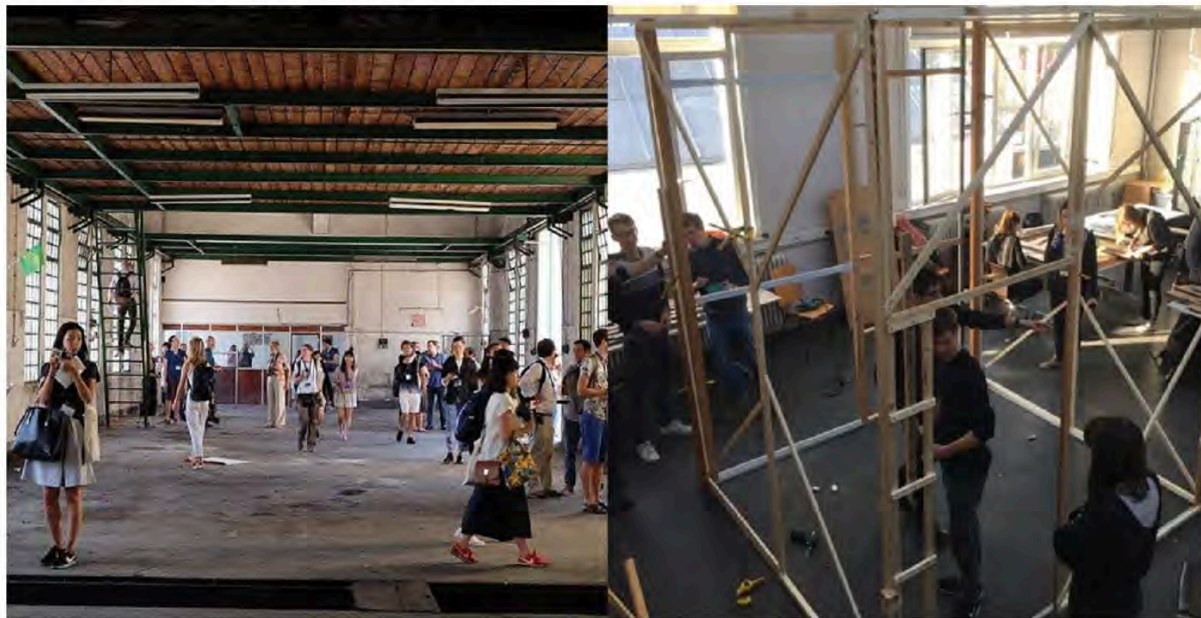
All course content is organised around four presentation and discussion moments, with tutors, external participants and guests: CONCEPT, STRATEGY, PROJECT and RESULT/FINAL PROPOSALS.

1. CONCEPT: Identify and formulate the problem and determine its nature (is it theoretical? spatial? formal?); present the conceptual problem-solving approach.

2. STRATEGY: Test the concepts with informed judgments. Collect knowledge and arguments to translate the concept into an architectural project. Develop a working method for the group that integrates different, complementary inputs and gives structure to the week to come.

This implies:

Fig. 4. Workshops of different scales and different complexities; the building ensemble, Lisbon, 14th International Docomomo Workshop; the interior space, Antwerp. Photo by Docomomo International.



Michel Melenhorst, Francisco Teixeira Bastos Contributions of Academic Workshops

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- Finding, evaluating and putting together all the information from presentations and site visits;
 - Characterising existing structures (architectural, contextual, functional and constructive conditions);
 - Using schemes, diagrams and models but also technical drawings, communicating the concept of the project;
 3. PROJECT: Develop collective critical thinking to feed the design process and express it in architectural proposals, based on the decisions determined in STRATEGY. Develop methods that identify the right working tools.
 4. FINAL PROPOSALS: Deliver a final product (project) and make effective use of visual, oral, written and other forms of communication to criticise, negotiate, create and communicate understanding.

4. RMB WORKSHOP TEST

Over the past two years, RMB members participated in and organised many workshops. The four workshops described here show the effect of the assignment on the workshop structure and methodology.

4.1. RMB Workshop Lisbon: Manutenção Militar Complex, by Docomomo International

Working with experienced teachers of different nationalities and backgrounds, the groups of students developed analytical skills and working methods.

Students worked in a historic Lisbon industrial facility of exceptionally large size. The workshop provided a forum in which students, researchers and practitioners discussed aspects of the reuse of Modern Movement buildings, allowing learning by doing.

An overall analysis of the complex and surroundings through documentation and fieldwork built up collective and multidisciplinary knowledge.

Through plenary group presentations of the analyses, everyone had access to equal information, allowing a sustained second phase of synthesis and a strategical masterplan proposal, focused on theoretical principles and guidelines for future interventions. Students came from different geographical and professional backgrounds. Two tutors, one local and one foreign tutor, tutored each group. Groups were complementary and worked with different points of interest.

Fig. 5. Workshops of different scales and different complexities; the building, Marl; the urban scale, Coimbra. Photographs by the authors.



This method lends itself well to acquiring more input information than a single group can research in the time available. Reshuffling the groups after the 1st phase is an option, since they tend to stick to their design and solutions, very close to the outcome of their personal 1st phase analysis, and therefore not profiting from the information from other groups. Tutoring worked very well in the analysis phase but the influence of the tutor strongly marked the results in the design phase.

4.2. RMB Workshop Marl by OWL UAS and IST

This five-day workshop simulated a design contest based on two cases from the 1960s, of distinct scale, usage and constructive system, proposed by the New Town of Marl and a housing cooperation. There was no brief or problem description.

Each team was composed of students from different geographical, cultural and professional backgrounds. The first day, thematic, informative sessions including field visits were scheduled. Subsequently, students came up with architectural design solutions, following a fixed methodology for their development. Three teachers intensively tutored all five groups of eight students, while two tutors acted as visiting critic. The students highly appreciated this method. The tutors, having an overview of the process and subjects of all the groups, were able to steer and direct the type of solutions to get a broad variety of solutions while avoiding duplicates and overlaps. Design developments were presented daily to generate interactive experiences between students and instructors.

The methodology leads the students along five steps from analysis to proposal: 1) Site and problem analysis; 2) Ideas/programme; 3) Strategy; 4) Proposal; 5) Communication: copies and papers on digital media.

The groups developed the overall theme of flexibility, applying this to both buildings. They tested the flexibility of the construction, the structure, and the ability to host new and adapted functions. Rigid change from one use to another and permanent flexibility were the two opposite approaches to flexibility that were found.

The workshop was successful from the teachers', students' and clients' viewpoint, bringing new attitudes and openings to the fore in dealing with two problematic buildings.

Inhabitants from the city of Marl were asked to participate in the workshops. Afterwards, they said they had a different, more positive opinion on their city, its buildings and their possibilities for reuse.

The city offered RMB working locations and cases for new

workshops, intending to adopt the concept of the students' workshop to find interesting solutions for complex problems and to get citizens engaged and involved in the city's reuse challenge.

4.3. RMB Workshop Antwerp: re-ACT by design, by OWL UAS, UA and E. de Leeuw Artez Zwolle

In all interventions in existing buildings, it is essential to be aware of the intrinsic characteristics and qualities. In a five-day workshop with 18 students and two tutors, a methodology was tested to make students in reuse aware of the spatial qualities of a space, and what these qualities are based on. This started with a mimetic rebuilding of an interior space of the workshop building. Mimicking is fundamentally different from mere imitation or quotation. It is how children learn things from us; they make things their own by imitating. This is not a copy paste action; they internalise what they learn, carry it with them and then change it themselves.

By reconstructing all parts of an existing room at a new location, an image was constructed that was different from the existing one. The room became separate from its context, creating new meanings, connections and images. At the same time, the original power of expression, such as the memory of the space, became part of the new reality.

The method is valid for all types of architecture but especially for modernist architecture. Modernist architecture often has a clear geometry and an absence of ornamentation; the influence on the spatial quality of apparently minor details such as electricity plugs, door handles or radiators is relatively large. In rebuilding the space, students become aware of these facts and can understand the fundamental elements and intrinsic architectural qualities of a space.

The whole workshop group built the room together but reflected and presented their observations on the space and the process individually. The two tutors gave small inspirational input presentations, advised in the building process, moderated the presentations and gave individual feedback to the students.

4.4. RMB Workshop Coimbra, social aspects and participation, interdisciplinary, by UC

The RMB Workshop in Coimbra Portugal challenged students to focus on five specific areas of the 1940s De Groer Urban Plan, which proposed the expansion of Coimbra's urban centre. All interventions for its reuse were to be based on awareness of its intrinsic urban characteristics.

In a five-day workshop, with five groups of eight students from different professional backgrounds and origins, two tutors per group and a team of specialists in art, sociology, anthropology and landscape, a methodology was tested to make students of reuse aware of the urban spatial, functional and social qualities and problems of the De Groer plan. Problematic relations between public and private, built and unbuilt, cars and pedestrians motivated the need for reuse of both buildings and open areas. Interventions had to be based on an understanding of the visions proposed originally by the architects and planners, the reading of the buildings' and neighbourhoods' history, as well as the contemporary problems of the areas.

Each group had an individual object to study – a building or a larger urban area – addressing one specific problem, i.e. housing, education or industrial use. There was no fixed programme. After a formal architectural analysis of the sites and buildings, techniques such as photo-elicitation and interviews were used as a participatory method to analyse urban conditions and evaluate the aspirations of the populations regarding future change. The students subsequently defined a reuse strategy and checked the capacity for adaptation of the buildings and sites against current societal demands, needs and aspirations.

The workshop interfaced with the RMB conference, which gave valuable inspirational input for the students, and the interdisciplinary team, which gave spontaneous feedback, support and comments to the teams, contributing significantly to students' understanding of the modernist city and architecture and how to think in terms of reuse.

5. CONCLUSIONS

Four workshops showed us that while the overall workshop structure constitutes a stable backbone for all types of workshops, subjects and problems in reuse cover a wide spectrum, so the following parameters should be used for fine-tuning according to the particularities of specific assignments and locations.

- Compilation and size of student group

Sizes may differ from 4-5 up to 20 per group, depending on the number of results expected and the methodology of the workshop.

- Number of tutors and their role

A tutor can be directly linked to one single student group or may have a freer role. In the latter case, when a teacher tutors all the groups, more steering of the workshop results as a whole may be possible.

- Structure of the workshop, mile points/deadlines:

The size of the workshop influences the structure and effectiveness of daily presentations. Many groups means much time spent on presentations, that could also be used for working. Nevertheless, we think it crucial to allow the whole 'workshop community' to follow the results and developments of all the groups on a daily basis. We therefore reduced the length of the daily presentations, and let the students suffice with one or two statements.

- The nature of the input material for the students and tutors

A large amount of information at the start of the workshop is liable to hamper free, intuitive ideas and goes against the idea of the active workshop. If the nature of the workshop requires a lot of advance knowledge on the workshop theme, the information should be distributed among the students to study prior to the start of the workshop.

- Involvement of external actors

The quality of the workshop tends to benefit greatly from involving external actors, both in the tutor's team and in the workshop teams, as visiting critics or as an audience at the final presentations.

- Description of the expected output, both in terms of content and product.

The workshop results should be used for further processing, dissemination and as input in a design project. To make the output available and comprehensible after the final presentation, it is crucial to communicate formats for presentations and possibly reserve time for documentation and editing.

- The inclusion of these workshops into the RMB+ curriculum.

The students' workshop is very effective for responding at short notice to developments in society and the academic and professional worlds relating to reuse. It is an excellent vehicle for disseminating knowledge on the architectural qualities and suitability for adaptive reuse of the building stock from the 1950s and 1960s to a non-professional audience. It will help to increase the acceptance of reuse as a solution, thus saving valuable buildings and neighbourhoods from the post-war modernist era from demolition. The combination of students from local/regional and international backgrounds in the workshops is a great way to open up new and surprising visions on reuse within the local context of the workshop case.

In the active and intensive workshops, students not only learn by doing in their own field (i.e. architecture) but also learn from each other thanks to the different professional backgrounds of the workshop participants.

The workshop also acts as an umbrella for other educational inputs such as lectures, online courses and online feedback on specific subjects, while supplying theoretical backgrounds and references. The workshops require a lot of time and effort to organise and prepare, but we are convinced that they are an extremely powerful tool for educating students in the adaptive reuse of modernist buildings.

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BIOGRAPHIES

Michel Melenhorst studied architecture at Delft Technical University and worked for Wiel Arets (1991-1995) and OMA (1995-1999) before starting his own office in 1999. In 2005, he became a partner in DAAD Architects. In 2012, he switched to Detmold Germany to hold the chair for Contextual Design at the Hochschule Ostwestfalen Lippe, where he coordinates the Master's in Architecture. Michel Melenhorst has extensive experience in teaching and lecturing at institutions such as TU Delft, Design Academy Eindhoven, Lasalle University Bogota, HCU Hamburg, Aarhus school of Architecture, University of Antwerp and K'Arts Seoul, and is active in workgroup education within Docomomo Germany.

Francisco Teixeira Bastos studied architecture at FA-UTL Lisboa and worked with Manuel Vicente (1989-1996) before starting Atelier dos Remédios in partnership with Madalena Menezes in 1997. Since 2000, he has taught architecture at Instituto Superior Técnico, and since 2003, has been responsible for first year's Design Studio, Master Architecture. His research activity focuses on practice-based research. Francisco Teixeira Bastos has extensive experience in architectural teaching and practice. Winner of the Prémio Valmor 2011 prize (Lisbon), he integrated the OCDE SITE for Good Practices for Education with Dona Leonor High School Modernization (2012), and is a member of the Portuguese committee for BIM normalisation (2015).

Session 17_IDENTITY AND NATION-BUILDING

Session Chair: Bárbara Coutinho (Portugal)



Identity and Nation-Building addresses the plurality of approaches on architecture and urbanism in Bulgarian, Poland, Hungary and Singapore, giving account of the richness that each specific situation contains, in inter-relation with the political, economic and social history of the respective country. For the theoretical frame and the practical examples presented, each paper is a relevant contribution for the understanding of how modern architecture was comprehended and had contributed to the identity of a given city or country, as well as its meaning and relevance for the individual, family and community life. On debate is the appropriation and evaluation each society has made of modern buildings and spaces through time together with the way they mirror the ideological frame, the social habits and the collective consciousness. To this end assume a particular relevance the causes and contexts that led to the recognition, promotion and preservation or, in opposition, to the disregard and demolition of the modern heritage.

Aneta Vasileva uses the demolition of a socialist monument in the centre of Sofia and its replacement by a war memorial during 2017 as a motif to discuss the modern heritage policy in Bulgaria. As the author mentions, this case “managed to reveal a number of identity clashes: communism vs anticommunism (an old one), nationalism vs universalism (a recent one), ‘left’ vs ‘right’ nationalism (a peculiar one), modern architectural heritage vs tradition”. In consequence, *The Clash of Nationalisms: Making of Bulgarian Post-Socialist Identity on the Modern Heritage Battlefield* makes a critical analysis about the “battle” in defence of the modern heritage and its preservation explaining how it is influenced by the growth of a Pan-European neo-nationalism rhetoric.

With *Modernist Architecture in Gdynia as a Factor of Social Unity and Integration*, Marek Stepka traces the history of the city of Gdynia (Poland) to characterise it in social, economic, demographic and political terms, intersecting it with the urban development. The paper puts in evidence *how* and *why* the city centre, the immediate districts and the port were

transformed by modern architecture during the 1920s and 1930s. Knowing that after the overthrow of the communist regime in 1989, “the city’s new administration decided to make modernist architecture its prominent landmark”, the paper stresses how the idea of a Modern Gdynia configures the city identity and may be used as a brand.

Daniel Laczo focuses on the *Modernist Survival during Early Socialism in Hungary* arguing that it was due to the influence of the Nordic Modernism on Hungarian architecture in the post-war period. “The method of the essay is a comparative analysis of designs showing Nordic influence between 1949 and 1963 and their interaction with the existing context”. The author stands that the modern ideal could be preserved even during the Socialist Realism thanks to a particular consciousness of the cultural and spatial value of the place and the tradition that came through the Nordic influence.

Last but not least, the paper of Eunice Seng makes us travel to Southeast Asia to debate *Concrete Garden City: Trans(planting) a Nation, 1950s-Present*. The essay explains the reasons that lead to an identification of Singapore as a tropical garden city and how the public discourse on nationhood and modernity was made into the intersection of concrete buildings and green areas. Analysing two urban dwelling types developed in the 1950s and 1960s – a garden suburb estate of single-family houses and a high-rise housing estate – the author “re-examine the garden city schema of national development as a strategy for regional networking and international identification”. Identity, nationalist rhetoric, representation, communism and post-communism, heritage, tradition, collective memory are some of the keywords that link the four papers, testifying the richness and complexity of the subjects under analysis.

BIOGRAPHY

Bárbara Coutinho. Master in Contemporary Art History and Post-graduate in Art History Education. Currently, conducting her *PhD on the Exhibition Space in the 21st Century Museums*. Member of the Docomomo International and of the Advisory Board of the Bienal Iberoamericana de Diseño. Founder director and programmer of MUDE – Museu do Design e da Moda, Coleção Francisco Capelo since 2006. Author of MUDE's museological program and the architectural concept of the museum building total refurbishment. Guest Assistant Professor at Instituto Superior Técnico - University of Lisbon. Between 1998 and 2006, was Head of the Educational Department at the Centro Cultural de Belem.

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CONCRETE GARDEN CITY:**TRANS(PLANTING) A NATION, 1950S-PRESENT**

Eunice Seng (Singapore, Hong Kong)

Abstract

This paper traces the entangled narratives of housing construction and tree planting in Singapore to reexamine the garden city schema of national development as a strategy for regional networking and international identification. It posits that from the late 1950s, the technology, material culture and architectural expressions of concrete was inseparable from those

of greening. Public discourse on nationhood and modernity took its most explicit and visible forms in new concrete buildings and newly transplanted trees. This two-prong urban development set the republic apart from other industrializing cities in Asia and Southeast Asia. From the onset, the state dictated the harsh outlines of the brutalist forms – the dominant architectural aesthetic emphasizing structural clarity that

Figure 1 A tree-lined street in Sennett Estate, with single-story bungalows on the right and newer semi-detached houses further in the distance. Across the street are terrace housing. Photograph © Author 2009



was accepted by virtually all architects in Singapore - to be mitigated by lush foliage. Nowhere else in the world has the garden city idea been so extensively coopted by a state for citizenry stake-holding - to build "homes for the people" - where it took on the roles of developer-producer and consumer as nation building enterprise. How are the strategies of maintenance transforming into those of re-envisioning and speculation? This paper examines the development of two post-World War Two urban dwelling types - the garden suburb estate of single-family houses and the high-rise housing estate- to consider the shaping of domesticity and the entanglements with nation building built upon the continual invention and maintenance of Singapore *the* garden city. 230

1. INTRODUCTION

The twentieth century was heavily impacted by garden city thinking. Singapore bore the imprints of the garden city at an extensive scale - from the earliest privately-owned garden city estate in the 1920s to the resettlement estates and new towns built by the government and housing societies in the 1950s to a full-fledged national housing program by the 1970s to the idea of the garden as the dominant urban mass in the city. So effective was the transplantation of the garden city idea that the citizens in post-colonial Singapore could not imagine that the city could have taken any other form than that which emerged.¹ To consider the entanglement of garden city domesticity with nation building, we shall briefly examine two housing projects. The first is a privately owned garden city estate that was built in Singapore in the 1950s, which expanded upon the pre-war estate in terms of size, density, social and infrastructural facilities. The second is the first new town developed in the 1960s by the Singapore Housing Development Board (HDB), the national housing authority that replaced the colonial Singapore Improvement Trust (SIT).

2. THE GARDEN CITY SUBURB

From 1947 to 1956, housing provision for the population was undertaken simultaneously and sometimes collaboratively, by the SIT, private enterprises and housing societies. This period saw the shift from houses with garden compounds to estates with mixed housing types - low-rise terrace houses, mid-rise blocks and high-rise apartment slabs of up to twenty stories. The SIT completed their first garden city estate in Tiong Bahru and began developing the first satellite town in Queenstown in 1953. Private housing activity expanded considerably as private land was requisitioned by the SIT for housing or devel-

oped into housing estates, to the extent that the development of private housing estates superseded SIT's in speed and scale. In the inland areas, private estates targeting the expanding middle- and clerical classes were built. The first and largest of these was Sennett Estate, with 1,300 houses on 155 acres of flat land at Serangoon Road in the northeast.

Backed by the Federal and Colonial Housing Building Society, an agency of the Colonial Development Corporation of the British government, Sennett Estate was the first private estate based on a self-contained suburban community for up to 10,000 people, to be built in postwar Singapore.² According to the managing director, C.W.A. Sennett, the estate was not a speculative building program of "putting up houses."³ None of the houses could be sold to large investors and none of the houses could be let." Formerly Chairman of the Rural Board and Commissioner of Lands, Chair of the Singapore Housing Committee and a trustee of the SIT, Sennett founded Sennett Realty Company immediately upon his retirement from public service in 1949. In partnership with the Building Society, his company purchased the Alkaff Lake Gardens - Singapore's first privately owned garden that was opened to the public in 1929 - for the development of Sennett Estate.

Planned and designed by the colonial architectural firm Swan and Maclaren, Sennett Estate was intended to be an alternative to the apartment blocks and dense estates that the municipal SIT were building. It was conceived to give potential buyers "a little house of their own, with a bit of garden around it and a quiet road in front" on land previously occupied by rubber trees and scrub. (Fig. 1) Built in three phases between 1950 and 1952, the SIT approved the housing scheme with the condition that the open space of the former Alkaff Gardens would be preserved.⁴ For the first phase, 350 bungalows, terrace houses and shops were built in over ten months. (Fig. 2) The second phase consisted of the construction of 370 more houses.⁵ The third phase saw the completion of the rest of the houses, a shopping center, market and garden.⁶ Each house came with electricity, water and sanitation, whilst the SIT undertook the construction of the roads and sewer system, and developed a public park at the center of the estate. Until mid-1950s, other private estates providing affordable housing for the clerical classes based on the hire-purchase plan were developed.⁷ Developers of these suburban estates were expected to resettle the squatters.

By 1956, the year of the student riots and the beginning of independence talks with Britain, the suburbs were occupied

by planned estates of predominantly terracotta-roofed concrete houses amid garden shrubbery and lawns. Serangoon Garden Estate with 2,400 houses, the largest private estate in the northeast suburb along garden city lines after Sennett Estate, was completed. Meanwhile, there were an overwhelming number of applications for the flats in Queenstown, the Trust's first satellite town with homes for 70,000 people on 500 acres of land west of the central area.⁸ The SIT planned for three more new towns in the north but these, like the inaugural Singapore Master Plan prepared by British planner George Pepler, which proposed a green belt for agriculture, playing fields and regional parks, were put on hold as the SIT began the process of "Malayanizing" the posts held by expatriates.⁹ When Singapore embarked on full self-governance in 1959, the SIT was replaced by the Housing and Development Board (HDB), which launched an aggressive and well-funded public housing program to attack the long-stand-

ing housing problem. Headed by the banker and industrialist Lim Kim San, the HDB constructed more than 5,000 high-rise, low-cost apartments within its first two years of operation. Henceforth, the relationship between the garden and the house was inverted. The lush gardens that used to conceal the houses from the public eye were in the new houses proportionately shrunken in size and in the apartment blocks, moved indoors.

2.1 Low-rise, High-rise Garden City

The making of Sennett Estate and SIT's Queenstown saw the leveling of hills and filling in of swamps. The HDB continued this process of building "homes for the people" at an intensified and accelerated rate with the movement of earth, resettling of squatters and farmers, and expropriation of land. The naturalistic garden was translated into a mechanistic aesthetic of "tropicality," which architects attempted to formulate and

Figure 2 Outer boundary of Sennett Estate with two-story terrace housing on the left and shop houses on the right. Photograph © Author 2009





Figure 3 View towards east of older generation slab blocks in the foreground with new tower blocks in construction. Photograph © Author 2016

calculate, most extensively in the facades, in the circulation passages and in the introduction of the balcony –the patio-in-the-sky– which was previously the outdoor terraces of the house.¹⁰ The translation of the “garden city” from suburban estates of low-rise house and garden schema to high-rise blocks of flats and playing fields was most prominent in the development of Toa Payoh (“big swamp” in Malay), the second new town in Singapore and the first to be designed and built from a *tabula rasa* by the HDB, on land filled after the extensive clearance of squatter settlements. Significantly, its development was concurrent with the commencement of the tree-planting campaign – an act that signified the garden city as national program.

Up till the early 1960s, tree planting occurred mostly in private estates and in the gardens of individual houses. In 1963, at the start of the construction of Toa Payoh New Town, then Prime Minister Lee Kuan Yew inaugurated the tree planting cam-

paign.¹¹ Repeatedly reinforced by the government through publicized tree-planting expeditions, the most dramatic of these undertaking were the hundred trees planted by two hundred government officials and community leaders in Queens-town and the planting of two hundred trees by the public led by three ministers in February and March 1964 respectively.¹² In 1967, the campaign was officially launched as the “Garden City”. By this time, the “nation” referred solely to an independent Singapore separate from Malaysia, which it was a part of from September 16, 1963 to August 8, 1965.¹³ From Independence, the “garden city” campaign was a political, economic and social project of cleansing and urban renewal.

3. THE SELF-SUFFICIENT NEW TOWN

Constructed in two phases between 1964 and 1987, Toa Payoh New Town embodied all the ideals of the incumbent government for the new island-nation. HDB’s plan comprised a

town park and an industrial complex at its core, bounded by four major roadways—a traffic ring—in the four cardinal directions. In contrast to HDB's centrally rationalized plan, the plan left behind by the SIT in 1958 showed a large idyllic garden city suburb with relatively narrow winding roads and a less definitive center. The sand from the leveled hills was transported miles down south to reclaim the Kallang Basin for its Industrial and housing estate. The first estate in Toa Payoh was completed and the flats opened for balloting in 1967. Sitting on 803 acres of barren land that was once a barren swamp of farms and houses, the first phase of Toa Payoh was completed in the mid-1970s. By 1978, 36,600 units had been completed housing 190,000 people.

Toa Payoh contains a variety of housing experimentation, particularly in terms of the organization of the land, the “neighborhood principle,” the building of a variety of high-rise type blocks and the transplantation of diasporic communities through resettlement and reallocation. (Fig. 3) It contains various types of blocks— from straight slabs to zig-zag blocks to point blocks. A distinct community structure was designed through the implementation of a circulation network, organization of blocks around neighborhood centers with their own community and shopping amenities which in turn surround a large town center for that served the entire new town population. (Fig. 4) The town center was the first prototype in Singapore. Each district is served by a network of vehicular roads and separated by open spaces.

Figure 4 View of Toa Payoh New Town towards the north, from Block 7A, Toa Payoh Central. The private Clover and Peminpin estates built during the same period are in the upper left corner. Photograph © Author 2016





Figure 5 Pinnacle@ Duxton public housing project with two sky gardens, foregrounded by other green buildings in the Central Business District.
Photograph © Author 2018

In late 1968, residents and hawkers in the newly completed estates of Toa Payoh New Town got together to clear away litter and rubbish as part of “Operation Broomstick” in conjunction with the “Keep Singapore Clean and Green” campaign that was launched in 1967.¹⁴ That year a specialist Parks and Trees Unit was set up by the PWD. In July, the Minister of Toa Payoh district led the first tree planting expedition in the new town. The government recognized that Singapore’s garden city required the participation of every citizen, and needed to be systematically coordinated and maintained. In 1971, the Annual Tree Planting Day was launched in the first week of November, as part of the plan to develop Singapore as a garden city. In 1973, the Singapore Botanic

Gardens merged with the Parks & Trees Unit, which became the Parks and Recreation Department (PRD) under the Ministry of National Development in 1975.¹⁵ The Parks and Trees Act was passed that set out the guidelines for promoting and maintaining the greenery of Singapore, including setting aside land for trees to be planted along roadsides, in car parks, and housing estates.¹⁶

3.1 Cultivation and Citizenship

The planning of the housing, green and the community spaces in Toa Payoh New Town embodied the garden city idea. On the urban scale, the “garden” took the form of playgrounds, paved squares and green open spaces. Conceived as

the space for the people, the new town was consistent with the international and local debates that were taking place in the 1970s. In the 1976 United Nations Habitat Conference on Human Settlements held over a month in Toronto, the Singapore delegation presented Toa Payoh as a success story of housing, with its dense arrangements of tower and slab blocks, and its citizen-residents participating in the Home Ownership Scheme (introduced in 1964). The new town jumpstarted the making of a new community of citizens who have a definitive stake in the nation and participated in the environment that was created for it.

The private garden city estate and HDB's new town represent the state's housing imperative in mid-century Singapore. Conceived in 1950 as a "miniature garden city for Singapore" based on the neighbourhood unit, Sennett Estate was the colonial government's imagination of post-war housing for the burgeoning middle-class. First presented by the SIT in 1956, HDB's Toa Payoh, its first new town planned and built on *tabula rasa* from 1964 was the nation's imagination of housing for a working-class citizenry (low-income and "average middle class"). Described as "urbanization with a vengeance," Toa Payoh was dominated by utilitarian slab blocks at the completion of the first phase in 1970. Amid public outcry of the housing becoming part of the "ugly concrete jungle", Toa Payoh was reiterated as the model town with focus on social amenities and greening as the concrete open spaces between the blocks were filled with gardens, sculptures and fountains.¹⁷ While the one was getting a greening boost, tree-lined Sennett Estate received a new community center with a landscaped playground, garden and outdoor spaces for sports, and the school made the news when it won the tree planting and gardening competition. As Singapore invented itself as a 'Garden City', the housing estates *visibilizes* the momentum in the national project of greening and cultivation of the body, mind and environment.

4. CONCLUSION

In the 1990s, an updated dictum 'City in a Garden' was conceived and entered public consciousness.¹⁸ It is a vision of urban infrastructure within a naturalistic tropical garden environment that would "anticipate and fulfill" the lifestyle needs of the individual, family and community; and bring "more greenery skywards, with rooftop gardens, sky terraces and vertical greening of our concrete buildings to ameliorate the harsh and stark concrete façade."¹⁹ "Green" became the housing adage, and "sky" and "garden" keywords in real estate parlance. It was by no accident that Moshe Safdie, architect

of the Habitat '67 housing project and author of "For everyone a garden," was HDB's consultant of choice for the design of a housing estate in Tampines New Town. Equally sought after by private developers, Safdie was also one of the jurors for the Duxton Plain Housing Design Competition in 2001 which saw over 200 international entries. The 2.5 hectares Duxton Plain public housing project site was significant not only because it was HDB's first international housing competition but also the site of the first two 10-story HDB blocks that were built in Tanjong Pagar in the Central area. With two landscaped sky bridges connecting the seven 50-story tower blocks, Pinnacle@Duxton ushered HDB's transition to its millennium phase of housing development. (Fig. 5)

Following this, HDB built two iconic Build-To-Order (BTO) projects – SkyVille@Dawson and SkyTerrace@Dawson designed by homegrown practices WOHA and SCDA respectively. As part of a larger "housing-in-a-park" concept that the HDB plans to implement in its new estates, these flats represents a new-generation public housing that emphasizes "flexibility, greenery and good living." At SkyVille, more than 1.5ha of public gardens and old rain trees are kept and incorporated into the landscaping. The common areas, lift lobbies and access walkways are naturally ventilated. At SkyTerrace, the sky gardens in the five towers ranging from forty to forty-three stories are linked through bridges, which are themselves filled with lush greenery.²⁰ Meanwhile, older new towns like Queenstown and Toa Payoh are undergoing renovation. Under the 'Remaking Our Heartland' program, seven "pocket parks" will be built along the four kilometers-long ring road around Toa Payoh Central, complete with fitness and community facilities.²¹

In 2012, Capitaland, Singapore's largest real estate company, commissioned Safdie to design Sky Habitat – two 38-story stepped slabs connected by sky bridges on three levels. Completed in 2015, the 12,080 square meters complex contains 509 apartments, each with its own balcony. Higher and containing three times the number of units than Safdie's first Habitat in Montreal, the architects statement that the stepped form with the protruding balconies provide a "more humane and delicate urban fabric" within the high-rise setting of Singapore, aligns neatly notion of 'city in a garden' living. In turn, the development anticipates the 2014 master plan for 2030: the nation is re-envisioned as an island of green, grey and blue, superimposed with a "play network" of waterways and linear parks, where fifty per cent of the land mass is for housing. Concurrently, the garden city project is transplanted in cities in Malaysia, India, China and beyond.

NOTES

- 1 Howard did not specify nett residential density, nor exclude high-rise housing, nor prescribe architectural style, only that the "fullest measure of individual taste and preference is encouraged."
- 2 "Sennett at Serangoon," *The Straits Times*, Sep. 30, 1950, 6.
- 3 "Big housing scheme to go on," *The Straits Times*, Aug. 19, 1951, 5. "Million \$ Trust Co. for S'pore," *The Straits Times*, Mar. 26, 1950, 9.
- 4 "SIT approves \$17 million Gardens' House Plan," *The Straits Times*, Sep. 28, 1950, 5.
- 5 Sennett Realty Company began to build lower cost houses after they realized that the first batch of houses at Sennett Estate were not affordable to the clerical class. "Plan for less costly houses," *The Straits Times*, Feb. 18, 1951, 3.
- 6 "A Neighborhood Unit for 10,000," *The Straits Times*, Oct. 21, 1951, 5.
- 7 These include the twenty-acre Frankel Estate on Changi Road by Credit Foncier, Serangoon Garden Estate Dunearn Road and Whitley Road Estates by Ideal Homes, as well as bungalows and semi-detached bungalows in Bennett and Bajaj Estates intended for "middle-class" families. See, "\$10,000 Houses on Easy Terms," *The Straits Times*, Oct. 2, 1950, 4. "236 bungalows in Tanjong Katong Plan," *The Singapore Free Press*, Dec. 26, 1952: 5. "Big Housing Plan for Colony," *The Singapore Free Press*, Dec. 29, 1952, 5. "Private Builders House 15,000 People – 3,000 more homes next year," *The Singapore Free Press*, Dec. 28, 1953, 3.
- 8 "1,600 apply for 68 Houses," *The Straits Times* (3 July 1956): 7.
- 9 "Top job policy: Decide now, SIT told," *The Straits Times* (11 Dec. 1956): 4. "Expats: Agencies must make their own decisions," *The Straits Times* (8 Dec. 1956): 22. On the master plan, see Patricia Morgan. "Secrets of the Master Plan are Out Today," *The Straits Times* (3 Jan. 1956): 2. The planners envisioned that by 1972, 200,000 people of the projected two million population would live in three new towns. See also, "Planners Pick Sites for 3 'Breathing' Spaces," *The Straits Times* (14 July 1956): 4.
- 10 See Fry, Maxwell and Jane Drew. *Tropical Architecture in the Humid Zone*. London: Batsford, 1956.
- 11 "Good response for big tree planting drive," *The Straits Times*, Jun. 14, 1963, 11.
- 12 "They bring rain too, says Minister Wok," *The Straits Times*, Feb. 3, 1964, 11. "Three ministers lead the tree planters," *The Straits Times*, Mar. 9, 1964, 5.
- 13 "Transforming S'pore into a 'Garden City'," *The Straits Times*, Oct. 30, 1967, 7.
- 14 "Big drive launched by Spore Housing Board to keep its estates clean – Residents and Hawkers Join Campaign," *The Straits Times*, Oct. 7, 1968, 14. "S'pore to become beautiful, clean city within three years," *The Straits Times*, May 12, 1967, 4.
- 15 Since 1963, the Botanic Gardens was the lead organization in providing the expertise and plant materials for the greening programs.
- 16 "NParks Mission and History," accessed on Feb. 23, 2018, <https://www.nparks.gov.sg/about-us/mission-and-history>
- 17 "Barker: They even planted trees in a rubber plantation," *The Straits Times*, Mar. 17, 1971, 6. "Out—the concrete jungle look...," *New Nation*, Aug. 16, 1973, 7. Soh Tiang Keng, "Toa Payoh," *The Straits Times*, Sep. 22, 1970, 9.
- 18 Steven Lee, "'City in a garden' plan set out for Singapore," *The Straits Times*, Dec. 11, 1998, 3.
- 19 "City in a Garden," *TODAY - 2nd Edition*, Oct. 21, 2002, 1.
- 20 Natasha Ann Zachariah, "Dawson's SkyVille and SkyTerrace projects are raising the bar for stylish public housing," *The Straits Times*, May 23, 2015.

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Accessed on Jan. 23, 2018, <http://www.straitstimes.com/lifestyle/home-design/dawsons-skyville-and-skyterrace-projects-are-raising-the-bar-for-stylish>
 21 Rachel Phua, "2 new public housing projects to be built in Toa Payoh," *Channel News Asia*, Updated: Apr. 22, 2017. Accessed on Jan. 23, 2018, <https://www.channelnewsasia.com/news/singapore/2-new-public-housing-projects-to-be-built-in-toa-payoh-8782958>

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THE CLASH OF NATIONALISMS: MAKING OF BULGARIAN POST-SOCIALIST IDENTITY ON THE MODERN HERITAGE BATTLEFIELD

Aneta Vasileva (Bulgaria)

ABSTRACT

In the summer of 2017 a socialist monument was destroyed in downtown Sofia amidst heated debates. It was built in 1981 to celebrate 1300 years of the foundation of Bulgarian state in line with the prevailing communist nationalist rhetoric at the time - a Bulgarian version of the phenomenon related to a late 1970s shift in the country's cultural policies. The socialist monument is to be replaced by a war memorial - a reconstruction of a previously existing at the same place one, built in 1934, partly destroyed by WWII bombings of Sofia and later fully dismantled by the communist regime. That memorial was part of the *Heimatkunst* in pre-WWII Bulgaria, commemorating the fallen soldiers in the wars for the nation state in the 1910s. The "battle of the monuments" uncovered a realm of disturbing conflicts hidden behind the seemingly monolithic European identity of the ex-socialist country. Bulgaria still preserves the image of an optimistic and reliable EU member without far-right or far-left political excesses, with modest and balanced international behaviour. Yet two monuments managed to reveal a number of identity clashes: communism vs anti-communism, nationalism vs universalism, "left" vs "right" nationalism, modern architectural heritage vs tradition. That's the reason why the debate on the destruction of one monument is actually a debate on the future of Modern Heritage in the country. And the clash of nationalisms is in fact a battle for the post-socialist identity of the Bulgarian city, taking place on the Modern Heritage battleground.

This paper will address two major issues which affect the perception of modern architectural heritage as of today: re-emerging of a strong anti-modernity trend which rejects all achievements of the XXth century (stressing exclusively on its failures) and the growing pan-European neo-nationalist rhetoric of our day. Both trends are not merely architectural, but also cultural and political and they both, for the time being, seem to be here to stay. I shall start with two stories followed

by a dissection of the phenomenon of the so-called "new architectural conservatism" through the story of the 2017 destruction of one key Bulgarian socialist and late modernist monument.

STORY 1

"Modernism is alien to the beauty and traditions of the Western world", "Modernism won't last for the same reason tradition will prevail. Beauty endures", "Tradition is beauty". These are only part of the pathetic clichés which are posted daily in the social networks by an active Twitter and Facebook account with rapidly growing popularity. The account is called "Architectural Revival", it is British and it describes itself as follows: *"In an age of ugliness, a work of beauty is an act of defiance. Tradition, not Modernism, is the future. This page is opposed to modernism (in all its forms)"*.

The page often cites or retweets the conservative English philosopher and writer sir Roger Scruton and parades clear counter-progressive statements. It has over 110 000 followers (at the time this text has been written) and although this is not a striking figure if compared to such popular architecture and design pages like Dezeen (also British, with nearly 1 000 000 followers) it must be noted that the audience of this particular account has nearly tripled in a year (otherwise it was created in 2012).

STORY 2

At the beginning of November 2017, at the centre of Bulgarian capital Sofia, in the area of a 1970s socialist urban ensemble, a nationalist monument was restored -- the neoclassical sculpture of a bronze lion, symbol of the power of Bulgarian state. The sculpture is located at the exact place where a modernist monument, part of the same urban ensemble, stood only several months ago. That modernist monument was habitually qualified as dangerous, decaying and "unacceptably ugly" by the majority of Sofia citizens" and was finally destroyed in July 2017 by order of Sofia Municipality. The lion

is holding a map with Bulgarian territories considerably exceeding the present boundaries of the Republic of Bulgaria and was preserved from a previously existing at the same place war memorial, built in 1934, partly destroyed by WWII bombings of Sofia and later fully dismantled by the communist regime. That memorial was part of the *Heimatkunst* in pre-WWII Bulgaria, commemorating the fallen soldiers in the wars for the nation state in the 1910s.

The restoration of the bronze lion was accompanied by an official ceremony and a military parade led by the Bulgarian Minister of Defence who in the presence of the Mayor of Sofia declared: *"Today we witness one historical justice. Let's never forget what unites us -- and it is written on the map of the lion behind us"*. The Minister of Defence is part of the nationalist coalition "The United Patriots", presently acting as a coalition partner in the basically pro-EU Bulgarian government.

What do both the above seemingly different and unrelated stories come to demonstrate?

THE NEW ARCHITECTURAL CONSERVATISM

Architecture is a slow art and is usually the last to be affected by changes on the so-called "cultural front". Yet in recent years manifestations of utmost conservatism and right-wing national-populism (which we have started witnessing in global politics for example) have reached architectural field again². Architectural conservatism is usually expressed by glorifying the "beauty" of the romantic past from pre-modern times, by denying progress and by refusing to construct a vision for the future. Modernism is under attack, populist patriotism prevails common sense, all traces of tolerance disappear and even the postmodern sense of humour seems completely non-existent.

How do we redefine the position of modern architecture in this situation? Can architecture react to such cultural "regress" with a new vision of "progress"? And how the story of one Bulgarian monument and its fate can help uncover the problems and lay them out for dissection?

Figure 1: Monument "1300 Years Bulgaria" and the National Palace of Culture, 1980s. © ATRIUM Archive



Aneta Vasileva The Clash of Nationalisms



Figure 2: Memorial of the fallen soldiers from First and Sixth Infantry Regiments, 1930s-1940s. © Lost Bulgaria

THE MONUMENT "1300 YEARS OF BULGARIA"

The monument "1300 Years of Bulgaria" was created in 1981 as part of a larger complex - the National Palace of Culture in Sofia. In the late XIXth century the area of the complex fell outside the city of Sofia and the military barracks of the First and Sixth Infantry Regiments were built on the site. The two regiments participated in the Serbo-Bulgarian War (1885), the Balkan Wars (1912-1913) and in World War I (1914-1918) and more than 3000 of their soldiers were killed in battle. In memory of the fallen a memorial was erected in the central part of the barracks complex in 1934-1936, designed by the Bulgarian architect Alexander Obretenov (1903 – 1990). On the blind walls of the three barracks, forming a U-shaped frame, were mounted three enamelled plates with the names of the fallen. In the centre of the ensemble stood the bronze figure of a lion, resting his left paw on a shield with a map of (imaginary) large Bulgaria.

During the WWII bombings of Sofia (in the winter of 1944) one of the memorial walls was completely destroyed. The other two were dismantled because of the construction of the National Palace of Culture complex in 1970s. The lion was preserved and exposed at the National Museum of Military History. By that time the area of the barracks had already fallen within the city limits and rather close to the city centre. Initially the site was designated for an opera house, later on building intentions changed and the location was considered most convenient for a multi-purpose cultural center, one of the so-called "palaces for the people", spread throughout the former Eastern Bloc.

Construction of a National Palace of Culture was part of the

initiatives for celebration of the 1300th anniversary of the Bulgarian State in 1981³. The construction of an urban complex of such scale completely transformed the structure of the city centre and created a completely new type of urban area. Up until the present it remains one of the biggest urban intervention in the capital city and the largest open public space in Sofia.

The monument "1300 Years of Bulgaria" was meant to serve as a vertical landmark in this vast new urban complex. It was built after a tender won by the team of the sculptor Valentin Starchev and was designed simultaneously with the park area. Along with Starchev the team also included architects Alexander Barov, Atanas Agura, Vladimir Romenski, Alexander Brainov and structural engineers Rumen Mladzhov and Milcho Brainov. Construction works started in the spring of 1981 and the monument was completed in considerable haste, but still in time for the congress of the Bulgarian Communist Party on October 21, 1981, dedicated to the 1300th anniversary and held at the National Palace of Culture.

The concrete-and-steel structure was 35 m high and metaphoric. It was meant to represent a spiral, interpreting the idea of the historical development of Bulgaria. Three segments formed the spiral, symbolizing "the heroic past of the Bulgarian people, their socialist present and communist future" -- the Scholars, the Mother and the Worker. It was crowned by two bronze "wings" on a metal substructure.

This monument was never appreciated by the public, both during and after the regime⁴. In addition there were considerable problems concerning quality of the construction works. The short terms for completion and last-minute changes of the finishing granite tiles resulted in falling down of the cladding shortly after the inauguration. In 1990s, after the political change of the regime in 1989, the monument had not been subjected to any repairs which led to further deterioration of its structural integrity and overall appearance. In 2009, due to its continuous deterioration, it was declared dangerous, scaffolding was installed and the granite cladding was removed.

Since 2012 the call for deconstruction of the monument has been constantly on and off the table.

In December 2014 Sofia Municipal Council voted and enforced an official decision for "Reconstruction of the Memorial of the Fallen Soldiers of First and Sixth Infantry Regiments and removal, relocation and rearrangement of the artistic sculptural elements of the architectural and artistic synthesis "1300 Years of Bulgaria". In 2015 a strong swing in the debate for the monument "1300 Years of Bulgaria" was given by the idea that the war memorial should be rebuild to



Figure 3: Monument "1300 Years of Bulgaria", 2001 - 2008. © Nikola Mihov

substitute the current monument. This initiative quickly gathered considerable group of supporters, both on- and off-line. A counter-group for saving the monument was also created. The debate led to deep public confrontation which was additionally triggered when the communist/ anti-communist paradigm was introduced⁵. Two years later, on July 3, 2017, Sofia Municipality started the deconstruction of the monument in question. Official reason for the hurried demolition was stated to be the necessity to rehabilitate the areas surrounding the National Palace of Culture in Sofia which will be the seat of Bulgaria's first Presidency of the Council of EU starting in January 2018. On July 13th DOCOMOMO International included the case in its Heritage in Danger Section⁶. Within three weeks the bronze figures were removed and the concrete volumes - demolished. The monument was replaced by a green area. The demolition process was accompanied by heated debates and physical protests led by archi-

tects, artists, art-historians and regular citizens and was executed in conditions of extreme social tension⁷.

On November 2, 2017 the bronze figure of the lion was transported from the National Museum of Military History and placed in the green area where the monument "1300 Years of Bulgaria" once stood. On November 26 the annual "Bulgarian March" of the Bulgarian patriotic and neo-nationalist groups and parties culminated in front of the statue.

THE IDENTITY CLASH

So in the summer of 2017 two monuments were opposed to each other in post-socialist Bulgaria. A socialist, post-WWII, late modernist one and a neo-classical, pre-WWII, often described by many as a "fascist" one. The "battle of the monuments" though not unique and certainly not strictly Bulgarian, uncovered a realm of disturbing conflicts hidden behind the seemingly monolithic European identity of the ex-social-

ist country. A number of identity clashes were revealed: communism vs anti-communism, nationalism vs universalism, “left” vs “right” nationalism, modern architectural heritage vs tradition.

As a result the unleashed debate threatens to destabilize the whole perception of Bulgarian post-WWII modern architecture as cultural heritage. While in general the architectural heritage of the XXth century is causing an ever-increasing global interest, Bulgaria lags behind this process and destructive results are most evident in socialist architecture and especially monuments such as “1300 Years of Bulgaria” in Sofia. Bulgarian architectural heritage of the XXth century, and most notably of its second half, is considered relatively “young”, lacking objective judgment and protective attitude by the general public. This architectural layer is associated exclusively with the socialist regime and is subjected to emotional, politically biased opinions, depriving it from impartial

evaluation. That’s the reason why the debate on the destruction of one monument is in fact a debate about the future of Modern Heritage in the country. And the clash of nationalisms is in fact a battle for the post-socialist identity of the Bulgarian city, taking place on the Modern Heritage battleground.

How does it happen that two monuments, both conveying apparent national identity ideas mixed with very strong nationalist and traditionalist narrative, are treated in such drastically different ways by contemporary Bulgarian society? Despite the different visual language, they share a similar message: “Bulgaria is your homeland. Love it and die for it”. Yet the first one is regarded as a symbol of an oppressing communist past, while the other – as demonstration of the greatness of the Bulgarian state now and forever.

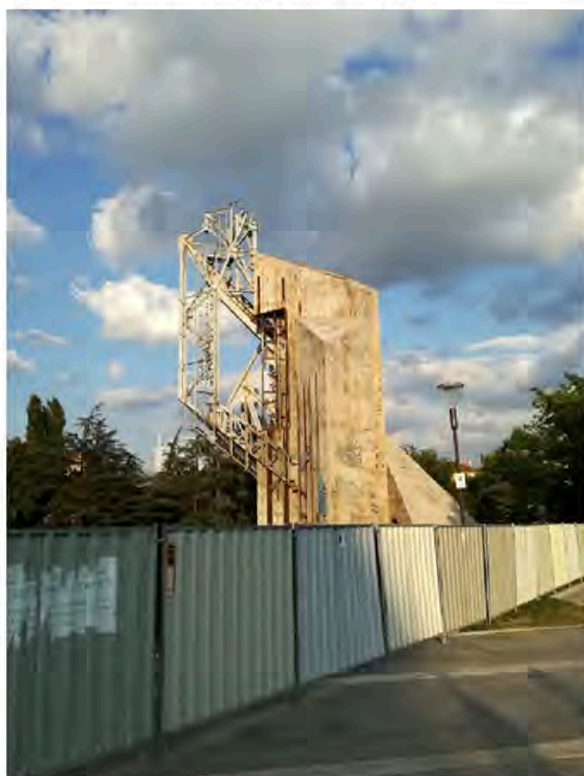
Then follows the logical question how do we link identity with memory in a post-socialist society?

Before 1989 communist authorities tended to legitimize themselves by constructing identity which is linked to memory. Common places of memory were transformed into public spaces of history which to control the past. The result was identity which consolidated not only the regime, but also the nation and was used by Bulgarian socialist culture every time it needed to react to global universalism. This nationalist return to the past directly reflected the changed cultural policies of the ruling Bulgarian Communist Party, trying to legitimize the regime by presenting it as the just successor and culmination of a consecutive national cultural development⁸. In a more general perspective, as Benedict Anderson supported Eric Hobsbawm’s conclusion: “*Marxist movements and states have tended to become national not only in form but in substance, i.e. nationalist. (...) The reality is quite plain: the “end of the era of nationalism”, so long prophesied, is not remotely in sight. Indeed, nation-ness is the most universally legitimate value in the political life of our time*”.

This is the reason why a post-socialist society cannot easily define these spaces of collective memory constructed during socialism without tensions and contradictions.

Socialist monuments and socialist architecture as a whole are a “dissonant heritage” par excellence that causes social tension and conflicts instead of common understanding as a seamless cultural layer for everybody. On another level, in the Eastern Bloc, XXth century modernism seems an equally dissonant heritage especially if regarded from the present neo-conservative stance. The political ideology of socialism and the architectural ideology of modernism have been merged in the sec-

Figure 4: The Demolition. 14 July 2017. © Valery Gyurov



ond half of century in such a way that there is no longer use to specify which the leading architectural style has, albeit concealed behind the oblique formulations of socialist realism. The reality is that modern architecture of post-war Bulgaria is in fact the socialist architecture of the People's Republic of Bulgaria. And the clash of identities on the modern heritage battlefield is yet to unfold.

NOTES

1 "Architectural Revival" exists in Facebook at the following link <https://www.facebook.com/ArchitecturalRevivalMMXII/>, as well as in Twitter at https://twitter.com/Arch_Revival_

2 The last 100 years have seen a number of resurrections of the "traditional" and the "national" as opposed to the "modern" and "progressive". But the latest shift in the global consensus seems the strongest since the postmodern and neo-traditional wave in the 1970s and 1980s.

3 A very strong nationalist wave in the Bulgarian socialist culture (architecture included) started to gather strength at the end of the 1970s and culminated in the widely celebrated 1300th anniversary of the foundation of the Bulgarian State in 1981 (681 - 1981).

4 While architects, art historians and intellectuals analyzed the monument as a "constructivist banner" and "deconstructed massive body", the general public coined the rather condescending nickname "the seven-winged-five-dickheads".

5 At first debates unfolded mainly online. The two opposing groups were: "For Reconstruction of the Memorial of the Fallen Soldiers of First and Sixth Infantry Regiments", available at: <https://www.facebook.com/groups/303528473154855/?fref=nf> and "Monument 1300 Years of Bulgaria in Sofia. Let it be", available at: <https://www.facebook.com/groups/707499292671413/>. Supporters of the war memorial debated in distinct anticommunist rhetoric while supporters of the existing monument played with the nationalist rhetoric from late socialism.

6 Available at https://www.docomomo.com/pdfs/events/heritage/111429_Docomomo%20International_1300%20Years%20Bulgaria.pdf

7 The story of the monument and the debates surrounding it can be traced in a number of informal sources like the already mentioned Facebook group "Monument 1300 Years of Bulgaria in Sofia. Let it be" with abundant information and photos (mainly in Bulgarian) <https://www.facebook.com/groups/707499292671413/>. During the demolition several online articles in English also appeared like Cheresheva, Mariya. 2017. "Bulgarians Divided as Capital Scraps Communist-Era Landmark". *BalkanInsight*, 5 July 2017 (available at: <http://www.balkaninsight.com/en/article/bulgarians-divided-as-capital-scraps-communist-era-landmark-07-05-2017>) and Lazarova, Joana. 2017. "Making Symbolic Architecture Matter", *The Huffington Post*, 23 July 2017 (available at: http://www.huffingtonpost.com/entry/making-symbolic-architecture-matter_us_597321d5e4b06b511b02c397). A specially dedicated web-page was created by the supporters of the monument, available at <http://save1300.com/>

8 Elenkov 2008: 380

9 Anderson 2016, 2-3. Hobsbawm 1977, 13

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MODERNIST ARCHITECTURE IN GDYNIA AS A FACTOR OF SOCIAL UNITY AND INTEGRATION

Marek Stępa (Poland)

ABSTRACT

Developed throughout the 1920s and 1930s, Gdynia was granted city status in 1926. Originally inhabited by about a thousand of indigenous population, the city owes its existence to the sea port. The decision to build the port (1922) was a magnet for people seeking work at port construction. Population numbers swelled from about one thousand at the time to ten thousand in 1926 and to 120,000 in 1939. Given the population mix, creating a homogenous community was anything but easy. Up until the early 1920s Gdynia was little more than a fishing village with no architectural tradition or local construction history. With no such heritage to fall back on, the city offered perfect conditions for young architects. Inspired by modernism, they were keen to turn their ideas into reality. Gdynia's city centre, the immediate districts and the port are stylistically homogenous and filled with modernist architecture. Shunned by the communists in the post World War II period due to its alleged bourgeois characteristics, Gdynia's modernist architecture regained its ground after the change of political system started in 1989. Following the nationwide local authority reform, the city's new administration decided to make modernist architecture its prominent landmark. Widely accepted by Gdynia's communities, the city's architecture is seen as its discerning feature and one that they are happy to identify with.

1. HISTORICAL BACKGROUND

As a city Gdynia developed throughout the 1920s and 1930s. In 1939 neighbouring Gdańsk was the scene of events that led to the outbreak of World War II. At the time Gdynia's population consisted almost entirely of immigrants and a handful of their children. The city owes its existence to the sea port which was built after the Polish state had regained its independence in 1918 after 123 years of subjection to foreign rule. Initiated after the end of World War I, the search for the best port location led to Gdynia. Not a difficult choice given the fact that Poland only had about 140 km of coastline

granted by the Versailles Treaty. In 1922 the Polish government took the decision to build the port. At the time Gdynia had a population of about 1,000 consisting almost entirely of Kashubians, a Slavic ethnic group speaking their own language. Granted the city status in 1926, Gdynia became a magnet for people seeking work at port construction. Population numbers swelled from about ten thousand to more than eighty three thousand ten years later.

2. POPULATION MIX

Conducted on 19 May 1936, the Gdynia census offers an interesting insight into the city's population. The majority of the people came from what was Prussian territory. Geographically the nearest to Gdynia, this area accounted for 61% of all newcomers from Polish territory. Russia dominated territory provided 31% of new inhabitants with Austria dominated territory representing 8%. As a result, 31% of Gdynia's inhabitants came from areas which were subjected to heavy Russification for about a century and a half and 69% of the people had gone through intense and ruthless Germanisation, to a lesser (Austrian-Hungarian Empire) or greater degree (Prussia, German Empire). They were educated in different languages with Russian spoken under the Russian rule and German spoken under the Prussian and Austrian administrations. They were educated in different school systems. While they were allowed to practice their Catholic religion, they had to accept Russia's orthodox church and Prussia's Evangelical-Augsburg Church whose presence and role were of key importance in those countries' political cultures. They had to understand and use different systems of measurements and learn to respect different legal systems. The schools they attended taught them different aesthetics and familiarised them with different styles of architecture. On top of that, in 1936 Gdynia's mixed community included 3,190 Poles (3.8% of the city's population at the time) who were born abroad bringing habits and customs they had acquired in other European countries (mainly France and Germany) and the US¹. Gdynia's Jewish community was growing dynamically,

too. With only five Jews in 1928 declaring permanent residence in the city, the number went up to 416 in 1933, the year when Hitler came to power in Germany. When the census was taken, Gdynia's Jewish population included 2,955 of which 1,539 declared permanent residence. In 1938 as more and more Jewish families were fleeing Germany for fear of the growing threat of the Hitler regime, Gdynia's Jewish population was some 4,500 with only 1,700 declaring permanent residence. The city's overall population at the time was about 120,000. Those who called Gdynia their home, suggestive of a long-term stay, came to Gdynia from all over Poland. Clearly in the majority, these newcomers also included Jews from countries that used to be Poland's partitioners. Most of them came from the former Russian Empire with Odessa (today's

Ukraine) as the main place of origin. From early on German Jews came in big numbers, mainly from Berlin, Hamburg, Frankfurt and other cities. Some newcomers originated from Czechoslovakia and Hungary (previously subjects of the Austro-Hungarian Empire) as well as Belgium, France, Great Britain and even from Turkey. The years just before World War II saw a clear majority of emigrants fleeing Germany. Gdynia, however, was not their final destination. The news from nearby Gdańsk (just 20 km away) was alarming with accounts of anti-Semitic excesses and support for the ruling national-socialist party. This was bound to end badly, should Germany attack Poland. As we know from many recollections of that time there was an overwhelming feeling that war was inevitable. So it is hardly surprising that in mid 1939 the number of Jews in Gdynia

Figure 1. Stanisław Ziłowski, residential building with service facilities belonging to the Employee Pension Plan of *Bank Gospodarstwa Krajowego*, Gdynia, built in 1935-37. The architect was a graduate of the Faculty of Architecture of the Lviv University of Technology (1921). The majority of his studies lasted when Lviv was the capital of the Kingdom of Galicia and Lodomeria – a part of Austro-Hungarian Empire ruled by the House of Habsburg. © Wojciech Jakubowski. Archives of the Gdynia City Hall.



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Figure 2. Roman Piotrowski, The building of Gdynia City Hall (since 2009), formerly Office Building of Social Insurance Institution, Gdynia, built in 1934-36. For the longest period in its history it had served as the headquarters of the management of PLO - the largest Polish ship owner company. The architect was a graduate of the Faculty of Architecture of the Warsaw University of Technology. © Paweł Lewinowicz. Archives of the Gdynia City Hall.

nia dropped to 1,453, all of them in permanent residence, to reach just about 700 on 1 September, when the war broke out².

3. CREATING A COHESIVE COMMUNITY

With so many different ingredients, creating a cohesive community was anything but easy. There were three factors, however, that helped to make it happen. First, everyone spoke Polish, the mother tongue for the overwhelming majority. Although the accents varied and many words were on loan from the languages people spoke in their countries of origin, everyday communications were unhampered. Second, Catholics represented a substantial majority. Sundays at the church helped to bring the newcomers together and brought them closer to the indigenous Catholics. Finally and most impor-

tantly – they all came to Gdynia to find work and in search of a better life. The city's unemployment benefits were just as low as elsewhere in the country. Claimants had to prove their employment record, a requirement which was more difficult or even impossible to meet for people outside Gdynia. Some came because life was difficult enough where they came from, others were attracted by the possibility to put their capital to work or hoped for a successful career. As well as pursuing their personal goals, for many it was the opportunity to make their country great again and help to rebuild it. Having shared goals and working hard to attain them is what brings people closer together.

Integration was a fact as can be clearly seen from Gdynia's history during and after World War II.

4. OUT AND BACK TO GDYNIA

In 1939 soon after Wehrmacht took over Gdynia, Germans began to relocate Polish residents, which was part of their plan to set up a submarine construction and repair centre there. This was to get rid of a hostile population under occupation and take over their flats to house German shipyard workers, submarine crews, military personnel, clerks, teachers, doctors, etc. More than 60% of the residents were displaced and told to go back to where they had just come from in search of a better life.

After years of the turmoil of war the majority of the people returned. While it is obvious that those with a house or property of some kind were keen to return, it was astounding to see people come back with no prospect of getting their previous job back and having to rent a flat. As well as hopes for a

better life, it was also the emotional attachment that attracted them back to the place which they helped to build and create. As noted by one of the researchers "Building the port and the city to support its commercial and military role and a hub for maritime education makes people proud even today. That pride is still very much alive among the people of Gdynia because it is well established in the city's architecture and urban image"³.

The city they were coming back to stood out even before the outbreak of World War II as a distinct place with a characteristics unlike other Polish cities. It did not have Prussia's and all of north Germany's brick elevations or modern links to historic styles which Gdynia never had and which were prevalent in Poland's southern and eastern towns. "Gdynia was a model of modernist architecture, interiors and lifestyle and a

Figure 3. Zbigniew Kupiec, Marianna and Albin Orłowski (USA citizens) town house with two utility storeys for "Bon Marche" Department Store, Gdynia, built in 1936. The architect was a graduate of the Lviv University of Technology (1932). © Archives of the Gdynia City Hall.



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projection of diverse visions of the future, all at the same time” – are the words of Andrzej Szczerski, a Krakow-based expert on modernist architecture⁴.

5. THE SOCIETY AND ARCHITECTURE

While initially the town houses in the emerging city centre area featured big city proportions, they were very traditional in form. This was also true of the port's built environment. It was not long, however, before young architects arrived, eager to take their chance at life and deliver unhindered and modernism-inspired visions of new architecture. With no local construction history or tradition or anything that the newcomers brought to prevail over other styles, there was no stopping of the new architecture. Proposed by the propo-

nents of the modern style, the architecture was neutral in character and equally alien to everyone, yet familiar because it was rational and as a result economical. After all, the construction boom caused by the needs of the growing city came at a time of the economic crisis⁵.

Just as the majority of the local population, the designers and construction managers had diverse backgrounds as regards their origins and sources of their professional knowledge and skills. Those who built the first traditional town houses received their education in the first decade of the 20th century and trained as construction technicians in German schools. The majority came from the region of Pomerania with some from Poznań and Gdańsk. Very few people came from the Austrian and Russian territories, as we know from Maria Jolanta

Figure 4. Jerzy Müller and Stefan Reyman, City Market Halls, Gdynia, built in 1936-1938. The building, designed by Jerzy Müller – a graduate of the Faculty of Architecture of the Munich University of Technology (1912) and Stefan Reyman – a graduate of the Faculty of Architecture of the Warsaw University of Technology (1930), still plays its role. © Bartłomiej Ponikiewski. Archives of the Gdynia City Hall.



Sołtysik's work⁶. The early 1930s saw more and more architects coming to Gdynia. Adopted in 1933, the parliamentary act "On managing Gdynia's construction works and designing those works" meant that only people with higher technical education were allowed to design buildings. As established by the same author, in the second half of the 1930s Gdynia's town houses were designed by 18 architects. Eight had trained as architects at the Lviv University of Technology (previously under Austrian rule) after Poland had regained its independence. Eight graduated after the war from the Faculty of Architecture at the Warsaw University of Technology (previously under Russian rule). And four had diplomas from German universities in Munich, Karlsruhe, Leipzig and Gdańsk with at least two of them graduating before World War I⁷.

Today, Gdynia's city centre, the immediate districts and the port are stylistically homogenous and filled with modernist architecture⁸. Shunned by the communists in the post World War II period, Gdynia's architecture was unfairly blamed for its alleged bourgeois characteristics. In the second half of the 1950s following the period of what today is referred to as socialist realism or socialist classicism, styles which the communist party imposed on the architects, Gdynia's modernist architecture regained its ground. The city boasts quite a few examples of the "second round" of modernist architecture from that period exactly. It did not go on for long though. Bespoke designs reflecting the context and local tradition gave way to standard buildings, with thousands of copies across the country, especially in housing. There were multiple copies of schools, kindergartens, health centres, community centres, sport halls and even theatres. It was not until Poland had changed its political system and overthrow the communist government, that those practices came to an end.

Poland's political transformation after 1989 reintroduced the idea of local government. Following Gdynia's new administration search for the city's discerning feature, the authorities decided to make modernist architecture its prominent landmark. As rightly observed by Robert Hirsch "There are few historic cities to have modernist architecture as a key element of their cultural heritage"⁹. The truth is that there was no other historic, architectural or aesthetic alternative in Gdynia and nothing to compete with the intensity and quality of the city's modernism. But then again, a city's discerning features are not necessarily found in its architecture or stylistics. While it is not the only feature, modernism is clearly an important part of Gdynia's identity. To quote Bartosz Macikowski "The authorities of Gdynia (...) have made a conscious decision to

invest in the city's ever present atmosphere of progress, innovation and openness to the future (...) There is a clear continuation of the spirit and scale of modernist architecture"¹⁰. Steps were taken to list the most outstanding modernist buildings and sites, including 88 hectares of the city centre, in the historic register. There are campaigns and projects designed to raise awareness of the value of modernist architecture which target owners, residents and users¹¹. The work includes scientific and popular science publications, meetings, talks, museum and outdoor exhibitions, modernism walking trails and finally regular international conferences under the common title "Modernism in Gdynia. Modernism in Europe" which invite residents who are not professionals on preservation, conservation and history or theory of architecture. Local developers have also recognised the need to relate to local tradition and its benefits¹². "Gdynia's modern style ("Gdynska moderna" in Polish) is a well-known and recognised term and the city's up-and-coming brand denoting quality architecture which developers today use to advertise their projects"¹³. Widely accepted by Gdynia's communities, the city's modernist architecture is seen as its discerning feature and one that they are happy to identify with.

NOTES

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BIOGRAPHY

Marek Stępa – architect, former lecturer at the Faculty of Architecture of the Gdańsk University of Technology. In 1993 he obtained a doctoral degree in architecture and urban planning. He was elected a Gdynia City Councilor in 1994 and since 1998 has been the deputy mayor responsible for spatial development, city investments and public transportation among others. He is the author of the concepts regarding the active protection of Gdynia's modernist monuments. Together with Robert Hirsch, he was an initiator of entering Gdynia City Centre to the register of monuments and the idea of organising scientific conferences devoted to modernist architecture in Gdynia.

MODERNIST SURVIVAL DURING EARLY SOCIALISM IN HUNGARY

NORDIC INFLUENCE ON HUNGARIAN ARCHITECTURE

IN THE POST-WAR PERIOD

Dániel Laczó (Hungary)

ABSTRACT

Soviet takeover in Hungary after World War II introduced central directives compulsory for architects. Official guidelines opposed and eventually oppressed the prevailing Modern Movement and forced a shift to Socialist Realism but called for a retreat within a decade. Modernist spirit has been preserved by a minority of designers oriented toward Nordic Modernism. The sensitive approach of Nordic Modernism was part of a broader trend that has been described later by Colin St. John Wilson as the Other Tradition of Modern Architecture. While mainstream Modernism was banned by the communist dictatorship a more delicate attitude similar to Nordic Modernism remained tolerable. The rediscovery of Modernism after the withdrawal from Socialist Realism was also a controversial process where Nordic architecture played an important role. The essay focuses on modernist designs in Hungary built between 1949 and 1963 that are conscious of the cultural and spatial context of traditions and location. The central Hungarian periodical already noticed Nordic influence in the work of Zoltán Gulyás in 1964. A recent wave of research is processing the oeuvre of individual architects. Monographic works have been published on the architects. Although Hungarian sources refer to the sensitive approach to context as a main trait of Nordic Modernism, neither the surroundings of each building, nor the influence on urban planning and landscape architecture has been thoroughly described. The method of the essay is a comparative analysis of designs showing Nordic influence between 1949 and 1963 and their interaction with the existing context.

1. INTRODUCTION

Soviet takeover in Hungary after World War II introduced central directives compulsory for architects. Official guidelines opposed and eventually oppressed the prevailing Modern Movement and forced a shift to Socialist Realism but called for a retreat within a decade.⁽¹⁾ Modernist spirit has been preserved only by a minority of designers oriented toward Nordic Modernism.

The definitive end of Socialist Realism in Hungary only came with the Revolution of 1956, leading to a relief in cultural policy. Modernism regained its authority slowly. Theory had developed the revival of modernism and it spread in architectural practice as well. Nordic Modernism survived central oppression and has been widely rediscovered and also researched.

The sensitive approach of Nordic Modernism was part of a broader trend that has been described later by COLIN SAINT JOHN WILSON as the Other Tradition of Modern Architecture.⁽²⁾ While prevailing mainstream avant-garde Modernism was banned by the communist dictatorship, a more delicate attitude showing the influence of Nordic Modernism remained tolerable. The rediscovery of Modernism after the withdrawal from Socialist Realism was also a controversial process where Nordic architecture played an important role. The essay focuses on modernist designs and theory in Hungary between 1949 and 1963 that are conscious of the cultural and spatial context of traditions and location

2. THE SHORT PERIOD OF DEMOCRACY AND MODERNISM

Cultural preferences underwent dynamic changes after the war, which also affected architecture. Prominent modernist architects of the interwar period were appointed leaders of the profession⁽³⁾ and modernism became dominant in new commissions. *Modernism* is a group of various artistic movements that proclaim themselves as being in sympathy with the orientation toward the future and the desire for progress.⁽⁴⁾

Apart from the surviving proficient architects a new generation of architects were starting their practice. Their curriculum expanded with an extraordinary experience. In 1944 a whole year of students of architecture had been evacuated from the forthcoming siege of Budapest to Denmark. Instead of returning immediately to Hungary, the students had stayed and worked as designers in local offices.⁽⁵⁾ ZOLTÁN FARKASDY (1923-1989) and GYÖRGY JÁNOSSY (1923-

1998) were among the most successful during their prolonged exile. Farkasdy worked for several offices including JØRN UTZON's (1918-2008), while Jánosy was awarded a study tour across Sweden. The *'Danish boys'* returned only in 1947 and brought home erudition in Nordic architecture and the first book on ERIK GUNNAR ASPLUND (1885-1940) (6) spreading the knowledge. *Nordic modernism* or *romantic modernism* offers an emotional approach in building a modern environment by creating direct relationship with the climate and immediate natural surroundings of the buildings, using regional forms of expression.(7)

Conditions in Hungary however changed after a few years. The communist party seized power from 1947 to 1949, leading to growing influence on cultural life. The first modernist buildings were finished by 1949 but the central commission was not satisfied with the result.(8) Cultural policy preferred a more powerful and monumental architecture. Modernism was attacked for formalism and its cosmopolitan attitude. Architectural theorists of the communist party promoted an architecture that is *socialist in form and national in content*, a definition coined by Stalin. A staged debate between the advocates of Modernism and Socialist Realism finally ended the discussion in 1951 banning Modernist designs.

3. MODERNIST SURVIVAL DURING SOCIALIST REALISM

Strict central directives were introduced by the cultural government. Designers had to follow the *progressive tradition*: Hungarian Neoclassicism of the 19th century.(9) Application of that tradition was later specified by an exhibition on the architecture of the USSR, socialist in form and national in content: *Socialist Realism*.

The architects returning from Denmark brought home the knowledge of a viable alternative for the anachronistic revolution. *Romantic Modernism* of the Nordic countries offered an artistic expression with a clear classical tone yet affectionate and modern both in disposition and details.

The first project was a competition for an office building in the centre of Budapest in 1948, during the turn. The entry of Farkasdy proposed punched openings of the façade which followed a strict and proportioned grid. The use of brick was uncouth as neither contemporary modern design, nor the Socialist Realist models applied it. The project was inspired by the town hall of Aarhus.(10)

Designs exceeded solitary objects. Nordic influence is visible in the numerous plans for the city centres of Farkasdy, for example *Oroszlány* (1954).(11) The former village was

Figure 1. Gyula Rimanóczy: Building R. Budapest, Hungary, 1955. © Dániel Laczó, 2018



planned to be extended to a city of heavy industry. Decency of the main square is quite opposed to monumentality. Provincial architecture, the tradition of *architettura minore* of Northern Italy was a popular source of inspiration among Nordic architects.(12) Immediate context of the planned centres remain uncertain.

The source of ideals did not remain obscure. A bulletin on ongoing design projects in 1951 identified the impact of Romantic Modernism in the ateliers of Farkasdy and Jánossy.(13)

Experienced architects also turned to Romantic Modernism. GYULA RIMANÓCZY (1903-1955) had mastered both modern trends with a classical touch present in the country: Italian interwar architecture known as the Roman School in Hungary and the Nordic Romantic Modernism.(14) Building R is strictly classical in its arrangement and details, oriented toward the River Danube. It is exceptionally reactive to its immediate environment, powerfully exploiting the grand waterfront.

Projects influenced by Romantic Modernism exceptionally deal with their direct urban, mental or natural context however. The common character was a cultural reference to the European tradition of Neoclassicism and Romanticism, which offered a refuge against cultural oppression. The related environment was mental, an intellectual haven, the free spirit of European Romanticism combined with modern expression.

The success of Nordic Modernism can be attributed to the fact, that both Scandinavia and Hungary had a largely rural society up to the middle of the century and the humanism of the North,(15) the idea of a class-free society, equality and social justice (16) were appealing ideas in Hungary just as Nordic architecture. Architecture can be conceived as a means for achieving this programme in both Scandinavia and Hungary. Nordic Modernism offered a democratic alternative to the forceful egalitarian acts of the communist dictatorship, accompanied by an extraneous and imposed style in architecture.

Socialist Realism as well as the tyrannical regime in Hungary survived the death of Stalin in 1953. Years of slow détente came; even criticism was formulated in the central architectural periodical but Socialist Realism remained the prevailing style until the Hungarian Revolution in 1956. The uprising was crushed. In spite of its immediate failure, the uprising sparked changes in the cultural sphere. A *new* architecture was propagated; modernism was shyly reintroduced to designers.

3. REVIVAL OF THE MODERNIST THEORY AFTER 1956

The failure of the Stalinist regime also led to changes in architecture. The first round of political consolidation of the new regime lasted until 1958; cultural issues were handled only afterwards. Apart from a handful of architects influenced by Romantic Modernism, Modernism had to be reintroduced and even *revived* on large scale. A short, transitory period preceded the beginning of the slow and widespread revival of modernism.(17)

Infill houses in the inner city still wounded by the fights of 1945 and 1956 labelled the *transitory period*. Nordic traditions appear again, as architects applied the grid scheme façade of the *Law Court Annex* in Stockholm by Asplund from 1937.(18) The first published directive in the term returned to the idea of an art that is *socialist in form and national in content*, but gave no further instructions.(19) MÁTÉ MAJOR warned that simply copying contemporary western architecture – instead of eastern – (still) leads to meaningless formalism as Socialist Realism did previously.

New architecture was not easy to find. Theorists developed two ways, just as their western colleagues did: a synchronic and a diachronic presentation of the Modern Movement. The presentation of the contemporary situation first seemed to be a simple collection of the current outstanding projects, similar to the venture for the International Style.(20) The keynote of JÁNOS BONTA described three different existing trends: 1) a structural but sterile formal language mastered by Mies van der Rohe (1886-1969), 2) the picturesque and radically individual designs, for example the works of LE CORBUSIER (1887-1965), and a 3) third path where the concept is expressed by the construction, naming projects of Scandinavian architects like Jørn Utzon. Later studies echoed the same perplexity. Presentation of the current situation did not prove to be sufficient.

Theory had to reinvestigate the idea of traditions – but this time, the modernist traditions instead of the progressive neo-classical ones. Theory aimed to prove the historical legitimacy of the Modern Movement, just as NIKOLAUS PEVSNER did previously.(21) Architectural historians and theorists dedicated their research to the recent history starting from the Hungarian fin-de-siècle movements. As a keynote Major reminded that the careers of great Hungarian architects have ended at the dawn of Modernism.(22) Eventually all narratives have revealed an insuperable historical fracture between fin-de-siècle movements and the Modern Movement.

Modern architecture did not quite seem evident for Hungarian theory after 1956. Neither synchronic outlook, nor diachronic researches offered authentic models. Only the signs of crisis were visible. Even SIGFRIED GIEDION argued in his foreword of the 1964 German edition of *Time, Space and Architecture* that modernism is in a state of confusion.⁽²³⁾ At the time, Giedion was also in search for new tendencies and added accentual chapters on Nordic architects Jørn Utzon and ALVAR AALTO. Hungarian theorists also had to seek an alternative story.

Theorists discovered that just before the untimely disruption of traditions Hungarian architects were in a close relationship with Finnish architecture. While careers and developing ideas were shattered by the end of World War I in Hungary, Finnish architects preserved, nurtured and evolved architectural thoughts of Secession afterwards. Critics admire the seemingly undisturbed progress of concepts which is considered the source of its worldwide success. A long dispute concluded that Finnish architecture preserved and developed the ideas of the common golden age while Hungary suffered from a confusion of artistic ideas sometimes oppressing each other. Finland can therefore be followed as a model in developing ideas.

ELEMÉR NAGY discovered that there is another tendency in Finnish architecture outside avant-garde, which grows out of the English Arts & Crafts Movement and Nordic Romanticism. The greatest architects of the *other tradition* are FRANK LLOYD WRIGHT, Asplund, Aalto, and this tendency has a large impact on Finnish architecture. Opposed to avant-garde, it emphasises the continuation and an organic growth of the past, instead of denying it; seeking to create a close relation to its vicinity by application of local materials and local traditions. Inspirational sources include the powers of nature; buildings are composed according to natural forces: addition, direct use of geological forms, crystalline shapes and cells emerge, volumes undulate and congest instead of giving a spatial expression of abstract fine art.⁽²⁴⁾

LÁSZLÓ VARGHA also mentioned the role of nature in his later article, but he also reflects on its appropriate content. As a last step in the search for an alternative modernism, the author ideologically certifies Finnish architecture as "*it is national, social in its content, and rural-national (ethnographical) in its form*", labelling it exemplary even in the spirit of Social Realism – in 1965.

After the transitory period theory had sought for a comprehensive revival of Modernism. Neither a contemporary out-



Figure 2. Zoltán Farkasdy: Úri utca 32, Budapest, Hungary, 1959 © Dániel Laczó, 2018

look nor the unfolding of local architectural history was successful, and theorists had to look for a suitable narrative. Historiography found *the* other tradition that is much more balanced and has a rich historical background. The other tradition of modernism is therefore historically legitimate, and it is even based on a social program, making it truly appropriate for socialist Hungary.

5. MODERNISM IN PRACTICE AFTER 1956

While theory and practice was emerging and seeking the path of modernism, the Danish boys kept to their conceptions and thoroughly investigated the existing context in their designs. Farkasdy completed his first house in the historical centre at *Úri utca 32* in 1959. Remnants from the Gothic period were creatively composed into the ground floor of the house. Scale and urban pattern had been carefully maintained. The new façade is an axial composition using a contemporary formal language.

Jánossy also designed a small apartment building in the historic centre at *Bástyasétány 27.* (1959-63). Maisonettes, unconventional in Hungary, were designed with different openings altering according to their function. The result is that two

floors become one unit and seem twice as high thus the façade design dissolves the antagonism between the small modern and the neighbouring historical large floor heights. The house is clad in whitewashed brick which is alien to any local convention but rather shows the direct influence of Aalto.

The spreading of Nordic Modern spirit after 1956 is visible in the designs of Zoltán Gulyás (1930-2000). His building in *Fehérvári út* from 1960 was among the firsts to depart from the transitional style for large infill houses. The compositional arrangement of the volume and the brick cladding follows the style of Aalto.(25)

Figure 3. György Jánossy: Bátyasétány 27, Budapest, Hungary, 1960. © Dániel Laczó, 2018



Dániel Laczó Modernist Survival During Early Socialism in Hungary

The scale of *Madách sétány 4* offered the possibility to create a more delicate relationship to its environment. The first post-war plans in modern spirit proposed the complete razing of the area, but Gulyás proved to be more delicate. He built a perimeter block clad in brick as his great neighbour. The wide street offered a grand gesture and Gulyás designed the building to gradually follow the curve of the street.(26) In his age it was a pioneering reaction to the existing urban fabric. Expressive forming of the main façade and the associative character of the staircase shows the influence of Aalto.

The most successful building of Gulyás was the *Chemolimpex Headquarters* built in 1963. The review praises the design for following the traditional cour d'honneur setting, common in the first decades of the 20th century in Budapest. Gulyás again demonstrated that a traditional plot of the inner city is perfectly suitable and sufficient for a modern design. Critiques once more highlight the influence of Aalto.(27)

Following the transitory period both design practice and theory rediscovered the other tradition of modern architecture as a means of comprehensive modernist survival.

6. SUMMARY

The central communist government introduced a strong social programme after the seizure of power in 1949. These included egalitarian acts, factories and even smaller workshops were nationalized, collectivization of agriculture was constrained, the mainly rural population became a subject of urbanization, and the newly formed and extended towns saw a powerful wave of industrialization. The communist party gained strict control of cultural life and forced two radical shifts in architecture between 1949 and 1963. Immediately after the final seizure the application of the Socialist Realist style was made obligatory but a gradual return to modernism followed the Revolution of 1956.

Strong modernization efforts, rapid social changes were often accompanied by a cultural need for a re-past in the 20th century. Totalitarian states as Italy, Germany and the USSR also evoked the formal language of Neoclassicism(28) as well as democratic countries like Denmark,(29) Sweden(30) and Finland.(31) Soviet modelled Hungarian Socialist Realism was a late development in this ideological movement in the early 1950's, anachronistic even in its anachronism.

Advocates of Socialist Realism criticised the Modern Movement labelling it formalistic and cosmopolitan, meaning that forms lack intellectual content and have no relation to its geographical or cultural surroundings. Theorists favoured pro-

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Figure 4. Zoltán Gulyás: Chemolimpe Headquarters. Budapest, Hungary, 1963. © Dániel Laczó, 2018

gressive traditions, which were eventually clarified solely as 19th century Neoclassicism, forging a direct ideological link between the Hungarian Reform Age (1825-1848) and the communist dictatorship. Radical provincialism or the subtle conservative, and timeless classicistic values incorporated in Nordic Romantic Modernism offered a shelter.(32) Thus a contemporary, conservative, and free minded architecture survived tyranny. A small group successfully maintained a modernist attitude, opposed and critically reacted to the dictatorial command of Socialist Realism.

The Hungarian architects influenced by Nordic Modernism were critical against Socialist Realism, but were critical against modernism as well. Withdrawal from Socialist Realism begun slowly after 1953, but the return to modernism was a slow process in practice and theory as well. Formulating the historical legitimacy of modernism in Hungary required strict critical approach. The strong critical attitude towards modernism coined by Socialist Realism remained active and eventually resulted in defining *the other tradition of modern architecture* in the 1960's.

The 1962 text of Nagy made similar discoveries as the 1995 book of Colin St. John Wilson regarding the other tradition. St. John Wilson describes this alternative movement as genuine modern, however emphasizes the spiritual and historical references instead of pure abstraction. Forms have an associative and symbolic value;(33) escapes all attempts to define it

as a regular style,(34) and is free of self serving fine art-like compositions.(35) Hungarian critique on modernism historically started in Socialist Realism, and results there as well, for the definite result is accepted as *social in content and national in form*.

Design architects influenced by Nordic Modernism were sensitive and conscious of historical traditions as well as theory was. The reference on local context and especially history appears on most buildings, the understanding of this architectural thought did not result in architectural copies but rather a spirit of a local reinterpretation of context.

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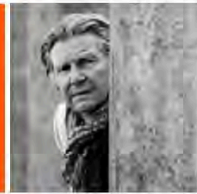
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BIOGRAPHY

Dániel Laczó is a PhD student at the Szent István University of Gödöllő, Hungary. He also works as an architect at Földes Architects. His main field at the PhD is the influence of Nordic Modernism in Hungary. Previously he examined the relationship between the theory of English Romanticism the and Modern Movement (Laczó Dániel: Modernista reflexiók az angol romantikus építészetelmélet alapértékeire, *Architectura Hungariae*, vol. 12. no. 2. (2013) 37-60.) and the Newly-Modern in Hungary (Simon-Laczó: Promise of a New Golden Age - Newly Modern Architecture in Hungary. *Periodica Polytechnica*, 2014)

Session 18 ABOUT TEAM 10 CONTINUITY AND CHANGE

Session Chair: Hubert-Jan Henket (The Netherlands)



Now that we move, in restoration and adaptive re-use, more and more towards the post WW2 period, it is very good news that this conference presents four papers and three key note lectures dedicated to the TEAM10 phenomenon. This is of particular interest to us today because many of the items that occupied TEAM10 participants are topical now, such as the in-between world of tradition and modernity, local and global, rationality and emotion. Besides their investigation into the issues of the big numbers, communal esthetic, identity, the role of the architect and the participation of the users are all key elements in our quest for a sustainable future.

The four papers presented in this session, deal partly with original conceptual issues of TEAM10 and partly with controversial decisions taken when confronted with restoration or adaptive re-use requirements. What if the original concept is a myth, or if the intervention is not in keeping with the original idea. In this session an open debate is intended, so come and participate.

BIOGRAPHY

Hubert-Jan Henket (1940), emeritus professor of the Delft and the Eindhoven Universities of Technology the Netherlands, is the founder (1988) and honorary president of DOCOMOMO international.

In 1969 he graduated cum laude with Aldo van Eyck as his mentor at Delft. From 1969-1976 he practiced in Helsinki and London.

In 1976 he started his own practice, since 2010 known as BiermanHenket architects. His portfolio includes the restoration of sanatorium Zonnestraal (with Wessel de Jonge), the Gerrit Rietveld Art Academy in Arnhem and the supervision of the Berlage Stock Exchange in Amsterdam, the Dudok Institute Neerlandais in Paris, the Theo van Doesburg house in Meudon (France) and Amsterdam Airport Schiphol (1995-2008). Among others he designed the Dutch Embassy in Bangkok and several museums like Teylers in Haarlem and "de Fundatie" in Zwolle.

He has written the book "Waar Nieuw en Oud Raken" (2013) and edited (with Hilde Heijnen) "Back from Utopia" (2002).

RE-THINKING THE ARCHITECTURE OF AN APPROPRIATE HABITAT: THE EXAMPLE OF SHUSHTAR-NOU, IRAN (1975-85)

Mohamad Sedighi (Iran, The Netherlands)

ABSTRACT

In 1974, the Second Iran International Congress of Architects (IICA) brought together a group of leading international architects to discuss the issues pertaining to local culture and industrialisation. Among the participants of this conference, three main figures of Team X including Aldo van Eyck, Georges Candilis, and Jaap Bakema played a kernel role. They extensively focused on the theme of 'Continuity & Change' in architectural traditions and addressed the ways through which an 'appropriate human habitat' could be constructed. Arguably, this conference had a substantial impact on the works of its organisers, in particular Kamran Diba who in 1976 designed a company town close to the ancient city of Shushtar, in south-west Iran. By analysing the urban form and development of this housing prototype, this paper reveals how Diba incorporated the idea of 'Continuity & Change', as discussed in the 1974 IICA, into his project. This project also poses questions about the role of standardisation in creating an appropriate human habitat and an adaptive total environment. Investigating the development of this model demonstrates to what extent Diba's model formed a synthesis between the local and global architectural culture.

1. INTRODUCTION

Organised by a group of young-leading Iranian modernist architects including Kamran Diba, Nader Ardalan, and Laleh Bakhtiar, the Second Iran International Congress of Architects (IICA) was held in Persepolis-Shiraz, between 24 and 30 September 1974. The conference aimed to discuss the role of industrialisation in the architecture and urban planning of industrialising societies, a topic that brought together leading international architects and urban designers such as Josep Luis Sert, Oswald Mathias Ungers, Moshe Safdie, Kenzo Tange, and Paolo Soleri, in Iran. Among the participants of this conference, three main figures of Team X including Aldo van Eyck, Georges Candilis, and in particular Jaap Bakema played a kernel role in the debates regarding the theme of

'Appropriate Human Habitats'.

In his influential speech, 'Continuity & Change', Bakema compared the vernacular architecture of Bazaar in Tehran and his Lijbaan project in Rotterdam; and then, he argued that the physical structure of both projects forms a relationship between different spatial units creating a continuity, while each unit itself would have accommodated change over time. Instead of emphasising on the archaic principles of Iran's vernacular architecture, such as the Persian garden or the courtyard house type, for developing a community model, Bakema focused on the relationship between modules and patterns, and proposed an open-ended 'total environment' where its structure is formed from a continuous string of small spatial and identical fragments. The IICA debates led to the provision of the 'Habitat Bill of Rights', a document that was submitted by the Iranian government to the first UN conference on 'Human Settlements' held in Vancouver, in 1976. Moreover, these discussions and in particular that of Bakema had a substantial impact on the works of their organisers, among whom Kamran Diba was the only one interested in the non-profit public works.

A few months after the conference, the Karoun Argo-Industries Corporation (KAIC) assigned Diba to design a new town close to the ancient city of Shushtar in south Iran, an area that later became known as Shushtar-e Nou. Intended to accommodate 40,000 blue-collar workers of the sugar industry, Diba grabbed this opportunity to reflect on the 1974 IICA debates, and to implement his ideas for developing a new community model in Iran. In this paper, I will contend that Diba's community model formed a new but interwoven relation of modernity and vernacular patterns of inhabitation, bringing a synthesis between the local and global architectural culture.

2. SHUSHTAR-NOU

Diba's special relationship with Iran's imperial office was instrumental to become engaged in many architectural and urban

projects.¹ Since the mid-1960s, Diba's firm collaborated with the Ministry of Housing and Urban Development for realising numerous projects in Khuzestan province, a region in south-west Iran. The most noticeable projects were the master plan of Khoramshahr port city in collaboration with Doxiadis Associate, the development plan of Defzul, an ancient city close to Shushtar, and the new campus of *Jondishapur* University in Ahvaz, among others. In all projects, arguably, Diba attempted to develop a scheme based on the socio-cultural and environmental characteristics of the region.

His interest to develop locally inspired urban projects can also be seen in the assignment Diba received from the KAIC, in 1976. As argued by Diba, while the KAIC design letter expressed the need for constructing a prefabricated housing project, he assured the client that his design scheme would meet the quantitative objectives of the project (i.e. time-plan and mass production).² Moreover, Diba proposed a new loca-

tion for this project, close to the ancient city of Shushtar. In his proposal, Shushtar-Nou was described as a modern town that would be divided from the old city through the 'Karoun-River', but connected via a bridge to the historic centre (Fig.1).³ While intended to form a continuity with the historic urban structure of Shushtar, Diba claimed that his compact urban scheme design would promote a new urban life among a traditional society, in Khuzestan.⁴

3. DIBA'S IDEAL MODEL

Diba's social vision is rooted in two different experiences, one as a child in Iran and the other as a post-graduate student in the US. After graduating in architecture, Diba studied sociology which turned him to a person who not only as an architect is sensitive to the local vernacular environment, but also as a theatre director is responsible to provide certain human situations that would enable users of space with various pos-

Figure 1. The urban layout of Shushtar-Nou. Source: redrawn by Mohamad Sedighi.





Figure 2. The configuration of a neighbourhood structure in Shushar-Nou's urban layout. Source: Mohamad Sedighi.



Figure 3. The Courtyard house typologies in Shushar-Nou, based on the number of multi-functional habitable rooms. Source: redrawn by Mohamad Sedighi.

sibilities of engagement and interactions.⁵ Diba grew up in a high-dense neighbourhood of central Tehran where diverse social and political events and activities took place during the nationalisation of the Anglo-Iranian Oil Company in the early-1950s. These created opportunities for gatherings and conversations in the small streets and squares forming new social relations among the general public in traditional communities of Tehran. This might explain why Diba considers density as a quality, rather than a challenge in developing human environments.

In his influential essay 'What Islamic Architecture Is Not', Diba contends that density would generate dialogues among people and allow them to negotiate their common issues.⁶ To reinforce his claim, Diba refers to the social structure of traditional neighbourhoods in Iran, where in the afternoon women wash the streets in front of their houses, an activity which provides a chance for a chat among neighbours, and an opportunity for their children to play outside. Indeed, these activities created a feeling of responsibility among the residents of such neighbourhoods and increased their sense of belonging to the living environment. That is why Diba described high-rise residential buildings as a serious enemy of human communities, specially in the Muslim societies, and claims that these building types neglect the sense of community and restrict the life of people to their living units.⁷ Considering Diba's interest in developing a new community mod-

el, the 1974 IICA conference mainly focused on the theme of human habitat in transforming societies, an event that was co-organised by Diba.

4. THE 1974 IICA

As mentioned previously, the IICA gathered leading international architects together, where the three main figures of Team X played a central role in the discussions regarding the theme of habitat.⁸ They described human habitat as a total environment where its structure is formed from a continuous string of identical fragments that would accommodate growth and change over time.⁹ In this model of habitat, as Bakema argued, the continuity of the spatial units plays a significant role. In his speech 'Continuity and Change', Bakema put emphasis on spatial, physical and visual relationship between individuals and the built environment. He claimed that the architectural elements could change, while the relationship they produce should remain permanent.¹⁰ Then, Bakema focused on the relation of modules and patterns as an open-ended built structure, and claimed that 'the means for making built environment would continuously change, so this change of means has to be based on recognition of the continuous function of *architecturban form* in the life of men.'¹¹ According to Bakema 'the built environmental form can function, to make what is far become familiar with what is near. It can function so that, which has to be developed in

large programmes with the fear of a scale which the human mind cannot take in, become fragmented.' Then, he concluded that 'we have to introduce the transitional elements which are an architectural question so that by human perception, big can be taken in bit-by-bit.'¹² Interestingly, Bakema's perception of a total environment resonates with Diba's approach about his community model. In an interview conducted by Enayat Fani, Diba conceived his project as an attempt to 'articulate and link a series of small units that were structured within a pattern of modular grids, an organised structure of changeable units that forms a total human habitat.'¹³

This approach might be seen from the parcel layout that Diba employed to organise the structure of neighbourhoods in Shushtar-Nou. In this layout, Diba replicated an identical plot size of 12- by 14-meter, and arranged them in pairs, back-to-back. This gave Diba a structure being changeable at will to all sides, and therefore independent of its periphery allowing inhabitants for eventual adaptation through the combination of plots in the future.¹⁴ Accordingly, each neighbourhood was designed with four rows of 11-paired houses, and the streets between them provide natural light for and access to the individual houses (Fig.2).

Another influential talk of the 1974 IICA conference that might have inspired Diba was that of Candilis. Although he gave a similar explanation on the meaning of a total environment, he put more emphasis on the importance of local condition in the process of developing human habitat. In his speech 'Appropriate Habitat', Candilis defines the 'real problem' of housing as 'to find the direction, the method, not only by building houses, but [also] what house one must build, a total house with its environment: a habitat.'¹⁵ Further, Candilis pinpointed that architects should enable people to build their own houses and environment, and for so doing, the only technological means that designers could employ is local materials and construction techniques that are dependent on available resources.¹⁶ This might explain why Diba chose a low-tech construction system with load-bearing brick walls placed on concrete footing, allowing local contractors to hire unskilled labours for the construction (Fig.3).

Aside from employing local materials and workers, the changeability of internal arrangement of individual houses can also be seen as an important characteristic of Diba's scheme. As argued by Diba, this changeability might enable individuals to form a living environment based on their needs, an approach that recalls van Eyck's notion of 'inner spaces'.¹⁷ In his short talk at the 1974 IICA, van Eyck criti-

cised the limited scope of individual contribution to the development of human habitat. Then, he addressed the role that 'inner spaces' would perform to a sense of familiarity with the built environment. This sense, as van Eyck argued, is largely dependent on the changeability of a place, and 'change only has meaning when it is applied with constancy'. According to him, which is constant and which changes constantly is the same thing in time and space and in terms of human beings.' Then, van Eyck concluded that in a process of evolution, 'each subsequent step leads from the previous one, where the inner spaces together not only comprise the whole, but individually, they are also as consequence of that whole.'¹⁸

It seems that the way van Eyck described the impact of 'inner spaces' in the development of human habitat played a fundamental role in the design of individual houses in Shushtar-Nou. Instead of designing a house as a conglomeration of different rooms with specific functions, Diba developed a series of multifunctional-rooms, mainly a combination of 5-by-5 meters, 4-by-4 meters, and 3-by-4 meters spaces. To bring these rooms in a variety of configuration, the service space (i.e. the bathroom, the kitchen and the lavatory) was placed among the habitable rooms as an autonomous unit, forming a frame around which change would take place. In so doing, each room would accommodate a variety of activities, reflecting a lifestyle that is prevalent among low-income families and rural population of Iran (Fig.4).¹⁹

Figure 4. The application of local materials for the construction of Shoushtar-Nou. Source: Mohamad Sedighi.

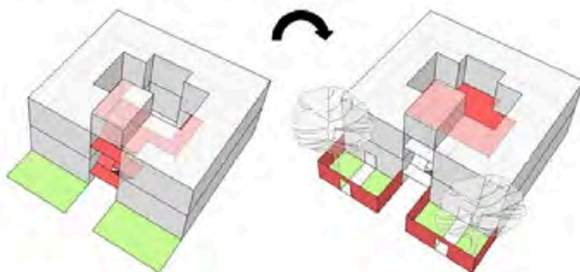


5. THE GROWTH AND CHANGE

The urban community of Diba underwent a series of multiple changes over time. However, these changes created perplexity in some scholars who wrote reviews on Shushtar-Nou. For instance, Mohammad Reza Shirazi, an Iranian scholar, claimed that the current situation of Diba's project testifies to an initial gap between the utopian vision of the architect and the real life of the inhabitants.²⁰ To reinforce his claim, Shirazi referred to the multiple changes that people made in the façade of their homes, and in the internal organisation of their houses. This section illustrates how Diba deliberately designed an open-ended structure, and to what extent his design decisions contributed, to facilitate growth and change over time.

The construction of Shushtar-Nou started in 1977. However, the Iranian revolution of 1979, and the war between Iran and Iraq, lasting for 8 years, disrupted the completion of Diba's habitat model. As a result, just over 650 dwelling units out of 6,500 houses were built by 1985. Despite the fact that the project was not fully realised and partly occupied by the refugees, it seems that the residents of Shushtar-Nou formed a collective community with a strong sense of belonging to the place. Since the year of 2000, this characteristic was reported, in multiple ways, by local press or independent researchers. A most recent review, published in the Iranian journal of *Shahret* (Your City) in 2016, was the results of a site survey, conducted by a group of students at Tehran University. While this study indicates that the inhabitants of Shushtar-Nou still deal with a variety of issues such as insufficient access to urban services and infrastructure, it clearly shows that the existing social-bond among the residents plays a crucial role in creating a secure and safe living environment.²¹ Moreover, this research explained about 'a participatory sprint among the residents for resolving their urban problems.' As described

Figure 5. The internal modification of house layouts by the inhabitants. Source: Mohamad Sedighi.



Mohamad Sedighi Rethinking the Architecture of an Appropriate Habitat

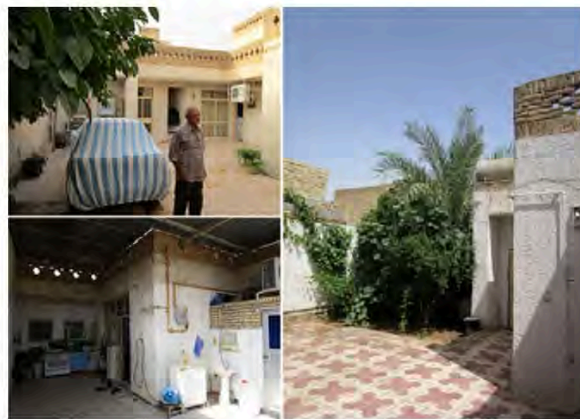


Figure 6. The modification of private courtyards in Shushtar-Nou. Source: Mohamad Sedighi.

by Christopher Alexander, the extent of social participation in an urban project is largely dependent on the design decisions that would cater for individual initiatives and user autonomy.²² Diba's plan contains a few characteristics that facilitated participation, I will argue, in the development of this urban community.

In Shushtar-Nou, the choice of a courtyard typology and employing the courtyards in the form of an 'indeterminate' outdoor room were essential for encouraging individual initiatives and achieving user autonomy. Particularly, this might be seen

Figure 7. The facade decoration by local masons and the modification of it by the inhabitants. Source: Mohamad Sedighi.



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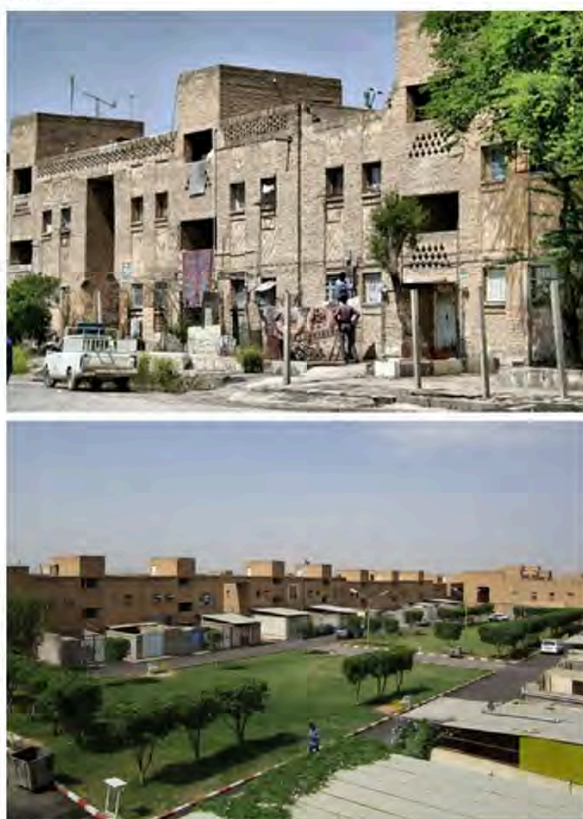
from the layout of the two-story house types, in Diba's plan. To give access to the habitable rooms in the second level, Diba designed a semi-open staircase and gallery as an autonomous entity between the interior spaces and the exterior courtyard. While this configuration enabled people to use freely the private indoor and outdoor spaces, it also allowed them to use the access system as an extension of the courtyard or as an integral part of their habitable rooms. As a result, some chose to integrate the access system into the internal layout of their houses, and some modified it for other purposes (Fig.5). Similar process took place in one-story house types, and the courtyard became the point of departure for further modifications. In these houses, people mostly chose to expand their habitable rooms towards the yards. However, some used part

of the courtyard as private parking space, or for their daily activities such as cooking. Surprisingly, in all cases, a small part of the garden remained intact which testifies to Shahcheraghi's claim who defined gardens embedded in the courtyards as the very characteristic of the Iranian house (Fig.6). While, the intermediate character of the courtyards as a space between indoor and outdoor activities enabled people to bring a variety of changes in the internal organisation of their houses, it also created a sense of incompleteness. This, indeed, formed a balance between individual expression and sufficient architectural standardisation, a characteristic that according to Peter Rowe recalls the notion of open-endedness.²³ According to Rowe, this open-endedness enables self-determination in prescriptive and large-scale development. Remarkably, Shushtar-Nou has simultaneous sense of being complete and unfinished. While the spatial organisation of houses is carefully designed and realised, the exterior façade of houses seems incomplete. In so doing, local masons were able to partly decorated the facades with brick patterns. Furthermore, part of the facades was left intentionally blank so that the future users could finish the materialisation of the facades with their motifs (Fig.7).

The other individual initiative took place around the communal gardens where the two-story house types for small families were placed. As a buffer zone between public and private spaces, Diba designed a series of front gardens next to the entrance of these two-story houses. Surprisingly, he did not choose to fence-off the gardens, forming an ambiguity in terms of ownership. The positioning of these gardens as the semi-private/semi-public outdoor domain provided an opportunity for the inhabitants of the two-story house types to choose whether to enclose the front gardens and use them as their private outdoor space, or to leave them as part of the public space. Subsequently, many people chose to wall-off the gardens; and in so doing, the gardens became an integral part of a new internal organisation (Fig.8).

The system of land-ownership in Shushtar-Nou also played an instrumental role in increasing social participation and the development of the project. This might be seen not only from the modification of individual house, but also from the evolution of communal gardens in Shushtar-Nou. Before the 1979 Iranian revolution, the public gardens were partly realised, and the KAIC was responsible for the construction and maintenance of public amenities and private houses. The Iran-Iraq war partly destroyed the public amenities and communal gardens of Shushtar-Nou, and the KAIC left the project unattended for a

Figure 8. The communal gardens before (top) and after (bottom) enclosing. Source: the top image by Amir Karimi and the bottom one by Mohamad Sedighi.



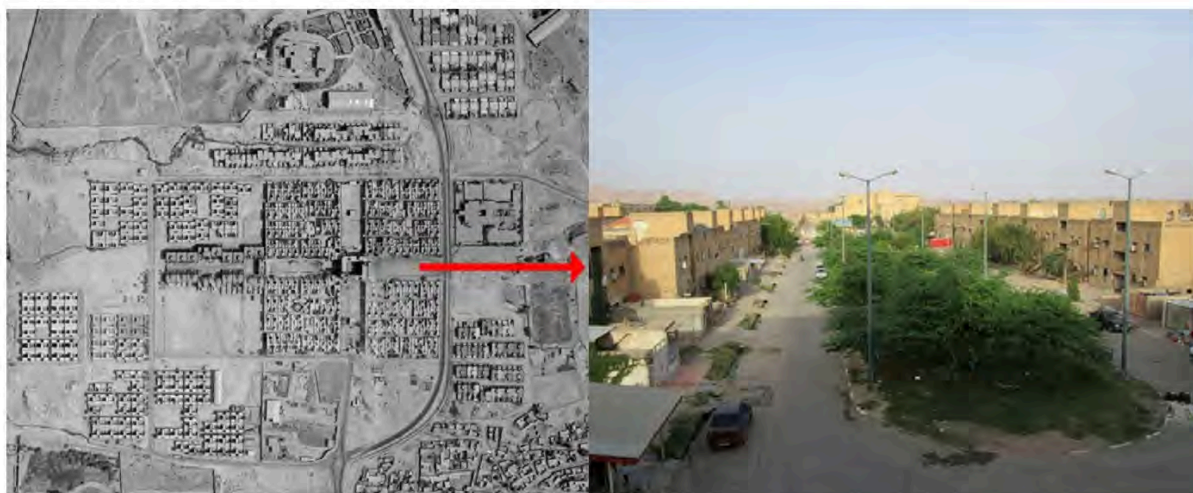


Figure 9. The left image is urban condition of Shushtar-Nou in 2001. Source: Iran Cartographic Centre, Accessed July 2016. The right image is the communal gardens of the project, in 2016. Source: Mohamad Sedighi.

long period. Moreover, the financial instability of the company in the 1990s exacerbated the situation and delayed the reconstruction of communal amenities and public spaces in Shushtar-Nou.²⁴ By conveying the ownership of houses to their inhabitants since the early-2000s, the residents of Shushtar-Nou have spontaneously begun to plant seedlings in the places where former communal gardens were constructed. In 2016, these public spaces turned into the gardens, forming a place full of trees for outdoor leisure activities (Fig.9).

Figure 10. The integration of communal gardens (dark green) and the pedestrian route (yellow) in the urban layout of Shushtar-Nou. Source: the archive of Iran's National Library, Accessed July 2016.



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6. CONCLUSION

In this paper, I contend that while Diba's community model did not lead to a methodological change of paradigm in the politics of housing design in Iran, his intention to provoke a new urban life among the residents of Shushtar-Nou might be seen as an attempt to bring a dialectic synthesis of local traditions and global civilisation. To encourage new social encounter, while Diba designed his plan tree-less in the neighbourhood level, he placed the communal gardens outside the urban fabric of the neighbourhoods. In so doing, the gardens were integrated with the main pedestrian route that connected all public amenities such as schools, shops and teahouses, forming a pleasant place for outdoor activities, joy and leisure (Fig 10). Moreover, the integration of archetypal elements such as gardens and courtyard house-types with a model of 'total environment' not only enabled the residents of Shushtar-Nou to persevere their collective identity, but also facilitated a condition under which change and growth could take place.

NOTES

- 1 Kamran Diba was a cousin of Farah Pahlavi, the former queen of Iran.
- 2 Enayat Fani, interview by Kamran Diba, 2014.
- 3 Kamran Diba, "Shushtar New Town on-Site Review Report," in *Aga Khan Award for Architecture*.
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- 5 Ibid.
- 6 See: *Buildings and Projects* (Stuttgart: Hatje, 1981).
- 7 "What Islamic Architecture Is Not," in *Understanding Islamic Architecture*, ed. Attilio Petruccioli and Khalil Pirari (New York: Routledge Curzon, 2002), 121.
- 8 See: Laleh Bakhtiar, ed. *Towards a Quality of Life: The Role of Industrialization in the Architecture and Urban Planning of Developing Countries - Report of the Proceedings of the Second International Congress of Architects, Persepolis, Iran, 1974* (Tehran: Hamdani Foundation, 1976).
- 9 See: Abdolhamid Eshragh, "2nd Iran International Congress of Architecture - Persepolis. Shiraz, September 24-30, 1974," *Honar va Memari* 25-26, no. Special Issue (1975).
- 10 Bakhtiar, *Towards a Quality of Life*, 29-32.
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- 15 Bakhtiar, *Towards a Quality of Life*, 237.
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- 18 Bakhtiar, *Towards a Quality of Life*, 301.
- 19 Diba, *Buildings and Projects*, 196.
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- 21 Golnoosh Mozafari, "Shahr-E Harf-Haye Magoo: Shushtar-Nou," [City of Untold Stories: Shushtar-Nou.] *Shabret: Nashriye-ie Darbareye Shahr* 6, no. Shahr va Jorm [City and Crime] (2016): 20-23.
- 22 Christopher Alexander, Sara Ishikawa, and Murray Silverstein, *A Pattern Language: Towns, Buildings, Construction* (New York: Oxford University Press, 1977).
- 23 See: Peter. G. Rowe, *Modernity and Housing* (Cambridge and London: The MIT Press, 1993). 285-88
- 24 Shirazi, "From Utopia to Dystopia: Shushtar-No, Endeavours Towards a Paradigmatic Shift," 120-36.

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BIOGRAPHY

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MYTH AND METAMORPHOSIS:**ALDO VAN EYCK'S ORPHANAGE (1960) IN AMSTERDAM RESTORED**

Wessel de Jonge (The Netherlands)

ABSTRACT

Aldo van Eyck's celebrated design for a new orphanage concerns two series of four pavilions in a green setting connected by an 'internal street'. Within a geometric pattern of structural cells each pavilion was specifically designed for a certain age group and gender, featuring different built-in play elements and furnishings. This masterpiece of the postwar Modern

Movement is generally recognized as an epitome of the ideas of Team X and the cradle of Structuralism.

The famous original pictures of the building that fueled the canonical status of the building - as did Van Eyck's inspiring and poetic writings - were carefully orchestrated to reflect his ideas rather than reality, thereby waning the difference between the 'real' original and its 'mythical' manifestation. The

Fig. 1. Aldo van Eyck, Orphanage, Amsterdam, 1960. Overview of the four pavilions for the older children after restoration. Photo © Jannes Linders.



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actual use of the building diverted fundamentally from the architect's preconceptions. Rather than giving room to individuality and freedom, the particular spaces and specificity of the built-in elements regulated the children's behaviour, and some elements were almost instantly removed. Hence, the building is characterized rather by its metamorphosis, than by its mythical original existence.

Its conversion into offices since 1990 required interventions that were partly designed by Van Eyck himself. The building has recently been restored, creating a contemporary office environment at the same time. Major questions were how to value the lost elements of the original building and how to deal with Van Eyck's own alterations, also given the new use as generic office space, i.e. as an unbounded working environment, rather than a regulating domestic environment?

1. INTRODUCTION

Aldo van Eyck was commissioned with the design of a new *Burgerweeshuis* in 1954. Closely knit with his ideas on twin-phenomena, in the design of the Orphanage "all efforts have been made to build this house like a small city, recognizing that the city should be like a large house"¹ – an effort that was guided by his motto: "a small world in a large world, a large world in a small world, a house like a city, a city like a house, a home for children, a place where they can live rather than survive."²

Aldo van Eyck had engaged himself with the world of children professionally since 1947, when he was invited to design a series of playgrounds for Amsterdam. In his 1994 biography on Van Eyck, Francis Strauven explains how this commission related both to the city and to the child: "(...) the child considered both in modern psychology and the theory of modern art to be the paradigm of unspoiled spontaneity, who could be regarded as standing wholly open to the elementary values of the new reality." With over 700 Amsterdam playgrounds, "Van Eyck was fortunate to have had an excellent domain where he could experiment with forms and space".³

In retrospect, Van Eyck described his design as a plan that "attempts to reconcile the positive qualities of a centralized scheme with those of a decentralized one (...) and to provide a built framework – to set the stage – for the dual phenomenon of the individual and the collective without resorting to arbitrary accentuation of either one at the expense of the other." And he continues that "There are of course many ways of approaching this objective. The one chosen here was, first, to allow the various units to form a dispersed complex pattern. Then, to draw

them together again by imposing a single structural and constructional idiom throughout (...)." ⁴ (Fig. 1)

2. ORIGINAL DESIGN

2.1 Denominator

The introduction of the matrix formed by the structural cells was not a basic assumption *a priori*. Whereas it is a widespread idea that the geometric pattern was a preconceived starting point of the design, Van Eyck introduced it only late in the design process as a structural device to organise the spatial concept and to bind the parts of the building into a coherent whole.⁵

The concrete domes were even conceived afterwards as a non-directional and a-hierarchical articulation of the roof treating all the parts of the building, whether served or service spaces, as being of equal importance. Inside, the precast domes do not evoke a "uniform, isotropic space, but coalesce into continually changing patterns that create a continually changing spatial rhythm – a rhythm that both binds the diverse spaces together and clearly articulates them."⁶

Particularly in the junior units, the dimensions of the building were adapted to the stature of the children, not by adapting the ceiling levels above, but by varying the ground floor levels. In that sense the lower roof level appears as a denominator binding together the various numerators representing the floor levels – an idea that Van Eyck may have borrowed from Jan Duiker's 'Zonnestraal' Sanatorium that inspired him so much.

2.2 Specificity

Van Eyck, in his retrospective reflection, noted that, after imposing the geometric pattern, the design process continued by "(...) introducing a device with unquestionable human content – the internal street. Although all the spaces, irrespective of their function and span, were subjected to a single principle, their place, sequence and subtreatment; their relation to each other, the whole and the site-content, give each the specific meaning it demands (...)." ⁷

The twin-phenomenon of small-large is most manifest in the junior's playroom. The demand to adapt the dimensions of the rooms to the children's stature was not brought about by lowering the ceilings but translated here into a large domed space featuring small spaces like play-houses embedded within them. Small and large are simultaneously represented.

The 'play situations' were specifically designed for each age group en gender, involving fixed furnishings such as stepping



Fig. 2. The large domed playrooms feature specifically designed, fixed furnishings that render the pavilions suitable for just one certain group of users and less suited for adaptive reuse. Photo © Jannes Linders.

stones, a kitchen cooking table, or a puppet theatre. However, by designing such particular items as fixed elements, the various pavilions ended up as specifically suitable for just one certain group of users. (Fig. 2)

Although Van Eyck's design for the orphanage was welcomed abroad by authors like Bruno Zevi and the British architectural press, the building was received in the Netherlands with mixed feelings. The modernist architect Van Tijen appreciated Van Eyck's relentless efforts to push his principles to the limit but argued that "this building merely proves that it is impossible to invent spontaneity in advance. Van Eyck (...) casts children's games of reinforced concrete. That his architecture is consequently sometimes more a stumbling block than a stimulus to real life, Van Eyck has now discovered."⁸ Herman Hertzberger wrote in 1982: "The space left by Van

Eyck is his own space. We are indeed obliged to look at the world through his eyes (...)."⁹

2.3 Myth

There is no doubt that the Orphanage is the cradle of Structuralism but if, by nature, Structuralism is concerned with the configuration of "conditioning and polyvalent units of form", as Hertzberger put it¹⁰, and with the creation of generic and perhaps even extendable spatial structures such as his *Centraal Beheer* office building, the question may rise whether the Orphanage itself should be labelled 'Structuralist' as well.¹¹ As a matter of fact, the extreme specificity of the infills and the built-in elements deprives the building from most of its flexibility and generic usability, which, according to Hertzberger, is a key characteristic of Structuralism that is lacking in the Orphanage.¹²

Moreover, the use of the building in operation diverted fundamentally from the architect's visions. A recent Historic Structure Report by Suzanne Fischer reveals that the building has never really been used according to Van Eyck's starting points. During the final stage of the design he tried to adjust it to changes in the functional programme as a result of novel insights in childcare introduced by a new director. Rather than as a 'home' for children in 'horizontal' groups of the same age and gender, the building came to serve as a shelter for children living in mixed, 'vertical' groups right from the start.

Although intended by Van Eyck to give room to human individuality and freedom the resulting spaces and architectural features were actually highly particular and, certainly when considered from today's perspective, even regulating the children's behaviour. Many of the built-in elements and furnishings were altered or even removed already within the first years. The building had been intended as a liberating environment that will have worked well as a long-term accommodation for mentally stable children, but one may wonder to what extent it will have been a suitable environment for traumatised and abused children for which the Orphanage was a transit house. Ironically, former inmates report how the building was felt to be inhospitable, and the inner streets dark and scary at night.

Most of the well-known original pictures of the building that fueled the canonical status of the building - as did Van Eyck's inspiring and poetic writings - do not show the building in actual use. Because of his disagreements with the new director he was no longer welcome on site, and he was then only allowed to make a photographic documentation shortly before the building would be put into operation. Hence the pictures show empty spaces with chalk dust on the floor and missing light fixtures. The playing children were either borrowed in private circles, or his own. Mostly made by Van Eyck himself, the photographs were carefully orchestrated to reflect his ideas rather than reality, thereby waning the difference between the 'real' original and its 'mythical' manifestation - that is cherished by many admirers of his work perhaps too uncritical. In fact, the building is characterized rather by its metamorphosis, than by its original existence.

3. PROJECT

3.1 Original and adaptation

For the last decades, the building has been used mainly as offices and adapted accordingly. Most of the group-specific

architectural elements have gone lost. Due to its poor thermal performance as well as to neglect and a general lack of maintenance, the building suffered from severe leakages, cracks and concrete damage around 1990, when Van Eyck himself was engaged to accommodate an architecture academy in the southern portion, introducing further alterations. The other part was refurbished again for office use and he seized the opportunity to restore some of the lost play-elements. In 1998 another architect refurbished the entire building again for office use, adding an extension with a second entrance. As a result the building exhibited various time-layers when our office started a project for an integrated revitalisation in 2015. On the basis of a commercial redevelopment the building was to be refurbished - not 'restored' - to create an up-to-date and sustainable office environment, while preserving the essential architectural qualities as much as possible. We worked closely together with the landscape architects of Atelier Quadrat.

3.2 Value Assessment

A major question for our design approach was how to value the features and qualities that have actually been part of the original building as it functioned for the users, as compared to those that were intended by the architect but that partly never worked accordingly, also given the new use as a generic office space, i.e. as an unbounded working environment for adult professionals, rather than a regulating domestic environment for children. In view of this, the specific interior elements that had gone lost have not been restored and only those still in place, have been conserved.

Our initial idea to reverse all major changes and revert to the 1960s structure was challenged by the heritage authorities, claiming that the 1990s addition and further changes by Aldo van Eyck represent a time layer of their own. Of course there is something to be said for that although the argument why the 1998 alterations by the other architect were not valued equally was not provided. The Van Eyck Foundation - representing his heirs - was in favour of removing all adaptations altogether, including those by Van Eyck himself, asserting those were 'mistakes' by Van Eyck.

As architects, we agreed with the Foundation that the original design of the Orphanage would best be perceived without Van Eyck's 1990s interventions, but as heritage professionals we supported the retention thereof, as being part of the works of the original designer, and on the condition that those would actually be conserved as carefully as the 1960s part. The other

architect's alterations however were rather formalist in character and competed with the original architecture, so our project included the proposal to have them removed. Removal of the added entrance pavilion in the southernmost patio is however still being discussed, as rentable floor space would be lost, but it is our ambition to restore all enclosed outdoor spaces.

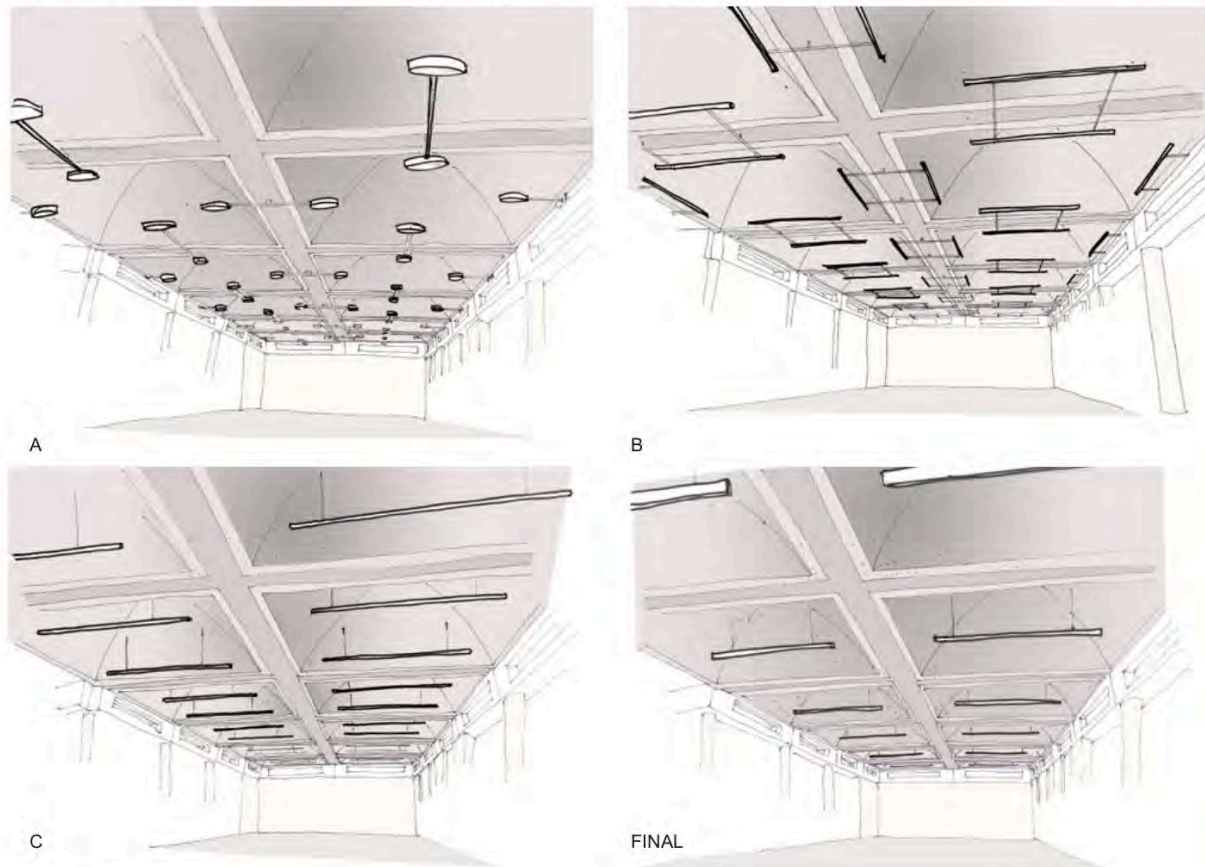
In some cases reverting to the original situation matched well with the objectives for the project. The configuration of the various infills with brick, glass or glass blocks matched the new use and could be kept and partially restored. The interior brick walls around the pavilions, that embraced the children's homes as a protective envelope and backed-up the celebrated diagonal vistas towards the outdoors, had been perforated to allow more

interaction between the later offices and the internal street. As the pavilions were to serve individual businesses the walls could be restored using the same street-paving-clinkers that Van Eyck selected originally. The inside has been smoothly plastered like in the 1960s. This way Van Eyck's reference to the internal street as a rough winter coat with a silk lining was restored.

3.3 Lighting: from specific to generic

A particular challenge, both conceptually and technically, has been the issue of artificial lighting that may serve as an illustration to our general design approach. Originally the types of lighting had varied according to the use and character of the various spaces. For the pavilions the various light fixtures

Fig. 3. Various options were tested for projecting multi-directional light fixtures from the beams out into the domes (A,B). Suspended light fixtures appeared to affect the characteristics of the domes far less (C). Figure © Wessel de Jonge Architecten.



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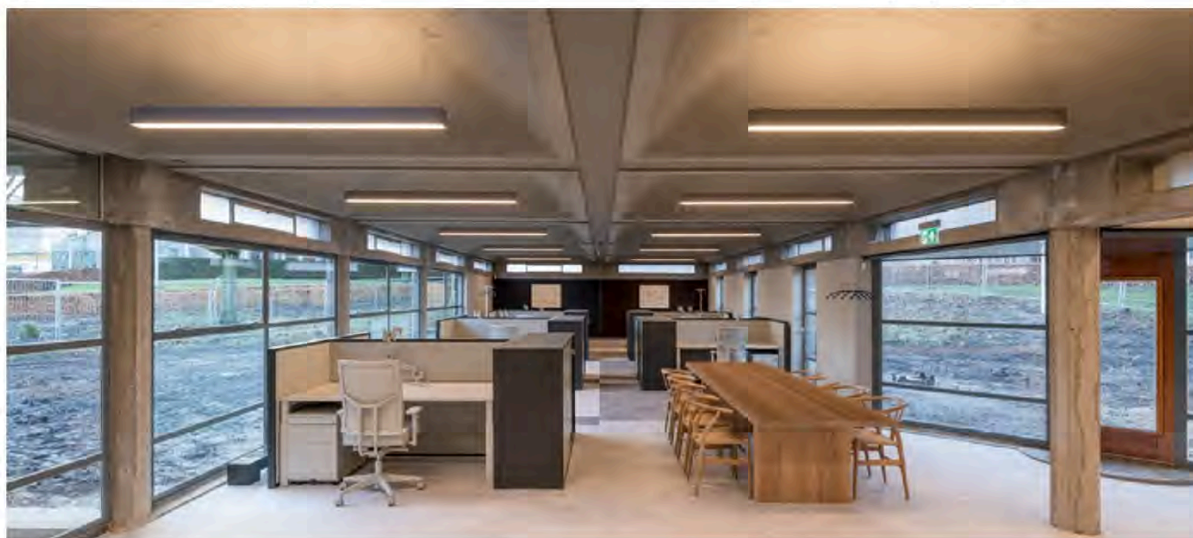
had been chosen to meet the functional zoning for playing, resting, dining, or doing schoolwork but again differently so for each of the homes. A large steel ring with small lamps suggests a centre for the living room for senior groups, while two similar chandeliers illuminated the middle of the festive hall. For the junior's playrooms under the larger domes Van Eyck designed freestanding light posts.

Except for the ceiling lamps that were applied in the internal streets, all original light fixtures featured up and downlight functions, while no light fixtures were hung from the domes, with the exception of the two chandeliers. All light connections and metal conduits for the electric wiring had been precisely embedded in the concrete work of the beams. However, the large majority of light fixtures had been lost and most of the makeshift offices were fitted in the 1990s with cable ducts along the walls and light tracks traversing the domes in order to create a generic lighting system: a solution we did not want to repeat. Since the aim of the project was not to reconstruct the original interiors with fixed furniture for children, we took the position that – in terms of heritage preservation – recreating Van Eyck's lighting plan wouldn't make any sense either. In our opinion, the choice for a new and generic use as an office conceptually justified the introduction of a generic lighting system. Also functionally, the original and characteristic contrasts in illumination levels were no longer acceptable. Illumi-

nation levels had to go up considerably requiring the addition of a large number of light fixtures and connections, which were unavailable from the embedded conduits.

To improve the lighting of the circulation areas provided by the internal streets we could elaborate on the principles as set out in the original design. But something more substantial had to be developed to convert the pavilions into office space. Simply increasing the number of ceiling lamps would have implied a disproportionate multiplication introducing two light fixtures at each beam span of 3.36 meter. Also the pre-dominance of downlight would create a glare rendering the domes into dark areas. Various options were therefore tested to project up/downlight-fixtures from the beams out into the domes. Lighting up the domes was an improvement but – with two light fixtures per dome – the sheer number of fixtures, power supplies and metal support arms with their particular shapes and forms would overrule the architectural and spatial characteristics of the domes altogether. (Fig. 3) Even if Van Eyck had avoided to suspend lamps from the vaulted ceilings himself, hanging the fixtures from the domes appeared to affect their characteristic forms far less and allowed for the domes to be slightly illuminated while providing sufficient lighting levels. After contracting the works the introduction of newly-developed LED-fixtures allowed their number to be reduced by half, leaving just one light fixture in each dome. (Fig. 4)

Fig. 4. Eventually one LED-up/downlight-fixture in each dome could meet the requirements for generic artificial lighting. Photo © Jannes Linders.



3.4 Concealing ceilings

As the old embedded conduits were unsuitable and too few, a new electricity network involving surface conduits seemed inevitable. This would surely have spoiled the spatial character of the domed ceilings. A solution could be found when we discovered that the domes originally showed a rough natural texture that aided the interior acoustic performance, which had gone lost by plastering the domes. The plaster could not be removed without completely destroying the original rough concrete surface. By applying about 30mm of a paper-based spray-plaster the conduits could be hidden while providing acoustic absorption to improve room acoustics at the same time. The rough grey material also resembles the original finish of the ceilings. The mains of all electricity services are accommodated in a 40 mm cavity behind a panel that covers the bottom of the concrete beams.

This integrated design solution was eventually agreed by the heritage officials to have the right balance between functional requirements and historic values. Despite the cost, it was satisfactory to the investors and users too. The fact that the geometry of the architraves with their centrally positioned apertures was affected by the 30-50 mm thick layer at the ceilings and that all of the 'concrete' ceilings are actually false, are setbacks. However, redesigning a building means making choices. We considered the results of our choice a better solution than retaining the original geometry while accepting a smooth ceiling with surface conduits and poor acoustics, or reverting to the original lighting plan that would be unsuitable for the new use.

4. CONCLUSION

In conclusion we may say that indeed Van Eyck has lent the building a sense of poetry that may be unprecedented in modern architecture. Even if it is tempting to regard his masterpiece as a successful shelter to accommodate playful, polyvalent and flexible use, the specificity of his design solutions, and the sheer number of individually crafted elements, in fact render the building into a structure that is also regulating and – to some extent – perhaps even curbing the behaviour of its users. The discourse whether buildings should be specific or, rather, generic in order to flexibly serve its purpose already came forward in the prewar Modern Movement.¹³ The increasing predominance of the rationalist mind in postwar modern architecture of course lays at the core of the emergence of Team X. Yet, working on the Orphanage, and re-designing parts of it, confirmed the impediments for adapting such a building to a changing use. When, as in this case, such specificity is part of the design intent, it seriously affects the chances for a building to be adaptively re-used and enjoyed as living heritage.

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NOTES

- 1 Ligtelijn 1999, p89 (Dutch edition only).
- 2 Aldo van Eyck in Forum 1961, quoted in Ligtelijn and Strauven 2008, pp 317-320.
- 3 Strauven 1998 p151; the word "domain" is a replacement by the author.
- 4 Aldo van Eyck quoted in Ligtelijn 1999, pp 88-89.
- 5 Strauven 1998, p305.
- 6 Strauven 1998, p295.
- 7 Aldo van Eyck quoted in Ligtelijn 1999, pp 89.
- 8 Wim van Tijen in "Inleiding tot discussieavond A et A", in Forum, 1960-61, nr. 9, pp 312-323, translated in Strauven 1998, p 322 by Victor J. Joseph.
- 9 Herman Hertzberger in McCarter 2015, p ix.
- 10 Ibidem.
- 11 See Lüchinger 1980, p 56.
- 12 Herman Hertzberger in his lecture for the inauguration of the restored Orphanage on April 12, 2018.
- 13 Like Sanatorium Zonnestraal (Duiker, 1928-31) and the Van Nelle Factory (Brinkman & Van der Vlugt, 1927-31) in the Netherlands. See De Jonge 2002, pp 44-59, and Adolf Behne, *Der Moderne Zweckbau*, eventually published Berlin, Drei Masken Verlag, 1926.

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BIOGRAPHY

The architect **Wessel de Jonge** is a full professor of Heritage & Design at the Faculty of Architecture, TU Delft, the Netherlands. He was the co-founder of DOCOMOMO International, chair of their ISC/Technology and editor of the DOCOMOMO Journal. He has widely published on the theory of (re-)design and his experience with modern heritage preservation. Wessel de Jonge Architects developed an expertise in conservation, adaptive reuse and extension of 20C heritage, including 'Zonnestraal' Sanatorium (Hilversum 1928-31, with Henket Architects) and the master planning for the Van Nelle Factory (Rotterdam 1928-31) prior to its listing as UNESCO World Heritage in 2014.

THE ECONOMIST PLAZA. HOW TO RESTORE A MODERNIST ICON TO CREATE SUSTAINABLE CONTEMPORARY WORKSPACE AND PRESERVE PUBLIC AMENITY?

Deborah Saunt (UK)

Abstract

As a practice hugely indebted to the work of Alison and Peter Smithson and Team 10, DSDHA are proud to be working on the restoration of the Grade II* Listed Economist Plaza. Having considered the impact of incremental changes since 1964 – the Smithsons themselves made alterations to their project prior to SOM architects' major reworking in the '90s – we have assessed what might be preserved or changed and have developed a phased framework to stay true to the original design intent and create sustainable and flexible workspaces and facilities, as well to maintain this unique public space for the city. Our framework has been guided by a rigorous methodology, devised in conversation with distinguished scholars and informed by our historical and forensic investigations of the Plaza. We have recorded the evolution of its design through time and catalogued historical photographs and drawings, in order to measure the impact of each subsequent alteration to the listed complex, both in terms of its spatial qualities and patterns of occupation. This research allowed us to establish a visual/spatial hierarchy, distinguishing the most iconic views – elements to be restored to the original design intent as much as possible – from the less known, and perhaps less successful ones, where, our design could update the complex to meet the demands of contemporary office, gallery and public space.

This paper will present DSDHA's reading of the building along with the methodology that guided our design choices for the sensitive restoration and substantial upgrade of the Economist Plaza. It will expose both the technical and the spatial challenges we encountered during this process and will offer the project up for discussion with the audience.

1. THE EVOLUTION OF THE ECONOMIST PLAZA IN RELATION TO THE SMITHSONS' AND TEAM 10'S IDEAS

As there is no definitive event, document, project or building that marks the beginning of Team 10 or embodies all its principles,¹ I have focused on Alison Smithson's *Team 10 Primer*

as the basis for my analysis of the Economist Plaza. Alison² exhibited a high degree of ideological control over the content and image of Team 10, of which she crafted her own account, omitting some contributions, highlighting others and restructuring the discussions in a way that often deviated from the group's original oral debates. As such my analysis is not aimed at an objective understanding of the history and motivations of team 10, but rather it seeks to uncover some of the ideas which the Smithsons put into practice in their design for the Economist Plaza – the building on which I had the privilege of working over the past two years. This paper will discuss how these ideas informed DSDHA's design framework for the restoration of the building.

1.1 The architects' social responsibility

Team 10 came together because of mutual realisation of the inadequacies of the modern movement. Each member of the group, Alison explains in the *Primer*, was concerned with introducing "into the bloodstream of the architect an understanding and feeling for the patterns, the aspirations, the artefacts, the tools, the modes of transportation and communication of present day society." Modernism, according to Team 10 members, didn't take human aspirations into account, limiting itself to an analytical study of 'what happens' – looking at where people live, where they go to school, to work, where they shop – without considering what motivates them. The group's declared their aim was to uncover the patterns of life which are determined by human aspirations rather than merely by functionality/efficiency.

This aim is reflected in the way in which the Economist Plaza conciliates the functional needs of a 20th century corporate office block with the established patterns of life of its surrounding historical neighbourhood and the necessity to make space for motorised vehicles within the city centre. At the core of the design are three buildings connected by a generous public space on a raised podium which houses parking and servicing beneath. The complex comprises a fifteen-storey of-

fice tower; and an eight-storey residential tower and a four-storey bank building – which sensitively maintains the architectural properties of St James's Street and mediates between the adjacent 18th Century facade of Boodle's club and the more monumental prospect of Brooks's Club opposite. On the one hand the podium re-interprets the plaza typology, which by the 60s in America had become a symbol of corporate magnificence. On the other it reinvents the existing pattern of alleyways, arcades and courtyards that provide pedestrian ways throughout and into the building blocks of St. James's. This new public space/route for the district, raised above the traffic and the fumes, is ideal for contemplation and for social interaction, but also to be occasionally animated by gatherings and events.

1.2 Association

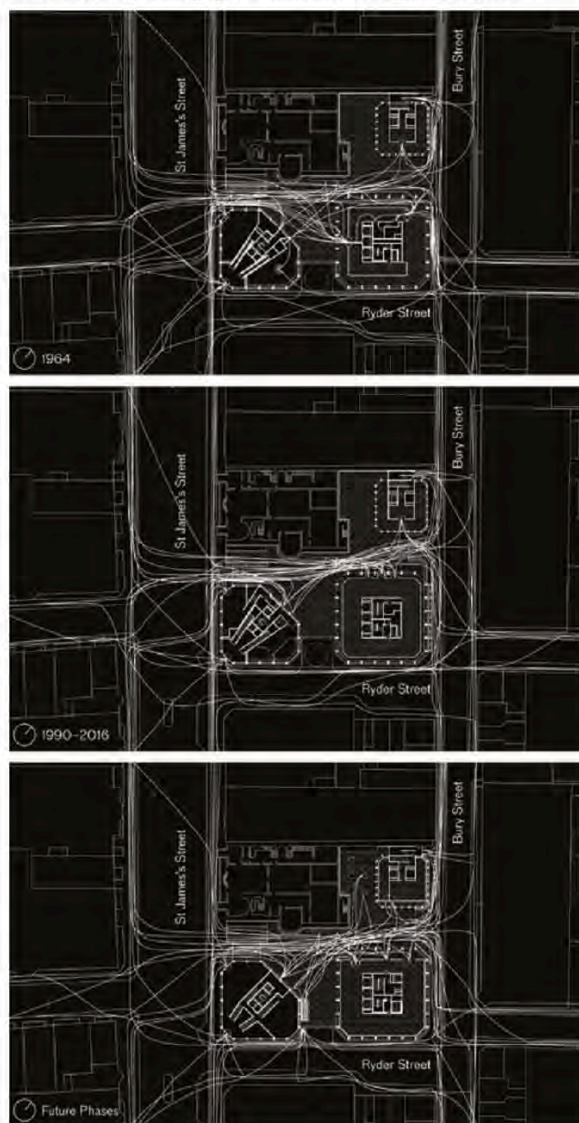
The podium – a street expanded to function as a social place – is an application of the principle of Association, aimed at restoring that sense of fine-grained context that Modernism had lost sight of. Team 10 had opposed the rigid zoning of the Athens Charter – dissecting the city into living, working, recreation, transportation quarters – with an urban planning taking into account how people cluster into groups: in houses, streets, districts and the city. At the Economist Plaza the Smithsons and their client strove to accommodate a mix of functions within their scheme. So that, instead of a mere conglomerate of offices (a monoculture), the complex could include a residential element as well as retail opportunities serving the neighbourhood. Functioning as a coherent yet variegated urban 'fragment', rather than as a segregated district that activates itself only during offices hours, the Economist Plaza's public spaces and surrounding streets were intended to be in use throughout the day and the night, deliberately blurring the boundaries between patterns of life and work.

1.3 Identity / Mobility / Urban Infrastructure

As part of Team 10, Alison and Peter rejected the anonymous and segregated urban environments produced by functionalism. The problem, they maintained, was one of re-identifying city-dwellers with their environment by optimising urban mobility and increasing connectivity between parts of the city, so that the "hierarchy of associations is woven into a modulated continuum representing the true complexity of human association." Mobility, as they intended it, was not merely a matter of rationalising traffic to make movements more efficient, it was rather a set of town-building techniques to anchor a communi-

ty and its activities, by making its hierarchical organisation legible in space. These techniques have to do with both the provision of urban infrastructure (from the motorway to the tiny

Figure 1. Economist Plaza, London. DSDHA's movement analysis of the Plaza as it was intended by the Smithsons in 1964; as it appears now, after SOM's major reworking in the '90s. And then showing how DSDHA's design proposals will transform the choreography of movement once again. © DSDHA.



alleyway) and with the careful study of the implications of flow and movement in the architecture itself.

The Smithsons had already explored the idea of the road system as the basis of the community structure in the Cluster City idea between 1957 and 1959, in the Hauptstadt Berlin Plan in 1958 and in the London Road study of 1959. At the Economist this is clearly expressed by the raised plaza: a new footway that could “chop through the old building face and build up a cluster complex in depth – a suggestion, a sign, of the new community structure.” The new route makes the existing system of streets and walkways typical of St James’s more legible. Simultaneously it re-organises this system as “the first part of a more general system of pedestrian walkways at various levels which should be an essential part of London”.

1.4 Doorstep / threshold

In the *Primer* Alison includes a comment by Aldo van Eyck where he laments the crude reality of a door, calling for the need to radically rethink this architectural element to reflect the complexity of the urban experience: “take an example: the world of the house with me inside and you outside, or vice versa. There is also the world of the street—the city—with you inside and me outsider vice versa. Get what I mean? Two worlds clashing, no transition. The individual on one side, the collective on the other, it’s terrifying. [...] A door is a place made for an occasion.”

Doors and windows are certainly handled with care at the Economist Plaza. The Smithsons’ objective was to “achieve a ‘half open and half closed’ space system, such as would in a practical way free the urban structure and, in a symbolic way,

illuminate our common situation.” The Plaza in this sense can be considered as a compendium of different types of thresholds, each celebrating the ritual of passage and mediating between different internal and external conditions.

- The plateau raised above the surrounding streets offers a pedestrian pre-entry space in which there is time to re-arrange sensibilities before entering the buildings to visit or work, as well as to rest, meet or do business – i.e. for community life to unravel.

- A family of sheltered spaces guides you through each block, in and out, creating covered porticos for social encounter, which in the office and residential towers anticipate the entrance at ground level, sealed within a recessed glazed surface.

- The street/raised podium is not just a means of access but also an arena for social expression, with all the windows facing the public space and creating a safer yet theatrical atmosphere.

- These windows, uninterrupted glazed bands running across each floor also frame the views towards the surrounding historic district as well as opening views through, letting the old and the new, the inside and the outside blend into each other and re-stating once again the porosity and purposeful ambiguity of the whole complex.

1.5 Choreography / graphics of Movement

Again in the *Primer* Alison reports a remark by Aldo Van Eyck: “A city, if it is a real city, has a very compound rhythm based on many kinds of movement, human mechanical natural. the first is paradoxically suppressed, the second tyrannically emphasises, the third inadequately expressed. Wheels or no wheels man

Figure 2. Economist Plaza, London. Views from Bury Street, across the plaza to St James’s Street. From left Original design by the Smithson, 1964; (Photo by Michael Carapatian) current condition with SOM’s alterations; and proposed areas to intervene. © DSDHA



is essentially a pedestrian, whether he really wants to be, will again become, or no longer wants to be is quite arbitrary. He is! 'Side' walk indeed means just what it is!"³

The Smithsons designed the Economist's three buildings as elements of the townscape to be experienced kinetically, according to a precise choreography of movements and views towards and through the complex and its public space as well as from within and without each of the buildings. The iconic photographs by Michael Carapetian embody all this; the people portrayed in the pictures, passing through the Plaza, add a temporal and dynamic quality to its austere and restrained setting, shifting the focus towards the 'events' that activate the space. In our studies, we revealed the original patterns of movement both between and through the buildings, showing how, over time, the intrinsic dynamism of the complex was subtly eroded by each subsequent change, with the consequence that the plaza, the main public space, is now less vital, more ossified, in every sense of the word. (Fig 1)

2. KEY IDEAS OF THE DESIGN THAT SHOULD BE KEPT

In our design we have consider all of the above aspects and many others besides, but, moreover, we looked carefully at the Smithsons' attitude towards 'Change' as reflected in both their design and writings about the building.

2.1 Change: 'buildings have a life of their own'⁴

The Smithsons used to continually re-visit their buildings, to make new appraisals that they would crystallise in writings, drawings and photographs. The Economist for instance – has over time offered itself to multiple even contradictory interpretations, with texts, photos and drawings tracing its evolution and becoming a constant leitmotiv of its authours' visual and written output. Rather than a monolithic finite form, the Smithsons conceived the Economist as an open-ended, highly flexible set of buildings that were able to anticipate change and therefore structure it. They described the complex as a "family of sheltered spaces that marked out precise patterns of life. Yet the characteristics of these spaces are such that they can be tuned by the occupants to the changing values of their time without denaturing the architecture."⁵ This was achieved by establishing a hierarchy between elements with long term and short term lifespans, between the "permanent" design gestures – which have impact at an urban scale – and the "transient" – like the technological appliances of prefabricated elements which can be replaced more regularly, when a new technology becomes available.

Deborah Saunt The Economist Plaza.

Moreover, overtime, the Smithsons had established a precise way of operating to address a building's evolution, specifically to determine how new uses could be accommodated within existing artefacts. They recommended that when "a wanted new use is found, that change of use is clearly signalled. A signal also announces that what is left is a scenographic shell, and that what is inside is now something different. [...] If what is inside - the use - remains substantially the same, but circumstances require it to be signalled differently, the new signal should be in some way an extension of the old."⁶

Initially, the design of the office tower was modified by the Smithsons in 1984, when the two points of entry to the lobby of the office tower had to be substantially rethought to accommodate the new use of the building due to new patterns of use from having been a headquarter for one single organisation into a multi-tenanted block. As Peter Smithson recalls: "Twenty years later floors were rented out to strangers and there existed a background threat from international terrorism or crime from which, even in this formal historic street, there is no escape. The new porch of 1983-84, gave a single simple, very visible, guarded, point of entry. It accepted that many who came would be strangers who need the porch to be more obvious; once inside visitors have to be screened and directed to the right places."⁷

Further, and clearly less successful, alterations were then carried out in the '90s during SOM Architects' major reworking of the complex, to expand the area of the lobby to act as a larger waiting area and buffer between the public Plaza and

Figure 3. Economist Plaza, London. DSDHA's photo overlay shows the most photographed angles of the Economist Plaza. © DSDHA



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the private office spaces. An entrance canopy was added, and two narrow stairs to the east were replaced by a wide flight of steps, welcoming people to the podium and mimicking the access on St Jame's Street to the west. At street level, on Bury Street, a series of extensions were clipped on to the pavement at the base of the tower. In an attempt to bring life to the plaza, a water feature was added to the north, between the residential tower and Boodles Club. In addition, the bank departed and a Japanese restaurant took over, latterly fitted out with dark tinted windows and timber by Kenzo Kuma.

3. DSDHA'S DESIGN

Acknowledging all these qualities, we have devised a framework of principles that will guide the new owner, Tishman Speyer, through the gradual upgrade of the complex. Our aim is to reverse some of the disruptive changes that occurred since the '90s, accommodate new uses and inject new life into this world-class public space. To this end in conversations with distinguished scholars (such as Professors Susannah Hagan, Max Risselada and Dirk van den Heuvel), we have devised a methodology of analysis and design that allowed us to address the concerns and aspirations of contemporary uses in the spirit of Team 10.

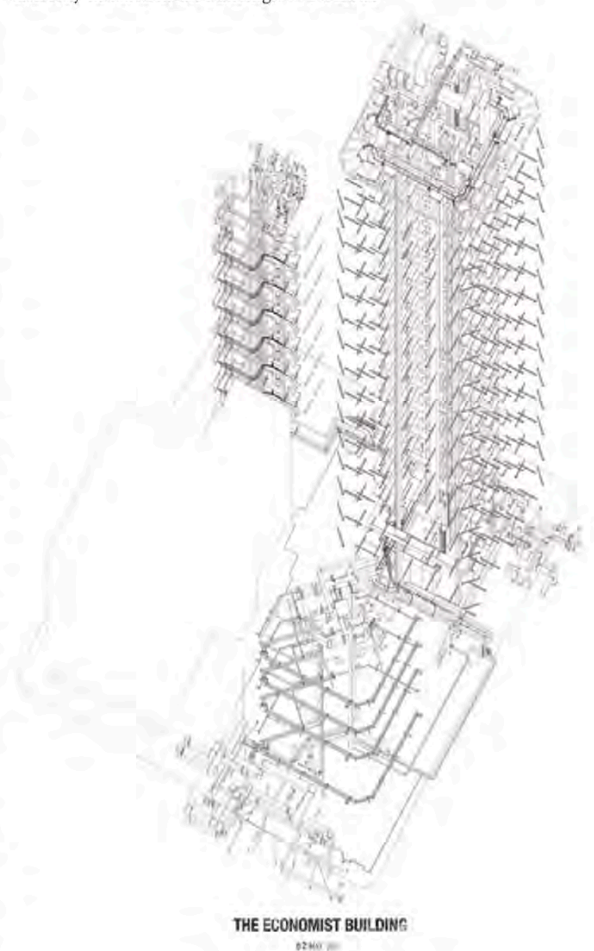
We have recorded the evolution of the design through time and catalogued historical photographs and drawings, in order to measure the impact of each subsequent alteration to the listed complex, both in terms of its aesthetic appearance and movement/occupation patterns. Cataloguing its key views, collecting and comparing the images that the Smithsons had commissioned as well as the ones taken by others, has allowed us to analyse the angles from which the buildings have been consistently photographed over time. In so doing we identified and studied the changes that took place, many of which have had a negative impact on the character and setting of the listed complex; even dramatically changing the choreography of movement through the site and its spatial hierarchy – turning the enjoyable quietude of the plaza into an efficient thoroughfare towards the office tower with undesirable views into the back of the house of the restaurant on the Piano Nobile of the bank building. (Fig 2)

In line with the Smithsons' vision for the Plaza as "an enjoyable public space" and "a rendezvous and tourist spot"⁸, we have rethought the 'urban choreography' of the complex, and have re-designed it as a quite, yet lively, meeting place. A new small café accessible from the plaza, new landscaping and additional seating will revitalise the currently run-down space

between Boodles and the residential block. Future phases will allow further permeability, with the reconfiguration of the staircase giving better access from Bury Street and a new discreet staircase on Ryder Street, which, in the spirit of local alleys and yards, will make the Plaza both visibly legible and accessible to the south.

The Smithsons clearly understood the city through movement. Their design for the Economist Plaza anticipates a network of new connections – places of encounter, where paths

Figure 4. Economist Plaza, London. DSDHA's axonometric view of the Economist Plaza, re-interprets the Smithsons' much-recognised axonometric of the complex and shows the new services that will be discretely installed in the buildings. © DSDHA



cross. They expected the plaza to intercept a series of links to a system of pedestrian walkways requiring the design of some elements – such as the harrow staircases on Bury Street – to be re-considered to accommodate the new patterns of movement, that would have made the complex more convivial. To fulfil these aims, we proposed to improve the staircase on Bury Street, already remodelled by SOM, by making it more generous as a place to also sit informally as well as for movement.

One of the main challenges in restoring a modernist project has to do with the reconciliation of vehicular and pedestrian movement, as in these urban visions cars would typically occupy the ground and people ‘streets in the air’. At the Economist Plaza, this separation becomes most manifest on Ryder Street, where, above the unappealing vehicle-loading/delivery-bay entrance to the underground carpark, the Plaza still awaits to be connected to the Smithsons’ predicted wider network of walkways. Our framework proposes to replace the carpark entrance’s metal grilles with a new vitrine window allowing views into this subterranean space to be re-configured to accommodate cultural uses. Moreover a new harrow staircase (echoing the one originally designed by the Smithson on Bury Street) will finally allow connectivity to the south. (Fig 1)

To bring back the original ‘porous’ quality of the complex, we have disposed that the glazing line of the office and residential towers’ lobbies would be pulled away from the perimeter, to reinstate some of the original colonnade and recreate the threshold/transitional space between the plaza and the interior, which went lost with SOM’s interventions. Moreover the views through the site that had been obscured by later changes will be opened up again. For example by removing the dark films to the restaurant on the corner of the site, which closed off views to the Plaza and inevitably discouraged people to use the public space, and by replacing the windows with double-glazed panels which improve the thermal performance of the building and hopefully will reduce the radiance on blinds to prevent overheating as well as condensation, which currently makes their surfaces opaque.

Our research methodology allowed us to establish a visual/spatial hierarchy, distinguishing the most iconic views – the elements to be restored to the original design intent as much as possible – from the less known, and perhaps less successful ones, where, our design intent could update the complex and meet the users’ needs within contemporary office, cultural and public space. For example, building on this research, we

decided to intervene on Ryder street’s carpark entrance, which was not featured in any of the Smithsons’ publications and whose appearance negatively contributes to this significant and lively street. Notably, these parts of the complex were not presented in Michael Carapetian’s photographs, but commented upon as a negative attribute in the architectural journals of the time. (Fig 3)

Aware of the Smithsons distinction between ‘permanent’ and ‘transient’ elements of a design, with the technological appliances belonging to the latter category, we proposed to rationalise the rooftop plant, modernise the services infrastructure (Fig 4) and reconfigure redundant spaces. The project could in this way increase the opportunity for public amenity and contribute financially to the creation of a substantial cultural space housed in the former basement carpark, which will soon become redundant as private motorised vehicles disappear from the city centre, under the effect of new regulations and the introduction of autonomous vehicles.

Overall the proposed changes of our framework work together to restore the civic character of the Economist Plaza’s original design. Echoing Team 10 mission to develop an “understanding and feeling for the patterns, the aspirations, the artefacts, the tools, the modes of transportation and communication of present day society”, our framework aims to deliver a project that best serves our ultimate client: the City.

NOTES

1 Team 10 was a loosely organised band of individuals, whose composition varied through the years and whose evolutionary story depends as much on each individual’s contributions as on a collective formulation.

2 She edited and compiled three monographs about Team 10: ‘the Team 10 Primer’ (1962, 1966, 1968), which is the text about the group, ‘The Emergence of Team 10 out of CIAM’ (1982), a less known compilation of documents published by the Architectural Association in London, and ‘Team 10 Meetings 1953-1984’ (1981)

3 Alison Smithson, ‘Team 10 Primer’, Studio Vista: London, 1968, p80

4 This is what Peter Smithson used to repeat, as his son Simon said to me in November 2017 during a meeting to discuss the project

5 Alison and Peter Smithson, ‘The Charged Void: Architecture’, The Monacelli Press: New York, 2001, p116

6 Ibid.

7 Peter Smithson, ‘Italian Thoughts’, 1993, page 53

8 Alison and Peter Smithson: ‘Report on the Proposed Design of The Economist Building, Ryder Street’. Extracted Minutes and Correspondence of the Royal Fine Arts Commission kept at the London Metropolitan Archives.

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BIOGRAPHY

As Director of the London-based architecture, urbanism and research practice DSDHA, **Deborah Saunt** is currently working on the refurbishment of the Smithsons' Economist Plaza. She has led several mixed-use, residential and cultural schemes, as well as a number of innovative civic buildings and significant public spaces in the UK.

Alongside her practice, Deborah is also active in research and teaching. Having recently completed a PhD and a Research Fellowship in the Built Environment (awarded by the Royal Commission for the Exhibition of 1851), she is now an ADAPT-r Fellow and leads research projects within her practice. Deborah has taught widely in the UK, in Switzerland, USA, Iceland and, most recently, in Spain. Moreover she is on the founding faculty for the newly launched London School of Architecture and heads its collaborative Design Think Tanks Initiative.

IN THE PATH OF THE “IN-BETWEEN”: FROM BUBER TO VAN EYCK AND FROM AMSTERDAM TO SAO PAULO

Anat Falbel (Brazil)

ABSTRACT

The paper, recovers the account of how Aldo van Eyck's production mediated the translation of the concept of the “in-between” in Brazil. The analysis comprehends the emergence of the concept within the CIAM's discussions, during the 1950s, and the identification of its presence in Brazilian soil considering as case-studies two public spaces: the FAUUSP, designed by João Vilanova Artigas and Carlos Cascaldi, and the SESC Pompéia, designed by Lina Bo Bardi and her young

team formed by Marcelo Ferraz and Andre Wainer. The analysis intends to unfold the path of the “in-between” within Brazilian architecture culture, as well as its current relevance as a theoretical tool in the design and critical analysis of contemporaneous spaces.

INTRODUCTION

In their research dedicated to the Team 10, Max Rissalada and Dirk van der Heuvel suggest that most of the history of

Arch. João Vilanova Artigas, Carlos Cascaldi, FAU/USP (1961-1969)



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Team 10 consists of personal events and encounters of which no direct trace remains, and which survive only in stories¹. This paper reclaims the account of how besides affinities and a cultural atmosphere extending itself over oceans, Aldo van Eyck's production mediated the translation of the concept of "in-between" in Brazil. It begins recovering its emergence within the CIAM's discussions in the beginning of the 1950s, to further identifies its presence in Brazil considering as case-studies two public spaces that until today embody the idea of encounter and dialogue. The first one is the building of the Faculty of Architecture and Urbanism of the University of São Paulo, FAUUSP, designed by architects João B. Vilanova Artigas (1915-1985) and his partner Carlos Cascaldi (1918-2010), built between 1961 and 1969. The second edifice is the SESC Pompéia, designed by Lina Bo Bardi (1914-1992) and her young team formed by Marcelo Ferraz (1955) and Andre Wainer (1955) between 1977 and 1986. The analysis intends to unfold the path of the "in-between" within the Brazilian architecture culture, as well as its relevance, in the present, as a theoretical tool in the design and critical analysis of contemporaneous spaces, understood as relational spaces or "places", as once suggested by van Eyck.

THE IDEA OF THE IN-BETWEEN

The in-between was advanced in the CIAMs, in 1952, at the Sigtuna Council Meeting, introduced by two young Swiss architects from Basel, Rolf Gutmann and Theo Manz. Under the humanist spirit brought in by Sigfried Giedion since the first postwar meeting at Bridgwater (1947), the two architects proposed to associate the relational space implied in the notion of *Habitat* with Buber's formulation of the in-between as the space of the encounter and dialogue².

Indeed, the in between was the definitive spatialization of Buber's dialogic thought, evolved since the 1920s instigated by Georg Simmel's social theories. The concept was formulated in 1938, in a conference at the Hebrew University of Jerusalem, and published for the first time in English, in 1947, as "What is Man?" in the collectanea *Between Man and Man*³.

As stated by Buber:

*What singularizes the human world is, above all, what occurs between man and man, something that is unique in nature... its roots are in that a being looks for another being... to communicate with him in a sphere common to both but that surpasses the proper field of each one. This sphere... I call the sphere of the in-between*⁴

For the German philosopher the in between was not an ad hoc auxiliary construction but *the actual place and support of inter-human occurrences... it does not show a simple continuity, but rather it re-established itself incessantly in the rhythm of human encounters*⁵

Hence, a reasoning that found affinities within the immediate postwar CIAM, aimed to the "creation of a physical environment that will satisfy man's emotional and material needs, and stimulate his spiritual growth"⁶. Actually, Buber's elaborations already resonated in Ernesto Nathan Rogers' 1951 comparison of the urban space - "the framework of men's lives" - with Calder's sculpture *Red Petals*, which the Italian architect described as "clearly defined in its different forms, but mobile and relative in its successive relations"⁷.

THE POSTWAR CIAM: IN QUEST OF HUMANISM

The introduction of Buber's philosophical anthropology within the CIAM was part of the cultural atmosphere that surrounded the organization in the immediate postwar. Among the intellectuals who since the interwar period questioned the consequences of rationalism in his merge into mechanization, Giedion considered that "the period of rationalism [was] nearing its end"⁸. Under the influence of Herbert Read's text on Descartes⁹, he declared that the new moment would open the path for the more "intangible methods of expression reconquer equal rights with the world of logic"¹⁰. The same dichotomy between "modes of thinking and modes of feeling" would informed the historian's postwar manifest *Mechanization takes Command* (1948)¹¹ in its demand to overcome the "mechanized barbarism of the period", and reinstate "a new balance between the individual and collective spheres... [which] lack real shape and structure"¹². Thus, particularly evoking Buber's rationale for the conceptual definition of the in-between.

The humanist perspective would continue to evolve from Hoddesdon to Otterlo. In the CIAM 8 official report, published under the Mars group's statement concerning the social role of community centres (cores) in facilitating contacts and exchange of ideas among people, the editor Jaqueline Tyrwhitt, Giedion's associate for more than 20 years, titled her essay "Cores within the Urban Constellation"¹³. One can suggests that when making use of Walter Benjamin relational concept already in her title, and acknowledging the contribution of architect Godfrey Samuel, Tyrwhitt was reasserting the presence of a new theoretical approach inside the CIAM, disclosing its inspiration. In fact, considering that the MARS group embraced a number of refugee architects from Central

and Eastern Europe the mention to the articulated figure of Samuel indicates that most probably, Martin Buber's intellectual work was known among the members of the group, in same way that Walter Benjamin's oeuvre¹⁴.

By his turn, Giedion justified the main theme of CIAM 8, "Heart of the City", as part of a general humanizing process taking place together with a *"return to human scale and a demand for the reestablishment of community life..."*¹⁵. For Giedion those new spatial attributes were illustrated in the contemporaneity by van Eyck's Amsterdam playgrounds¹⁶.

In the same spirit, J. L. Sert used a Saul Steinberg drawing, and a series of urban images taken from above identifying the encounters between man and man and recalling László Moholy Nagy spatial experiences.

Nevertheless, it would be Jaap Bakema's poetic claim that a core could be either the cemetery of Asplund's crematorium or an old wooden building sauna in Finland that evoked the most Buber's elaborations on the essence of man. In his text, the Dutch architect postulated that:

Arch. Lina Bo Bardi, Marcelo Ferraz, Andre Wainer, SESC Pompéia, (1977-1986), photo: Nelson Kon



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there are moments in our life in which the isolation of man from things becomes destroyed: in that moment, [the moment of the Core], we discover the wonder of relationship between man and things¹⁷.

Still, the definitive reference to Buber, would appear in the Otterlo's report, as a quotation from *Der Mensch und sein Gebild* (1955)¹⁸, concerning art as the work and perception of the in between subjectivity and objectivity:

Art is neither an impression of natural objectivity nor an expression of soul-like subjectivity; it is the work and witness of the relationship between the substantia humana and the substantia verum, the intermediate form¹⁹

The permeability of Martin Buber's formulations amid the architectural milieu close to the CIAM is justified by the international recognition of the philosopher's work after the 1947's

edition of *Between Man and Man*. Moreover, in 1951, the philosopher visited the United States making a profound impression upon large segments of the American intellectual community. Nevertheless, besides the humanist atmosphere of the American scene – translated in his research on “the eternal present” (1957)²⁰, and the proximity to the Mars group's discussions through Tyrwhitt, Giedion could also had access to Buber's writings through his wife, the art historian Carola Giedion Welcker (1893-1979). Closely involved with the development of modern art, Carola might have known Buber's 1930s impressions on art, as well as architecture, from his writings on the nature of *Dialogue*²¹

In 1958, in his collectanea *Architecture you and me*,²² the English version of *Architektur und Gemeinschaft* (1956), the affin-

Arch. Lina Bo Bardi, Marcelo Ferraz, Andre Wainer, SESC Pompéia, (1977-1986), photo: Nelson Kon



ities between Giedion and Buber would present themselves even more conclusive than the titles may suggest. While reviewing his *"The Humanization of Urban Life"* (1952), Giedion seemed quite aware of Buber's elaborations regarding the ideas of community (*Gemeinschaft*) and society (*Gesellschaft*)²³, and instead of Ferdinand Tönnies's fatalism²⁴, he assumed Buber's belief that the contemporaneous society could give place to a new community:

*the most beautiful housing project remains but a segment when it stands in isolation, when it has no "heart", no place that serves as a bridge between private life and community life, no place where human contacts between man and man can again be built up... the mark of a true city is the balance between you and me. It is this you and me relationship that we must build up again today*²⁵

"ALDO VAN EYCK AND RELATIVITY"²⁶

Just as Giedion, Aldo Van Eyck also found in Carola Giedion Welcker the "intellectual nourishment for a lifetime"²⁷. Most probably, as suggested by Strauven, it was under Carola's inspiration that he approached Mondrian's theoretical formulations regarding the issue of relations in the contemporary culture²⁸, which he will mention specifically when discussing the topic of aesthetics at Bridgewater²⁹.

Accordingly, for van Eyck the relational concept raised in 1947 would evolve with Buber's in between formulation, and developed under the idea of doorstep. And, although his claim in Otterlo that the *doorstep* "was uttered by the Smithsonian at Aix"³⁰, he himself, would clearly elaborate the idea in the same terms proposed by Georg Simmel's essay *"Bridge and*

Arch. Lina Bo Bardi, Marcelo Ferraz, Andre Wainer, SESC Pompéia, (1977-1986), photo: Nelson Kon



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Door" (1909), published in 1957. Accordingly, with "door-step" or "threshold", as metaphors for the in-between space, van Eyck would reconcile the same tension bound of the dual process represented by Simmel, in his elaboration on the bridge and the door, discussing and amplifying conflicting polarities: connection and separation, outside and inside, individual and collective, open and close, space and mass, large and small.

The same procedure will inform the design of the Otterlo Circles. Hence, if as proposed by Buber, the dialogue between man and man was based *"on the establishment and acknowledgement of the independent otherness of the other with whom one fosters relation, addressing and being addressed on this very basis"*³¹, Van Eyck outlines the space "in between" the realm

of architecture and the realm of human society considering the autonomies of both realms. In that way, when presenting his diagram in Otterlo, the architect reconciles all the issues discussed at the CIAM since its creation, as well as the ones left behind.³²

ALDO VAN EYCK'S BRAZILIAN THEORETICAL AND FORMAL REPERCUSSIONS

In his still insightful and consistent book, Strauven suggested that Aldo Van Eyck's ideas had extensive repercussions, but mostly without references to its original source³³. Indeed, in Brazil the architects of the FAUUSP and SESC Pompéia's, as well as the historiography that deconstructed both buildings and the intellectual biography of their authors, never openly

Arch. Lina Bo Bardi, Marcelo Ferraz, Andre Wainer, SESC Pompéia, (1977-1986), photo: Nelson Kon



recognized the appropriation of Van Eyck's formulations or formal references.

Nevertheless, van Eyck's discourse was an essential component of the postwar CIAM discussions that traversed the Atlantic Ocean. In Brazil, those latter were conveyed either by CIAM's representatives like Sigfried Giedion and Ernesto Nathan Rogers, who arrived in the country to participate in cultural initiatives like the São Paulo International Art Biennials, or by the CIAM publications together with the international press. Effectively, with the exception of the *Dutch Forum*, since its foundation the library collection of the School of Architecture and Urbanism (1948) at the University of São Paulo, assembled international magazines such as *AD*, *L'architecture d'Aujourd'hui*, *Casabella Continuità*, *Domus*, *L'Ar-*

chitettura cronache e storia, or *Architectural Forum*. Considering that, both João B. Vilanova Artigas and Lina Bo Bardi teach at that same school - the first one, since its very beginnings until his removal by the dictatorship in 1969, and Lina Bo Bardi, between 1955 and 1957 - it is quite likely they became aware of van Eyck's theoretical and design work amid the school's library collection.

De facto, those two buildings encompassed spaces that can be experimented and perceived as places of encounter and meetings under the theoretical tools developed within the postwar CIAM. Both edifices evoke van Eyck's elaborations on the in between, the articulated doorstep, where the mind is welcome by reconciled polarities³⁴: connection and separation, outside and inside, open and close, space and mass, as well as large and small.

Arch. João Vilanova Artigas, Carlos Cascaldi, FAU/USP (1961-1969), photo: Nelson Kon



Both buildings embodied the values that constitute the realm of architecture described in van Eyck's Otterlo circles diagram as a synthesis of three traditions: the classical one, the tradition of the spontaneous buildings and, the modern tradition³⁵. In this sense, while the FAUUSP's setting evokes a Greek temple and its internal space suggests the agora, the "spatialization of democracy"³⁶, architect Lina Bo designs the SESC's theatre highlighting its references to the Greek Theatre. Likewise, if Lina Bo Bardi's in between spaces disclose her Italian cultural background and her deference to the tradition of the spontaneous urban tissues as in between places, Artigas re-enacts the modern tradition appropriating the concrete structure in his discourse and design. An operation also conducted by Lina, although with much more historical sensibility, when she choose to preserve the Hannebique structure of the old manufactory. Therefore while reconciling the essence of architecture – not the form – as remarked by van Eyck³⁷ – architects Artigas and Lina Bo are responding to human identity.

Although never uttered, the personal encounters between Artigas and Lina Bo with Aldo van Eyck's work are incontestable. The first trace of this one Team 10's peripheral story is an old copy of the last issue of the *Dutch Forum* (July, 1967), published as a sum up of the main issues appeared between 1959 and 1963. Found at Lina's archive, the magazine kept among its pages a Portuguese translation of Aldo's "The large house – little city" statement, as well as a report on the Sonsbeek Pavilion. As testifies by Lina's team partner architect Marcelo Ferraz³⁸, that same building was included by Lina among SESC's design references, inspiring the conception of the ateliers and providing the space under the extensive industrial covering a city-like character, similar to Van Eyck's design.

Another footprint of the same story is one article published by Artigas, in 1969, to introduce two residences designed between 1966 and 1967³⁹ in which the concrete brut combines harmoniously with traditional materials. Although the text's ambiguity, probably due to the author's militant rhetoric, Artigas began his discourse referring to Heidegger's essay *Building, Dwelling, Thinking* (1951)⁴⁰, and without any mention to van Eyck, or the Team 10, he closed his remarks on the word *Bauen* using the Dutch architect aphorism "The large house-little city".

For decades, the aphorism remained Artigas's genial insight until been identify in Alberti's treatise⁴¹. The Brazilian architecture historiography explained Artigas' oeuvre after the middle 1960s, and the presence of the "archaic and the modern", as the consequence of the engaged architect's restlessness in face of the country political atmosphere⁴².

Nonetheless, on the contrary, Artigas' formulation came from a very specific source, demonstrating that although the nationalistic stance assumed by the Brazilian Communist Party, either Artigas, the creative architect, or Lina Bo Bardi, were following closely the CIAM discussions since the postwar.

And, while Artigas described the FAUUSP in terms of "the sensation of spatial generosity [that] favors interaction, meetings and communication... the spacialization of democracy"⁴³, Lina Bo Bardi named her project the citadel of Liberty⁴⁴. Both carried the promise of being the place for Buber's genuine dialogue- "no matter whether spoken or silence"⁴⁵ – in which each of the participants has in mind the other or others in their present and particular being.

NOTES

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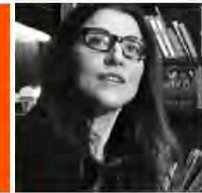
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BIOGRAPHY

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15IDC Poster Presentation Introduction

Nataša Koselj (Slovenia)



The main aim of the 15th International Docomomo Conference's approach to the peer-reviewed Poster Presentation is to spread the academic discussion on Modern Movement issues to the in-between time and space of the Docomomo Conference's schedule by having the poster exhibition open also to a wider audience during the conference in Cankarjev Dom. In the following pages, we present the full text and one reference photo from each poster. The posters are mostly based on critical scientific research, analysis and synthesis. Some of them already suggest new approaches and solutions, most of them compare and describe the situation of the Modern Movement buildings and sites before or after renovation or displacement. The authors of the posters are established academics and PhD students from the fields of architecture, architectural history and conservation. In a couple of examples, the posters are the results of joint research between tutors and their students.

We received 32 posters from different countries all over the world. They discuss and present current questions on the documentation and conservation of Modern Movement architecture from industry (Palestine, Italy), administrative and shopping centres (Brazil, Guatemala, Australia, Belgium) educational buildings (Thailand, Slovenia), housing (Syria, Germany, Belgium, Lebanon, Turkey, Serbia, Latvia, Hong Kong, Australia, Slovenia), health-care and leisure centres (Brazil, Poland), nationally important institutions (Poland, the Czech Republic, Brazil), museums and art centres (France, Belgium) city planning (Croatia, Slovakia), bridge metamorphosis (Slovenia) and the use of materials such as exposed concrete and stone in the context of the Modern Movement (Serbia, the Netherlands). Two posters presenting original Modern Movement interior design (Finland, Belgium) are especially welcome as interior design is likely to be amongst the most vulnerable of the Modern Movement's heritage.

The Docomomo community is very diverse and the Poster Presentation exhibits this diversity of research backgrounds, approaches, standards and values in a very explicit way. The question "What is Modern?" is a subject of discussion in rela-

tion to the context. The Western, Eastern, former imperialist and former socialist countries have different experiences with the meaning of Modernity because of their different - if not opposite - contexts. The transformation of cities, humans and nature is so easy today that Kafka's *Metamorphosis* is becoming a reality. The world is changing rapidly and the views today regarding what constitutes good and bad architecture of the past is much different than it was 30 years ago when the Docomomo community was formed. Nevertheless, something is, and hopefully will remain, the same: the passionate search for those levers in history of the Modern Movement that shifted the understanding of space and time, the nature of humanity, and the values of community and society to a more conscious and complex level by experimenting with new technologies, materials and meanings of transportation and most of all, the awareness to preserve, integrate and upgrade all these values for the children of tomorrow.

BIOGRAPHY

Nataša Koselj is an architect with a PhD on post-war Slovenian architecture (2003), who studied and worked in Slovenia (University of Ljubljana), Finland (MARCH2002), UK (Oxford Brookes University) and France (Cité de l'architecture at du patrimoine). Docomomo Slovenia Chair since 2004, who has formed the course »20th Century Slovenian Architecture«, at the University of Ljubljana, Faculty of Architecture, which she has been teaching since 2005 as a freelance. She has researched, lectured, edited, exhibited and published extensively on post-war Slovenian architecture, especially on Danilo Fürst and Edvard Ravnikar, whose unpublished diaries she analysed during 2000-2005. She received Plečnik's Medal (2014) for the monograph on Danilo Fürst.

URBAN TRANSFORMATIONS AND THE SHIFTING IN PRODUCTION MODES, AL-NAAMEH FLOURMILL - NABLUS CITY

Shaden Awad, Manal al-Bishawi (Palestine)



A general view of al-Na'ama Flour Mill from the west, 1940, G. Eric and Edith Matson Photograph Collection, Library of Congress, Washington DC.

URBAN DEVELOPMENT OF NABLUS

Nablus city urban culture is consisted of a mix of different historical and architectural layers, including the Roman, Byzantine, and Islamic periods, in addition to the impacts of different occupations, 1917-1994. The extensions of the old town of Nablus reflects the colonial and modern tissue that com-

poses the existing modern city (Abujidi, 2014). The first construction work outside the city was done by the Turkish governor in 1875 in the eastern entrance of the city as an arsenal and military resident for the Turkish army. This building continued to be used as a prison at the British mandate, Jordanian rule, and the Israeli Occupation. The Palestinian authori-

Shaden Awad, Manal al-Bishawi Urban Transformations and the Shifting in Production Modes

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ty used part of it for the Ministry of Foreign affairs, and then it was destroyed during the Israeli invasion in 2002. In 1875 a Latin convent and a protestant school and a chapel were erected, and a new street was constructed to connect with the new center. After that a public square was constructed next to An-Naser mosque in 1883 and then the clock tower was built on the silver anniversary of Sultan Abdelhamid (Scholch,1982) (Al-Nimr,1938)(Abujidi,2014). The economic rise of the city led to new projects and developments, the national hospital was built in 1888 in the northern part of the city, and another monastery of saint Josef was built in mount Eibal in 1887. In 1915 the railway in the northeastern part was completed, this railway connected Nablus with El-Affuleh. The first large development outside the Old town was after 1927 earthquake, when the municipality built camps to rehouse people in the eastern part. According to Abujidi(2014) and Al-Nimr (1938) the number of inhabitants reached 25,0000. Nowadays Nablus is considered the largest commercial and cultural center in Palestine, the neoliberal impacts are obvious in the city built environment. The urban transformations of the city and its linkage to the changes in the production patterns manifested by the conversion from production to consumption is discussed through, focusing on *Al Naameh* Flourmill, which is not only significant, because of its contribution to the industrial modern heritage of Nablus, or its linkage to the modernity project, but also its journey from its inception to its recent tragic annihilation. The story of the mill reflects a paradigm that couldn't transfigure to cope with the neoliberal forces affecting the city. This paper aims at contextualizing the flourmill for the reader and situates its specific typology in temporal and spatial context.

THE INCEPTION

Al-Na'ama Flourmill was erected between 1923-24 on 2,450 square meters on the western periphery of Nablus, on Haifa Street, which connects Nablus and Tulkarm(Interview with Emad Al Masri, 2017). This location made the mill accessible for the trucks that transported wheat from other parts of Palestine and Jordan. The flourmill formed an important landmark, which contributed to the surrounding area's urban character. The establishment of the flourmill encouraged other investors to launch commercial and industrial developments in the area; in particular, A Gas Station was constructed opposite the mill and an ice factory was constructed next to the mill and later transformed into al-Arz Ice Cream Factory. The generators and the machines were so loud that their sound

reached even those in the city living far from the mill. This was among the reasons for the delay of residential expansion toward the area. The mill's main building was a fifteen-meter tall, yellow, rectangular concrete structure, which contained the milling machines. In addition to the main building, warehouses were connected to the western side of the building and opened onto a large yard that was used as a loading area for wheat and flour. The mill's inner space was divided into five different levels by iron beams that were covered with wooden pallets. The production process started at the highest level and began with sieving, followed by washing, drying, grinding, and, finally, sorting and packing on the ground level. Later, another floor was added to the building, increasing its height to eighteen meters. At that time, the flourmill was the highest building in the city. The yellow concrete block made an impression on locals and made the mill an extraordinary structure that was valued by the inhabitants of Nablus.

During the Jordanian period(1948-1967) the flour supply was not enough to cover the demand of the local market, especially after the Nakba and the increase in the population. After the Israeli occupation for the West Bank and Gaza in 1967, al-Na'ama Flourmill struggled to survive. The mill faced difficulties due to out-of-date machines, unavailability of wheat, and competition with the modern flourmill in Haifa (the Grand Moulins), which produced flour in larger quantities and at lower prices. Further, the mill was required to import wheat through the ports controlled by the Israeli occupation, since it was no longer possible to import through Aqaba port or to buy wheat from the Jordanian tradesman as before. Al-Na'ama Flourmill Company managed to keep working until the late 1980s.

THE ANNIHILATION

The dramatic post-Oslo rise in land prices encouraged the owners to sell the mill's land to four investors from Nablus and the surrounding villages. In 2012, the new landowners applied for a demolition permit, following the Palestinian law that was announced in 2006. The law states that the demolition of any building older than fifty years should be approved by the ministry of tourism and antiquities.

As a consequence of frozen and out-of-date cultural heritage law, and after the department of antiquities team examination of the building and the lot on which it sits, the demolition process was approved in 2013 and the building was demolished in 2015. The chamber of commerce and industry supported the demolition as investment and a project that could

be part of the economic development process. The investors' first plan was to erect a shopping center, a typical post-Oslo proposal; however, the project was suspended and the investors are still conducting business studies to decide the future of the project. Currently, the location of the mill is used as a paid parking lot.

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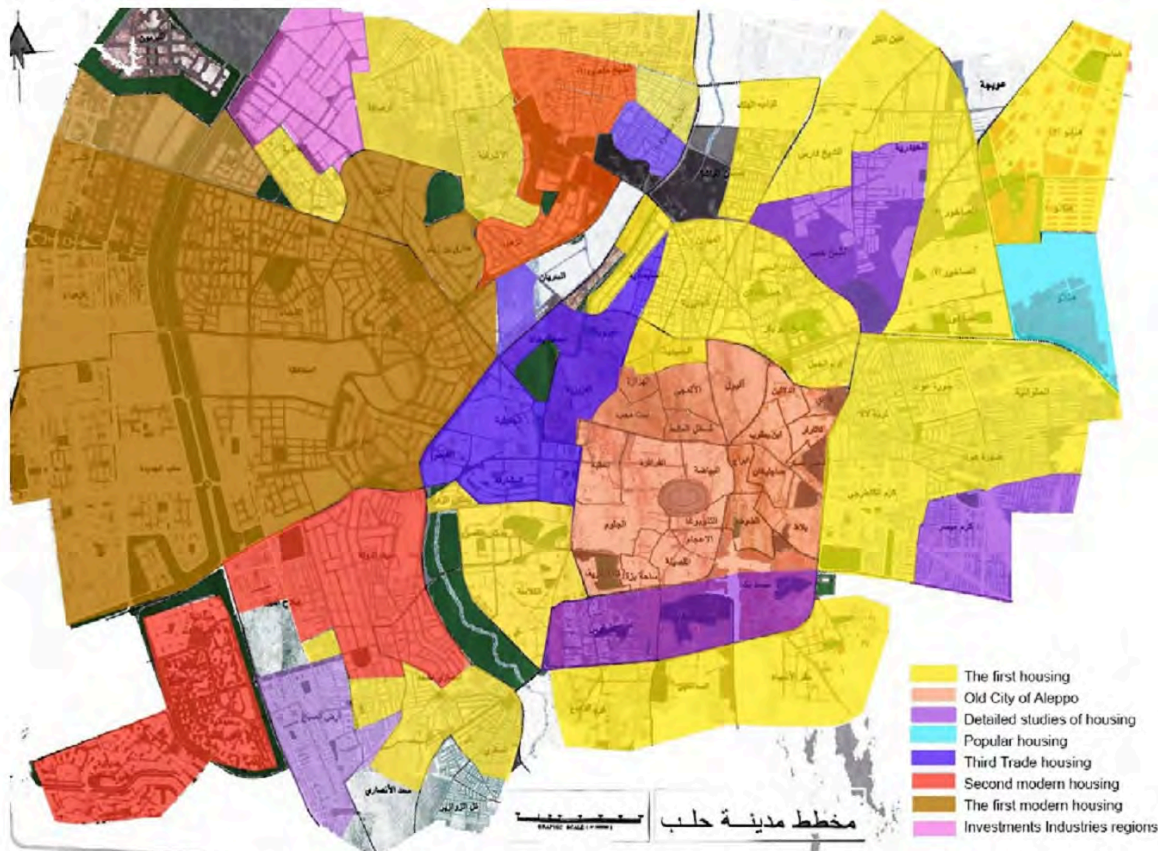
BIOGRAPHIES

Shaden Awad is an assistant professor in the Department of Architectural Engineering at Birzeit University. Her main field of interest are Palestinian local architecture, space transformation and domestic culture.

Manal al-Bishawi is an assistant professor in architecture and spatial planning in the Department of Architectural Engineering at Birzeit University. Her academic and research activities are oriented toward architecture and urban design in relation to social behavior with particular attention to gender issues in the Middle Eastern contexts.

MODERN RESIDENTIAL ARCHITECTURE IN ALEPPO CITY TRANSFORMATIONS AND POTENTIALS FOR THE RECONSTRUCTION OF OLD-ALEPPO

Christine Kousa (Syria, Belgium), Uta Pottgiesser (Germany, Belgium), Els De Vos (Belgium)



Aleppo City Plan: Aleppo City Council, Urban and Organization Archive.

INTRODUCTION

Aleppo in Syria is best known for its historical core; the oldest continuously inhabited city in the world that is protected by UNESCO World Heritage Sites. Nevertheless, Aleppo also has a high variety of modern architecture, namely, residential that is characterized by different influences and trans-

formations through the different phases of development, such as migration waves and recently destructions through the Syrian Civil War. This paper describes and categorizes the modern residential architecture in Aleppo city during the 20th century, while at the same time, aims to discuss the potential of adapting post-civil-war residential architecture to the actu-

al transformations of social life and the local environment of Aleppo city.

Continuation of Courtyard Housing until 1918 (Late Ottoman Period) which is considered an authentic housing in harmony with all the components of social life; privacy and security, as well as with the climate of the city⁴. This type of housing is characterized by the limited height, usually no more than 10m for two floors. As well as a large number of openings that open onto the inner courtyard; similar to the traditional courtyard housing^{1,11,12}. Meanwhile, the external façades are influenced by the architecture of Istanbul² in terms of decoration and the openings that open onto the outside.

TWO PHASES OF MODERN RESIDENTIAL ARCHITECTURE

1. Housing Typology from 1920-1946 (French Mandate period) which does not take into account the social and spatial structure of the city e.g. climate, privacy etc. This type of housing is characterized by the absence of the courtyard and appearance of the central hall with the rooms placed in line on both sides of the hall, and the balconies. The external façades, open onto the outside are rich in decoration³. In this period, we can distinguish the transition from the individual urban fabric which is characterized by two-story and direct staircase to the collective urban fabric which is characterized by multi-story and shared staircase⁴.

2. Housing Typology from 1946-1963 (post-independence period) and the beginning of the socialist economic transformation⁸ which represents a reincarnation and adoption of Western models that finally led to a state of contradictions between different urban components of the city. This type of housing is characterized by several floors that could reach four or five floors. As well as by the striped corridor which connects the different spaces and function of the housing⁵. This type of housing moved from formalism and richness in decoration to rationality and functionalism in design, and is characterized by simple façades⁶. Despite widespread of housing for one family - the villa - During the second half of the 20th century, the multi-story housing with commercial functions at the ground level, are still most common one in the urban structure of Aleppo⁷.

Other classification of residential urban Areas according to the Construction Code¹⁸ and the Urban System of Aleppo which determined (urban areas - sidewalks and pathways - high floors - building heights - cantilevers and balconies) are as following (1) Old Aleppo city and its protection area. (2)

Attached housing areas; first housing - third trade housing (3) Detached Housing areas; first modern housing - second modern housing - Second housing. (4) Complex residential areas and areas with special regulations (villas - housing associations - housing of public sector).

TYPES OF TRANSFORMATION

First; at each phase more evolved than its previous, beginning with the curved shaped in the prehistoric civilizations⁹ and then square and rectangle shape¹⁰ to the formation of the courtyard in the ancient civilizations of Syria⁵, which continued to evolve to fit with the local social component during the different phases of civilization until the beginning of the 20th century.

Second; with the beginning of the 20th century, the cultural transformations resulting from the subordination of culture in Syria to the Western world emerged during the French mandate period and post-independence period led to major architectural transformations in terms of the residential architecture, such as absence of known courtyard housing configurations in order to be replaced by multi-story and multi-family residential buildings with Western design which are not related to the characteristics of the place and incompatible with the components of social, cultural and economic life. Thus, the city of Aleppo suffered from the contradiction between the two parts the authentic traditional part (with courtyard) and the imported contemporary part (without courtyard).

Recommendations for Reconstruction of Old-Aleppo and destroyed residential areas

1. developing and reviewing the urban system of Aleppo City which is adopted and copied from abroad, as one of the most important distinctive of contemporary residential architecture in Aleppo.

2. Achieving the compatibility between the social needs, the functional requirements of housing, and the economic considerations.

3. Taking advantage of the architectural and urban heritage of the Arab and Islamic residential architecture, as it is a local building adapted to the spatial and social environment of the city.

4. Determining the possibility of benefiting from the old and modern Western residential architecture, in order to achieve an urban balance in harmony with the local environment of Aleppo.

5. Taking advantage of the similar experiences, like Hassan Fathy¹³, Rasem Badran¹⁴ and Mohammed Hakimi experiences⁴, to find a residential architecture compatible with the city of Aleppo.

6. Reinforcing the housing function in Old Aleppo City by using modern methods and techniques.
7. Finding the best way to combine the authentic and the local housing identity with the ideals of equality and progress of the Modern Movement.
8. Making adjustments related to increasing the investment factor by transforming the courtyard housing into multi-story homes.
9. Adopting courtyard housing complexes. As such, the architectural design is conceived with various extensions (cantilevers) that enhance the aesthetic value, enhance the environmental aspects, and ensure the privacy of the residents.
10. These complexes are composed of different levels that differ in their recedes. By doing that, a private courtyard for each residence can be provided.
11. These complexes are complemented with all the urban services e.g. green spaces, parking, play grounds etc.

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BIOGRAPHIES

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Prof. Dr. **Els De Vos**, engineering architect and spatial planner, is associate professor at the Faculty of Design Sciences at the University of Antwerp. Her PhD dissertation on the architectural, social and gender-differentiated mediation of dwelling in 1960s–1970s Flanders has been published with the University Press Leuven in 2012. She has co-edited with University Press Antwerp several volumes in the field of architecture, including Theory by design (2013). She published in several national and international journals, and is a member of the editorial board of the new magazine Inner (www.inner-magazine.org). She's the coordinator of the Erasmus+ project Re-Use of Modernist Buildings.

IDENTITY AND CONSERVATION OF MODERN ARCHITECTURE IN THAILAND. CASE STUDY: “SALA PHRA KIEW” STUDENT UNION BUILDING, CHULALONGKORN UNIVERSITY, BANGKOK

Suphawadee Ratanamart, Noppawan Ratanamart (Thailand)



Sala Phra Kiew Building, Chulalongkorn University, Bangkok, Thailand. Photo by: Noppawan Ratanamart

ABSTRACT

The Student Union Building named “SALA PHRA KIEW”, constructed in 1966 is considered to be the symbolic building of Chulalongkorn University. It has served as clubhouse for students, in aiming to promote unity and harmony between students and faculty members since then. The building, achieving the international style, demonstrates the technological advancement of reinforced concrete with wide flexible space. Columns span 25 meters with 9 meters extended, 17.50 meters height. The remarkable entrance with glass win-

dows and sunshade induce ventilation and daylighting. The building was renovated in the year 1981 and 2014 with the guidelines for adaptive reuse.

INTRODUCTION

Chulalongkorn University is the first university in Thailand, and has been founded by “The Royal Pages School”, where King Chulalongkorn or Phra Chunla Chom Klao Chao Yu Hua (King Rama V) has graciously approved the establishment of the university in the year 1899, and the “Phra Kiew”

has been installed as the school symbol as placed in the Grand Palace. Phra Kiew, the Thai equivalent of the coronet, is a headgear traditionally worn by young princes and princesses. King Chulalongkorn adopted it as his personal emblem, as it coincided with the literal translation of his name.

From then on, Thailand or "Siam" has experienced the development to sustain advancement and prosperity as observed in the Western countries of the modern era. And from realizing that education is an important factor for development, in 1916 King Rama VI has graciously established the Royal Pages School as the university by the name of "Chulalongkorn University" to serve as the royal memorial for King Chulalongkorn, his father. Chulalongkorn University is situated in Patumwan district, downtown of Bangkok, with the area of approximately 455.73 acres comprising of educational area of 51.55%, academic area for rental of 16%, and commercial area of 32.45%. Chulalongkorn University has been developed to achieve continual advancement, with sustained quality for teaching and learning, research and environmental management for the university. This includes 19 Faculties: the Department of Science and Technology, Health Science, Sociology and Humanities, and includes the international and English programs. According to this, the university has been recognized as the oldest and most renowned university in Thailand.

MODERN MOVEMENT

Thai architecture has been influenced by architectural trends of the Western world since 1868. During the reign of King Rama VI (1910-1925), there has been extensive construction of public buildings and various technicians and craftsmen from abroad with expertise in different fields have been hired to provide service for government sectors. Therefore, modern Thai architecture has been shaped in the way that integrates Thai architecture with utilization of public buildings and construction technology. Modern buildings were designed harmoniously with the integration of Thai roof forms comprising of reinforced concrete structure. Shading panels were first implemented and designed to suit Thailand's tropical climate. These features extensively served their purpose for Modern Thai architecture until present-day.

THE IDENTITY

Sala Phra Kiew: The term "Sala" in English denotes the Thai style building for multi-purpose application, and is open and spacious. Therefore Sala Phra Kiew in the concept of modern

Thai architecture features an integration of modern Western architecture that utilize the technological advancement of reinforced concrete, the application of wide span structures, in conjunction with the wide and open shape of Sala, comprising of high gable roof and all-around glass sidings that can be opened to allow ventilation, and also overhangs to guard against sunlight. Sala Phra Kiew also has a basement which is slightly lower than road level, and is utilized as the university bookshop. The building shape resembles the coronet which is the symbol of the university, as seen from the building plan, roofing and three-dimensional shape.

Sala Phra Kiew building has been constructed during the modern movement period of Thailand (1935-1973) and designed by MC Vodhyakara Varavan and Professor Lert Urasyanandana, architects, and Dr. Rachot Kanjanavanit, structural engineer. The building was completed in 1966. It is located at the center of the university, to serve as multi-purpose building, as recreational area for hosting student and faculty activities from all departments. The building has been utilized continually in various occasions such as the celebration ceremony for Buddha crystal statue in 1966, where citizens and members of Chulalongkorn University jointly attend this worshipping ceremony. The building with 5,116.99 square meters. The first floor has been elevated to 2.00 meters above the road level; this features a wide and spacious hall allowing for natural lighting through the glass sidings that extend from the floor to the ceiling. The hall has hosted activities for all student clubs, and some area also used to hold faculty meetings. The interior of the hall measures 43.00 meters in width, which comprises of five column spans of 25.00 meters x 10.00 meters. This features a stairway up to the Mezzanine floor that serves as the meeting place for all faculty members of the university, and also allows for viewing the activities held on the first floor. The ceiling is made of wood, and clearly displays the concrete rafter roof structure. The high pitch gable roof with the small gable dormers are lined on both sides of the ridge as the traditional Thai roof style, covered with concrete tiles. The wide open area is a flexible space that can be adjusted in dimension to suit the utilization purpose of each student club from various faculties that has varying curriculum. The curved concrete stairway near the entrance, leads to the Mezzanine floor, which creates the sense of movement of space from the lower floor to the upper floor. In the year 1972, the Mezzanine floor had been utilized to welcome Queen Elizabeth II and Duke of Edinburgh from the United Kingdom, as honorable guests of HM King Rama IX on the

royal visit to Thailand. The Mezzanine floor had been used as space for serving royal welcoming meal following the royal ceremony.

ADAPTIVE REUSE

After the building has been in continual service for 15 years, in 1981 with an increase of the number of students and the changed functions, the building was called for renovation to suit the utilization and also strengthen the structure. In 2014-2015, another renovation was made to increase utility space, by adding the new 4 storeys building behind, therefore obtaining the total building area of 11,941.99 sq.m. Both renovations are carried out in accordance with the guidelines for adaptive reuse, with the objectives to sustainably conserve the identity of such valuable building, and to endure the love and unity of all university members until today.

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BIOGRAPHIES

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Ms. **Noppawan Ratanamart** graduated from the faculty of Humanities with a bachelor degree in Japanese language, Kasetsart University. She is currently a freelance translator, research assistant and a partner of natural beauty brand: Florescent since 2016. She had participated in the research of modern movement architecture in Thailand project since 2013 and the research of solar bioclimatic house in Thailand project, 2014-2016. Ms. Noppawan Ratanamart participated in 13th DOCOMOMO International Conference, Seoul, South Korea, 2014 and 14th DOCOMOMO International Conference, Lisbon, Portugal, 2016. At present, she is a secretary of Docomomo Thailand chapter.

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FROM CONTROVERSIAL DESIGN TO HERITAGE ICON: SEIDLER'S SHELL HOUSE

Cristina Garduño Freeman, Giorgio Marfella, Gareth Wilson (Australia)



View from the south of Shell House, 1 Spring Street, Melbourne. Design by Harry Seidler, 1989. Image Credit: Giorgio Marfella

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ABSTRACT

Shell House opened in Melbourne in 1989 after a decade of controversy on its architectural design, urban built form and relationship with the city's skyline. Seidler's design was described as 'selfish'; it challenged local planning guidelines while exemplifying his trademark modernist vocabulary identified with Sydney, Melbourne's rival city *par excellence*. In 2017, Shell House was inscribed as state heritage for its aesthetic significance, the same derided three decades earlier. Shell House presents a case for the re-evaluation of the late twentieth-century iconic tall buildings, often perceived as conceited, but later recognised as icons that contribute to city skylines, views and identity.

SHELL HOUSE

Shell House was designed by the master of Australian Modernism, the late Harry Seidler.¹ Completed in 1989 Shell House is the only tall building erected in Melbourne designed by Seidler, whose oeuvre is more closely identified with Sydney.² Controversy surrounded the project during and after its period of realisation as Seidler's design disregarded the local planning guidelines and broke with the city's urban form. The value of this building has changed over the last three decades, evidenced by its recent inscription at a state level on the register of the Heritage Council of Victoria.³

This inscription recognises the building for "demonstrating the principal characteristics of a class of cultural places and objects" and for "exhibiting particular aesthetic characteristics".⁴ Shell House is significant as "an outstanding example of a late modernist office building in Victoria", yet at the time of its planning application in the mid-1980s, the design of the headquarters of Shell was, in fact, vehemently opposed by the City of Melbourne.⁵ Some assessors went as far as opposing the proposed design of Shell House by defining it 'selfish' and 'ungainly' in official records.⁶ Shell House can also be read as representative of all that was 'wrong' with Melbourne's rival capital, Sydney; Seidler's design was fuel for an ongoing battle for cultural supremacy played out through architecture at a national level.⁷ Shell House is also recognised for its aesthetic significance. The S-shaped tower comprises interlocking curves that create a sculptural form that is partially free-standing on a plaza that addresses the south-eastern corner of the inner city and opens up to Fitzroy Gardens. The design of Shell House departed significantly from the post-modern inspired built-form guidelines that the City of Melbourne had adopted. Nonetheless, the project gained approval at the state level from the

Planning Minister at the time.⁸ The controversy surrounding the building's exemplification of Melbourne architecture, as well as its relationship to the city, makes its recent inscription at the state level all the more unexpected. Rather than recognising the building for its representativeness of Victorian tall building architecture – that is as a typical example – it recognises its value as atypical; a counterpoint to expected built forms of the time and to Melbourne's colonial orthogonal street pattern and existing skyline.

Today, Shell House is celebrated by architects, media, and city authorities as a landmark.⁹ Now an icon, Seidler's building demonstrates the intertwining of the socially-driven aesthetic value that underpins its iconicity. It demonstrates the way in which perceptions of heritage can change over time. In the past, an icon was representative and stereotypical – it gained notoriety because it belonged to an archetypal form. But since the middle of the 20th century, iconic architecture has become associated with the atypical, buildings that challenge stereotypes through often controversial aesthetic propositions, providing identity at a national and international level.¹⁰ Shell House, like other icons of the 20th century, embodies these characteristics by being stylistically *of* Sydney (New South Wales), yet inscribed for its significance for Melbourne (Victoria). In this way, Shell House demonstrates how works of architecture currently not valued, such as many commercial tall buildings, may in time be recognised for their contribution to cultural heritage.

Despite being custom-designed for the British-Dutch multinational oil and gas company, Shell House was a speculative property construction by Grocon, at the time led by Bruno and Rino Grollo, with a contract for a long-term tenancy of 30 years. However, Shell progressively vacated the building from the early 2000s, subletting the entire building to a diverse range of tenants. This contractual arrangement has helped to substantially preserve the building; most of the communal spaces of the original brief are intact, even though they are vacant or only partially or adaptively occupied. Examples include the staff canteen with its original interiors and furnishings, fully equipped commercial kitchen, laboratory rooms, a business centre, internal and external landscaping, an inactive water feature, roof gardens, artwork, and a barely used theatre. The radial ceiling grids on each floor remain fully functional with the original warm light fittings installed and in working order. Also, much of the original equipment is still preserved and functional, including costly building maintenance units needed to service the terraced rooftop.

Many of the original design features of Shell House have survived for thirty years. However, with a rental deal of 30 years expiring in 2019, the conservation of the public and semi-public spaces is uncertain. The need for workspace flexibility, energy efficiency, and continued urban infill puts the future of Shell House at risk. The paradox is that the complex may be under greater threat of change after heritage listing than before.

Melbourne's Shell House supports the case for the re-evaluation of the contribution made by late twentieth-century tall buildings to the historic built environment. This building typology is a unique form of cultural heritage, where architectural form, technology and urban design coexist and integrate with one another. Much of the discourse to date has focused on the opposition between the technological and socio-aesthetic values of this typology which, more often, is considered as a destructive force for the built environment. Calls for the conservation of exemplars in the building stock of office towers completed in the late twentieth-century may not seem culturally significant *prima facie*. However, on closer inspection, some instances demonstrate long-term and positive contributions to the social and visual identity of a city's skyline.

NOTES

1 Harry Seidler died in 2006.

2 Peter Salhani to ArchitectureAU, 20 Sep 2012, 2012, <https://architectureau.com/articles/harry-seidler-architecture-art-and-collaborative-design/>; to Harry Seidler: Art & Architecture, 2017, <https://sydneylivingmuseums.com.au/2017/08/29/harry-seidler-art-architecture>; Norman Day, "Sydney, the Buildings, in So Many Chapters," *The Age*, 16 Aug 1997.

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Dr **Cristina Garduño Freeman** is Postdoctoral Research Fellow at the Australian Centre for Architectural History, Urban and Cultural Heritage, at The University of Melbourne. Her research focuses on participatory culture and Google search data to understand the social value of Modern Heritage. In 2017 her book, *Participatory Culture and the Social Value of an Architectural Icon: Sydney Opera House* was released by Routledge. She has published in leading international journals and has won (individually and collaboratively) over AUD \$134,000 in funding over the past 3.5 years. Before academia, she practised professionally in architecture, landscape architecture, urban design and visual communication design.

Dr **Giorgio Marfella** is a graduate of the University of Florence (Italy) with a PhD in architecture from the University of Melbourne, a registered architect in the State of Victoria and a lecturer of the Faculty of Architecture, Building and Planning at the University of Melbourne. He is a full-time academic active in research, teaching and industry engagement associated with tall buildings of the present and past. In his doctorate thesis, he has analysed the urban, typological and technological characteristics of Melbourne's tall office buildings during the second half of the twentieth century. Giorgio is a member of SAHANZ (Society of Architectural Historians Australia and New Zealand) and of the University of Melbourne research centre ACAHUCH (Australian Centre for Architectural History, Urban and Cultural Heritage), where he contributes with expertise in tall building design, technology and construction history.

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KEEPING MODERNISM ALIVE:**HARRY SEIDLER'S RENOVATIONS TO HIS 1953 T. MELLER HOUSE (AUSTRALIA)**

Mariana Martin (Australia)



Original harbour facade. Photographer: Marcell Seidler, 1953. © 2018 Penelope Seidler. Negative digitised by Eric Sierins. Source: Polly Seidler

ABSTRACT

50 years after the T. Meller house in Castlecrag (Sydney) was completed, Harry Seidler had the privilege of renovating and enlarging it. This project is a unique opportunity to understand his approach to the conservation of modern houses. The main questions to be addressed in this poster/research are as follows: What can we learn about Seidler's approach in assessing the significance of his own work? How did he trans-

late his assessments into the practical conservation and transformation of his own building?

INTRODUCTION

New architecture is always a cultural statement of its time. Seidler was mentored by four modern masters: Gropius, Breuer, Albers and Niemeyer. Seidler's architecture is an "amalgam" of these several influences.¹ T. Meller house par-

ricularly shows how Seidler's architecture has been influenced by studying design under Albers – with compositional arrangement of the geometric forms of the architectural façade to achieve visual tension such as overlapping “reverse symmetry” of one slope countered by an opposing slope and suspended volumes which appear to float². The house also shows the influence of working with Niemeyer in 1948 for three months just before Seidler arrived in Australia. Niemeyer speaks of their mutual “enthusiasm for modern architecture” and their “elective affinities: the search for architectural innovation, the same attraction to conquer space, and a constant preoccupation to promote the integration between architecture and fine arts.”³.

Conserving this house is about conserving this legacy.

CONSERVATION PHILOSOPHY & SIGNIFICANCE

The Modern Movement was a rethinking of the traditional notions about architecture and, in the same way now, its conservation demands a rethinking and a new approach⁴. While conservation of historic buildings focused on material preservation, the conservation of modernist buildings focused on values, fundamentals and ideas. So what are these fundamentals of modernism? What is it that has made this house significant? What are the values that shaped Seidler's work?

According to the Australian ICOMOS Burra Charter, conservation is “all the processes of looking after a place so as to retain its cultural significance”. So an assessment of what is significant in modernism is the first step to determine what is important to preserve. For Seidler the Modern Movement was a new ‘attitude’ to building, which was constantly in flux because it reflected the changing visual language of art, changing social needs and the ever-expanding wealth of technological means⁵. The values that made the T. Meller house significant are:

- the fluidity of the space: “horizontal spaciousness which embraces the entire house, amplified by a vertical openness which penetrates all levels”⁶. The use of ramps following Le Corbusier's idea of promenade architectural,
- the perception of the exterior landscape from inside the house, by exposing every room's glass wall and terrace to the harbour view,
- the formal quality (which is not dependent on the materials used),
- the sculptural fluidity and lyrical forms (including strong lines of the butterfly roof and the vertical louvre shading devices); and
- the architecture being slightly elevated from the ground.

T. MELLER HOUSE BUILT 1951-1953, RESTORED 2002-04

Since the house was completed in 1953, there had been dozens of different owners who had progressively disfigured the house by the time a new owner purchased it in 2002 and approached Seidler to restore it to its original glory.

Seidler noted that the original house of 1953 was not physically strong due to early post-war limitations of available materials and building technology. The original materials specified at the time of construction were not necessarily the best means of achieving the spatial qualities and aesthetic experience for which he strove. Seidler proposed to rebuild the house keeping the original architectural form (preserving the significance) but using the new durable materials and the latest 21st century technology such as reinforced concrete slabs for the cantilevered balconies. Also the original timber balustrades and internal ramp metal handrail were replaced with structural glass. What was originally fixed timber vertical louvres on the exterior wall (alongside the upper internal ramp) were replaced with coloured metal louvres.

Seidler had acknowledged that houses (in areas where there is space to expand) will invariably need to evolve to a contemporary lifestyle. For example in the 1950s, if people had a car, one car garage was normal, by 2002 it was necessary to have at least two car spaces.⁷

In 2002, he enlarged the house to accommodate the new client's needs, designing additions which would not compromise the significance of the 1950 house. Seidler designed two additional bedrooms, a games room, garaging for two cars and a swimming pool. The additions were located on the street façade (non-harbour side) maintaining the original Albers' formal composition (of the elevation). This was achieved by using the technique of extrusion – where the additions followed the original Albers-inspired form. Also the original horizontal window was reinterpreted in the new façade (above the garage). A similar visual effect of what was an original white suspended facade was achieved by echoing the original void (negative space underneath) with the new recessed matt black garage roller door under the new (extruded) upper white street façade above. The expanded house grew as a living organism, faithful to its origins.

CONCLUSION

Seidler embraced change as part of what it was to be modern. He did not think that a living house had to be frozen in time, but that houses inevitably evolve: adapting to new social

needs and new technology, yet still maintaining the house's original visual language which is its significance.

A good heritage conservation approach requires an initial correct assessment of what makes the house significant. The T. Meller house's heritage significance is its visual language, its fluidity of space and the interior's visual connectedness to the exterior landscape. Conserving this house kept modernism alive.

NOTES

1 Peter Blake, *Architecture for the new world: The Work of Harry Seidler* (Sydney: Horwitz; New York: Wittenborn; Stuttgart, Karl Kraemer; 1973) p. 7

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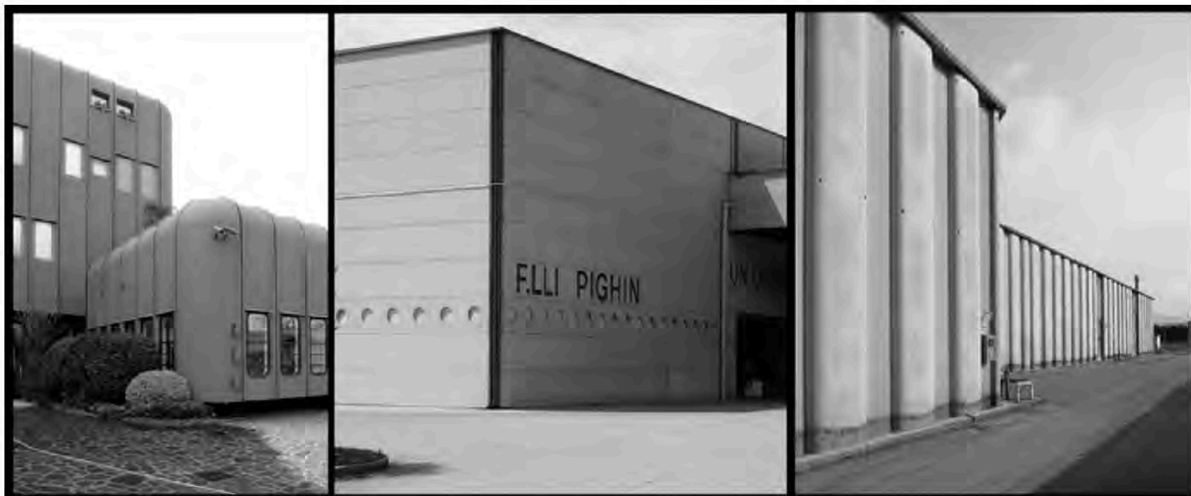
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BIOGRAPHY

Mariana Martin was trained as an architect in Argentina. She completed a Master Degree in Heritage Conservation at the University of Sydney. She has been working in Heritage Conservation within the public sector in Australia for the last 4 years. Previous to that she has been working in the fields of Architecture and Interior Design. Mariana is a member of Docomomo Australia and ICOMOS.

CONCRETE INDUSTRIAL ARCHITECTURE IN ITALY 1950 -1980: DOCUMENTATION OF A CHANGING MODERN HERITAGE

Maria Vittoria Santi, Anna Frangipane (Italy)



ARM Italia factory, 1968, Milan, A. Mangiarotti

Pighin factory-farm, 1967, Udine, G. Valle

Seleco factory, 1966-1967, Pordenone, G. Valle

ABSTRACT

An overview on prefabricated industrial buildings in reinforced concrete made in Italy between the '50s and the '80s, focusing on best works, places and remarkable figures, is presented through a catalogue of significant buildings, which highlights relationships between companies and designers, spaces and times, history and current conditions of use and degradation. The knowledge of concrete industrial architecture in Italy, witness of the excellence of architects, engineers and companies which have believed in the expressive and technological opportunities of the new building types, disclose the potential of this hidden heritage towards protection, renovation and transformation.

INTRODUCTION

The phenomenon of abandonment of industrial buildings and sites has made the reuse of industrial buildings a major topic of current post-industrial dynamics. The evaluation of industrial heritage enables the identification of valuable buildings, which may then assume the role of potential centres for re-designing the territory. Furthermore, the presence of modernist industrial buildings increases the need for strategies for their protection and transformation (renovation, conversion, energy efficiency upgrade and seismic retrofit), in accordance with the principles of selective preservation and adaptive reuse.

Industrial architecture in Italy has largely concentrated upon concrete construction techniques, mainly through the evolution of prefabrication, which played an important role in the diffusion of the industrial building types, characterising, today,

the 'industrial landscape' ¹. Italian designers, between the '50s and the '80s, experimented with the use of concrete in industrial construction: several of them took the opportunity to introduce new technologies and brand-images by designing their own concrete elements, while others exploited the possibilities presented by standardisation and prefabrication to inject their personal modernist language into industrial architecture ².

This attitude towards reinforced concrete and prefabricated systems led to the construction of many factories across the country, which constitute some of the most successful examples of industrial buildings of the late twentieth century. However, since its origin, questions about the values of this built heritage have constantly arisen, considering if, in the search for architectural and corporate identity, mass customisation suffices in architecture ³.

CONCRETE INDUSTRIAL ARCHITECTURE IN ITALY 1950-1980

As the identification of examples of emergent industrial architecture is the much-needed step of 'critical knowledge' of this heritage, research into the issue has produced an online catalogue⁴ of "Concrete industrial architecture in Italy: 1950-1980", which lists notable buildings constructed using both cast-in-place and pre-cast concrete methods.

The records included are organised upon the basis of a minimum fiche (as defined for the DoCoMoMo register) in a database, which includes around 120 industrial buildings, both relevant and less known, and their designers. The poster presents here a selection of these case-study buildings, chosen due to their relevance in the international context of modernist architecture.

A number of Italian architects, in fact, stood out for the ability to combine the products provided by the industry to build unique architectural works - such those of Pier Luigi Nervi, Gino Valle, Vittorio Gregotti and Tobia Scarpa. Furthermore, for many designers the factory was an opportunity to reshape the trilit with current concrete technology and redesigning the construction units ⁵, as in the practice of Marco Zanuso, Vico Magistretti, and Angelo Mangiarotti. The design of modern factories involved also prominent figures of structural engineering, including Silvano Zorzi, Antonio Migliasso, Gino Covre, and Aldo Favini, thus highlighting how industrial architecture had become a thriving field of application of aesthetic, structural and technological solutions.

A relevant perspective is also introduced by the chronological and geographical interpretation of the data on this built her-

itage. The '50s saw the construction of large complexes for well-known companies (Olivetti, Fiat, Pirelli) and buildings for the growing industrial sector ⁶; large concrete structures spread throughout the country, following the development of new structural elements or new forms, pursuing greater spans, wider spaces and better performances. The '60s saw the real proliferation of prefabricated concrete construction next to traditional concrete building methods, even including some masterpieces of modern architecture. In the '70s, the prevalence of prefabricated building envelopes for concrete skeleton structures became evident with the construction of notable factories ⁷.

From a geographical point of view, the presence of remarkable industrial buildings or sites, as well as that of construction companies specialised in the field, is concentrated in the most industrialised regions of the country.

NOTES ON CURRENT CONDITION

The research into Italian industrial architecture has highlighted, besides the recognition of significant buildings, the key issues of their current condition, alteration and state of conservation. Many of the buildings have been subject, over time, to substantial modifications, which includes partial demolitions, additions determined by the changing needs of the production cycles, recladding and rebranding resulting from a change of intended use, and alterations to the concrete surfaces as a result of repair and maintenance.

On the other hand, there are some good examples of industrial buildings that have been restored, converted and intelligently integrated into the changed context, becoming central elements of new cultural or business centres, still linked to the industry.

A CASE STUDY IN NORTH-EAST ITALY

The Sèleco plant in Pordenone, built in the late '60s and designed by the architect Gino Valle for the company Zanussi, is a case in point in the past and present scenario of prefabricated architecture for the industry. In this sense, the building envelope is definitely the most distinctive character of this factory: the façade is made of precast reinforced concrete panels, shaped and assembled according to an original system designed by Valle and also used in other factories for Zanussi (Porcia in 1964 and Grandi Impianti in 1968). In that period, in fact, research carried out by Valle into industrial buildings (architecture reproducibility and prefabrication) focused precisely on the constructional definition of

the cladding components and their assembly. In this case the facade system consist of very tall and narrow precast r.c. panels with a peculiar curved shape, which were assembled alternately front and back, creating a 'chained' façade and the theme of a colonnade which represents the structural rhythm of the building: a solution devised for the façade which constitutes a particularly successful example of the way in which the design of the constructional detail can also control the large scale of the work.

CONCLUSIONS

The issues regarding the industrial heritage of the 'recent past' have become even more relevant today due to the increasing need of initiatives for the preservation, valorisation, refurbishment and reuse of industrial sites.

Thus the online catalogue provides an essential overview of the legacy of the Modern Movement in Italian Industrial Architecture, highlighting some of those unique aspects - such as adaptability, flexibility, standardisation, industrialisation and, above all, experimentation - which could facilitate the protection and reuse practices.

This system is able also to track de-industrialisation and abandonment over time by recording information on the past and current use of buildings and monitoring their state, modification and any possible damage. It is an approach which therefore favours an organic evaluation of the specific values and characteristics of each building in order to assess its adequacy and potential for restoration - having in mind energy and seismic retrofit and adaptive reuse.

NOTES

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Anna Frangipane (1963), PhD in Construction Engineering, associate professor of Architectural Engineering at Udine University (Italy). Her research activity carried on is focused on: i) materials and building techniques of built heritage, with main attention to stone; ii) preservation and retrofitting of built heritage; iii) relationship between water and built environment; iv) rainwater harvesting and water saving; v) didactic for constructions: projects and experiences. Author of nearly one hundred of publications; reviewer of the Geological Society of London (UK), Special Publications and of the International Journal of Heritage Architecture: Studies, Repairs and Maintenance; tutor/co-tutor of nearly one hundred BSc/MSc/PhD thesis.

Maria Vittoria Santi (1985), Arch. PhD. She received her PhD. in Civil Engineering Architecture and Territory in 2017 at the University of Udine, where she cooperates in research projects and educational activities. Her main areas of interest are industrial heritage and prefabricated construction; her research activity is carried on in the field of history of construction, materials and building techniques - with attention to concrete -, protection, preservation, retrofit, reuse and environmental sustainability of the built heritage, topics on which she has written several recent publications and conference presentations.

GUATEMALA CIVIC CENTER, MODERN HERITAGE IN DANGER

Sonia M. Fuentes P. (Guatemala)



Guatemala Civic Center, Photo: Sonia Fuentes 2018

ABSTRACT

The Ministry of Culture and Sports in Guatemala requested DoCoMoMo Guatemala, to lead the technical committee to do the proposal to declare the Civic Center as National Heritage (2014). In 2015 it was revealed that the government threatened against all the initiatives to elevate this complex to be included in the UNESCO's Indicative List by proposing an invasive proposal of about 6 massive buildings in the site where the actual Central Train Station (The most important train station in Central America in the 20's). Management of the Architectural Heritage and its validation should be done by participatory and inclusive actions.

BODY TEST

The Ministry of Culture and Sports in Guatemala, being conscious that modern heritage is already susceptible of being recognized, protected and divulged, requested DoCoMoMo Guatemala, to lead the technical committee to do the proposal to declare the Civic Center as National Heritage (2014). The Guatemalan Civic Center, in its first construction phase, is an urban complex located south of the old colonial center of the city. In the urban scale it considers all the concepts proposed by the 8th CIAM "The Heart of the City" imposes another type of layout introducing the main boulevard-type axes to the city and it is formed by four buildings which are

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related to each other by plazas and walkways. These four buildings are Municipality building; Guatemalan Social Security Building, el National Mortgage Building and last but not least Bank of Guatemala Building, which was in those years, the tallest building in Guatemala City.

It is perceived in this urban complex, an accent of modern regional architecture and the cultural approach that sought to contextualize the "universal architecture" in our country.

Unfortunately, two years ago it was revealed to our society that the government threatened against all the initiatives to elevate this Civic Center to become candidate in the UNESCO's Indicative List by proposing an invasive proposal of about 6 massive buildings in the site where the actual Central Train Station is located putting it also in danger of total destruction. This Train Station was considered for many years the most important station for Central America and nowadays is one of the most emblematic examples of industrial architecture in our country. It is located nearby the Civic Center which is already declared as National Heritage.

Aware of the foregoing, several sectors: artists, architects, urban planners, cultural managers, civil society, higher education institutions and involved institutions, showed interest in the conservation and valorization of this complex and therefore presented different requests to the Ministry of Culture and Sports. For this reason, the Ministry convokes a Technical Committee to unify efforts and criteria with the purpose of achieving the inclusion of the Civic Center within the Indicative List of World Heritage.

To accomplish adequate procedures of preservation and revitalization, it is very important to involve different sectors of society. The management of the Architectural Heritage and its validation should be done by participatory and inclusive actions. A participatory validation workshop, with a duration of 5 hours, was organized in which all sectors of Guatemalan society were invited. As a result of the results obtained in said workshop, the Ministry of Culture declared the Cultural Heritage of the Nation the Historical Center Civic Center of Guatemala City and its areas of influence, according to the Ministerial Agreement 189-2014. With this important step, efforts could be initiated with UNESCO to submit it for consideration to the Indicative List of World Heritage.

In mid-2014 the Government announced, through the National Agency of Partnerships for the Development of Economic Infrastructure ANADIE, the interest to build an office project to centralize all the Ministries which are scattered throughout the city from Guatemala. That was the initial ap-

proach, however, it did not have the proper analysis to justify the selection criteria of the site where the project was planned. The proposal that ANADIE presented to the Ministry of Culture and Sports and the Technical Committee of the Civic Center was that of a complex of 6 buildings and 5 basements to house approximately 2,500 vehicles. The proposal provides partial destruction of the Industrial Heritage in question and shows in a first draft invasive, massive and de-contextualized proposal apart from not having studies of the negative impact that this proposal would bring the current centrality of our city. This not only would destroy an important heritage for Guatemalans, but pollute the Civic Center endangering its status as Heritage of the Nation and, therefore, the possibility to be elevated to World Heritage.

Concerned about this threat, the technical table again resorts to participatory strategies to make a counter proposal in which, far from being destructive and invasive, it proposes a valorization and revitalization of the Central Station, respecting all the Patrimonies involved, recognizing the vocation of the terrain and rescuing the initial thesis of the Heart of City with which the Civic Center was raised in the 50s. A workshop was held with a duration of 8 hours promoted by the Crecer Foundation who was responsible for coordinating it and wisely invites all involved sectors including ANADIE Director and his technical team.

As a result of the workshop, the Industrial-Cultural Heritage Park emerges, a proposal that puts in value the Industrial Heritage, integrates the original project of the Civic Center and promotes peaceful coexistence. Management has not been entirely successful but the technical committee has been doing the necessary steps to make it happen.

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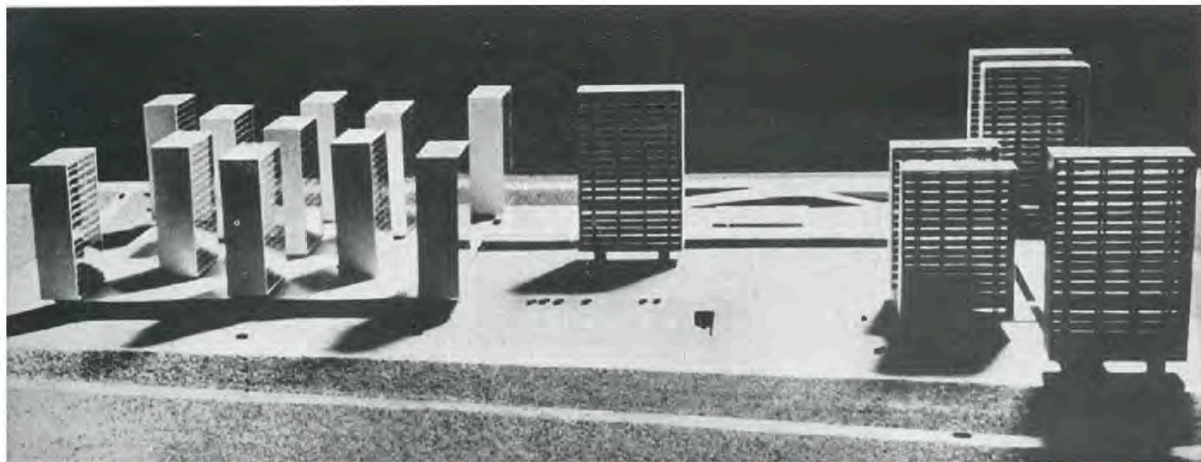
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BRASILIA'S BANKING SECTOR AS INCOMPLETE WORK, 1957-

Helena Bender (Brazil, Switzerland)



Módulo: revista de arquitetura e artes plásticas (February 1959), 5. © Foundation Oscar Niemeyer

ABSTRACT

This poster understands Brasília's Banking Sector as a plan for long-term building. It suggests that the idea was already present in Oscar Niemeyer's discourse published in *Módulo* magazine, proposing a link between it and Sigfried Giedion's *Space, Time and Architecture*. These discourses are thus examined around the idea of unity that both imply. On this, the model, assembled for the sector and used as illustration of Niemeyer's speech, is perceived not as a final form to be achieved, but as a guideline. A tool to coordinate inputs of different architects across time. Thus, instead of closed work, or open work, this poster sees Brasília's Banking Sector as incomplete work.

INTRODUCTION

Perhaps there is no catchier image of Brasília's center than the photographs of its Banking Sector model. These photographs reveal Oscar Niemeyer's contribution to the development of Lucio Costa's Pilot Plan. These same photographs

are, however, often attached to descriptions of a static urbanism that failed in dealing with time and change.¹ As much as these accounts seem true to the formal rigidity implied in the model, they contrast with Niemeyer's refusal to design the sector's buildings.² In fact, the architect had managed instead the involvement of different collaborators in a development across time. Following this procedure, the Banking Sector, as built, had indeed changed from its model. But rather than claiming the mismatch as a failure of a static plan, this poster assumes the model as a guideline, understanding the Banking Sector as a plan for long-term building. This planning aspect is not unheard about the center of Brasília.³ However, it has not been examined in the context of Niemeyer's reasoning. Thus, this poster suggests that it was already present in the architect's articles published in *Módulo* magazine, proposing a link between them and Sigfried Giedion's *Space, Time and Architecture*.

ON THE PHOTOGRAPH

By the end of the 1950s, several reports on Brasília illustrated the Banking Sector through the photographs of its model instead of drawings. Shot by Mário Fontenelle as plan, elevation, and aerial perspective, these photographs advertised Niemeyer's ideas for one of Costa's functional sectors.⁴ The sector, intended for banks and semiprivate companies, was designed to the southeast of the city's Central Bus Station. But Fontenelle's black-and-white photographs captured it as in the isolated model. They show the sector as seventeen slab-like buildings equally assembled with white cardboard. To the south of the sector, buildings would be seventeen-story high and oriented north-south; to the north, they would be seventeen or twenty-story high and oriented east-west. A special setting was reserved for the Bank of Brazil in center of the composition. A ground-level awning would join the buildings as a continuous structure. It would be filled with buzzing venues such as cafes, restaurants, bookstores, and bank agencies.⁵

ON THE DISCOURSE

The photographs of the Banking Sector model appear as part of Niemeyer's discourse for the first time in "Unidade urbana (City Planning Unity)". The article criticizes the disorder of the Brazilian city, claiming for unity as a problem to be faced by architects. Due to "limitless possibilities" offered by technique, wrote Niemeyer, "the city has been reduced to a conglomeration of structures, some of them of great merit, considered individually, but having nothing in common with one another and presenting as a group a deplorable picture of confusion and lack of harmony."⁶ In this context, the architect had chosen the photograph that shows the Banking Sector in a foreshortened perspective. Thus, forcing the viewer to see buildings and awning as a group.

Niemeyer's text was printed on a special page, smaller than the magazine regular size. What enables a continuous comparison between two drawings that compose the article's header and summarize Niemeyer's point: to the left, the orderly facades from a colonial Brazilian street; to the right, a confusion of buildings heights and shapes commonly found in a modern South-American city. When the page is turned, Niemeyer's reasoning is clarified even further by the contrast of six illustrations that range from the *Rue de Rivoli* in Paris to the Banking Sector in Brasília. The opening and closing positions of such images are memorable. They were not arranged by chance as, curiously, the image of the *Rue de Rivoli* match-

es with the one that Giedion had published in his book *Space, Time and Architecture*.⁷

Giedion dedicated a section of his book to the *Rue de Rivoli*. As the Banking Sector's awning, the Parisian street was joined by an arcade filled with commerce at ground level. Giedion used this example to argue for a comprehensive attitude regarding city planning as opposed to the fragmentary approach of the nineteenth-century specialist. An argument that resembles Niemeyer's one, when the architect claimed for unity and rejected the disjointed use of building techniques in the construction of the urban environment. To Giedion, "regulations alone offer no solution."⁸ But the historian did not stress that even *Rue de Rivoli*'s first track was built across time through the aid of rules.⁹ An aspect that Niemeyer recalls regarding the street, when he attached the image to the explanation that "city-planners of those days made a deliberate effort to adhere to [...] standards."¹⁰ A statement that may justify why Niemeyer closed his article with a photograph of the Banking Sector model, paraphrasing Giedion, and by wishing Brasília to affect city planning in Brazil "by disciplining the use of masses and open spaces and by restoring among architects the concern with unity."¹¹

Niemeyer further clarified the model for the Banking Sector as a tool to control the building form in "Setor Bancário de Brasília (The Banking District of Brasília)". Similarly to general accounts on the sector, the article does not reveal ground or floor plans, nor sections for each building. Instead, it is succeeded by a sequence of reports on three projects. These projects were intended for the sector and made by different teams of architects. Bearing the same "*gabarit*,"¹² they would fill in the form of each building displayed in the model. Thus the Palace of Trade, designed by Eduardo Kneese de Mello and Carlos Sena,¹³ as well as the Seguradoras Building and the National Bank for Economic Development, respectively planned by Antonio Pedro Souza e Silva and Alcides Rocha Miranda,¹⁴ followed the programmatic and formal rules that Niemeyer established in the model and in his text. Intended for the Banking Sector North and South, they were designed with a slab-like shape, seventeen-story high, and animated by gregarious programs in their ground level. Such buildings, as shown in the article, seem regard the model nothing more than a layout scheme.

CONCLUSION

As Niemeyer later remarked, "in Brasília, in the urban sections [...], regulations are set up to cover volumes, free spac-

es, heights, facing materials, etc., in order to prevent the city from proliferating, like other modern cities, in a regime of disharmony and confusion.¹⁵ Projects would indeed come in the following years to confirm such set of rules, as the Bank of Brazil (1960) designed by Ari Garcia Roza, Ivo de Azevedo Penna, Aldo Garcia Roza, and Renato Ferreira de Sá, the Casa de São Paulo (1961), by Nauro Jorge Esteves, and the unbuilt Affonso Eduardo Reidy's Bank of London and South America (1964). The set of rules connects Brasília to the unity praised by Giedion in the *Rue de Rivoli*. Moreover, it promotes a sense of incomplete work rather than closed, or open work.¹⁶ An incomplete work that, through the aid of the model, included different teams of architects and an indefinite amount of time.

NOTES

1 See Carsten Krohn, "Ordnung und Fortschritt. Der Stadtplaner Oscar Niemeyer" in *Oscar Niemeyer: eine Legende der Moderne*, Paul Andreas and Ingeborg Flagge eds. (Frankfurt am Main: Deutsches Architekturmuseum, 2013), 40.

2 Oscar Niemeyer, *Minha experiência em Brasília* (Rio de Janeiro: Revan, 2006), 18.

3 See Norma Evenson, *Two Brazilian Capitals. Architecture and Urbanism in Rio de Janeiro and Brasília* (New Haven; London: Yale University Press, 1973), 184; Carlos Eduardo Comas, "Brasília: Lucio Costa," in *The Companions to the History of Architecture, Twentieth-Century Architecture*, David Leatherbarrow and Alexander Eisenschmidt eds. (John Wiley & Sons, 2017), 5.

4 "Arquitetura e urbanismo: o Setor Bancário e Comercial do plano de Lúcio Costa," *Brasília: revista da companhia urbanizadora da Nova Capital do Brasil* (November 1957), 11.

5 As the one that Henrique Ephim Mindlin designed for the National City Bank. See "National City Bank," *Arquitetura e engenharia* (1961), 124-125.

6 Oscar Niemeyer, "Unidade urbana (City Planning Unity)," *Módulo: revista de arquitetura e artes plásticas*, trans. Eric Charles Drysdale (February 1959), 3-4.

7 Sigfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition*. 3rd ed. (Cambridge; London: Harvard University Press, 1959), 615.

8 Ibid., 610.

9 See Leonardo Benevolo, *Storia della città* (Editori Laterza: 1978), 740.

10 Niemeyer, "Unidade urbana," 3.

11 Ibid., 2; 3.

12 "Brasília," ed. the Cultural Division of the Ministry of Foreign Affairs (Berne: Staempfli & Cie, 1958). The use of the word "gabarit" in the booklet is important. In French, the second sense of "gabarit" means "toute dimension réglementée, toute forme imposée." *Multidictionnaire de la langue française*, (Les Éditions Québec Amérique, 2014).

13 With the collaboration of Artur Luiz Pitta (reinforced concrete structure) and Homero Viera Lopes (installations). "Palácio do Comércio (The Palace of Trade)," *Módulo: revista de arquitetura e artes plásticas*, trans. Eric Charles Drysdale (April 1959), 11.

14 With the collaboration of Elvin Mackay Dubugras and Fernando Cabral

Pinto. "Banco Nacional de Desenvolvimento Econômico em Brasília (National Bank for Economic Development in Brasília)," *Módulo: revista de arquitetura e artes plásticas*, trans. Eric Charles Drysdale (April 1959), 14.

15 Oscar Niemeyer, "Forma e função na arquitetura (Form and Function in Architecture)," *Módulo: revista de arquitetura e artes plásticas*, trans. John Knox (December 1960), 3.

16 Cf. Aldo Rossi, "Introduction to the First American Edition," *The Architecture of the City* (Chicago: MIT Press, 1984), 18.

BIOGRAPHY

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METAMORPHOSIS OF THE HRADECKY BRIDGE

Lara Slivnik (Slovenia)



The Hradecky Bridge at its third location in 2013. Photo: Lara Slivnik

ABSTRACT

Hradecky Bridge was designed in 1865 by Viennese engineer Johann Hermann, constructed by local craftsmanship and opened in 1867. Its cast-iron prefabricated structure allows that the bridge was constructed at three different locations across River Ljubljanica and this makes the Hradecky Bridge unique. During those relocations some parts of the bridge (e.g. cast iron prefabricated structure and parapet) had been pre-

served but some of them had been changed (e.g. gas lamps and pavement). Although the bridge is older than other Modern Movement buildings there are lot of similarities between them mainly because of the Hradecky Bridge continuity of change.

THREE METAMORPHOSIS OF ONE BRIDGE

Hradecky Bridge prefabricated structure allows that the bridge was constructed three times at three different loca-

Lara Slivnik Metamorphosis of the Hradecky Bridge

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tions. The first location was in the Ljubljana centre, the second location was near the Ljubljana Mortuary and the present location is again near the town centre.

The primary structure of the Hradecky Bridge consists of three prefabricated three-hinged grey cast-iron truss arches with the total span of 30.4 metres and the height of 2.2 metres. The prefabricated elements comprising the truss arches were made at the iron foundry in Dvor pri Žužemberku (Hof in Krain). The 5.7 metres wide Bridge was opened in October 1867 and was named after Janez Hradecky (Hradeczky), the mayor of Ljubljana in 1820-1840.

At the first location, the bridge connected two squares in old Ljubljana town centre as Hradecky Bridge (Hradeckega most, 1867-1930). Initially, the Hradecky Bridge stood at the location of the second oldest timber bridge, the Upper Bridge. From its construction in 1867 until the regulation of the river banks in 1930, it connected the Old Square (Stari trg) and the New Square (Novi trg). The bridge structure remains the same during this period; only four prefabricated iron gas lamps were replaced after the electrification of Ljubljana in 1898.

During the extensive regulation in 1930s, the river bed was consolidated and the banks were bolstered. Due to this works the Hradecky Bridge suddenly became too long. Therefore it was dismantled and moved nearly 2 km downstream the river where the same structure had been assembled again close to the Ljubljana Mortuary instead of a small wooden bridge. Officially the bridge was still named the Hradecky Bridge but as it was so close to the Mortuary it became popular with its nickname the Mortuary Bridge (Mrtvaški most, 1932-2010). At the new location the entire iron structure of the bridge remained the same, but some corrections were introduced. They include improved foundations, reshaped concrete parapets (where the Mortuary Bridge was connected with the river banks) and the addition of the new entrance to the bridge with concrete parapets and lamps in a form of a cone. Jože Plečnik, the most famous Slovene architect and the head of the River Ljubljanica 1930s regulation project designed all this additions.

The quiet and unimportant location behind the Mortuary actually saved the Bridge during the decades of socialism, the system so often at least ignorant if not even hostile to the cultural heritage. The only thing from that period worth to be mentioned is that in 1960s the hot water pipes were installed below the Mortuary Bridge markedly hiding its cast-iron structure.

After more than 70 years in use at the second location, the modern traffic became far too heavy for the nineteenth cen-

tury bridge structure. Hence, the town authorities closed the Mortuary Bridge for heavy traffic in 2004 and afterwards the Bridge remained open for pedestrians only. However, in 2009 they decided to replace the Mortuary Bridge with the wider one and move the old bridge structure once again, this time to a more prominent location closer to the town centre.

After taking the Mortuary Bridge carefully apart, it was established that even after more than 140 years all parts of the primary structure made of grey cast-iron were still in a very good condition. During the refurbishment, all parts were first sandblasted and then examined by visual and penetrant test. Only three parts of the original primary structure (out of 84) needed some repair. Finally, all parts were protected against the various weather conditions, especially against UV light and rust. The bearings were cleaned with acid and smeared with graphite to improve the corrosion resistance. At the renovation place, the six cantilever trusses were assembled from the original cast-iron pipes and triangles using new, pre-stressed screws. Afterwards, still at the renovation place, two groups of three cantilever trusses were connected with the original I beams. The two halves of the bridge, now renovated, were transported to the new location, this time again near Ljubljana city centre, approximately 450 metres upstream from its first, original location. The foundations strengthened with 20 metres deep piles on both river banks were prepared in advance. Finally, after both parts of the bridge were laid down into their final positions, the bridge was fixed by the hinges. It was quite an issue to decide which lamps should be installed at the bridge: original gas lamps from 1867 or Plečnik's concrete lamps in a form of a cone.

After the Hradecky Bridge was carefully renovated and constructed again, it was opened on May 11th 2011. The third relocation and the careful renovation of the Hradecky Bridge give hope that after decades of neglect, Slovenia finally starts not only to recognize but also to invest in its cultural and technical heritage.

After more than 150 years of its construction, Hradecky Bridge again serves as a pedestrian bridge in Ljubljana city centre. The Hradecky Bridge was the first three-hinged arch bridge structure ever built in the Habsburg Monarchy and nowadays it remains the world's oldest surviving three-hinged bridge. Today the Hradecky Bridge is recognized as the one of the highest achievements of the industrial heritage in Slovenia. Because of its three-hinged structure it is also an important, although still not well known, treasure of the world's industrial heritage.

Although the bridge is older than other Modern Movement buildings there are a lot of similarities between them mainly because of the Hradecky Bridge continuity of change. The metamorphosis of the Hradecky Bridge could be a guideline for preservation Modern Movement buildings.

ACKNOWLEDGEMENTS

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BIOGRAPHY

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UNINTENTIONAL CONTINUITY:

DEVELOPMENT PARALLELS OF EARLY MODERN URBAN PLANNING

(CASES BRATISLAVA, SLOVAK REPUBLIC AND NOVI SAD, REPUBLIC OF SERBIA)

Henrieta Moravčíková, Laura Pastoreková (Slovak Republic), Éva Lovra (Republic of Serbia)



Analysis of the regulation of Bratislava (1907-17) and Novi Sad (1910-11), designed by Antal Palóczy.

Bratislava and Novi Sad are characteristic examples of towns that were decisively shaped during the 20th century. From the beginning of modern urban planning in historic Hungary, city planners followed two main current approaches, the engineering approach of the German school and the artistic principles conceived by Camillo Sitte. Both of these approaches are visible in the first regulatory plans of Novi Sad and Bratislava. Even if these plans remained unrealized as whole, their main ideas could be traced in the later urban planning solutions. This striking continuity is evident despite the fact the planners in the 1930s and 1960s never referred to the first plans.

One of the most productive eras of town building and modernization of historic Hungary is represented by the period from 1867 to 1918. The urban evolution was determined by

the change of paradigm in urban planning that influenced the understanding of urban tissue, urban types and town construction in general. The leading Hungarian urban planners and theorists followed all the major themes of the era's planning discussion. The modern urban planning principles, as well as the common urban design language (rings, avenues, city parks etc.) acted as a common platform for the town shaping in the entire Austria-Hungary.

In frame of the historic Hungary, Bratislava and Novi Sad share a lot of common urban and historical markers. Both of them were free royal towns located on the river Danube on the edges of the monarchy, strongly influenced by the surrounding landscape and local climate. From the historical and cultural point of view, Bratislava served almost for 250 years as the coronation town and legislative centre of Hungary.

ian Kingdom. Although Novi Sad was founded only several centuries later, during 18th and 19th century it became an important trading and cultural centre.

During the period of Austria-Hungary, all the construction activities in Bratislava belonged to the administration of the city Technical Division. In 1896, the Division was assigned for the preparation of the regulation and expansion plan, on which they worked for 10 years. Nevertheless the evoking criticism towards the town-regulation resulted in the initiative to order the plan from an independent planner. The new plan was presented at the annual meeting of the town council in September 1905. Though this plan was again rejected by the councillors it increased discussion on a wide range of questions regarding regulation and inspired the city government to invite the well-known town planner professor Antal Palóczy to evaluate the situation. Already by March 1907 professor Palóczy was commissioned to prepare a new regulatory plan. In Novi Sad, the local Technical Division submitted probably their primary regulation and expansion plan in 1908. There is no evidence whether the first design was fully approved or presented to the public, but like in the case of Bratislava, at the same time the city representatives decided to look for the external experts in the field of urban planning and to organize a regulation design contest. The contest was won by three design teams: Imre Francsek and Lipót Berceller, Antal Palóczy and György Kopeczek and József Wälder.

Antal Palóczy, the Budapest based architect and city planner, followed the various trends and practices of modern urban planning theory and promoted these principles among the local architects already since 1880's. In his first regulatory plan for Bratislava, he outlined two main development directions. He also proposed the replacement of a part of the rail lines from the city centre, their rebuilding to an elevated structure, as well as the removal of several railway stations on the territory of the city. In his plan he implemented the idea of the "Industrial Canal" that was for the first time introduced by the local industrialist Johann Ludwig. Palóczy assumed the construction of three bridges across the Danube, as for purposes of transportation and the future urban development on the opposite bank of the river.

In his design for Novi Sad, he again paid attention on the characteristic features of the town. He proposed the expansion of the city in all directions, with precise functional zoning. He modified the form of the industrial channel with the new spacious industrial district around. He connected the city centre

with river bank, planned numerous new parks, railways, public buildings, squares and the new system of traffic.

On the basis of the analysis of original plans and city regulation processes in Bratislava and Novi Sad, we can state that in both towns very similar process of procurement of the regulation plans was practised. We can also state that both of the plans of Palóczy show numerous of parallels as for example the setting of the main direction of the town development, the application of functional zoning, the way of transport and railway organization, the construction of ring roads, the street enlargement, the form and function of the river bank, the location of bridges, the establishment of parks and city greenery, as well as application of the artistic principles such as urban structure composition and the arrangement of monuments.

Antal Palóczy can be considered the founder of the modern city planning in Bratislava, as well as in Novi Sad. In prior to planning, he studied the cities, their history, presence and tried to propose solutions for the future having in mind that the population of the cities will grow rapidly. His idea was revolutionary, because for the first time in both of the cities, he introduced two levels of urban planning: the general plan of regulation and growth that have to cover the entire town, and the particular regulation of city parts that are in need of such regulation. In his plans, he proposed smaller sized urban blocks and higher variability in the rhythm of open spaces, parks and residential blocks, as he focused on the healthy living and on the diversity of the townscape. He concentrated on solution of the increasing traffic problems, he proposed ring roads and radials in form of boulevards and geometrically equal urban blocks, where those were possible. He followed the aesthetic values of Sitte but took into account the principles of the German town planners in the planning of squares and streets.

We can assume that the either one of the Palóczy plans did not materialize because of the First World War and subsequent events, but its indirect impact can be traced in the later plans of the city, even when the designers of the plans have never recognized it. Even though it was never approved as a whole by the city council, Palóczy's regulatory plans can be regarded not only as initiatory but indeed opinion-shaping in terms of the modern planning of both of the cities. It is also worth noting that the later designers of regulatory or land-use plans for Bratislava and Novi Sad generally made no reference to Palóczy's original blueprints or to his written texts of the era, which should be considered a very typical modernist way of dealing with the history.

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Éva Lovra, PhD in architectural sciences, town planner and civil engineer with two master degrees. Her research field is urban tissue and urban typology (1867-1918), urban morphology, theory and urban history of the same period; urban and architectural theory after the WWII in Serbia. In 2014 her scientific monograph, Subotica's urbanism and architecture after the Second World War (1948-1975) was published. She was a researcher at the Hungarian Academy of Arts, participated in numerous foreign research journeys, worked as a researcher in Slovakia, Czech Republic, Croatia and as a guest lecturer in Italy. Her scientific work has been rewarded with several awards.

BEYOND THE GROWTH PARADIGM

THE FUTURE OF TRANSPORTATION'S VERTICAL SEGREGATION RUINS

SLOVAK RADIO BUILDING BRATISLAVA

Peter Szalay (Slovak Republic)



The inverted pyramid of the Radio broadcasting building from the roof terraces in 2013. Photo: Braňo Biebel.

ABSTRACT

In his book, *The Future*, Marc Augè asks, “What happened to the future?” (Augè, 2014, p. 12) He added that today’s society seems to reside in the eternal present, and if it spends any time thinking about the future, it is primarily about distorted and apocalyptic visions. For a long time now, architecture and urban planning have abandoned forecasting and futuristic research, characteristic elements of the thinking and crea-

tion of the architects of the Modern Movement, which culminated in the post-war techno-optimism. One of the symbols of this movement was the construction of the Slovak Radio building, an architectural complex which featured a bold inverted pyramid shape as well as an extensive urban plan of terraces and bridges. In the modernist spirit of the vertical segregation of transportation, a new city center was to be created on the terraces above the busy traffic artery, the trans-

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verse axis of Bratislava. The fall of socialism in Czechoslovakia also resulted in a halt to the elaborate project of the new center and the public terraces were ignored in the plans of post-socialist Bratislava. The ruins of the terraces of the radio building complex remained a burden for the financially under-funded state institution until citizens, architects and enthusiasts entered the game.

The wave of Techno-Optimism that was accelerated by the postwar arms race but especially the Space Race had an impact on architecture on both sides of the Cold War barricades. Architects looked to the future and diligently planned the transformation of cities and entire regions for decades ahead. Scientific and technical progress became a guarantee for the gradual implementation of comprehensive visions for the building of the new world of the space age. While the architects in the West kept the faith until the early 1970s, until the oil crisis hit, in the Eastern bloc, Techno-Optimism became one of the tools for building socialism. However, the long-term plans, which did not envisage any essential social upheaval, were dashed by the end of the cold war and the fall of the socialist regimes in Central and Eastern Europe. The modern urban renewal projects massively launched by authoritarian regimes, failed due to their comprehensive implementation. Ambitious plans for the construction and reconstruction of entire urban structures and cities which were demanding in terms of construction and technology and designed on the cutting edge of a technological utopia, were often unfinished, and all that remained were isolated fragments. Waves of privatization and the return to market competition were followed by the criticism and general rejection of those grandiose but unfinished town-planning visions. Their radical intervention in original structures based on the intentional rejection of compact cities has been and still is understood as a rupture in the natural continuity of urban development, a mistake that needs to be rectified.

Designing according to the principle of vertical segregation as a sophisticated technological solution to traffic jams in dense city centers was also one of the mistakes of Modernism. Visions of a multi-layered urban fabric, promised to liberate streets and squares from the noise of traffic and infrastructure in general. In the early 20th century, Eugene Hénard presented the vision of "two streets one on top of the other" almost as a utopia, but less than half a century later this had become commonplace. The implementation of vertical cities and neighborhoods situated on terraces, canonized by the western

history of the modern movement, such as Robin Hood Gardens in London and La Miraille in Toulouse, had multiple parallels in Eastern Europe and just as in the West, the discussions regarding their demolition and redevelopment began in the 1990s. The vertical segregation of transportation in the city centers, the goal of which was to lift pedestrians above ground level and thus protect them from motorized transport, was rejected as ineffective, dangerous and inhuman. But with the post-modern return to traditional streets and squares, pedestrians again had their feet firmly planted on the ground and the elevated terraces began to deteriorate; they became the ruins of "unsuccessful" modern planning and many fell victim to new projects oriented primarily on economic effectiveness and real estate interests.

The Slovak Radio complex in Bratislava (authors Štefan Svetko, Štefan Ďurkovič and Barna Kissling, project: 1964 - 1968, realisation 1969 - 1983), whose construction was a triumph over social and investment pressures and which just in year 2017 became a listed monument, is another example of a vertical city fragment. This fully functioning structure was designed as part of an extensive project - the construction of a transverse axis, a new traffic artery which should have constituted the compositional axis between the historical center and the administrative center of the capital of Slovakia in the newly formed federal system in the country. However, the segregation of transportation which characterized the entire concept was implemented only on the roof terraces of the radio complex and was only briefly open to the general public. The back slabs waiting for the installation of the bridge decks and the grandiose access stairways, which have gradually fallen apart due to exposure, indicate their original purpose.

The Pod Pyramídou (Under the Pyramid) project, which in 2014 for the first time since the completion of the building, brought a more sustainable public function to the terraces, showed the potential and vitality of this concept even in its fragmented state. As is typical in post-socialist countries today, where public institutions and authorities quickly accepted the neo-liberal concept of a weakened state, the use of the terraces was not initiated by the public institution located in the building, but by active and committed citizens. Thanks to the low-cost character of this very young project, which simply featured the adaptation of the areas to create a community garden for cultural events or operating a summer café, it has created a strong impulse for the mediation of the values provided by the radio building to the general public and the institution itself and contributed to the listing of this struc-

ture among the cultural monuments. The architectural input coordinated by architect Dominika Belanská originated with-in participative and collective initiatives, as opposed to the ordinary ideas of conservationists. They were an accumulation of temporary interventions, starting with grassy areas, an improvised stage and screen, through the recycled construction of the flowerbeds and outer areas for urban-gardening, up to the prefabricated café stand, none of which would have complied with the strict museum conservation criteria of the structure. In spite of this, their effect on the care and maintenance of the structure, and especially on the renovation of the equally important monument values of the function, has brought perhaps more than the efforts of specialists. In general, it was the start of the active care on the building by the owner, not only the passive expectance to found for the complex renovation. Volunteers activated by the Dominika Belanská together with employs of Slovak radio, started work on simple clearing and sanitation of facades and terraces pavements. Their interest in protecting of the authentic surface material finally inspired the facility manager of the broadcasting building to collect stone and tile claddings from buildings of the same period which were currently in reconstruction and storage them, for the future restoration of the heritage. The Pod Pyramídou (Under the Pyramid) project represents a nostalgic return to the dream of modernists, a flash of retromania, which, according to Svetlana Baum, we are now experiencing. But it is not a dream of the completion of this ruin of modernistic town planning or the revision of transportation segregation ideas. The participants opened a new perspective for the future of this site from the radio terraces, a perspective which goes beyond the dystopic instability of a future generated by chasing after increased production through repetitive demolition and construction. It is the perspective of a positive future which lies in the continuous care and artistic use of the ruins of the radio terraces and which is independent of an unsustainable growth paradigm.

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**THE FERANTOV VRT PROJECT:
STUDENTS' CONTRIBUTION TO THE PROCESS OF PRESERVING
MODERN HERITAGE**

Sonja Ifko (Slovenia)



Edvard Ravnikar, *Ferantov vrt* residential and commercial complex, Ljubljana, 1964–75. Photo: Sonja Ifko.

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15IDC Metamorphosis Poster Presentation

ABSTRACT

The preservation of heritage is crucially connected to understanding of the values of heritage, so education – of students and professionals but also of the general public and, above all, heritage owners – is of vital importance for effective protection. This is particularly important when talking about the heritage of post-war modernism, above all in the case of buildings that are not protected by the strictest protection regimes, where decisions on works affecting them are mainly taken by their owners.

The paper presents the results of the successful involvement of a group of students in the decision-making process regarding the renovation of one of the most important buildings of Slovene post-war modernism – the Ferantov vrt residential and commercial complex in central Ljubljana.

When talking about learning in the context of heritage protection, work on concrete, practical projects is the most effective way and, in the event of successful cooperation, also brings directly applicable results. One such case is the cooperation between the Faculty of Architecture, University of Ljubljana with the Institute for the protection of cultural heritage of Slovenia (Zavod za varstvo kulturne dediščine Slovenije – ZVKDS), experts from the practical sphere and the representatives of the owners of block B of the Ferantov vrt complex in Ljubljana, for the purpose of arguing the importance of a conservation approach to renovation and helping residents choose the high-quality renovation of one of the most important works of post-war modernism in Slovenia.

Ferantov vrt complex (1964-1975) was built on the historic site of a Roman forum now the city centre to the design of Edvard Ravnikar (1907-1993), the central figure of Slovenian post-war modernism. It was designed as above-standard housing, intended also to the market, which shows in the stressing of the exceptional location, and mainly in the programme variety, and the functionally consistent and rich apartment ground plan, to quote Stane Bernik's description of the complex.¹ In a period of radical functionalism, the complex was designed to subordinate itself in an innovative manner to the block format of the traditional city. Ravnikar combined the new and the existing in an innovative way at multiple levels; both in his enhancement of the traditional design of the four-sided block surrounding a central space, which he opened at the corners, thus achieving connections in space, something also enhanced by the form of the facades, and in the presentation of archaeological remains. He rede-

signed part of the complex in order to be able to present the archaeological remains of the Roman town of Aemona and interpreted historical memory on the main facade. In volumetric terms the complex presents remarkable variety, adapting to the structural lines of the existing architecture while at the same time providing a new living volume in the vertical direction as an organic structure. The premises at ground level enabled additional passage from the streets to the central courtyard, which thus became an extended public space.

The volumetric variety is complemented by facades with visible reinforced concrete structural elements and brick cladding with visible bricks, which through subtle positioning create new rhythms, accentuated edges and tactile structures in order to create – together with the accentuated structural elements – new emphases, rhythms and, above all, connections with the space to which they belong.

THE PROBLEM

The facade was in urgent need of repair. The effects of the weather and mechanical damage have caused the concrete to fall away in some parts and led to corrosion of the reinforcing steel. The wooden parts of the facade and building fixtures are also wearing out. Individual owners have tended to replace the latter with inappropriate substitutes made from plastic profiles and by changing the proportions of the glazed surfaces. The placement of external air-conditioning units and the rearrangement of the premises on the ground level, where each owner takes a different approach, in most cases without adequate regard for the importance of the architecture, also represent major problems. The big problem are the large windows, which individual owners are replacing with new double glazed windows in smaller sizes.

Despite its great architectural significance, the complex is entered in the national register of cultural heritage with the lowest level of legal protection.² As a result of this, repairs have already been carried out in some parts of the complex, but in an inadequate manner.

APPROACH

Experts from the ZVKDS in Ljubljana sought a comprehensive solution to enable the implementation of facade repairs that would both conserve the complex's authenticity and be technically effective. Despite the fact that their role here was purely advisory, they wished to propose solutions to the owners that would preserve the outstanding value of the complex. A section of the residents were in favour of such a solution,

which made it all the more important to seek a comprehensive solution in conjunction with experts from the practical sphere and demonstrate the advantages of renovations of this type and, in particular, of the holistic treatment of exteriors. The experience of the renovation of part of the complex, where repaired areas were resurfaced and the reinforced concrete elements partly isolated, had in fact proved to be negative. We therefore linked the challenge to the study process in the context of the elective subject "Protection of contemporary architectural heritage" at the Faculty of Architecture, where students combined their study of the theoretical aspects with the preparation of a project that enabled them (with a methodological framework and pedagogical guidance provided by me as mentor) to familiarise themselves with all the stages of the analytical and practical process of conservation of the architectural heritage of the modernist period, and to work as part of an interdisciplinary group. This experience was further enhanced by cooperation with the owners and by a promotional campaign and public presentation for all stakeholders. In methodological terms, the work took place in interrelated phases, beginning with analytical work and identification of the heritage – here the students researched the history of the area from ancient Aemona to the present and studied all archive material and written sources relating to the complex, both those written by the architect Ravnikar himself and critical and theoretical works covering this area. An important part of the analytical stage involved researching the theory and practice of the protection of modern architecture in sources ranging from surveys of the Docomomo to the ICOMOS Madrid Document.³ This part of the analysis concluded with a detailed presentation on the significance of the complex. This was followed by analysis of the material state of the heritage in the part of the complex under consideration – B block – and the mapping of façade damage. The study of successful cases of good practices abroad served as a starting point to set parameters for renovation and maintenance guidelines of the commercial ground plan, which were drawn up in conjunction with experts from the Institute for Research in Materials and Applications (IRMA) and the ZVKDS. The next stage consisted of the drafting of repair proposals, which were then prepared and tested on the site. Beside that students prepared proposals for the redesign of the exterior of the ground level in order to unify appearance of the shops.

RESULTS

After completing the research, we organised a conference for the owners at the Faculty, which is close to the complex, and presented the results to them. The students presented the findings of their analyses and the renovation proposals and invited the owners to choose an effective solution. Their highly committed work met with an extremely positive reception. Their research, which was based on a newly developed methodological process that can also be applied to other, similar cases, was published in book form.⁴

The key result, however, is the residents' choice of the renovation approach that was selected as being the most suitable for the heritage.

NOTES

1 BERNIK, Stane, *Slovenska arhitektura dvajsetega stoletja : Slovene architecture of the twentieth century*, 2004, Ljubljana, Mestna galerija Ljubljana, p. 358.

2 This is a consequence of the fact that the ZVKDS does not have enough experts to evaluate all units and conduct the legal protection procedures that are also partly tied to local or national policy decisions when it comes to the statuses of monuments of local or national importance. This is a particular problem for more recent heritage, such as the case in question.

3 <http://www.icomos-isc20c.org/madrid-document/>

4 BRITOVŠEK, Brina, KERŠIČ, Andraž, RIJAVEC, Miha, ŠUŠTERŠIČ, Polona, mentor IFKO, Sonja, *Trajnostni pristopi za varstvo povojne arhitekturne dediščine 20. stoletja: Primer stanovanjska sosenska Ferantov vrt / objekt B* [Sustainable approaches to the protection of post-war 20th century architectural heritage: The case of the *Ferantov vrt* residential complex / B block], student research project, 2015, Ljubljana, Faculty of Architecture.

BIOGRAPHY

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PRESERVING THE INTEGRITY OF ANDRÉ BROTHERS' MUSEUMS DESPITE THE EVOLUTION OF USES AND CONDITIONS OF CONSERVATION

Caroline Bauer (France)



Zoological Institute and Museum, Jacques and Michel André (Nancy, FR, 1932-33), Centre Image Lorraine.

ABSTRACT

Jacques and Michel André, architect and engineer, built three museums in the town of Nancy (FR): the Zoological Institute and Museum (1932-1933), the Museum of Painting and Sculpture (1932-1936) and the Iron History Museum (1961-1966). The first two have well evolved over the years, but the third raises today the question of preserving the essence of the building with regard to new conservation and comfort needs. Comparing them shows that it is essential to take into account the technical approach and the interior fittings in the heritage process.

Issued from one of the most important dynasty of architects of Nancy (FR), Jacques André (1904-1985) and Michel André (1905-1975), architect and engineer, built three museums in town, between the 1930's and the 1960's. Those museums share a similar function but have different status: university museum for the Zoological Institute and Museum (1932-1933), artistic museum for the Museum of Painting and Sculpture (1932-1936), and history museum for the Iron History Museum (1961-1966). Fifty to eighty years later, the uses and conditions of conservation of these museums have evolved. We aim to understand their effects on the building,

Caroline Bauer Preserving the Integrity of André Brothers' Museums

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and how it is possible to deal with them without changing the essence of the original edifices.

One of the most interesting elements about the production of André brothers is their technical and constructive research, especially at the start of their career, during the interwar. Back then, they built the Zoological Institute and Museum and the Museum of Painting and Sculpture. For the former, the architects studied a blind hall to exhibit the animal collections, but also to preserve them, in accordance with the commissioner's request. They wrapped it in a double wall to obtain "the most isothermal possible" space, and completed it with an aeration system (chimney and small openings). Following the adaptive technical process of *textile blocks* by Frank Lloyd Wright (1867-1959), they built the museum with local competences, and designed its formal expression with regard to the French theoretical debates. For the Museum of Painting and Sculpture, Jacques and Michel André also studied their project following a technical approach focused on light and aeration, but here, in accordance with the new principles of fine arts museography in the 1930's. They inquired about the most recent museums, like the Beaux-arts Palace of Victor Horta in Bruxelles (1922-1928) and the municipal museum of The Hague by Berlage (1931-1935). Similarly to the Zoological Institute and Museum, they used a double wall, within which they integrated the heating and aeration, with perforations in the lower and upper side to make a continuous ventilation. They also respected the times recommendation to have a side lighting for sculpture's spaces on the ground floor, and a zenithal lighting for the painting's upper spaces, for which they studied a superposition of three different glass layers.

These two museums evolved during the last 80 years: the Zoological Institute and Museum lost its original university functions to become a Museum-aquarium, and only parts of the interior fittings, like the entrance hall, remain since the 1930s. Despite the evolution of the building, the technical thinking is still readable. The good implementation of its materials allowed that none of them was replaced over time. Relying on the technical and aesthetic interest of the facade, the building is listed as historical monument since 2016. Otherwise, the concept of a black space is still relevant today and appreciated by the curators. Yet, the museography has been modernized in the 2000's, and it is unfortunate that the original glass cases designed by Jean Prouvé (1901-1984) have been changed, while they participated to the work on a global technical approach.

In the Museum of Painting and Sculpture, the innovative installations are confined indoors and don't impact the con-

struction's process and the facades. Indeed, the André brothers' project is an extension of a Stanislas Square's pavilion (1751-1755), a town's emblematic heritage complex. When the Museum required more exhibition surface in the 1990's, the architects Laurent and Emmanuelle Beaudouin, with Jean-Luc André, Claude Prouvé, Eric André and Sylvain Giacomazzi, renovated the existing museum and built a third wing. The new spaces have been established in the location proposed by the André brothers for a future extension, at the back of the Stanislas Square, around a garden. This third wing reminds the composition of the André's building, with a concrete wall suspended above a more open ground floor. The architects who took part in the renovation retained the zenithal lighting of the paintings galleries, but remade it for more efficiency. It became the support of a new device: a horizontal plan suspended which orients laterally the light.

For the Iron History Museum, built in the 1960's, Jacques and Michel André had a different technical approach compared to their previous museum projects. They chose to promote at first the expressiveness of the material over the constructive efficiency. Indeed, the ambition was to create the first museum about the history of iron in Europe, in the specific local context of steel industry's golden age. The architects thus glorified the material with the use of an impressive metal frame, which literally goes through glass boxes. In accordance with the principle of flexibility established in the post-World War II's fine arts museums, André brothers also devised free spaces with the possibility to modulate both natural and electrical lightings. In the same idea, the associate architect Claude Prouvé (1929-2012) designed the exhibition furniture with a modular system made with metal and wood. This building has not undergone any major transformations, but it nowadays presents difficulties. Built before the oil shock, the museum is made with only a single-glazed curtain wall. The poor thermal and humidity performances affect the energy consumption, the comfort of the users and the conservation of the works. The management of solar radiations is also problematic, as the original occultation systems were quickly put out of use.

Despite those difficulties, it is essential to preserve the integrity of the building in the future. To this end, one should maintain the central place of steel in construction and furniture, but also consider the original principle of flexibility – of the building and the museography – as a tool for news projects.

In the goal of conservation, the knowledge of the principles that characterize the essence of the building by all actors (own-

ers, curators, architects...) allows to plan its evolution accordingly. As of today, those three buildings are still keeping their original exhibition function, which limits their transformations. Studying their evolution shows that the technical and museographic approaches (choice of materials and their implementation, management of light, temperature, humidity and ventilation) must be taken into account as much as the others elements in the conservation process. The interior fittings, which become outmoded quicker than the buildings and require frequent renewal, also deserve an increased consideration.

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ESMA PAVILION BY ROGER BASTIN AND JACQUES DUPUIS A MODERN HERITAGE TO PRESERVE IN BELGIUM

Chiara Fucelli, Michel Prégardien, Laurent Debailleux (Belgium)

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Front view of the pavilion, Copyrights: C. Fucelli, 2017

ABSTRACT

The lack of a policy framework in Modern movement architectures can lead to the further deterioration of a building until the point of no return.

ESMA pavilion is the last project of a productive collaboration between Roger Bastin and Jacques Dupuis. This paper considers that the building represents the completion of this common path, before they each embarked on separately recognized careers. Elements characterizing the architecture of

both architects are recognizable in this pavilion.

Unfortunately, it was seriously damaged by two fires in 2017 and 2018. The analysis of the site, plan, furniture, circuit and other aspects allows us to appreciate qualities of the building, and to understand how it could be preserved.

PREFACE

This paper presents the ESMA pavilion (1953), designed by Roger Bastin and Jacques Dupuis, and its park in Auvelais

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15IDC Metamorphosis Poster Presentation

near Charleroi.

In 2015, the municipality of Sambreville, the owner of the building, obtained European funding to renovate it in an “exemplary way” from an energetic point of view. While its future function was uncertain, choices had to be made to enable the building to be used; a bad intervention could have been harmful.

At the end of 2016, some 3D views of the new project alarmed historians and professors. The preliminary draft, and first intentions did not seem to respect the pavilion’s intrinsic qualities at all. The new project was focused on sustainability and energy efficiency. The Universities of Brussels and Mons took an interest in the site and started an awareness-raising campaign, doing workshops with students. Historians also engaged in a dialog with the local administration and the architects involved.

In June 2017, during a meeting with all stakeholders presenting students’ work, everybody declared that they were conscious of the patrimonial value of the site, and agreed that the future project should deal with preservation of the building’s qualities.

Unfortunately, the pavilion caught fire two times, in the middle of September 2017 and on February 2018, due to the illegal occupation of the site. The building and its quality parts are strongly damaged.

Unfortunately despite all the mentioned activities about new functions and actions for the future preservation of the pavilion, the local administration could not guarantee the security of the site in its present transitory situation.

The preservation of this type of building takes time: time to understand what to do and how to do it, and time to make decisions between stakeholders. The lack of a policy framework during these key periods can lead to the further deterioration of a building until the point of no return, which is the case here.

Written to draw the attention of municipality of Sambreville and the relevant policy makers, this paper analyzes the qualities of the building, with the aim of conveying the intentions and influences of the designers of the time.

ROGER BASTIN AND JACQUES DUPUIS¹

The pavilion constructed in 1953 for the Electricity Society was a recreation space for employees and their families. At that time, all classes of workers shared this activity space².

This metal framed building does not have protected status, despite its recognized architectural qualities.

More recently, the pavilion was occupied by the Ardennes boules club, and, until June 2016, the students of the hotel school of Saint-André College were able to use the kitchen and the restaurant.

This project is the last of a productive collaboration between Roger Bastin and Jacques Dupuis. This paper considers that the building represents the completion of this common path, before they each embarked on separately recognized careers. Elements characterizing the architecture of both architects are recognizable in this pavilion.

This paper aims to explain the characteristics of the ESMA pavilion, and tries to understand the architects’ choices in order to assess the composition and structural elements.

The analysis of the site, plan, furniture, circuit and other aspects of the functional details allows us to understand qualities of the building.

THE SITE AND LE CORBUSIER’S INFLUENCE

The pavilion is located at the bottom of the site, on the opposite side to the two points of access to the park.

It is necessary to take one of the two paths across the park before discovering the pavilion, almost like a suspended entity among the trees.

Due to the flood prone character of the land, the building was elevated. The veranda in the ground floor is not original. Roger Bastin knew Le Corbusier’s five points very well, and he knew how to apply them when necessary³. Thus, the need to bring in light, to create covered spaces, and to blend with the landscape, all influenced his choice of columns, which gives a poetic dimension to the spaceplace.

THE ORIGINAL PLAN

The building is composed of two parts. A functional block (north side) with showers and toilets on the ground floor, and a kitchen and the concierge’s accommodation in the first floor. The southern part includes recreational facilities for the former workers. Arriving in the heart of this space, by the main access, there is a small bar, which is directly linked to the game room of the Ardennes boules club on the ground floor, and the restaurant upstairs can be reached via a staircase. The spaces are open and communicate with each other, favoring the function of a meeting and relaxation place. The lobby has a direct view under the porch to the sandpit for the children. It is easy to imagine this place full of life, bustling with all the different activities.

THE CIRCUIT

As previously explained, the approach to the pavilion starts at the entrances to the park. While we discover the building between the trees, we can take an elevated path, passing over a pond, and we arrive at a protected area under the cantilevered terrace. From this space, an oblique wall breaks with the orthogonality of the rest of the building and marks the entrance, leading the visitor to the heart of the pavilion. The lobby is a generous double height space, where we find a well-designed, inviting staircase. Upstairs, we discover the restaurant, the main space, bathed in light. From the restaurant a large curtain wall characterizing the project gives access to the balcony, offering a privileged view of the park. We thus discover the landscape from a new angle. The landscape is closely linked to the building, and is part of the project.

MATERIALS

In Roger Bastin's architecture, materials are always employed in the simplest way. His favorite materials were stone (*murs en moellons*) and concrete⁴. We can find this sincerity of material in the metal structure, which was raised in a clear and meticulous way. The metal structure and curtain wall give rhythm to the facade and characterize the building's aesthetic. Prefabricated concrete panels, barely thicker than the joinery, constitute the main part of the structure.

FURNITURE

The showers are functional and well designed. The restaurant and bar, the area for playing boules, the slatted partition, the waylobby chandelier, the staircase, the coat rack, each of these pieces is a masterpiece. The wooden furniture, finely designed by Dupuis, is inspired by Scandinavian design and brings warmth to these spaces.

PRESERVING SIMPLICITY

The two fires destroyed completely interior furniture and compromised part of the structure.

Architecture's historians, like Maurizio Cohen, plead for the preservation of structure and for the rebuilding of damaged parties, in order to preserve simplicity of lines and volumes⁵. Simplicity, together with the qualities enounced above, can be considered as an intrinsic architectural value to preserve. This attitude could rescue the Bastin-Dupuis pavilion from total demolition, that seems to be unfortunately announced. Nowadays, even though expertise of the structure is not yet done, stakeholders argue that it's too expensive to preserve it,

and suggest a tabula rasa. They imagine the reconstruction of an energetic-efficient building in the same location (but what will be the criteria of new construction?).

Will the work of documentation and awareness of historians be able to save the plans and the structure of pavilion against economic and energy-efficiency arguments?

While a committee of academics is set up to save the coat rack, the only furniture's masterpiece kept miraculously intact from fires, the future of the pavilion remains uncertain.

NOTES

1 The beginning of the career of the two architects and their influences is explained in *Jacques Dupuis l'architecte* by COHEN Maurizio & THOMAS Jan, Bruxelles, *La lettre volée – Communauté française de Belgique*, 2000.

2 COHEN Maurizio & THOMAS Jan, *Jacques Dupuis l'architecte*, Bruxelles, *La lettre volée – Communauté française de Belgique*, 2000

3 «...le langage corbuséen apparait comme un fonds commun, essentiel mais non suffisant – une grammaire en quelque sorte, mais qu'il faut utiliser à l'intérieur d'une syntaxe personnelle.», PUTTEMANS Pierre, *Le Corbusier et l'après-guerre*, rencontres, *Le Corbusier et la Belgique*, CFC Editions, 1997.

4 VERSAILLES Kevin, *Roger Bastin : Etre et matérialité*, article dans le recueil de textes : *Roger Bastin Art et Architecture*, Province de Namur, 2016.

5 COUVREUR Daniel, *Un temple du savoir-faire et du génie wallon en péril*, article paru dans *Le Soir de Lundi 19 mars 2018*, p.27, Bruxelles, Groupe Rossel, 2018.

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BIOGRAPHIES

Chiara Fucelli is an architect graduated from the University of Florence and a PhD student at the University of Mons, Polytechnic Faculty. She works as assistant to support engineer-architect students, involved in projects concerning the way of intervention and *riuso* in existing buildings. Her re-

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Michel Prégardien is architect civil engineer and works as project manager at the University of Liege (B), in charge of the renovation of several patrimonial buildings of the University. He is also professor at the University of Mons at the Polytechnic Faculty, teaching composition and architectural history/theory to future engineer architect. He holds a PhD thesis in architecture and urbanism in 2013. With the help of Deleuze's philosophy and specially his work on Francis Bacon's paintings, the thesis determines the conditions for exceeding the image of a building and directly reaching the perception of its matter. He is also co-author with Jean-Claude Cornesse of a book named *Villas of the 20th century. Evolution and interaction of composition schèmes*.

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Chiara Fucelli, Michel Prégardien, Laurent Debailleux ESMA Pavilion by Roger Bastin and Jacques Dupuis

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MODERNIST ARCHITECTURE AS A MEANS OF BUILDING THE NATIONAL IDENTITY IN THE POLISH PEOPLE'S REPUBLIC IN THE YEARS 1956 – 1980

Blazej Ciarkowski (Poland)



Pyramide-shaped sanatorium in Ustron-Zawodzie designed by H. Buszko and A. Franta (author: Blazej Ciarkowski)

ABSTRACT

This study is an analysis of the social significance of the modernist architecture in Polish People's Republic and its current reception. Modernist holiday resorts have been selected to serve as examples. Designed by the leading Polish architects, they were a reflection of the local reception of the Modern Movement. Using the scale of a single building of the entire construction complex, the designers created the fundaments

for the new identity of the communist society. Modern aesthetics was supposed to bring us closer to the West. The social program implemented the ideology of a socialist country, while the assignation of particular resorts to workplaces reinforced labor ethos.

The history of Polish post-war architecture and its political meaning is a complex phenomenon. From the beginning of

their rule, communist authorities were convinced that architecture had a huge idea-carrying potential. In the beginning, architecture was just an element of the construction and perpetuation of the new system, whereas after 1956, it became a tool of the modernization politics whose objective was to build the “second Poland”.

ARCHITECTURE, MODERNIZATION AND POLITICS IN COMMUNIST POLAND

Architect Jerzy Hryniewicz proposed a systematics that took into account the specifics of the political changes and dependency of Polish architecture after the year 1945 on the subsequent cycles of economic plans. He distinguished five consecutive stages. The first one was characterized by the continuation of pre-war schools and directions (1954-1949); the second stage was dominated by the socialist realist doctrine (1949-1956); the third stage marked the return to modernist ideas of function and construction. The fourth period brought on a certain threat related to the domination of urban projects, simplification of particular buildings to the simplest shapes. Dichotomy and discrepancies between the planning activities and architecture became more profound in the following stage. The sixth stage brought about a breakthrough that occurred in the first half of the 1970's. It was principally related to the development of residential construction built with the use of industrialized technologies, which unfortunately did not develop according to the expectations as during the seventh period (1976-1980) the country came to the brink of an economic crisis. The Hryniewicz's systematics was accepted by two of the most important architecture historians concerned in post-war architecture in Poland- Andrzej Basista and Tadeusz P. Szafer.

From the very beginning, architecture in the communist Poland constituted an element of the modernization of the country. Although, the aesthetics was not always modernist, the ideas of progress and social changes were. Even in the years between 1949 and 1956, when the academic classicism imposed from above was the binding point of reference and its monumental character was a symbol of the power of communist state, it was a part of the philosophy of modernity understood according to the Jurgen Habermas as a questioning of one's identity, as well as the philosophy of change perceived as a driving force by Alain Badiou.

In 1956, when the idea of socialist realism was rejected and the attention was drawn once again towards modernism, many have considered it the end of politicizing of architec-

ture. However, the response to the social realism was not the architecture devoid of ideology, but the architecture that reflected ideological content in a new manner. As Piotr Piotrowski has noticed, the communists building “the second Poland” “did not need the propaganda of socialist realism anymore, but modern art that did not interfere with the status quo”.

LEISURE IN THE PEOPLE'S REPUBLIC OF POLAND

In the country where the majority of social activity was politicized, tourism and recreation also constituted an element of central authority's policy. In 1945, when the President, Boleslaw Bierut handed in the center in Spala to the hands of the Foundation for Polish Science, he expressly stressed that it would become a place of the working class' recreation.

First half of the 1970's is historically considered the most successful time of the People's Republic of Poland's tourism, which is emphasized by Andrzej Szczerski, among others, which he referred to as the “decade of holiday building”. It would not be possible though without a number of actions taken in the previous period. At the turn of the 1950's and 1960's, began works on the development of the plan of the general spa system in Wisla-Ustronie. That project represented a typical for the times of the People's Republic of Poland relationship between the development of holiday resorts and industrial growth. Towns located in Beskid Slaski mountain, such as Ustronie or Wisla were considered predestined to play a role of a touristic and recreational background for the people from the Upper Silesian Industrial Region. This is how the organization and development of the recreational basis was permanently combined with the idea of the development of heavy industry which was the principal branch of the People's Republic of Poland's economy.

RECREATIONAL ARCHITECTURE AT THE SERVICE OF POLITICS

Modern Movement determined the foundation of mutual relations between architecture and the natural landscape based on the simultaneous coexistence and opposition. Le Corbusier's “white blocks in the sun” stood in stark contrast to nature and simultaneously tried to take advantage of its most significant features. The situation of the post-war socialist modernism looked slightly different. The ideological lack of context was increasingly more often replaced by the attempts to creatively interpret local forms.

The “Harnas” holiday resort in Zakopane and sanatorium in Ustron serve as an example of the described evolution. In the first case, the architects designed dynamic, abstract volume on the slope of the mountain. In a sanatorium-spa district Ustron-Zawodzie, there was a different concept adopted. Instead of reminiscing the international style, they offered a constructions consisting of seventeen repetitive “pyramids”. They regarded perpendicular forms as inappropriate in the context of the mountainous landscape, whereas the triangle became the starting point as it reflected the shape of the sloping roofs of the highlanders’ houses. “Almost all the views of solid blocks were in the shape of a triangle and were embedded in the landscape”, they said.

What is significant about the above projects is the fact that holiday resorts in Polish lowlands and coast practically do not have this kind of solutions. The construction of new objects in the coastal health resorts obviously did not favor the emergence of compact complexes of uniform construction style. At the same time, there were hardly no local cultural references, architects could be inspire with. Sanatorium in Kolobrzeg designed by Edmund Goldzamt and Helena Gurjanova, appears to be just another fine manifestation of international style. However, in most cases architects designed more modest forms, mostly due to economic reasons.

IDEALESS MODERNITY?

The authorities willingly promoted collective and closed leisure forms at the employee centers. Cyclic, mass holidays became one of the elements of so called “little stability” and a permanent element of life of the great majority of the society. At the same time, communist authorities treated organized recreation as a tool of shaping attitudes compliant with the official ideology among the participants. Both the organization of the holidays and their form served that purpose, and the architecture would set the stage for that. In communist Poland abstract art and modernist architecture were not free of politics, as we would like to see them. Krzysztof Nawratek was wrong, when he wrote that after 1956 “there was no more time nor mood for ideology”. Seemingly devoid of ideology modernism has then become a tool that perpetuated a certain political and social order.

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BIOGRAPHY

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THE CHANGE IN THE TANGIBLE AND THE INTANGIBLE HERITAGE OF ESKİŞEHİR SUGAR FACTORY RESIDENTIAL CAMPUS

Figen Kivilcim Çorakbaşı, Ayşe Deniz Yeşiltepe (Turkey)



Administration Building of the Eskişehir Sugar Factory (1933). Photo by Figen Kivilcim Corakbas, 2018.

HISTORY

Eskişehir Sugar Factory was established in 1933 as a significant step of the industrialization and the modernization of the Turkish Republic, which had been established only a decade ago then. The factory and its campus were designed by German engineers and architects, among which there known to be architect Bernhard Pfau.

The first sugar factories in Europe were established in the second half of the 19th century; i.e. in Rumania in 1876, in Swe-

den and Denmark in 1880, in Bulgaria and Spain in 1898, in England in 1919, in Ireland and Latvia in 1925, and in Iran in 1932.

Sugar was foreign to Anatolian culture until the first years of the Turkish Republic. Previously, the Anatolian people had been familiar with condensed grape juice syrup (pekmez), and had been using it in their meals.

Before the Republic, sugar was imported from the European countries like England and France. In the late Ottoman peri-

od, there had been efforts for establishing sugar factories, though not realized.

As a result of various pre-Republican studies on establishing sugar factories and growing sugar beet, the adequacy of the climate of the cities of Ankara, Kastamonu, Bursa, Çanakkale, Sivas and Elazığ for growing beet was approved. In 1925, a report that was submitted to the Turkish Republican Parliament mentioned the names of these cities as possible locations for new sugar factories.

The state decision to build sugar factories was firstly taken in the First Turkish Economy Congress, which was held in Izmir in 1923. The first two sugar factories of Anatolia were established in Uşak and Alpullu in 1926. Eskişehir Sugar Factory and its residential campus were established in 1933, as the third public sugar factory of the newly-born Republic.

THE MODERN RESIDENTIAL CAMPUS

The campus of the factory complex was divided into two parts by a main urban axis, which separates the factory buildings with the residential area. In late 1950s, the residential area included more than 75 lodgments, which were designed according to 5 different typologies, parks and green areas, a cinema, a hospital, two restaurants, a farm, a greenhouse and an administrative building. In this study, mainly the heritage of the residential campus is discussed.

Not only the factory's technology but also the residential buildings' typologies were new to the modest Anatolian town of Eskişehir. The facilities in the residential campus of the Sugar Factory contributed to a high extent to the establishment of a modern life style in the city.

As mentioned above, between 1933 and the end of 1950s, 5 different types of residences were built in the residential campus, all of which are probably designed by German architects. The characteristics of the different types were determined by the hierarchical structure of the Sugar Factory administration; that is, the biggest and the most prestigious two residences forming Type A were allocated to the Factory Manager and the Agricultural Manager, whereas smaller but still highly equipped 10 two-floor houses (Type B) were given to the vice managers. Nevertheless, all types had gardens and equal services provided by the campus.

Two restaurants (one open-air used only in summertime) and a cinema were the main public spaces, where the Sugar Factory community came together and practiced a Modern way of living; i.e. live music was present in restaurants on several evenings of every week.

Until 1960s, the German engineers continued to work and live in the factory, which turned the campus life into a multi-cultural one. In other words, the factory and its residential campus sustained its original Modern character until 1960s.

CURRENT SITUATION

The factory is still functional today as a state property as it was founded nearly 85 years ago. However, nor it sustains its significance in the contemporary city's vibrant life, neither it is considered as cultural heritage by the public. Additionally, there is a risk of division of the campus for privatization purposes.

The authors of this paper had the chance to coordinate the architectural documentation of 5 residences representing 3 of the 5 typologies that exist in the residential campus, in the scope of an architectural conservation course that was held at Anadolu University. The documentation process was designed to reveal the historic, cultural and intangible values of the architectural heritage of the Sugar Factory. Moreover, the authors coordinated various graduate-class studies, which concentrated on the intangible and tangible cultural heritage qualities of the site. Additionally, the authors interviewed some of the engineers and architects, who used to both work and live in the Sugar Factory.

As a result, it is observed that the integrity and authenticity of the residential campus are highly preserved, mainly due to continuous use of the campus. The landscape of the campus was maintained so well by the Sugar Factory Administration that one can propose that it is even more valuable than it was first designed. The landscape value of the campus is an important aspect to be conserved.

The residential buildings were subjected to many changes, especially when the interiors are concerned. Usually the kitchens and bathrooms renewed many times, and in some of the cases there are closed and semi-open areas added to the houses. Surprisingly, most of the original architectural elements like windows and doors were preserved, revealing the quality of the original material, techniques and workmanship.

On the other hand, the Modern social life lost most of its main facilities: the restaurants provide a more modest service, there is no regular live music and the cinema has been closed for a long time. One reason is the fact that the campus is surrounded by the city that provides most of these services. Another reason may be the state policy that prefers private companies over state companies, and that desires to privatize state factories.

METAMORPHOSIS OF THE CAMPUS

According to the site surveys and literature review, the metamorphosis of the residential campus of the Sugar Factory can be directly related to the urban development trends in the city of Eskişehir; and can be roughly schematized as follows:

1. The campus life as the symbol of the modern and the western life style (from 1933 to ca. 1960)
2. Autism period (ca. 1960 - ca. 1980)
3. Decadence and isolation (ca. 1980 - ca. 2005)
4. Urban commodity and further decay (since 2005)

The first period witnessed continuous development and contribution by German engineers and architects, whereas the second period was a more stable one. The third and fourth periods of decay coincide with the change in Modernization culture of the Republic: the idealism was long-left and the daily life was highly determined by the rapid urbanization; its advantages and disadvantages.

As a result, the Modern life that the residential campus offered hardly lives today, leaving the authentic architecture and landscape as a container of many memories.

The paper discussed the change in the character of Sugar Factory and in its relationship with the city. It is argued that the relations between the tangible and the intangible qualities of the site were changed in accordance with the changing social and physical contexts.

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BIOGRAPHIES

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MIHELIČ'S BUILDING IN THE URBANISTIC CONTEXT OF MIŠČEVIĆ'S BLOCK "CENTER" IN OSIJEK, REPUBLIC OF CROATIA

Ines Ambruš, Denis Ambruš (Croatia)



Milan Mihelič, Department Store (Blagovna hiša), Osijek, Croatia, 1967. © Credits (Private collection of Josip Klobučar, 1967)

The ambient transformation of the city blocks in the center of Osijek into open public spaces was determined by urbanist Radovan Mišćević, in the urban project "Reconstruction of

the block 'Center' in Osijek, in 1965, which defined the location for the construction of the "Department Store"¹ from 1963 to 1967 of the architect Milan Mihelič.

The precursor to Mišević's project was the conceptual urban project "The parcellation of Capuchin church gardens" presented by city architects and urban planners from 1906 to 1910, namely, Viktor Axmann and Ivan Domes.² The plan introduced the street corridor in the north-south direction peripherally formed by business-residential buildings and a town square with a department store as the main landmark of this space.

Still, the urban identity of this area was realized after 1960 when the new social demands led to changes in the city's functions that influenced the metamorphosis of the historical center of Osijek. The urban project of Mišević determined the layout of the new buildings with an emphasis on constructing business - commercial buildings and creating a kind of a *City* within the historic city center.³

The physical structures of the block "Center" mediate between the characteristic structures of the traditional city and the structure of the revalued practice of modern urbanism (8th CIAM congress, Hoddesdon, England, 1951, the theme "Heart of the City").⁴ A new urban center with a pedestrian zone separated by roads and cars was designed and built, focusing on the so called difference of „the heart and the machine“.⁵

Mihelič's "Department Store" is the main protagonist of Mišević's urban project, which was attractive both by its modernist architecture and its contents (three large Slovenian companies: "Prehrana", "Modna hiša" and "Slovenijales") covering a total area of 9264.7 m² basement and three floors.⁶ Contemporaneity and specificity is expressed by the reinforced concrete and steel construction and vertical communication with escalators, as well as by the design of outer sheaths with metal walls, panel boards and drawn aluminum profiles. A special distinctiveness was achieved in shaping of the ground floor with the pillars symbolically accented with industrial elements, which by contrasts, emphasizes the finesse of the glass and metal walls.

It is noteworthy to mention the federal award of the newspaper "Borba" Mihelič received for the architecture of the 1967, whose purpose was the popularization of the most important architectural achievements at the state level of the Yugoslavia.⁷ Mihelič was also awarded with prominent Slovenian prize, the Prešeren Award, for the same project.⁸

With the "Department Store" in Osijek, he created the prototype of the "department store architecture"; his original established the foundation for further codification of the department stores that followed in the Yugoslavian architecture.⁹

Thanks to this successful fusion of economic needs and archi-

tectural design, it has been noted as a model example in other countries, as well.¹⁰

The devastation of the original building occurred after the fire in 1982. Mihelič, as the author of the renovation, approached the professional ethics of that time by choosing a moderate stylistic variation of postmodernism, rather than a facsimile. With that kind of orientation, he sends a clear message of transformation openness of the architecture of "Department Store" in consistency with time. Precisely this influenced the choice of the renovation method of architect Damir Šterijev from 2014 to 2016, who reinterpreted the original with his own author expression.

The earliest realization of the department store, which conceived a new urban center and became the main venue for social gatherings, was actualized by urbanist and architect, Victor Gruen with the project "Shopping Mall", Northland, Southfield, MI, Detroit, 1954.¹¹ Similarities with Mihelič's "Department Store" are evident in the architectural composition and shaping where the 'par terre' zone is a colonnade, creating a sense of intimacy between the streets cafés and shops. However, it should be noted that Gruen designed the "Shopping Mall" on the periphery, outside of Detroit, whilst Mihelič created an architectural ensemble in the center of Osijek.

By building of block "Center" and the "Department Store" in that time period Osijek became an example of the harmony of urban planning and top-level architecture, by the pure merit of the engaged authorities, urbanists and architects, Mišević and Mihelič.¹²

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Ines Ambruš graduated Art History and Italian Language and Literature on the Faculty of Philosophy, University of Zagreb, Croatia. Since 2005 to present, she has been working in the Ministry of Culture, Republic of Croatia, as Senior Advisor - Conservator. She is finishing doctoral thesis “Company town Bata in Borovo” on the PhD program of Art History, Faculty of Philosophy, Zagreb. She taught as an associate in the Department of Art History, Faculty of Philosophy, University of Rijeka on the subject “Industrial heritage in the Continental Croatia”. She participated on the international project “Company Towns in the World”, at University of Padua.

Denis Ambruš graduated from the Faculty of Architecture, University of Zagreb. He obtained his master's degree in science at the postgraduate study of spatial and urban planning on civil engineering, University of Ljubljana. From 2013 – 2017, he worked as Deputy Mayor of Osijek. As architect, among other projects, he authored the grand altar during the visit of Pope John Paul II to Osijek in 2003. He won several awards, one of them in the International Competition “Solutions” during the 24th Youth Salon in Zagreb, Denis Ambruš received the award “Honorable Mention”, with Makoto Sei Watanabe as reviewer.)

BRUTAL AND FRAGILE: CASE STUDY OF NEW BELGRADE'S "CONCRETE BAROQUE"

Jelica Jovanović (Serbia)



Facade of the meander No. 9 - delamination, corrosion of the reinforcement (photo by Jelica Jovanović, February 2018)

New Belgrade's Central zone is under tentative protection and while the evaluation is ongoing, main concern is 'the next step': how to restore? The usual comments are concerning the zone's famous brutalist Blocks 22 and 23 - designed by Stjepanovic, Jankovic and Karadzic in 1968, and built through comprehensive integrated process of planning, designing and

developing. The current condition is troubling: 'the concrete baroque', one of Belgrade's most popular landmarks has damages caused by the age, technology issues, inadequate reparations. The poster presents preliminary investigation of the structures: review of archival documents and literature, visual condition survey and field observation.

Jelica Jovanović Brutal and Fragile

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Block 23 is one of nine urban blocks of the Central zone of New Belgrade, the new extension of the city of Belgrade aimed at becoming the capital of socialist Yugoslavia post-World War 2. It was planned and designed as one of six housing blocks, surrounding the three-blocks central axis of the zone which would have connected the Federal Executive Council and the railway station via string of public spaces and adjacent public services. Together with neighboring Block 22, the architectural and urban design of Block 23 was selected on a federal, anonymous competition, which took place in 1968. The Belgrade based team of three architects: Božidar Janković, Branislav Karadžić and Aleksandar Stjepanović won first prize. Their architecture was based on modernist agenda: architectural typologies of towers, slabs and meanders surrounded by greenery and open spaces. The elaboration of design was a well-coordinated process with many agents involved. The team developed architecture in the IMS Institute, famous for application of prestressed concrete, urban design in Urban Planning Institute of Belgrade with involvement of the head of the New Belgrade department, Milutin Glavički. The investor was the Department of National Defense, the developer companies were "Rad" and "Napred", which were using different prefabricated construction systems: movable formwork and IMS Žeželj skeletal structure. The design was challenging - numerous custom-made pieces, small profiles in 'natur' concrete (local term for 'béton brut'), flutings, concrete flowerpots. The facade was technologically separated from the load bearing structure and custom-made utilizing both industrialized and hand-craft production, which enabled the authors to fully develop their design ideas. When buildings started emerging, professional circles started calling them 'concrete baroque' because of the delicate concrete elements on the facade. It is precisely these features of the architecture that are the challenge of how to proceed with protection and restoration.

The block is now fifty years old and had no mayor reconstruction, other than the regular maintenance. During the last couple of decades even that maintenance is questionable - many companies in charge went bankrupt, other were replaced with less experienced. In total, a drop in the quality of maintenance is quite evident. Meanwhile, many changes had happened: two slabs got the additional floor to house refugees at the beginning of 1990s; after 1992 the flats were privatized and are not exclusively owned by the Ministry of Defense anymore; the ground floors were populated by various small businesses, each adapting the space to its own needs even oc-

cupying the public spaces. Consequentially, the devastation came with these processes: the windows and doors were replaced, many flats got roof and balcony extensions, the use of the auxiliary spaces such as garages and atomic shelters changed to gyms or clubs. The careless changes in use, additional load that has been added to members of the structure, the bombing of the nearby thermal plant in 1999 - it all contributed to the overall degradation. The open/public spaces are also in bad condition: the drainage systems are not maintained so there is a lot of excess water causing the problems with frost damage, appearance of algae and moss and recesses of the earth. Because of that, the pedestrian paths, playgrounds and pavements are cracking and becoming unsafe, while even some lower parts of the buildings are being exposed to the rise of dampness from the overrun water. The buildings themselves have issues tightly connected with the features of the design. First, the components are reduced to the necessary minimum, in order to be as light as possible. Although originally thermally insulated, the insulation disintegrated which is causing a lot of problems with thermal losses. The developer did some experimentation with concrete mixtures as instructed by the architects, to make the concrete as 'white' as possible. This caused the frequent formation of cracks in the facade panels, especially on the tower no. 2.

The cracks are appearing in many facade elements, due to weathering, frost-thaw and bad setting of the concrete mixture in the formwork, often leaving the aggregate clusters exposed, on the surface of the components. The porosity of the surface allowed penetration of water and subsequent spalling, delamination, erosion and corrosion of the reinforcement, with pieces falling off. There are certain zones where the owners themselves removed or changed parts of the components, causing deformations and misalignments of the components on the facade. Vandalism is occurring quite often, either through breaking and destruction of the design elements, or graffiti, but also through 'beautification' by paintwork or commercials for the businesses. The most common damage to the facades is by installing the individual air-conditioning units, but also by anchoring large scale commercial panels. From the sources available, no structural damage occurred, although there were changes in the loads that need further assessment. And although not inspected, as a rule there are problems with flat roofs, that are worn out, fallen into disrepair, or haven't been properly installed to begin with. Unfortunately, like in many other cases, the circumstances of the emergence of this architecture have significantly changed and

most probably cannot be replicated for the purpose of restoration. The synergy between different levels of planning, design and construction today is barely possible, but reconstruction and restoration is much more difficult, due to the loss of the technology: the companies that designed and built the block are either privatized or bankrupt, their construction premises thoroughly dismantled and fallen into disuse, their staff scattered all over the world. Hence, the simplest method, which would be replacing the worn-out facade elements with new - and potentially of improved efficiency - is currently the most difficult to perform. Another approach has to be considered, which would strive to repair on-site as many components as possible, and by replicating the (manual?) craftsmanship of the original developers. A challenge and a paradox, given the fact that this kind of architecture was not originally intended to be repaired and restored, especially not as a protected landmark, but also not by 'stepping back' to the manual labor from the original industrialized production.

BIOGRAPHY

Jelica Jovanović, PhD student of University of Technology Vienna. Graduated at Faculty of Architecture University of Belgrade in 2010. Founder and member of NGO Group of Architects. Coordinator of regional projects *Unfinished Modernisations* and *Inappropriate monuments*. Project coordinator of DOCOMOMO Serbia. Trainee of Cultural Heritage without Borders, Central Institute of Conservation of Serbia, Belgrade Open School, Europa Media and IAESTE. Scholar of OeAD *One Month Visit*, SAIA Action AT-SK and National Scholarship Programme of Slovak Republic. Curatorial assistant of *Yugoslav Architecture 1948-1980* exhibition for MoMA. Member of Docomomo Serbia, Association of Conservators of Serbia, Association of Belgrade Architects and ICOMOS.

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THE ONGOING HISTORY OF RESTAURANT SAVOY BY AINO AND ALVAR AALTO

Jonas Malmberg (Finland)



Restaurant Savoy in 1938 (photo Helsinki City Museum / A. Pietinen) has faced multiple minor alterations: the linen, carpet, chair upholsteries, curtains etc. Yet the atmosphere has been preserved.

Vast numbers of buildings have been totally refurbished within 30 years intervals – or even demolished. Commercial interiors tend to have far shorter life spans, but in Finland one notable exception is the Restaurant Savoy in Helsinki. Even here, however, a steady and ongoing stream of minor and more substantial alterations commenced almost immediately

after the opening on 3rd June 1937. After eight decades of continuous use and modifications of various kinds, the contemporary appearance is, at least on closer examination, quite different from the original.

The esteemed architect brothers Valter and Bertel Jung, who ran their own architects' practice Jung & Jung, were notable

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designers of commercial buildings. It was Valter Jung (1879–1946) who designed the A. Ahlström company's modern "Industrial Palace" at Eteläesplanadi 14 in the centre of Helsinki, and the building, which also included a theatre, was completed in 1937. The commission for the interior design of the building's upper-floor restaurant was awarded, however, to Aino (1894–1949) and Alvar Aalto (1898–1976) – perhaps due to the encouragement of the patron of the arts Maire Gullichsen (1907–1990).

Afterwards it is impossible to accurately distinguish the designs by Aino and Alvar Aalto and other designers in both Artek company and Aalto Architectural office. Yet the abundant over all character of the interior matches on Aino's cosy attitude as well as Alvar's contemporary more humanistic approach in modernism. The Restaurant Savoy was a mutual project per se.

Alvar and Aino Aalto's friendship and cooperation with Harry (1902–1954) and Maire Gullichsen was unique. Maire Gullichsen was a member of the Ahlström family and Harry Gullichsen was the managing director of the company A. Ahlström. Their open-minded approach to modern architecture and design produced, in addition to the Restaurant Savoy, the family's unique home, Villa Mairea. The company's factory and residential areas in Sunila and Kauttua demonstrated a new kind of thinking in town planning and innovative residential building design.

Already two years before the completion of Savoy, this same friendship led to the founding of the company Artek, which was to manage the export and marketing of Aalto-designed furniture that already at the time had sparked international interest, as well as operate as a comprehensive interior design store to "promote rational living and interior design". Also, it was through art exhibitions organised by Artek that Finns had their first encounter with the most significant works of the avant-garde artists of the time. Restaurant Savoy was one of Artek's first interior design projects and several new models of furniture and lamps, as well as interior design objects, were specially created for it.

The interior of the restaurant was abundant. It was very rich in various types of wood: birch in the ceiling, mahogany in various panels, pine in decorations, and elm in the furniture. The use of fabrics was also vivid: blue and white floral patterned curtains, white dotted brown upholstery for chairs, brown speckled woollen carpet, striped table cloths and dotted napkins. The lush planting with special pots provided yet another distinctive feature.

The tableware included the famous free-form vase, used for fresh flowers as well as for serving. The vase originated as part of a more extensive glass series in the 1936 Karhula-Iittala glass design competition. It was soon exhibited, for instance, at the Finnish pavilion at the Paris World Expo in 1937, and was incorporated as part of the interior of Restaurant Savoy – hence its name.

The interior of the restaurant is still dominated by many of those original themes. The wide pelmets above the windows and the areas between the windows are plywood with mahogany veneer, the window board is mahogany and the removable protective grilles for the radiators and the ceiling paneling are birch. Many unique features are encapsulated in the original wall between the main dining hall and the entrance hall: the upper windows, the ventilation solutions and the refined wood-framed glass vitrine on the entrance hall side. On the dining hall side, the lower part of the wall is taken up largely by fixed sofas. The most central feature of the upper section is the slats made from cross-glued red-hearted pine, set at an angle of 37.5°, growing between which, as shown already in the design sketches, are lush creeping plants. At the end of the sofas are wooden screens decorated with perforations. Above the dining tables framed by the screens are Aalto-designed pendant lamps, later given the nick name Golden Bell [Kultakello]. Those as well as the wooden features are all authentic pieces – despite one lamp which has been replaced by a later piece.

But the main interior of the restaurant has been altered too: the colourful linen and curtains having been replaced by bright white ones, the floor has been covered with a new carpet several times, and the chairs were reupholstered in blue in 1996. The western end of the restaurant lost its grand piano stage and serves today as a lounge with some later Artek furniture – those alterations being still mostly in balance with the original appearance.

On the storey below the restaurant dining hall was originally the festival suite, comprised of individual function rooms, as well as the restaurant offices and two private apartments. The function rooms were fitted with various curtains and thick carpets as well as unique lamps designed by the Aaltos and fabricated by the company Taito, the managing director of which was the designer Paavo Tynell (1890–1973). A personalised look was created for each of the function rooms.

Why the lower floor of the restaurant has lost most of its original elegance? The spatial organization as well as many lamps and doors have survived, but as late as in 2007 the windows

of the corridor were lost due to the partial heightening of the other building wing, designed by Architects office Helin & Co. Most of the furniture and also many characteristic materials, like the Japanese wall papers are lost after too many unsympathetic steps in designs.

The original roof terrace was a central part of the restaurant, and the design by Paul Olsson (1890–1973), the leading Finnish garden designer at that time, provided seating for almost ninety patrons. The terrace was described as follows in the newspaper *Helsingin Sanomat* on the opening day on June 3, 1937: “The roof terrace is in a way divided into three sections on the basis of the variety of plants used as decorations. On the west side only Japanese plants have been used as decoration, the north side, overlooking the Esplanade, is decorated with a variety of plants, among which we noted rhododendrons, cherry trees, cypresses and impressive cactuses, and the balcony section towards Kasarminkatu street has been arranged as a lovely rose garden.”

Quite soon after the opening the terrace – which originally had rattan woven chairs by Artek, special lamps designed by Alvar Aalto, and various types of planted gardens – faced its first wave of alterations. As recently as the year 2000, additional alterations incorporated part of the terrace designed by architect Kristian Gullichsen (b. 1932). The glazed terrace was furnished with Artek furniture in the manner of an interior space, thus lacking the original cosy and partly rustic character.

Yet despite all these alterations, the main interior and the vestibule seem and feel almost intact. The challenge for continuous alterations in a highly detailed modern interior is in respecting the intentions of both owners and designers – Restaurant Savoy has mostly succeeded in both respects.

Key moments in the history of Restaurant Savoy:

1937 Opening of the restaurant

1974 Changes to the interiors (by Yhtyneet Ravintolat)

1996 Renovation of the interior (by Artek / interior designer Ben af Schultén and Architects' office Iiris Ulin / architect Päivi Oksanen)

2000 The partial glazing in of the roof terrace, (by Gullichsen Vormala Architects / architect Kristian Gullichsen)

2005 Protected under the stipulations of the town plan in accordance with the Land Use and Building Act

2007 The windows of the lower level corridor were blocked, (Helin & Co Architects / architect Timo Patomo)

BIOGRAPHY

Jonas Malmberg (b. 1974), architect (M. Sc. Arch. University of Oulu, 2002) and Art historian (M. A. University of Helsinki, 2013) Jonas Malmberg is employed since 2012 at the Alvar Aalto Foundation as supervising restorations of various Aalto sites, doing research, lecturing and developing Building Historical Surveys and Conservation Management plans. He has written various articles in magazines and publications and given visiting lectures (e.g. Tampere University of Technology, Aalto University, University of Oulu and Arkitektsskolen Aarhus, and Design museums and seminars). His professional activities include the membership at the ICOMOS 20th Century committee and the board of DOCOMOMO Suomi-Finland.

METAMORPHOSIS OF THE PARLIAMENT IN PRAGUE: BUILDING THE CZECHOSLOVAK NATIONAL IDENTITY THROUGH ARCHITECTURAL IDEAS AND URBAN CONTEXT

Klára Brůhová (Czech Republic)



Karel Prager – Jiří Albrecht – Jiří Kadeřábek: the winning design of the "house over the house" from the competition in 1966. Jiří Voženilek, „Soutěž na přestavbu areálu u Národního muzea v Praze, Architektura ČSSR XXV, 1966, 456.

ABSTRACT

The paper is dealing with the projects for the Czechoslovak Parliament, designed over several decades starting in the early 20th century. The first projects date back to the time before the first World War and the task was not solved until the 1970s. The story of Parliament reflects the development of modern architecture and at the same time, it shows the transformations regarding the materialization of the Czechoslovak identity – initially in the democratic First Republic and later in the Socialist system. Naturally, the eventually implemented project for Federal Assembly Building, completed in 1974, is also described and contextualized.

The history of Czechoslovakia began in 1918 when the so-called first republic was established as an independent state with the capital city of Prague. The birth of the republic presented number of changes in the administration and urban planning of Prague. One of the key moments in terms of architecture and city formation was the need for new institutions necessary for the functioning of an independent state. Next to the ministries or different offices, it was especially the Parliament, as the object of the highest importance, which was to become Prague's modern dominant with a significant representative potential. In order to accomplish this task successfully, it was necessary to propose not only an adequately architectural-

ly conceived object but also its suitable location within the city. As for the location, the agreement (at least among the professional public) was reached relatively early – via the “Competition for the Regulatory Plan of the Northwest Sector of Great Prague” in 1920. There was an unprecedented agreement among the competitors when they all chose the Letenská plain to become the location of the new Parliament.¹ However, the selection was rather understandable – Letná was attractive due to its generous area, elevated position over the river and the inner city, and also its panoramic coherence with the Prague castle.

There was a consensus regarding the general location of the future Parliament, however, in terms of its architectural design the situation was opposite. The competitors approached the task of the new Prague dominant rather differently. They submitted designs which were purely historicizing, visions of either Wagnerian or classic modern, but also a project in the specifically Czech style – architectural cubism. Similarly diverse proposals were sent to the next “Competition for the Development Plan of Letná”, which was to finalize the location of Parliament at Letná and the specific appearance of its building. This competition held in 1928 already received several functionalist projects whose representativeness went hand in hand with their constructional and material progressiveness. There was even a vision of multiple skyscrapers which were meant to underline the importance of the Parliament complex with their height. Therefore, it is obvious that the architects viewed the optimal design of the new dominant differently and each of them wanted to present Prague with the representative shine of a city in a slightly different way.

At the end of the 1920s, the previously unambiguous agreement about the location at Letná began to break. The selection of the site was not challenged by the experts but the future users of the building – deputies and senators. As they declared in their statement, the location at Letná was found to be “*inappropriate*” and not representative. On their own initiative, they proposed locations closer to the heart of the city. In this sense, they also announced a new competition in 1929, which was set to find a more centrally located plot for the Parliament building.² Such task was very difficult to accomplish due to the density of buildings in the historic area of the Prague city center. And the requirement for the size of the object made this task simply impossible to fulfil. According to the parliamentary representatives, the new Parliament building was supposed to reach 37.000m² which would surpass both the Parliament in London and Washington. Some competitors approached the

assignment in a clever way – they proposed to keep one chamber in Rudolfum (where the Parliament was located temporarily) and they searched only for the location of the second chamber. Others attempted to solve the problem with a high-rise building placed in free or demolished areas of the Old and New Town of Prague.³ As for the design, the projects were again highly diverse – some architects stood by the belief that new dominants of the historic center should bear the features of historicizing architecture as well, others presented entirely modern and progressive visions. Probably the boldest one was Jan Gillar who proposed an eighteen-story high “skyscraper” located between the Charles Bridge and the National Theatre, in the very heart of Prague.⁴ However, it must be noted that this and many other projects were conceived rather academically. As to realistic outcomes, no suitable proposal resulted from this competition – generous representativeness and progressiveness acceptable for Letná didn't receive a positive feedback in the historic center. It might have been assumed that such failure would bring the competent persons back to the idea of Parliament at Letná. However, it didn't happen anymore. Other concerns came with 1930s and the economic crisis, therefore, the Parliament remained in its provisional location at Rudolfum. The revival of the subject didn't occur until after the Second World War. In 1947 there was a new competition for the Parliament, or more precisely National Assembly, which brought the focus back to Letná – the competition received 73 projects and only five of them located the Parliament building elsewhere. However, not even this competition resulted in realization.⁵

Shortly after the competition came the events of 1948 which predicted a radical transformation of the political and social climate in the country. Former democratic Czechoslovakia inevitably changed the course towards the Eastern Bloc and the socialist state system. This, however, didn't mean abandoning the vision of a new Parliament and the ambition to gain a new representative object within the city area. The idea, which failed to be realized in the pre-war era, was fulfilled in the socialist state conditions. It can be presumed, with a slight profanity, that it was the sudden change of the architectural and urbanistic environment, or the centrally directed planning to be exact, that saw the end to open yet lengthy debates of the first republic and stood behind the implementation of this project.

The new (now) Federal Assembly was created based on the winning project of the competition held in the middle of 1960s, in the era of moderate liberation of the socialist regime and greater creative freedom.⁶ The assignment forever left Let-

ná, which was to be used for other purposes, and focused on the location between New Town and Vinohrady in the proximity of the Wenceslas Square and the National Museum. The reason was the earlier disputed representative location in the city center within the context of historic dominants but there was also another, rather prosaic cause. In this particular area, there was the building of the Prague Stock Exchange, which served as the new (but again rather provisional) seat of the Czechoslovakian Parliament since the Second World War. The institution wasn't supposed to be moved but only extended with a new modern part. Therefore, the competition wasn't looking for a new building project but for a completion of the existing protected monument from the 1930s. The requirement of preserving the Stock Exchange building and fulfilling the extensive spatial demands for Parliamentary operation caused that most of the competitors struggled to fit everything necessary in the selected location. One of the exceptions was the winning project by the team of Karel Prager, Jiří Albrecht and Jiří Kadeřábek who came with the idea of a new construction built over the Stock Exchange in the form of a "house over the house". Aside from fulfilling the spatial requirements, the jury evaluation stated that the proposal "achieves the massive effect and its grandeur contains the features of monumentality".⁷ Therefore, it is obvious that the desire for materialized representation lost none of its intensity and the goal was achieved in a highly progressive way.

The built project is indeed very monumental and represents an essentially modern element which supports the metropolitan character of the upper end of the Wenceslas Square.⁸ The most significant element of the parliamentary complex is probably the superstructure itself, the "house above the house" with its massive supporting construction made of four Vierendeel beams. The architects cooperated with excellent structural engineers who made a precise calculation and the two new floors could be elevated on very subtle pillars.⁹ There was also a plan to cooperate with the top artists – so that the Federal Assembly area would become a "Gesamtkunstwerk" where architecture, design and art merge in the very last detail. In order to design the construction, the so-called "Smeltery" was created, which, following the example of medieval Gothic smelteries, aimed to create a coherent piece of work from the cooperation between architects and artists.¹⁰ However, the historical events of the late 1960s affected their work. With the so-called normalization and re-emergence of censorship and control, number of people related to the project became undesirable. As a result, the object completed in 1974 did not entirely comply with the

generous proposal. Nevertheless, it can be said that, to a certain extent, the hope of the time and the desire for a modern representative intervention into the city structure materialized into the Federal Assembly. I consider it right that the object was included in the list of cultural monuments and I also believe that the same recognition should be given to number of other Czechoslovakian "brutalist" buildings.

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CV and publications: <https://www.fa.cvut.cz/Cz/Lide/Bruhokla>

MAPPING INDIVIDUALLY DESIGNED SOVIET HOUSING BETWEEN 1945-1990 IN RIGA, LATVIA

Līva Garkāje (Latvia)



Examples of individually designed Soviet housing in Riga, Latvia: 1) Housing complex on 10 Pērnavas Str., architect M. L. Brodskis (1954); 2) housing block on 29 Āgenskalna Str., architect V. Savisko, I. Jākobsons (1972); 3) Housing complex on 30 Annīņmuižas Blvd., architects Z. Kalinka, A. Reinfelds (1986); 4) "Lion's House" on 104 Brīvības Str., architect E. Šēnbergs (1987). © Līva Garkāje

ABSTRACT

Individually designed housing (in Russian: *Индивидуальные проекты жилых домов*) was a phenomenon of post-war

modernist housing architecture (1945 - 1990) in the Soviet Union. It was comparatively rare, diverse and experimental in nature, and usually carefully placed in its urban context. This

poster reflects on research that was carried out to define, map, and analyse the architecture of individually designed Soviet housing in Latvia by introducing previously rarely researched Soviet housing typology and providing arguments for the architectural and cultural heritage value of individually designed Soviet housing to encourage the addition of the most valuable examples to heritage lists.

INTRODUCTION

Made to house the highest ranks of Soviet citizens, individually designed Soviet housing (in Russian: *Индивидуальные проекты жилых домов*) built between 1945 - 1990 reflects the trends of high-end Soviet housing design and displays local traits of post-war modernist architectural expression in each of the former Soviet republics. As the capital city of the Latvian SSR and a former centre of Soviet industrial production, Riga has the most diverse selection of non-standardised design Soviet housing in Latvia.

Although this housing usually has better thermal insulation and a tendency to age better than large scale estate serial housing, **it may have to undergo additional thermal insulation in the near future** to meet today's comfort and energy-efficiency demands. Unfortunately, this process often happens ignoring the original façade materiality of these buildings due to currently unclear post-war modernist housing heritage status in Latvia.

METHODS

In order to gain a comprehensive overview of the dating, amount number and character of individually designed Soviet housing in Riga, a review of literature and archival material was carried out. During the research process it became clear that neither the main housing designer institution, The City Planning Institute (in Russian *Латгунпрогоспстрой*), nor any other institution in the Latvian SSR, had made a separate list of individually designed Soviet housing. One of the main reasons for this was the nomenclature's unwillingness to officially acknowledge classes (and accordingly the better housing provided for the highest ranks of Soviet citizens [2, p. 585]).

FINDINGS

Soviet multi-apartment housing had three types: *serial, experimental and individually designed*. Serial housing's purpose was to house masses. It was often located in large scale estates using similar building designs. The purpose of experimental housing was mainly to try out ideas for new housing series. If

the building proved to be economically successful, it could become a new housing series. One such example was the 119 series. Sometimes, though, architects in Latvia tended to use the term *experimental* instead of *individual* to enable wider design and layout options, whilst remaining politically correct [1, p. 188]. One of such buildings is located on 313 Brīvības Ave., architects M. Staņa, I. Jākobsons, H. Kanders (1970). In this research, such cases were counted as belonging to the individually designed housing category that was built for the highest ranks of Soviet citizens (nomenclature, army officials, state artists, musicians, factory leaders and their entourage). It was conceived for a single location, proposing a distinctive façade design, as well as spacious layouts, in some cases duplexes.

Timeline. Despite the exclusivity of individually designed housing, the design of these buildings had to at least formally follow construction regulations which demanded maximal use of standardised constructions. To make following these regulations easier, in many cases architects used a construction scheme of a particular series, whilst adding to it individually designed façades and apartment layouts. This means that the architectural development of non-standard design housing can be associated with the same evolution periods as serial housing, which was primarily influenced by construction regulation norm changes [3, p. 163-165]. Thus, the development of Individually designed housing falls into 5 periods: Stalinist (1945 - 1958), 1st generation (1958-1963), 2nd generation (1963-1971), 3rd generation (1971-1985) and 4th generation (1985-1991) [4].

Urban layout. Research proved that the urban distribution of individually designed housing was determined by factors such as: a) proximity to the institution that ordered the construction (if applicable); b) more prestigious placement - either in the city centre or next to some other attractions like an important city boulevard, nearby river or lake etc.

Style. During the Stalinist period individually designed housing was rare. Almost all multi-apartment buildings in Riga were designed directly using or sometimes slightly modifying (in a manner appropriate to the urban context) a variety of serial designs in socialist realist style. These buildings had four slope roofs and plastered embellished façades. Individually designed housing tended to retain the same simple building volume forms with more generous decorative elements, in some cases having stone tile cladding instead of a plaster finish. In addition, these building blocks were occasionally complemented with towers in block corners. One of such exam-

ples is housing complex on 10 Pērnavas Str., architect V. Ramman (1954).

Starting from the mid 1950s, following the rise of N. Khrushchev as Soviet leader and his plans to modernise and optimise the Soviet construction the building style starts to change towards modernism. It appears, at first, by making lower sloping roofs and abandoning plaster decoration, but still retaining the use of silicate and clay bricks in exterior walls, as well as Socialist Realist proportions. Subsequently, modernist proportions and box-like flat roof building forms were adapted by maintaining exposed silicate and clay brick longitudinal load-bearing walls but later adapting large-panel constructions (1st generation). The same trends can be seen in individually designed housing of the same period.

Unlike 2nd generation serial housing, non-standardised housing design did not stop using bricks. The designs included load-bearing crossing brick walls with salient (exposed) ends in façades to display the building's tectonics, as well as diverse façades. The rest of the façade was made either using large concrete panels with varied decorations (plaster, tiles and terrazzo plaster), timber and metal panels, or clay and silicate bricks. The façade composition usually had accentuated entrance and staircase volumes. One of the few 2nd generation examples is located on 12 Vesetas Str., architects O. Krauklis and Grietiņš (1966).

The most significant surge of individually designed multi-apartment housing construction was during the 3rd and 4th generation. Both generations tend to have more varied volume and layout compositions, as well as a wider usage of bricks in façade design, including 12-16 story tower design. A typical individually designed 3rd generation housing block example can be found on 1 Hospitāļu Str., architects S. Lubovičs, A. Reinfelde (1979), whereas the 4th generation can be characterized with the so called *Lion's House* on 104 Brīvības Str. (architect E. Šēnbergs, 1987) and high-rise housing group on Annīņmuižas blvd. (architects Z. Kalinka and V. Rauhvargere, 1987) examples. The 4th generation marks a turning point towards post-modernist style and, consequently, a return to higher pitched sloped roofs. In addition, in-situ cast concrete was introduced in tower block design.

CONCLUSIONS

This research shows that non-standard design multi-apartment Soviet housing in Latvia was a contrasting architectural phenomenon to large scale estate serial housing for the masses. Simultaneously, at times it could be equated with experi-

mental housing which was sometimes used as a formal pretext to legally experiment with new architectural ideas and be creative in an otherwise rather restricted apartment housing planning field.

The buildings were usually placed in central locations, had diverse urban, as well as apartment plan, layouts and tended to be designed in harmony with their surroundings. The most active construction period was the 1970s and 80s when post-war modernist, as well as post-modernist style buildings were erected.

Taking into account that these buildings illustrate the architectural creativity of Soviet period housing architects in Latvia this research urges the responsible institutions to start evaluating and listing the most distinctive buildings of the period in architecture and cultural heritage lists.

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MODERNISM AT EXTREME ALTITUDES EXAMPLES OF LEISURE-PURSUIT BUILDINGS CONSTRUCTED IN THE SECOND REPUBLIC OF POLAND (1918–1939)

Maciej Motak (Poland)



Fig. 1. Sanatorium and mineral water pump room in Morszyn (now Моршин, Ukraine), designed by, respectively, Marian Nikodemowicz and Franciszek Kocimski, built in 1935–1939. Photograph by Adam Lenkiewicz. Postcard by Książnica-Atlas, Lwów 1939. Author's archive.

Fig. 2. Jan Kasprowicz Mausoleum in Zakopane, designed by Karol Stryjeński, built in 1933. Photograph by Antoni M. Wiczorek. Postcard by Książnica-Atlas, Lwów 1938. Author's archive.

Fig. 3. Cable car linking upper Zakopane town with the Kasprowy Wierch peak (in the background), designed by Anna Kodelska and Aleksander Kodelski, built in 1935–1936. Photograph by Roman Serafin. Postcard by Książnica-Atlas, Lwów 1939 (with the emblem of the FIS Nordic Ski World Championship 1939 on the other side). Author's archive.

Fig. 4. Restaurant (Café Casino, no longer existing) near the sandy beach in Jurata at the Hel Peninsula, built in 1935. Photograph by Adam Lenkiewicz. Postcard by Książnica-Atlas, Lwów 1939. Author's archive.

Fig. 5. Maritime station in Gdynia, designed by Dyckerhoff & Widmann company, built in 1932–1933. Photograph by Adam Lenkiewicz. Postcard by Książnica-Atlas, Lwów 1939 (and the same building in the 1937 post stamp, drawn by Waław Borowski). Author's archive.

ABSTRACT

Among the Modernist buildings dedicated to tourism that were built in the Second Republic of Poland (1918–1939), a considerable number were constructed either at a very high altitude, in the mountains, or at a very low altitude—next to the sea coast. Apart from fulfilling their basic functions, namely providing visitors with accommodation and whatever was necessary for their having good time, these buildings played an important role in the formation of the state and national identity, while some of them were also quite interesting for their architectural features.

This year Poland celebrates the 100th anniversary of the Independence, which was regained after the over-100-year-long period of partitions between three other countries. The recovery was possible due to the efforts of the society and the situation in Europe at the end of World War I. At its dawn, the reborn state was in need of both improvement and unification in many fields, such as legislation, administration, economy. Although the Second Republic of Poland was far from being a perfect state, the successes achieved in the Interwar Period (1918–1939), of which only a period of slightly over fifteen years (1923–1938) was quite peaceful, were substantial. Various means and tools were applied, architecture and planning being not the least ones. In these fields one can point to spacious and impressive volumes of public edifices (such as parliament houses, office blocks, museums, libraries), industrial structures (especially in the new port city of Gdynia and in the extended towns of the Central Industrial Region), numerous houses and housing projects (in which the traditional approach sometimes “competed” with Modernist trends). However, buildings and structures serving tourism and leisure time also happened to make proud the people who used it or just watched it. Due to their function, they were usually placed in specific locations – in the mountains, in the depth of forests, next to the sea coast or lakeside. During the Second Republic of Poland (1918–1939) there was a marked increase in tourism. Some people had more free time being rich enough while the other ones, mostly the middle class, started to enjoy their paid holidays. That extra time could be spent in many ways and tourism tended to gain interest. That included hiking and skiing in the mountains as well as leisure time at the seaside or healthy pursuits in resorts all over the country, but especially in the areas attractive for landscape, good climate and unspoiled nature. All in all it resulted in many new architectural projects. Due to the geo-

graphical distribution of the most attractive locations it was in either the very south of Poland or the country’s northwest that the tourists chose most often. Although the borderlines of Poland at the time were different from the present ones, that meant the same characteristics as today, i.e., respectively, the highest and the lowest altitudes in the country.

A network of mountain hostels and huts were built in the West and East Beskids mountains (part of Carpathian mountains) along most of the border between Poland and Czechoslovakia (ca. 900 km). Some small parts of the mountains were specially outstanding for their height exceeding 2,000 metres. That was where the most spectacular group of new buildings appeared. It consisted of three cable-car stations linking the town of Zakopane with the peak of Kasprowy Wierch in Tatras at respectively 1,030, 1,350 and 1,960 metres, the highest of which was also equipped with a small hotel (fig. 3). The fourth building—the meteorological observatory near the top station—was perhaps even more striking due to its location at the very summit of Kasprowy Wierch (1,985 m). All four buildings were designed by Warsaw architects Anna Kodelska and Aleksander Kodelski to be built soon: the stations were completed in 1935–1936 in less than a year, while the observatory in 1936–1938. Despite their “lowlands” homeland, the architects skillfully combined Modernist ideas such as flat roofs together with local features, e.g. granite-clad walls. For over 80 years the Kasprowy Wierch cable-car stations and meteorological observatory have been performing their original functions, only with slight improvements, such as a new system of circulation, which enabled more visitors to embark, and a restaurant added at the top station instead of a hotel.

The town of Zakopane, which lies at the foot of Tatra mountains, had been well-known even before World War I for being an attractive tourist site and also for the attempts that were made there to create a Polish national style when Poland was not an independent country. Known as the Zakopane style, it drew upon the traditional local wooden architecture and craft. Though it could seem not very appropriate environment for Modernist architecture, a lot of such architecture emerged in Zakopane ranging from large sanatoriums and hotels to small elegant villas and even memorials dedicated to distinguished artists many of whom decided to live in Zakopane for quite a long time (fig. 2).

Soon after the completion and shortly before the outbreak of the World War II, the Kasprowy Wierch meteorological observatory had to give way as far as the height over the sea level was

concerned. Another observatory was built in 1936–1938 at the summit of Pop Iwan in the Eastern Carpathians (now Pip Ivan, Ukraine), at 2,020 metres. The Marshall Józef Piłsudski meteorological and astronomical observatory was designed as a result of the architectural competition won by Kazimierz Marczewski and Henryk Pohoski. It was only in use for a very short period, before becoming an impressive ruin following World War II. There are advanced plans for its restoration underway and after they will have been completed the building will open as a Polish-Ukrainian youth meeting centre.

Apart from those most striking examples in the highest sites, there was a growing number of projects built along the hiking trails in the West and East Carpathians as well as in the popular spas lying at the foot of the mountains like Krynica-Zdrój or Morszyn-Zdrój (now Morshyn, Ukraine). In the latter one of the largest and most luxurious sanatoriums was completed shortly before the World War II (fig. 1). It was designed by Lviv architect Marian Nikodemowicz and built in 1934–1938 to become a focal point of the spa, together with the nearby pump station of mineral water (fig. 1). The sanatorium still performs the original function.

At the Baltic Sea coast, which was a sort of another corner of the country, lying at its lowest altitude, the seaside tourism tended to flourish to almost a comparable extent, despite the fact that Poland's sea coast was quite short at the time (ca. 150 km). Moreover, approximately half of it was a 35-km long and very narrow Hel Peninsula. Many pensions and hotels were built near the wide sandy beaches of the Baltic Sea. They were accompanied with infrastructure of clubs, restaurants (fig. 4) or piers. It was especially there that the Modernist horizontal lines and large panes of glass seemed to be an undisputable choice. Most of the seaside buildings were, like their mountain counterparts, relatively small. The maritime station in Gdynia stood out both for its size and for being a building related to tourism in a very special way. That was the place from where seven Polish ocean liners and many smaller vessels set off carrying passengers to work, study or just travel to both Americas and other countries. The building was designed by the Dyckerhoff & Widmann company and built in 1932–1933 (fig. 5). Slightly damaged during the World War II, it was still in use after the war. It was beautifully restored in recent years, its function transformed to be the Emigration Museum.

The Modernist buildings at the extreme altitudes played an important role despite the relatively small sizes of most of them. Their construction in unfavourable conditions was of-

ten found as technical achievement. Being already in use, they helped to promote particular Polish regions for tourism, and for science, too. They were also sometimes considered to be convincing symbols of independence and statehood. Last but not the least, their Modernist forms can be perceived as yet another attempt of the state's desired unification.

Finally, a very special proof of the importance of those Modernist structures was the fact they were published in newspapers and professional magazines of the time and also "portrayed" by photographers. One of the purposes of the latter was illustrating the postcards a series of which was released by the Książnica-Atlas Lwów publishing house in 1938–1939. Since the subjects of the postcards (over 2,000 different ones) focused mostly on the historic monuments, the presence of contemporary Modernist buildings (several dozens) was an evident sign of respect paid to them.

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BIOGRAPHY

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CORRIDOR-FREE SCHOOL BUILDINGS BY EMIL NAVINŠEK

Mitja Zorc (Slovenia)



Emil Navinšek: Central hall of corridor-free Bežigrad High School, Ljubljana, 1936 [archive: Slavica Navinšek]

ABSTRACT

The Slovenian architect Emil Navinšek (1904-1991) is the author of an innovative, corridor-free design of school buildings. The design is characterized by spacious, central, multipurpose halls situated on each floor, which are naturally lit, ventilated and opened to the surroundings, with transparent staircases connecting the halls vertically. The corridor-free design was realized for the first time in 1936 at Bežigrad High School in Ljubljana. Using a systematic approach the architect designed 38 corridor-free buildings up until the late 1960s as variants of the initial scheme. The principles of his design were studied on a sample of school buildings in Ljubljana. These buildings show evidence of use and face future challenges.

Mitja Zorc Corridor-Free School Buildings by Emil Navinšek

BODY TEXT

The Slovenian architect Emil Navinšek (1904-1991) is the author of an innovative, corridor-free design of school buildings. The design is characterized by spacious, central, multipurpose halls situated on each floor, which are naturally lit, ventilated and opened to the surroundings. The halls, with classrooms organized on lateral sides, are more than corridors for communication, they enable various interactions and activities and are a prolongation of the external space.

INTRODUCTION OF THE CORRIDOR-FREE SCHEME

In his 1926 graduation project, Valentin Vodnik Primary School in Ljubljana, mentored by prof. Jože Plečnik, he al-

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ready shows some of the characteristics of the corridor-free design. A gymnasium and multipurpose hall forms the central space, with blocks of classrooms placed on the lateral sides. The classrooms are accessed via unusually wide corridors and spacious staircases. Only half of the building was finally built in 1929 [Plečnik (1928): 71-79; Krečič (1992): 146, 150, 190-191]. Though lacking the sober Neues Bauen appearance of the 1920s, the organization of the space is similar to Otto Haesler's Glasschule in Celle, Germany from 1227/28 [Otto Haesler Initiative, 2018] or Ivan Zemljak's Municipal Primary School Jordanovac in Zagreb, Croatia from 1930/31 [Radović Mahečić (2007): 111-114].

PROTOTYPE

The corridor-free design was realized for the first time in 1936 with Bežigrad High School in Ljubljana, Slovenia. The building consists of interconnected, multistory, cubical volumes, each with a designated program. The volumes are placed on the site according to their optimal orientation and functional connections. The surroundings were designed as a school park. The spacious and transparent main staircase establishes a vertical connection between the halls on each floor. The building clearly follows the Neues Bauen paradigm with simple cubical volumes, a façade of plain white plastered surfaces and basic geometric window openings. It introduces a reinforced-concrete frame structure, modern materials and advanced building technology. All the spaces have clear and rational designs, larger than standard dimensions, and are naturally lit and ventilated. The Bežigrad High School is a unique example of contemporary early modernist school buildings, where democratic, hygienic, open-to-air and nature spaces were created. Unlike the designs of the open-air school movement, which strive for more light, air and space for all, achieved through classroom pavilions dispersed in greenery (e.g., Ecole de plain air, Eugene Beaudouin, Marcel Lods, Suresnes, 1932/35) or by implementing open-to-air terraces (e.g., Openluchtschool, Jan Duiker, Bernard Bijvoet, Amsterdam, 1927/30), Navinšek creates spacious, airy and well-lit platforms within the core of the building. Despite initial skepticism and opposition, which Navinšek faced during the development of the project, the newly built, innovative school building was finally well received [Navinšek (1940): 89, 92; Navinšek (1969): 2].

SYSTEM OF BUILDINGS

Following the Bežigrad High School prototype, up until the end of the 1960s, Emil Navinšek built 38 corridor-free

schools in Slovenia. The vast majority of the buildings were between 1957 and 1966, during the state program of the mass (re)building of schools after World War II [Navinšek (1978): 16]. His comprehensive oeuvre is unique in the history of modernist architecture in Slovenia [Koselj (2008)]. Navinšek developed a systematic approach to the design of school buildings, thus avoiding the repetition of identical buildings. Using standardized spatial units (from classrooms and teachers' offices of various sizes to whole complexes such as sports halls with a service room), unified technical solutions (structure, building services) and an array of architectural elements (windows, screens, railings, furniture, lighting etc.), he designed numerous variants, each building uniquely corresponding to the specific conditions of the program and the site. The schools were often built in phases that were already considered in the initial design.

SPATIAL SCIENCE IN ARCHITECTURE

In 1969 the architect published a book entitled "The Revolutionary New Corridor-Free Systems in Architecture", where the principles and benefits of a corridor-free design are explained, calculated and extensively illustrated. In this way he introduced the principles of spatial science in architecture. The book starts with a comparison of the corridor and corridor-free designs, continues to the organizational schemes of various building types and the organization of building clusters, and even to proposals for ideal cities, consisting entirely of corridor-free buildings. An important part of the book is dedicated to analyses and project proposals for exemplary buildings worldwide, rearranging them into corridor-free designs [Navinšek (1969)].

Recently discovered documents show that Emil Navinšek was preparing a book entitled System in Architecture in 1939 (probably a predecessor of his 1969 book). This implies that the theoretical basis for his designs was defined soon after his first corridor-free schools were built, prior to his main oeuvre, and that his corridor-free designs were manifestations of his theoretical principles and not vice versa [Zorc (2017): 12]

RESEARCH PROJECT

The principles of the systematic approach to the design of school buildings used by Navinšek were the subject of research, conducted in 2015 by a team of students at the Faculty of Architecture, University of Ljubljana, led by assist. prof. Mitja Zorc. The research was limited to fourteen corridor-free schools designed by Emil Navinšek in Ljubljana. After initial

data gathering, field research and a study of the relevant literature, a comparative analysis of the school buildings' designs was carried out, covering various parameters, such as urban setting, volumetric design, functional and spatial organization, design of facades and architectural elements, use of materials, etc. The team also studied the typology of the interventions that altered the original designs of the buildings over time. The team also collaborated with specialists in heritage building conservation, structural and building technology consultants, and thus identified the key elements of the buildings that should be preserved and made project proposals for renovation and modernization.

Corridor-free schools designed by Emil Navinšek have been in use for several decades. Their systematic and flexible design enabled various adaptations, made according to changing organizational needs and school programs, varying numbers of pupils, changing functional and spatial requirements, etc. Spacious, multipurpose halls housed various activities. But they also functioned as space reservation, often being occupied or fenced off by teachers' offices, service rooms or even classrooms. This degraded the qualities of the corridor-free design, the halls lost their natural light and ventilation, as well as the spaciousness and transparency. On the other hand, the design proved to be sustainable, showing an ability to adapt to changes through time, and in most cases still preserving the possibility for reconstruction to the initial state. Multipurpose halls on each floor also correspond to the current tendencies in the organization of innovative learning environments, where classrooms are opening and connecting to learning landscapes [Montag Stiftung Jugend und Gesellschaft, 2017: 99-105].

CONCLUSION

In the past decade many renovations in accordance with energy-efficiency directives were carried out. In most cases this was not for the benefit of the original design, meaning the loss of important examples of modernist architecture. Unified guidelines and coordinated design solutions are needed for future renovations. And they should be based on learning Emil Navinšek's systematic approach to the design of school buildings.

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Mitja Zorc (born 1974 in Kranj, Slovenia) is an architect, who in 2000 graduated from the Faculty of Architecture, University of Ljubljana, Slovenia. Currently, he works as a practicing architect in Ljubljana and as an assistant professor at the Faculty of Architecture, University of Ljubljana. In 2008 he was awarded the Plečnik Prize for Architecture for the School of Economics, Murska Sobota, Slovenia (with Rok Benda and Primož Hočevar).

CURICICA SANATORIUM:**MODERN ARCHITECTURE FOR HEALTH AT RISK**

Ana M. G. Albano Amora, Renato da Gama Rosa Costa (Brazil)

Team: Leonardo Silvestre, Thaysa Malaquias, Michael Morouco



Curicica Hospital. Raphael de Paula Souza Fund. Casa de Oswaldo Cruz Archive.

ABSTRACT

Curicica Sanatorium (Rio de Janeiro, Brazil) is a milestone in the history of treating tuberculosis and a way of doing architecture in mid-20th century. The sanatorium's value is based on the alliance between responding to a health program that would require extreme care in its function and organization,

combined to contemporary spatiality and art concepts of the time, using a modern outlook to reinvent genuine elements of Portuguese-Brazilian architecture. Because its hospital complex representativity, it's extremely important to understand its characteristics, considering this a document to be a way of doing and preserve modern sanatorium architecture.

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The Curicica Sanatorium (Rio de Janeiro, Brazil) is a milestone in the history of treating tuberculosis and the way of doing architecture in mid-20th century Brazil, combining precepts originating from design rationalization and constructive modernity with other arts, such as landscaping and mural art.

The sanatorium's value is based, above all, on this complex alliance between responding to a health program that would require extreme care in its functional and care-giving organization, and a quest to experiment with contemporary spatiality and art concepts of the time, using a modern outlook to reinvent genuine elements of Portuguese-Brazilian architecture. In this way of designing, the intent was to respond to specific issues regarding the place, such as the tropical climate and a concern to bring the artistic experience to the masses by means of public buildings.

The construction of the Curicica Sanatorium, located in Rio de Janeiro's expansion area, took place between 1949 and 1952, the same year in which Lucio Costa (1902-1998), in Venice, believed that the interaction between modern architecture and mass production would make it possible to reconcile the concept of "art for art's sake" with that of "social art." The design is representative of the first works of Rio de Janeiro architect Sergio Bernardes (1919-2002), under the auspices of the National Tuberculosis Service (SNT). According to the recommendations of this institution, the construction should be economical, following principles of design and constructive rationality, but without sacrificing its technical and functional qualities.

All though at the time, the monobloc system was in vast use for hospital projects, in Curicica it was adopted the pavilion system, more indicate for certain diseases treatment, such as tuberculosis, Hansen and mental diseases, because of isolation requirements. Contemporary research indicated high percentage of seclusion in patients admitted to monobloc sanatoriums, leading the architect to design Curicica with special characteristics that tried to avoid bad results provided by confinement. The same Bernardes project was applied for the treatment of patients suffering from pulmonary tuberculosis, in Recife and Minas Gerais. Only the first one was in fact built as an annexed to Olavo de Freitas Sanitarium, then specialized in bone tuberculosis.

We made a field survey, where it was apprehended the main measures of the infirmary pavilions. From this survey, we sought to understand the possibility of the existence of an original grid and a modulation used to define structure and

other details of the building. It was confirmed from the study of the architectural and structural composition, which modulates, in a mesh 1,20 by 1,20 m, gardens, building elements – such as frames, rooms, corridors, and even external façades. We can say, from the analyzes of the drawings made, that the use of a modular system was essential to obtain the reproduction of these types of pavilions for Curicica Sanatorium, also used in similar projects of the National Campaign Against Tuberculosis. This modulation, as proposal as an official demand, optimized the organization of work production at the sanatorium site, which contributes to a rapid and efficient reproduction of the structure elements. Our study allows visualizing the project process that took into account all the last construction details.

Such a method of the architect working descends from the principles of rationality defended by modern architects. This procedure was significant in the architecture in general, and, especially, for the hospital architecture, allowing the hospital to be performed as a "healing machine", like famous Foucault statement. In Curicica case, in a time that the Brazilian civil construction industry was still based in the use of non-qualify workers, this approach allowed Bernardes to develop the project thinking about the fabrication of structural elements in locus, which was in line with the profile of the architect, who showed a clear interest in innovation.

Because this hospital complex is representative of modern architecture, it's extremely important to understand its characteristics here in this forum, considering this document to be a way of doing modern, sanatorium architecture. Due to its experimental and avant-garde character, the Curicica complex is in the process of being put under municipal protection, with the support of Docomomo Brasil, since 2003 and not yet concluded.

The data collected since the beginning of our study, in 2002, is helping to understand the necessity to preserve this modern hospital architecture. However, there is a lack of more information referred to the original design that may contribute to the preservation actions itself and, even more important, to the restauration and preservation works.

Modifications that took place during the 2000's, both internally and in its surroundings, have exposed the complex to the risk of losing the plastic and habitability characteristics proposed when it was designed, as well as having destroyed parts still intact from its original construction. The architecture of Curicica Sanatorium is configured as a space built according to a certain historical and social pattern, and can be

seen as a memorial foundation and a true document for investigating certain historical-social contexts due to its functional and aesthetic qualities.

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BUILDING A MODERN HOUSE IN NORTHERN LEBANON: 2 SIBLINGS, 2 HOUSES

Roula El Khoury Fayad (Lebanon)



Architect and daughter posing in front of the house built on a slope in Tannourine, 1984. Photo courtesy of Rose Hajj-Obeid.

ABSTRACT

During the early 70's, Lebanon witnessed a considerable rural urbanization and 'consolidation' of its modern architectural heritage. The essay presents the case of two houses designed by Rose Hajj-Obeid, a young Lebanese architect for her two siblings in Northern Lebanon. It examines similarities between the two projects and depicts external factors

shaping the evolving modern identity of and resulting differences between the two houses. It argues that the modernity of the two houses is self-reflexive: it recognizes its embeddedness within a particular context, the site and its surrounding, and the extent to which the evolution of this context reshapes their identity.

Roula El Khoury Fayad Building a Modern House in Northern Lebanon

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Caught between the golden age of the 60's and the break of the civil war in 1975, the early 70's witnessed a period of 'Consolidation' for modern architecture and the dissemination of an international language throughout different regions of Lebanon (Haddad). Prominent foreign and local architects were actively engaged in academia promoting modern ideals and influencing a new generation of modernist architects. Rose Hajj-Obeid graduated from the Lebanese University in 1972 and started her professional career as an architect at an early age. She was featured on the cover of two prominent local magazines in the mid-70's (al-sayad and al-hasnaa) as one of the first 3 female architect/engineer practitioners in the North of Lebanon, particularly highlighting her role and presence on construction sites. Rose's portfolio includes residential villas, additions to old house, restoration works and other commercial projects and competitions. Her first projects were commissioned by close members of her family and friends but her career as an independent architect was hindered by the break-out of the Lebanese civil war resulting in her need to join a larger corporation. Rose had the chance to work on large projects in Beirut including the Aresco Palace (1980) which was the first steel structure buildings in Lebanon as well as an international competition for a presidential guests palace in Damascus (1976). Today her work remains relatively unknown despite a promising start. This essay focuses on 2 of her first projects: A modern family house in Amioun, commissioned by her older brother while she was still a student and a modern summer residence for her sister in Tannourine, which was commissioned to her one year after she graduated.

THE PREMISE OF THE MODERN HOUSE

While the traditional family home represented the physical embodiment of the rural lifestyle and the well-established agro-pastoral practices (Raguette), its modern version aimed at reflecting the change in the form and the function of the family often borrowing its aesthetics from the West. The House in Amioun is characterized by its repetitive stacking of split levels: one a few steps above the main reception area accommodating a small convenient apartment for the elderly parents, and another on the first floor separating the bedrooms of the family members. The functional split system is also shaping the massing of the house into two distinct blocks connected by the staircase. Its large windows, punctuating the facades, provide generous views to the front piazza, the garden and the distant rural landscape, while being recessed

to protect the interior of the house from direct sun exposure. The interiors are simple and white, often articulated by light wooden partitions. The house in Tannourine is located on a steep slope and designed to accommodate 4 bedrooms for the family facing the East, each resting on a terrace and extending on the roof of the other. The rooms are connected by an internal staircase mediating the 3 main levels of the house and exposed from the double height reception area on the ground floor. On the first floor, an elevated passageway overlooks the dining room and the main reception and leads to a small library. A guest room with a separate access and a view on the main piazza is located to the West, on top of the kitchen. The functionalist aspect of the two houses, their visible structure and distinct architectural elements, as well as the rational distribution of their program, are a testimony to the modern influence of the two projects. Furthermore, these houses reflected an image of the modern lifestyle and social status of its inhabitants, and de-facto that of the architect, being part of the two families.

THE DRAWINGS OF THE MODERN HOUSE

I turn my focus on the drawings of the two houses not only to read the identity of the projects but for more insight about the nature of the relationship between the architect herself and the project. While architectural drawings are considered an integral part of the architect's communication and translation (Perez-Gomez), the recovered drawings of the house in Tannourine were often partial and incomplete, suggesting the crucial role and presence of the architect during its construction and the inevitability of spontaneous decisions on site.

On the other hand, the house in Amioun had a complete set of permit and construction drawings, with the envelope, material and areas following the local building codes, and where the architect had less leverage on many design aspects and thus arguably more distant from the end product.

Despite the centrality of the two dimensional 'Drawings' in the design process (Le Corbusier), the architect liberated herself from the task of representation and took advantage of the absence of any regulatory authority in Tannourine to meticulously design and 'Build' the project on site.

THE TRANSFORMATION OF THE MODERN HOUSE

Located one and a half hour drive from the coastal highway and elevated at 1800 meters above sea level, the house in Tannourine was built as a statement challenging the steep slope of the mountain, yet catering for the ambition of its commis-

sioner to engage in public affairs. The latter reflected in the generous reception areas on the ground floor and the large piazza in front of the house to welcome his visitors. While it remains hidden nowadays between the dense trees of its surrounding, the house is struggling to stay visually isolated from nearby developments and to avoid transient traffic through its site.

CONCLUSION

In Amioun, rapid urbanization caught up quickly with the house. It is now surrounded by developments from all sides. The blurred boundaries of the site have become massive demarcation lines, and its once scenic rural views have been completely transformed. The playground that was the meeting point for neighborhood kids is deteriorating and idle throughout most of the year. A monumental postmodern gate defines the entrance of the house today. As a conclusion, the modernity of these two houses is self-reflexive and was constantly reshaped by its changing context. While both have departed from inherited forms and meanings of a Lebanese traditional family house, encapsulating changes in the form and function of the new family, their more recent evolution has opposed their original modernity. The initial premise of both houses is now endangered and almost rendered obsolete due to the transformation of their context. The two houses as they stand today are facing the challenge of preserving their modernity in a context that have undergone a complete transformation.

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BIOGRAPHY

Roula El Khoury is an Assistant Professor of Architecture at the School of Architecture & Design in LAU. She is the coordinator of design studios for the second year architecture program as well as other drawing courses. Her research interests include topics in 'Representation and Design', 'Representation of Capital in the City', 'Intangible heritage of the City' and 'Alternatives Public Spaces in the City'. Roula received her Masters in Urban Planning from the GSD at Harvard University and a BA in Architecture with a Minor in Political Sciences from AUB. She has participated in several local and international conferences. She was also recognized by numerous awards and competitions. Alongside her full-time position, Roula is an independent consultant in design, delivering projects from conception to execution for private homes, offices, festivals and theatrical productions.

CHANGES AND CONTINUITY - HOW TO TRACE JUL DE ROOVER'S INTERIOR IN HIS TRANSFORMING MODERNIST OEUVRE?

Selin Geerinckx, Els De Vos (Belgium)



Arch. Jul De Roover in House Hellemans, 1956, personal archive of Jul De Roover

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ABSTRACT

In the work of interior designers and architects a certain evolution during their professional career can be noticed. Yet, in terms of future conservation and re-use, it is essential to understand an oeuvre in depth. Besides rather traditional research methods in architectural history, such as a literature study, oral history and archival research, we would like to add a different approach. Through the model making of conceived and realized projects, we will demonstrate how it is possible to reveal other perspectives in the work of designers. We will explore this valuable methodology on the oeuvre of modernist architect Jul De Roover, the founder of the first interior architecture programme in Antwerp. As De Roover succeeded in creating non-conventional atmospheres, with a great sensitivity for materials and colors, his work lends itself for this methodology.

KEYWORDS

research methodology - interior architecture - modernism - craftsmanship - art - (im)material culture - continuity

MODERNIST ARCHITECT JUL DE ROOVER

Due to his sensitivity towards natural building materials and his awareness for color, Antwerp modernist Jul De Roover is appointed as our study case. A preliminary scan of De Roover's oeuvre indicated that his articulation in both architecture and interior design modestly changed over time. While his first designs had a rural character and were embedded in an arts & crafts tradition, his later projects appear to be influenced by external voices from the (inter)national architectural and artistic scene. Like a ropedancer, Jul De Roover was balancing in his public speeches simultaneously between conservative and progressive (interior) architecture, arts, political fields and his vision on home cultures.

THE RESEARCH METHODOLOGY

Our research methodology was two-fold. In the first phase of our research, we applied the traditional sources within historical research, such as a literature study, archive consultations, location visits (if possible) and interviews with privileged witnesses. However, rather than concentrating ourselves only on the professional field, we also looked into De Roover's intimate circle. This type of communication has the power to reveal additional layers of the subject's personality that an archive cannot provide you with. Particular anecdotes bring another comprehension of the subject's image, while stories also

help to select the cases to scrutinize. If the buildings are still approachable, a location visit and talk with the users for their experience is of highest added value. The value of the visit is that we can experience the interior spaces with our body, instead of looking top down to a plan and sections. Material and color is experienced through the senses of the human body. Moreover, we are able to walk, circulate through the difference spaces and we get a deeper comprehension of how it could have been (without making statements on that). In the second phase we pursued to finalize our in-depth analysis by reconstructing the buildings in models. Our motivation is that when model building is applied during historical research, the researcher is confronted with the (in)visible information that is found through the process of making it. The act of reconstructing it, gives us information about the *technie* (how things are made) and which design decisions were taken during the process.

THE RESEARCH PROCESS

The first phase was initiated with a literature study that allowed us to understand the context in which De Roover worked. Hence in 1946, Jul De Roover (1913-2010) developed the curriculum of interior architecture along with a theoretical discourse of what the role of interior architecture implies in the growing context of consumerism at that time. Secondly, a visit was brought to De Roover's (personal) archives. Though, one has to bear in mind that his archive contains only a selection of cases and doesn't allow to explain certain nuance in his design discourse. To understand the oeuvre of De Roover more deeply, we need to take into account the time and surroundings he grew up as a child, teenager and adult. As such, we learnt that De Roover was born in an artistic and socialist-oriented family at the start of WWI. Henry De Roover (grandfather) was an atelier chef at the large shipyard Donche-Beuckeleers. His father, Albert De Roover, was a figurative painter and a teacher at the Royal Academy of Fine Arts in Antwerp. This connection with the artistic caused that he often got involved in projects that relates to the arts or was for artists as he had a good affinity with their world. Visiting the locations provided a different awareness. Although the spaces were organized in a simple grid structure on plan, the spatial experience does not represent the same thought. Besides materialization, the sense of (day)light, the acoustic qualities of the interior and the sense of human scale appeared. An interim statement is that there are few key points in his vision that remained continuous over the years. Such as

nature, the use of natural materials (wood mainly, brick and concrete), craftsmanship, treating the interior space as an void instead of filling it with the materialized memories of the inhabitant or with furniture as prescribed by conventions and without thought.

During the second phase, this research-on-design was enriched with a research assignment for 52 bachelor students of the dept. Interior Architecture (University of Antwerp). The assignment involved 8 study cases, ranging from a private house designed in 1954 until a public library in 1975. The designs were related to the arts as he had many projects for artists or the cultural sector, and we find them particularly interesting as we expect that it were projects where he received more freedom from the clients to implement his ideas and vision. The assignment was to reconstruct and to articulate the historical interior. This challenged the students to reflect not only on the visible, but also on the absent information. There were two points of departure. Certain groups only worked with information from the archive. The other groups started with a location visit, without having plans and technical documentation. While the first mentioned had to reconstruct, for example, an exhibition space about color use based on a floor plan and black and white pictures, the latter were obliged to use their senses to understand the interiors, together with instruments to measure the spaces. The gathered data comprised an inventory of dimensions, materialization, construction methods and the sensorial experience, articulated in handcrafted plans and models. Even the articulation, which had to be based on the crafts, forced the students to be informed on materials of that time and to learn how articulate them in an abstract way. Due to the fact that all case studies ran at the same time, students regularly exchanged their findings with other students. Consequently, certain gaps could be filled.

CONCLUSION

First of all, certain buildings that were demolished came alive. By materializing the buildings (in a smaller scale), it is much easier to understand them as a whole. Moreover, the comparison between designs became easier. It became clear that specific materials reoccur in several designs: floor (Hoganas) and wall tiles (white squares), milk glass bowls as light fixtures, white finishing of cupboards (Cubex style), industrial inspired tools, such as a ladder open fire system, the play with brick patterns, color accents,... Although, in case of budget reasons lower material qualities were chosen without neglect-

ing the typical atmosphere in De Roover's designs. As for color, we noticed a similar use in projects such as the two custom offices on the border between Belgium and the Netherlands, like the colors of the Netherlands or Belgium national flag. We could also detect that the application of color depended on the inhabitant. The fact that De Roover chose all walls to be white as the paint works had to 'color' the interior spaces in the artist's house illustrates this statement.

In short, expanding the historical research methodology of literature study, archive work, interviews and location visits with a reconstruction (on scale) of the interiors, invisible layers come to light.

BIOGRAPHIES

PhD Candidate, master int. arch. **Selin Geerinckx** is an assistant at the faculty of Design Sciences at the University of Antwerp for which she currently investigates the notion of movement within the modernist interiors. Prior to this position she worked one year on the work and professional life of Jul De Roover. Selin has studied interior architecture (KU Leuven, 2016). Her master dissertation in interior architecture for which she formulated an innovative theoretical discourse as an authentic guardian of the body and the spirit received highest distinction in the frame of (cultural) heritage, authenticity and continuity.

Prof. dr. ir.-arch. **Els De Vos**, engineering architect and spatial planner, is associate professor at the Faculty of Design Sciences at the University of Antwerp, where she lectures in the field of architectural history and theory and interior architecture. Her PhD dissertation on the architectural, social and gender-differentiated mediation of dwelling in 1960s-1970s Belgian Flanders has been published with the University Press Leuven in 2012. She has co-edited with the University Press Antwerp several volumes in the field of architecture, including *Theory by design* (2013). She's the UAntwerp coordinator of the Erasmus+ project *Re-Use of Modernist Buildings*.

ARCHITECTURAL CONCEPTS OF CLASSICAL ANTIQUITY IN THE PROJECT OF THE FRENCH EMBASSY OF LE CORBUSIER¹

Silvia Raquel Chiarelli (Brazil)



Figure 1. Le Corbusier in Brasília, 1962. Source: Le Corbusier Foundation / photo published in the magazine *Projeto*, no. 102 (1987), 116.
Figure 2. Perspective of French Embassy. Source: CHIARELLI.

ABSTRACT

In December 1962, Le Corbusier visited Brazil for the third time. On this occasion he was in Brasília to know the terrain for which he designed the Embassy of France (1962-1965). This study presents a brief analysis and interpretation of the facades of the two main blocks (Chancellery and the ambassador's residence) of this unconstructed project. This analysis and interpretation are made under the theme of composition, starting from some of the architectural concepts of Classical Antiquity. For a better understanding of this reading, two-dimensional graphic pieces of the facades were elaborated from the original drawings consulted in the collection of the Le Corbusier Foundation².

1. CHANCELLERY

The southeast-southwest and northeast-northwest facades of the Chancellery are tripartite, formed by the classical composition of

three parts: the pedestal, the column and the entablature.

In the case of the southeast-southwest facade, the pedestal stands out for the ground floor, conformed by the cladding only on that floor in the blind tower and that runs through the cylindrical volume in height, by the *pilotis* with circular section and the *brise-soleil* with double ceiling height, by the social entrance door and by the indoors that surround it (reception, offices and residence of the caretaker) with simple ceiling height that do not follow until the slab of the first floor.

Composed of the floors - from the first to the sixth and penultimate floor - all with simple ceiling height, the column stands out for the blind tower without any opening, by the *brise-soleil* grille that protects the glass and sills protecting the garden terraces.

The entablature is formed by the seventh and last floor, also closed by a glass facade and composed by the blind tower and the sill of the garden terrace.

The column is composed of the cylindrical shape, clearly read by the presence of the semicircular grid composed by the *brise-soleil*, forming a large outer circumference, which unifies the whole from the first to the sixth floor. This has most of its glass closure advancing to the perimeter of the inner circumference, while the boundaries of the pedestal and entablature envelopes are formed by the junction of orthogonal shaped environments, similar to a union of pieces in which each piece corresponds to an environment with minimum area.

The reading of the tripartite composition of the north-east-northwest elevation is almost the same as that of the southeast-southwest elevation, with only two caveats: there is no blind tower joining all the decks and the sills of the terraces between the first and sixth floors.

The southeast-southwest elevation is asymmetric, unlike the northeast-northwest which is practically symmetrical. It is possible, however, to note the search for balance in the organization of the elements that compose it. While on its left side there is the strong presence of the large opaque surface in apparent reinforced concrete of the blind tower, accentuating the verticality of the building, on the right side there are six narrower opaque surfaces, representing the sills of the garden terraces, also in apparent reinforced concrete, signaling the horizontal lines of the building.

2. AMBASSADOR'S RESIDENCE

The four facades of the ambassador's residence are asymmetrical, however, one notes the search for the compositional balance of its elements. In the case of the north and south facades, the symmetry of the blind wall in apparent reinforced concrete, limited on both sides by the *brise-soleil* that follows from the ground floor to the second floor, is broken by the marquee, which demarcates the main and social access in the first floor, and two access ramps, one on either side of the block - one from the parking reserved for the ambassador's residence and the other from the pool, connecting the ground floor to the first floor.

In the east and west facades, the balance is demonstrated by the compositional arrangement of the elements that show horizontality and verticality, in order to project two ideas that, although antagonistic, are also complementary. In the east and west facades, the verticality is marked by the interruption of the *brise-soleil* mesh at the south end of the building, where is located the social entrance door on the first floor and by the social access staircase that connects all floors, with the exception of the subsoil. In this case, the idea of verticali-

ty is designed to break with the idea of horizontality, which is built almost naturally in a building with the proportions of this case.

In the east and west facades, the equilibrium is also achieved by the compositional game between full and empty, formed by the elements that compose them.

The same facades are formed on the basis of tripartite composition.

In the east facade, the pedestal is composed by the ground floor, that is formed by the *pilotis*, a part of the mesh of *brise-soleil* and the ramp of access to the swimming pool; the column is formed by the first and second floors, and composed of the remainder of the *brise-soleil* mesh; and the entablature is composed of the third and last floor, highlighted by the blind wall in apparent reinforced concrete.

In the west facade, the floors that make up each tripartite division correspond to the same ones of the east facade. There is only a subtle difference in the compositional elements of the pedestal and the column. Here, the pedestal consists of the ramp from the parking reserved for the residence and not the access ramp to the pool, which connects the ground floor to the first floor. The column is also composed of the marquee and the portico that mark the main and social entrance, in the first floor.

The column is also composed of the marquee and the portico that mark the social entrance, in the first floor.

FINAL CONSIDERATIONS

This process of analysis and interpretation of this project, added to the research of other authors³, demonstrates that part of the architectural concepts of Classical Antiquity is intrinsic to the architectonic work of Le Corbusier.

NOTES

¹ This study is an integral part of the doctoral thesis of PhD. Silvia Raquel Chiarelli, developed under the orientation of Prof. PhD. Ruth Verde Zein (Universidade Presbiteriana Mackenzie, São Paulo, Brazil) and co-orientation of Prof. PhD. Ricardo Daza (Universidad Nacional de Colombia, Bogotá, Colombia). The doctoral thesis was developed in the *Programa de Pós-graduação em Arquitetura e Urbanismo* of Universidade Presbiteriana Mackenzie. The research was supported by *Fundação de Amparo à Pesquisa do Estado de São Paulo* (FAPESP) and by *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* (CAPES), in Brazil and in France. The second country was where the author held her doctorate "sandwich" under the supervision of Prof. PhD. Philippe Potié (École Nationale Supérieure d'Architecture de Versailles, Versailles, France). The FAPESP granted two scholarships to carry out this research: *Bolsa no País* (Brazil), case # 2015 / 00678-2, and *Bolsa de Estágio de Pesquisa no Exterior* - BEPE (France), case # 2015 / 26685-5.

2 Le Corbusier Foundation, 8-10 *Square Du Docteur Blanche*, 75016 Paris, France - <<http://www.fondationlecorbusier.fr>>

3 Authors such as Colin Rowe (1987) and Ricardo Daza (2015) have shown the presence of the architectural concepts of Classical Antiquity in the architectural production of Le Corbusier.

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BIOGRAPHY

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THE APPROPRIATION OF THE CENTER OF CULTURAL COEXISTENCE IN CAMPINAS - "THE HEART OF THE CITY"

Taiana Car Vidotto, Ana Maria Reis de Goes Monteiro,
Fernando Shigueo Nakandakare (Brazil)



"Center of Cultural Coexistence aerial photograph, showing its surrounding area"
CONDURU, Roberto. Tropical Tectonics In: Brazil's Modern Architecture. Phaidon, 2004.

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ABSTRACT

The aim is to go over the appropriation of the Center of Cultural Coexistence (CCC), in Campinas, Brazil, relating it to the precepts established during the 8 CIAM. A framework was drawn to present the contrast between its original purpose, by Fabio Penteadó, and its current condition through its project and the news published by local newspapers. The CCC presents a contrast: it's successful in the open space, as a lively civic urban center and a failure in its underground, where the theater and art gallery are perishing, but it still remains the "heart of the city".

INTRODUCTION

Campinas Theater, designed between 1967 and 1968 by Fabio Penteadó (member of the director board from the Brazilian Institute of Architects and Brazilian delegate of the International Union of Architects (UIA)) Aldo Calvo, José Luiz Paes Nunes, Alfredo Paesani, Falcão Bauer and Teru Tamaki, became the Center of Cultural Coexistence of Campinas (CCC). The CCC was built in perfect tuning with the precepts developed in the 8 CIAM, in Hoddesdon, England. At that Congress new parameters for the design of urban centers were proposed including the suggestion for the implementation of new centralities outside historical urban centers.

At the 8 CIAM the theme "heart of the city" was proposed by the English group MARS, interested in include the local community in the city design process. At the same event two Dutch architects had special contributions. Aldo van Eyck, assumed that public spaces should offer protection and cosiness for the population and Jacob Bakema, brought to that civic urban center a new social responsibility - the potential to create human relationships (BARONE, 2002).

The concept of the "heart of the city" should consider it as a meeting space. A place of free manifestation, independently of its location or content, allowing liberty and spontaneity. With those attributes, it would promote social relations between all city citizens. Concerning its function, the new centrality should host public activities such as contemplation and idleness, attracting neighbors. Its design needed to consider the human scale, in order to build a harmonic bonding between the building and the open space, avoiding monumentality. The "heart of the city" should encourage the sense of community and must be a place where all the citizens must converge (BRAZ e SILVA, 2010).

THE CCC

Taking it into consideration, the CCC is considered as "the heart of the city", designed in the surroundings of Campinas's historical center. The CCC had a theater and an art gallery in the underground, built by four massive concrete volumes. At the top of them, from the street level, a grandstand takes place of each one of the four block's rooftop, building an open air theater for 8.000 people. As an open space for meeting and relaxing it was planned to be a place where the citizens could read, rest, watch artistic or sports, as well as join public manifestations (PENTEADO, 1998). Besides that, the open theater stimulated the civic sense, designed during the dictatorship regime, as a democratic manifest (GIROTO, 2013). Both CCC layout and program, assumed the creation of an open space for meetings and all kinds of manifestations. This place should also allow experiences of leisure and recreation, as well as the establishment of a harmonic connection among built and open spaces, avoiding monumentality. In addition, the CCC design proposed that in its surroundings the constructions had at most 08 floors and should host at the ground floor places like bars and restaurants, in order to establish a relation with the civic center (TREVISAN, 2010). Since its opening, in 1976, the local papers published the activities and the positive side of a public space, constantly opened to the population. In one of the news, they highlighted that the grandstand could be occupied in a moment of reading, like garden benches, as well as for the observation of musical and arts shows (Correio Popular, 1976). Besides that, they reinforced the CCC as a meeting point in the city, where the local culture was celebrated. In the underground the art gallery was hosted the Image and Sound Museum, the Symphonic Orchestra and an extension of the Contemporary Art Museum. One year after the opening, the news emphasized that two hundred thousand people had visited the CCC, one third of Campinas population at the time. But the news also pointed that the open theater had acoustic problems, due to the intense traffic around it (Estado de São Paulo, 1977).

In the 1980's was announced that the CCC would be renovated, especially because of its landscape that wasn't built like the original design. In addition, some of the concrete walls were painted and they should be reestablished like the original ones - fair-faced (Estado de São Paulo, 1985). A decade later, during 1992, the main architect that designed CCC, Fabio Penteadó, warned at the local newspaper that if the building wasn't renovated it would collapse (Correio Popular, 1992). But since 1980's until 2002 - for thirty years - the civ-

ic center only received small repairs, and Penteado continued to publish its dissatisfaction with the stage of conservation of the CCC (Correio Popular, 2002).

CONCLUSION

Closed since 2011 debates under the settlement of rules for the use of the CCC open space are going on in local newspapers, while the State organization is searching for sponsors to restore the underground theater and art gallery, regarding that the building is considered as municipal heritage. Since 2014, structural analyses were made to renovate all the building, but the public bid wasn't presented for the population (Globo, 2014; 2017). Meanwhile, the public space around the CCC hosts a street market during the weekends and many groups for sports practice every day. At night, teenagers take the place to meet and enjoy the public space - what brought questions about the drugs use (Câmara Legislativa de Campinas, 2017). However, the CCC keeps its fundamental role as space for public manifestations and democratic expressions, as it was at the Military Dictatorship - in the 1980's - and during the Brazilian President Dilma Rousseff impeachment (Globo, 2015).

The CCC presents a contrast in its use and occupation: it's successful in the open public space, as a lively civic urban center. At the same time it's a failure in its underground, where the theater and art gallery are perishing. The expected contribution of this article is to present an architectural project that lives a constant metamorphosis, fulfilling its purpose as a "heart of the city".

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A PURSUE FOR THE DESTINY OF THE ARCADE IN THE TWENTIETH CENTURY: THE CASES OF TWO MODERNIST GALLERIES IN BRUSSELS

Tine Poot, Els De Vos, Maarten Van Acker (Belgium)



Figure 1: Record Fair at the Ravenstein Gallery, 2013, photograph, adjusted to monochrome photograph by Sam Romilly, Flickr, licensed under CC BY 2.0.
Figure 2: Child playing at the Elsen Gallery, 2016, photocollage, adjusted to monochrome photograph by Margot Slegers and Ellen Molen, no licence.

ABSTRACT

Every year, about 6 million people pass through the nineteenth century shopping arcade Galeries Royales St. Hubert (1847), which remains an emblematic symbol of the search for modernity in Brussels until today. However, as Johann Friedrich Geist pointed out in his *Passagen-Ein Bautyp des 19. Jahrhunderts* (1978), the typology of the arcades knew a slow death as an architectural concept after 1900.

Even so the mapping of the Brussels' region revealed an atypical amount of post-war arcades of which two modernist galleries are of particular interest. First, there is the Ravenstein Gallery built between 1954 and 1958 after the demolition of a large part of Brussels as a result of the large infrastructure development of the North-South connection. Second, the Gallery of Elsen, built in 1953 and situated in the Matonge quarter, was created after the independence of Congo in the early sixties.

By analysing these cases through a material culture study in combination with personal phenomenological observations, we reflect on how the Modern Movement adapted this nineteenth century typology of public space and how the authen-

ticity and identity of these spaces evolved in the rapidly changing urban fabric of Brussels.

To start with, in this research we understand the typology of the arcades as a prototype of the public interior, designed as publicly used glass-covered within privately or collectively owned lots which were located within inner area of the building block¹.

Throughout the nineteenth century, a continuous Parisian cultural influence infused Brussels with architectural ideas including the spatial idea of the Parisian arcades². The clearest example of the Franco-Belgian transfers is the Galeries Saint Hubert, built in 1947 by architect Jean-Pierre Cluysenaar, who took his inspiration for his shopping arcade from the Galerie d'Orléans of the Palais Royal in Paris. Apart from the monumental Galeries Royales St. Hubert, the Brussels context gave rise to at least seven more modest shopping arcades, of which only three still exist today. There is another parallel that can be drawn between the nineteenth century urban developments in the city of Paris and the urban context of Brussels, namely the implementation of the extensive embellish-

ment works in the form of grand boulevards lined with bourgeois apartment buildings.

However, in contrast to the Parisian context, the Brussels boulevards did not drain the public out of the arcades, but instead a connecting network arose between the two urban typologies. So, we already established that the arcades of nineteenth century Brussels played a structuring role in the development of the city.

But what happened with the typology afterwards? How did the socio-economic and urban developments in Brussels of the twentieth century influence the modernist translation of this spatial idea?

Benjamin underlines in his *Passagen Werk (1927-1940)*, whilst he is writing it at the end of the 1930's, the already decaying status of the arcade as a European building type³. Additionally, in his extensive catalogue *Passagen-Ein Bautyp des 19. Jahrhunderts* (1978), Johann Friedrich Geist pointed out that the typology of the arcades knew a slow death as an architectural concept after 1900⁴.

Although it seems that the arcade has not been a durable type of public interior, in Brussels we find the postwar re-occurring of this spatial type an interesting anomaly. The mapping of the Brussels' region revealed around eight more galleries which seem to fit with the traditions of twentieth century modernism. In this case study we focus on two particular arcades, namely the Gallery Ravenstein and the Elsene Gallery. The conception of both these arcades can be framed by the post-war rebuilt in Belgium, especially in Brussels, which was predominately an issue of private developers⁵. Whereas the Ravenstein Gallery was conceived in the tradition of the monumental Galeries Royales St. Hubert, the Elsene Gallery represents the functionality which comes with the introduction to the Brussels context of the high-rise apartment and office buildings.

RAVENSTEIN GALLERY (1954-1958)

The advent of the World Expo of 1958 demonstrated a regained belief in modernity and change and introduced a far-reaching architectural metamorphosis of the urban fabric of the city of Brussels. Pre-war plans (1903) for the connection of the North and the South train station, also known as the North-South connection saw completion: several working-class districts between the upper and lower city were demolished which resulted in a vast building site. Here, the immobiliere Electrobel saw an opportunity to resurrect a shopping arcade with a four level office building, to connect

the newly built Central station (1952) with the ministries and offices in the upper Brussels. The architects Alexis and Philippe Dumont designed an arcade in the International Style with a street-like ground plan ending in a monumental rotunda to comfortably bridge the 10-meter elevation between the lower and upper Brussels for the thousands of civil servants passing through the arcade every day. In the eighties and nineties more and more after work bars and rendezvous cafés started to appear in the arcade, which targeted the office workers and civil servants as their main clientele. At that time the arcade becomes as it were a place suspended between work and private life. In 2005, the property developer Robelco comes in with an ambitious plan to regenerate the gallery as a cultural link between the cultural institutions on the Mont des Arts and the historical city centre. However, the revitalization strategy of Robelco fosters social discrimination of the current tenants, especially the bar owners in the rotunda area, in order to fulfill their ambition to 'improve the image of the gallery'⁶.

The regeneration of the Ravenstein gallery is clearly an example of how property developers plan what the political theorists Michael Walzer calls 'single-minded spaces' that are centered around a singular function, in this case private consumption, and may be used by an exclusive audience which answers to a similar set of values⁷.

ELSENE GALLERY (1953)

Today, the Elsene gallery which has been renamed Matonge gallery in 2017, is situated in an African migration neighbourhood which bears the same name.

By contrast, when the gallery was built in 1953 by architect and developer Jean-Florian Collin, that same neighbourhood was primarily populated by the Brussels bourgeoisie and rising middle class. At its opening, a substantial number of Brussels' personalities came to admire the shopping complex with underground parking, cinema, shops, office spaces and apartments. In its early years, the gallery targeted a rich and European clientele, the interiors of the boutiques were designed by other architects and there was a landing strip provided for helicopters on the rooftop of the gallery⁸. So, in the sixties there was still no trace of the later prominent Belgian-Congolese atmosphere of the neighbourhood.

The change of atmosphere however, began when in 1969 another gallery, La Toison d'Or, opened in the vicinity and the majority of the former boutique owners moved out from the by then decaying Elsene gallery to the newer shops of the

Gallery Toison d'Or. At the time, there were already two African orientated shops which were located in the gallery, a shop that sold African wax prints and a snackbar called 'Snack Matonge', because of the deteriorating state of the arcade the rent price was low and a critical amount of other merchants of African origin soon followed⁹.

Today the gallery is one of the three anchor points around which the African neighbourhood has been constituted. Despite of the even poorer state of the arcade, the enduring appropriation of the interior streetspace of the gallery has led to the creation of an unique African ambiance. Although, we see that the original spatial concept with a dense concentration of small shop units has been remodelled in other galleries due to changing retail demands, the Matonge gallery, former Elsenegallery, benefits from this layout to create an atmosphere that resembles the buzzing streets of the original Matonge district in Kinshasa¹⁰. So it appears that this arcade has played a central role in the unfolding of a Belgian-Congolese identity of this neighbourhood, even on a transnational level.

CONCLUSION

The history of the two arcades showcases a tenuous relationship between durability and change (urban regeneration). Although being a distinct expression of the search for a modern language in the nineteenth century, the arcade was adapted by the Modern Movement in the first place as a functional typology for commercial purposes to provide access to the apartment and office buildings. Over time, however, we see that it is a flexible typology that allows various other uses, be it commercial upgrade or appropriation by a specific community.

Furthermore, in their condition of public interiors, they show how the interconnectedness of the interior and the urban reflects the history of the city and how these spaces have to adjust to the socio-cultural and economical evolutions. Secondly, in their function as shopping spaces, they adhere to a double logic: the logic that underlines their constitution and the current logic that is followed by the city.

To conclude, the two modernist galleries provide interesting urban interior codes to read the metamorphosis of the urban tissue of Brussels.

NOTES

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BIOGRAPHIES

Tine Poot, PhD candidate, has been educated in the fields of Interior Architecture and Urban planning and Spatial Design at the University of Antwerp, Faculty of Design Sciences. She takes this unique combination to its advantage in her doctoral research about the Public Interior, the design of durable, inclusive public interiors from an urban and interior perspective.

Els De Vos, engineering architect and spatial planner, is associate professor at the Faculty of Design Sciences at the University of Antwerp, where she lectures in the field of architectural history and theory and interior architecture. Her PhD dissertation on the architectural, social and gender-differentiated mediation of dwelling in 1960s–1970s Belgian Flanders has been published with the University Press Leuven in 2012. She's the UAntwerp coordinator of the Erasmus+ project Re-Use of Modernist Buildings.

Maarten Van Acker is fascinated by cities and what shapes them. He is professor of urban design at the Faculty of Design Sciences at the University of Antwerp. His research focuses on infrastructure and urban design. Maarten is a member of the Urban Studies Institute and represents the Research Group for Urban Development. He holds a PhD for his research 'From Flux to Frame', analysing the impact of infrastructure design on the urbanization of Belgium since the 19th century. In New York, Maarten continued at The New School his post-doctoral research on urban (infra)structures.

FROM VERNACULAR TO MODERN – DUTCH NATURAL STONE IN AND OUT OF THE CONTEXT

Wido. J. Quist (The Netherlands)



A single traditional rubble wall to contrast with and to strengthen the modern shapes and materials of the former technical school Maastricht (Theo Boostonen 1960/1966). Copyrights: Wido Quist, 2016.

ABSTRACT

This poster presents recent research on the use of stone in 1950s Dutch Modernism. The use of stone in modern architecture has its origin in the 1920s and '30s in the South of the Province of Limburg where the stone was quarried. Influenced by international architecture the use of stone found its way to other parts of the country in the 1950s and '60s. The architectural expression and meaning of traditional stone in

modern architecture has not been addressed yet to its full extent. This poster gives some first insights and calls for further systematic research into the use of stone in modern architecture.

INTRODUCTION

The materialisation of architecture always balanced between the use of local materials and imported materials. Trade in

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building materials took place for technical reasons (i.e. the search for wood to create large spans), or for esthetical reasons (i.e. the search for decorative marbles). Due to its subsoil, The Netherlands has an abundance of clay, resulting in many brick buildings and only a minor quantity of natural stone containing buildings. Most of the stone used for building had to be imported. The Netherlands has only few local supplies of natural stone suitable to be used for building, most of them concentrated in the south of the Province of Limburg.^{1,2} Consequently only little has been researched and written on the use of native Dutch natural stone in buildings. On the occasion of the 6th Flemish-Dutch days on natural stone the existing knowledge has been brought together, new insights have been published and new research questions have been raised.³ This poster focusses on one of these new questions: the use of natural stone in 1950s Dutch Modernism.

KUNRADE LIMESTONE AND CARBONIFEROUS SANDSTONE

Up to the end of the 19th century both Kunrade limestone (*Kundersteen* or *Kunrader steen*) from the area between Voerendaal and Benzenrade and Carboniferous sandstone (*Kolenzandsteen*) from the Cottessen region were used locally in two vernacular rural building types: rubble constructed (farm) houses either rendered or not and timber framed (farm) houses on a stone plinth. During the 1920s and 1930s the use of locally quarried stone was boosted, aiming for a "... harmonious relationship between landscape and building", building forward on "... the particularities of the specific beauty of southern Limburg" that was advocated by the traditional Roman Catholic population of the region of South-Limburg.⁴ Locally quarried (and imported) natural stone played an important role in establishing the relation between landscape and building.⁵ The physical translation of this regionalism into a more nationwide modern architecture took only place after the 2nd World War.

STONE IN MODERN ARCHITECTURE

Stone cladding was addressed in Docomomo's Preservation Technology dossier 6.⁶ Traditional built stone walls in modern architecture have only been addressed in footnotes and solitary case studies. Books, covering the oeuvre of important modern architects such as Le Corbusier, Frank Lloyd Wright, Philip Johnson and Richard Neutra, show rubble stone and roughly cut to shape stone in several drawings and many photographs, but the text almost never addresses the material and

its role in the architecture of the building. Studying stone in the 'masterpieces' of modern architecture reveals the importance. The Kaufmann residence – *Fallingwater*, by Frank Lloyd Wright (1937) is probably the most well-known example of landscape and building blending together in one piece of art. Locally quarried stone was used to construct and clad the central cores and columns of the building to which the large cantilevers are connected.⁷ The way stone was cut to shape and laid to courses - thin layers in between higher blocks - strengthen the horizontality in the house, where the rough surface adds to the feeling of 'being at home'. Also the widely published *Pavilion Suisse* by Le Corbusier and Pierre Jeanneret (1930-1932) has a minimally addressed curved wall in rubble stone that helps anchoring the building to the green surroundings. Reflecting traditionalism helps to strengthen the architect's modern principles. Comparable effects can be observed in Le Corbusier's and Lucio Costa's *Maison du Brésil* (1957-1959).

STONE IN MODERN DUTCH ARCHITECTURE

Architects Jos Wielders (1883-1949), Alphonse Boosten (1893-1951) and Fritz Peutz (1896-1974) laid the basis for the use of stone in modern architecture in the 1920s and 1930s. After WW II, Limburg born architects Jean Huysmans (1913-1974), Jozef Franchamps (1912-1982) and Theo Boosten (1920-1990) continued using local and imported rubble stone, more and more in combination with modern reinforced concrete in the region of South-Limburg. Outside the geographical stone-region, architects such as Joost Boks (1904-1986), Auke Komter (1904-1982), Bernard Bijvoet (1889-1979) and Gerard Holt (1904-1988) used Dutch Carboniferous sandstone and Kunrade limestone on a handful of different projects outside its original context.⁸ The popularity of rubble stone in modern architecture initiated the import of stone from Germany and Belgium and created stone-architecture without a geographical context, e.g. the St. Hubertus-church in Tollebeek, built on reclaimed land in 1960-1962 by Herman van Wissen (1910-2000).

Only a few stone-containing modern buildings have been examined closely, but it revealed already several unexpected aspects such as unknown finishes – combining old and new techniques –, neatly composed bonds and a refined elaboration of classical architectural elements i.e. plinths, chimneys and (curved) walls. All of those are not mentioned yet in literature and architectural historical research has not touched upon it. It is interesting to see the resemblance between the

use of stone in international modern architecture and in Dutch modern architecture asking for redefinition of 'vernacular' and 'out of the context'.

CONCLUSIONS

From the early 20th century onwards, stone changes from a vernacular building material used for functional reasons to a material mainly serving an aesthetical purpose. The choice to use it and the way to use it (e.g. dimensions, shape, finish, bond, etc.) becomes an architectural choice instead of a functional one. First within the geographical context where the stone was quarried, developing a typical regional architecture, later out of the context mainly to 'humanize' modern architecture, following the international trend often attributed to the exhibition 'Brazil Builds' in New York's Museum of Modern Art in 1943.⁹

On the occasion of the 6th Flemish-Dutch days on natural stone first attempts have been made to inventory (rough) stone in modern buildings, with promising results asking for a more methodological approach. A systematic inventory of the use of stone in the oeuvre of modernist Dutch architects, their (international) network and their frame of reference is expected to reveal new insights in this architecture. It certainly will influence the identification of heritage values that go beyond the iconic aspects of Modernist architecture. Understanding traditional stonework in modern architecture deserves a similar approach as the research on colour.¹⁰

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Wido Quist is trained as architect and building engineer and now works as an assistant professor at Delft University of Technology. He defended his PhD-thesis early 2011 on the replacement of white Belgian sandy limestone at conservation campaigns in the Netherlands. His research interests contain among others history of conservation, 20th century building materials and natural stone as well as (pre-cast) concrete. He is involved in education of master students in architecture with a specific focus on building conservation and (technical) adaptation of existing buildings to future needs. Wido Quist is chairman of DOCOMOMO_NL and board member of WTA NL-VL.

SUSTAINING THE SOCIAL HISTORY AND COMMUNITY SPIRIT THROUGH REVITALISING THE OLDEST MODERNIST SOCIAL HOUSING “MEI HO HOUSE” IN HONG KONG

Wai Yu Anna Yau (Hong Kong)



Mei Ho House is the only surviving Mark I H-shaped resettlement block in Hong Kong and the first design for public housing of the same category. (Photo taken in 2010, Hong Kong Youth Hostels Association)

ABSTRACT

Mei Ho House, built in 1954, is one of the first six resettlement blocks built by the Hong Kong British Colonial Government to provide accommodation for the victims of the disastrous Shek Kip Mei Fire happened on 25th December 1953 remarking the beginning of public housing programme in Hong Kong.

This building underwent a conservation and adaptive re-use project and reopened as a youth hostel with a social history museum in 2013. This UNESCO award winning project preserved an important chapter in the social history of Hong Kong and demonstrates the enduring value of the modern typology of social housing.

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BACKGROUND

Mei Ho House, built in 1954, is one of the first six resettlement blocks built by the Hong Kong British Colonial Government to provide accommodation for the massive number of victims of the disastrous Shek Kip Mei Fire broke out on 25th December 1953 remarking the beginning of public housing programme in Hong Kong. The six resettlement blocks formed the first public housing estate – Shek Kip Mei Estate in Hong Kong.

Mei Ho House is a 6-storey H-shaped modernist reinforced concrete building characterized by the long linear forms and strong horizontal lines formed by their continuous balconies on two identical wings connected by a central block forming an H-shape. The optimal structural design and construction as well as a minimum approach to detailing reflected the urgency to provide basic social provisions for fire victims within the shortest time. This Mark I H-shaped design is the first prototype of public social housing in the Hong Kong. Social housing of this architectural form accommodated almost half of the Hong Kong's population between 1950s and 1970s, therefore the way of living in these H-shaped building is a common nostalgic memory of Hong Kong people.

SIGNIFICANCE REVEALED DURING REVITALISATION

Redevelopment pressure triggered demolishment of deteriorating resettlement blocks for high rise modern housing in 2000s, but Mei Ho House was deliberately kept. After the demolishment of other resettlement blocks in Hong Kong, Mei Ho House became the oldest and only surviving example of its kind in the territory. It underwent a conservation and adaptive re-use project and reopened as a youth hostel with a heritage museum in 2013. The Mei Ho House distinguishes itself from the other built heritage conservation projects for the rich social attachments it received from the local communities and its economic sustainability. Emphases were placed on sustaining the communal spirit associated with this form of public housing. A former residents network was established to work with project team integrating the sustainability of social values into the planning and implementation of conservation.

During the 5 years of the project period, a total of 40 oral history interviews and workshops were conducted with former residents who used to live in the same type of resettlement blocks to reveal their authentic living experience with the H-shaped built environment. The design of this early public housing significantly shaped the way of living and living stand-

ard of working class inhabitants. As recalled by the majority of the former residents, the living condition was not pleasant but compared to those homeless people after the fire, being able to move into a building built by concrete was a jackpot prize for their families. The resettlement blocks provided them a physical and more importantly a psychological shelter. Each 120 square feet residential unit in the block required by the government to accommodate 5 adults. These units were arranged in back to back layout with a continuous balcony connecting all the units. This unique design induced residents to extend their living area to the common area which the later became common space for cooking, sleeping and leisure that no doors were shut between neighbours. An intimate relationship and close bond were therefore evolved. These H-shaped resettlement blocks were also the cradle of light industry where residents set up shops and started their small scale business.

Layers of factors collectively generated a communal “Lion Rock Spirit” – the resilience character of Hong Kong people to overcome hardship. Lion Rock Mountain also became an associative cultural landscape as many H-shaped public housing buildings were built at the feet of Lion Rock Mountain. Mei Ho House does not just witness the evolution of the living pattern, but also a testimony of the assiduous spirit of local working class who gave tremendous social and economic influence to the society underpinning the speedy development of Hong Kong in the subsequent decades.

SUSTAINING SOCIAL VALUES

The lively stories collected from former residents together with its historical and architectural values have shaped the interpretation approach of the heritage through a narrative of real experience; adaptive reuse was carefully planned to facilitate visitations and a self-sustaining business model of supporting museum operation entirely by hostel income. The heritage museum is set up inside the Mei Ho House building with typical dwelling units preserved in situ – the theatre of each story. The free admission museum features oral histories records and artefacts donated by former residents, and receives great appreciations for it allows visitors to understand the authentic daily living of working class community which are not known by the younger generations. Former residents continue to take a major role in the development of docent training programmes and other communal activities which were held regularly and over hundred docents have been trained to inherit the values and significance of Mei Ho House by the community in actions.

SPIRIT OF PLACE

Mei Ho House was designed with a motive to improve and modernize the living standard and environment of fire victims. The unique spatial morphology provided a crucial foundation for establishing a sense of solidarity among the communities which is influential to the establishment of the communal spirit and identity. The spirit to break through from poverty as represented by oral history cases echoes with the spirit of modernism to break through from traditions. The building would value less without the layer of social history. The story of Mei Ho House vividly demonstrated the direct interaction between an architectural morphology and inhabitants, and how they affected the sustainability of each other. Modernism underpinned the development of generations of communal spirit and thereafter social development enriched the influence of modernism. The spirit of the place of Mei Ho House is defined by both the modernist physicality of the architecture and spirit of community.

The project received Honourable Mention award of UNESCO Asia-Pacific Heritage Awards for Cultural Heritage Conservation in 2015 for it “preserved an important chapter in the social history of Hong Kong and demonstrates the enduring value of the Modern typology of social housing”. The physical life of a modernist style building has limitations and therefore temporary, but the local community who inherited the spirit of modernization would carry on the values, enrich and recreate, eventually archive enduring sustainability.

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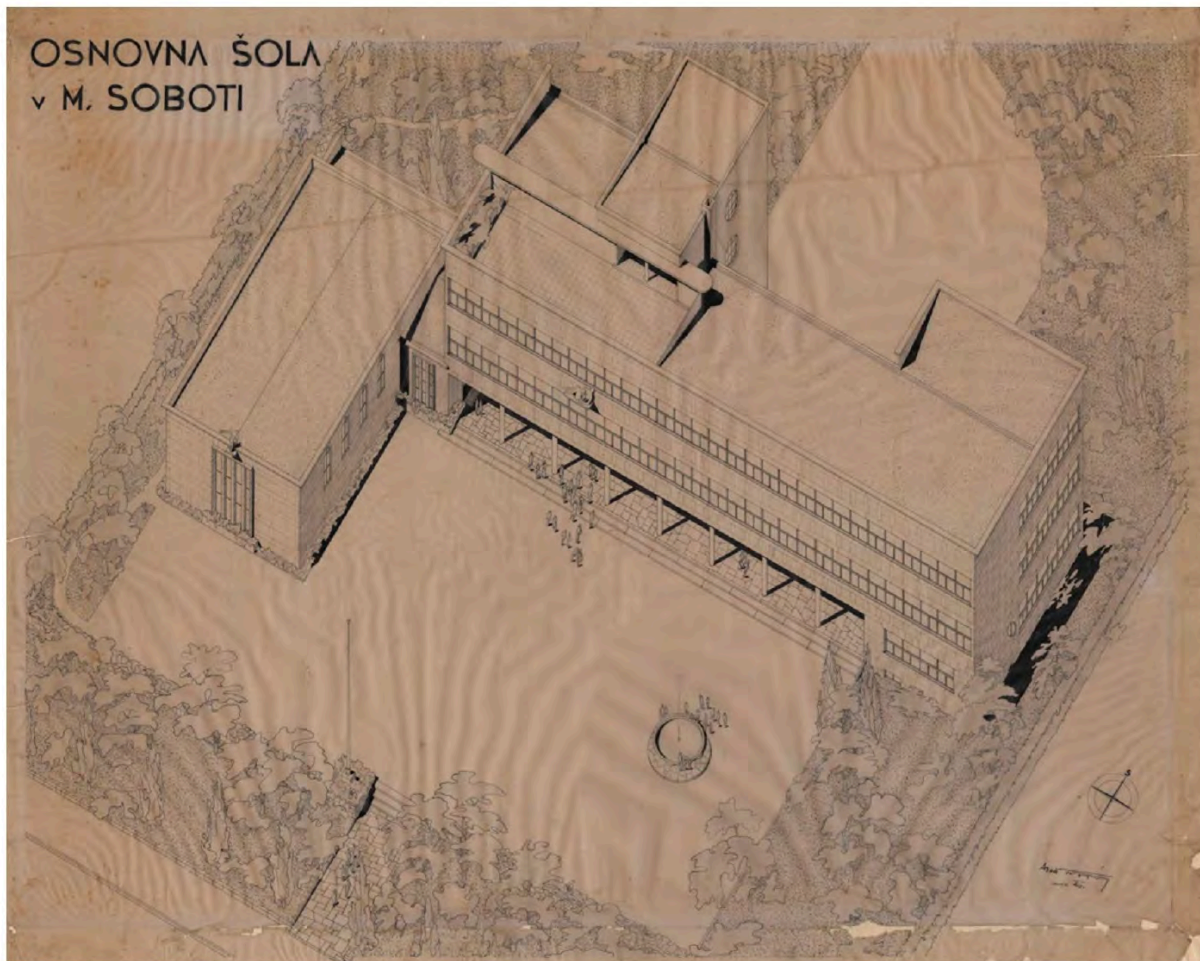
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ARCHITECTURE FOR THE COMMUNITY:**SCHOOL BUILDING BY FRANC NOVAK IN MURSKA SOBOTA**

Meta Kutin (Slovenia)



Axonometric view of the primary school building withouth third floor added at a later stage, 1940 (Archive of High School Murska Sobota).

ABSTRACT

The poster presents the work of architect Franc Novak who introduced modernism aesthetics to the province of Prekmurje. His school building by its outstanding image symbolizes progress and hope in future spatial and social development of the town. Novak in his designwork had no ambition to develop a typology itself of a school building. He found much more important the monumental address of the building and its symbolic message to the developing town. He turned his effort toward positioning of his building into the public space of the town.

INTRODUCTION

Between the two World Wars, Murska Sobota was a typical Pannonian settlement numbering some 300 ground floor houses with double-pitched roofs. Only wide macadam roads could lead to Murska Sobota and it had no distinctive centre and, save for two church towers, no space landmarks or a historical core of the settlement. The building boom of Murska Sobota was due to the construction of its railway connection in 1924 and due to restoration works carried out after a catastrophic flood the next year (Brumen, 1995).

The unexpectedly rapid progress of the settlement coincided with the end of studies of Franc Novak at the Academy of Arts in Vienna, under the guidance of the renowned architect, Prof. Peter Behrens. Local newspapers reported on the arrival of the first graduate architect in Prekmurje (Jutro, 1933: 5). Novak who openly rejects 'any borrowing' is given the opportunity to start, as architect under the contract, a comprehensive and systematic land management arrangements on behalf of the municipality. As a committed modernist he undertook spatial arrangements of Sobota 'from zero'. Novak's work is largely inspired by his two months' practice in the architectural office of Le Corbusier in Paris. Novak's school building, which by its outstanding image symbolizes progress and hope in future spatial and social development of the settlement, conveys characteristic features of his work opus in general. The official opening of the school in 1950 took place only ten years after first project designs were created. Although square metres of the school have in the meantime increased, the basic message of this monumental building remained unchanged up to this day.

BETWEEN PRAGMATISM AND REGULARITY OF ARCHITECTURAL STYLE

Although Novak gathered and trained the entire building team who was familiar with new materials and construction details, he was often compelled to have recourse to pragmatism. Thus he often leans a less expensive wooden ceiling against a concrete framework structure. Similarly, he likes to conceive a false flat roof, details of which mostly ignored by local masters, just for visual affect and views from the street. Also in the case of school building, Novak complies with five architectural points of Le Corbusier only at first sight. Behind the high attic of school gym, he hides a gently sloping double-pitched roof. He leaves just enough space for rooftop terrace in order to present a characteristic motive of modernism, 'the roof garden'. The motive of continuous window bands marks only the front representative facade, while the backside facade remains torn up - it is not meant for the world to see. It speaks for itself why old photographs and axonometric drawings never show buildings from backside.

He 'denies' the tectonics of the groundfloor only judging from appearance, since groundfloor spaces are too valuable for him to renounce them completely.

The design of linear facade, which emphasizes building's formal programme, affects floor plans and layouts for any room. Large and bright classrooms are arranged along the southern facade. They are interconnected by a corridor which runs full length of the building and is naturally lit from the north.

In the ground floor of the building, at the intersection of all routes, he accommodates dining room with kitchen, technical education room, linkage on gym, some other service rooms and a caretaker flat.

BETWEEN BUILDING AND TOWN

The building created for a central view, expresses Novak's awareness of the important purpose of buildings and of the role buildings have to play in defining the new centre of the town.

The architect had in mind the future town as divided by functions. The individual areas would be connected by wide streets hedged in by red roses, which would even more emphasize the whiteness of facades. For the town centre, he selected a park by the castle and installed there necessary town services, among which a school building.

The school building was shifted from the edge to the inside of building plot. In this way, the architect outlined the building's significance for the developing urban space. Such a positioning

also enables an observer to get sight of the entire building. In his design conception Novak had no ambition to develop a typology itself of a school building. He found much more important the monumental address of the building and its symbolic message to the developing town. He turned his effort toward positioning his building into the public space of the town. The sequence of spaces which integrate his school building into a larger community, is masterly.

The sequences of spaces from public pavement to individual classrooms shows Novak's understanding of public communication surfaces and interconnection between functional and social value of spaces, which encourage making stays and socializing with other building users as well as between the latter and larger community members.

Conceptually reserved school entrance is hidden behind a colonnade supporting the upper floors. The asymmetric entrance axis is only indicated and has a symbolic concrete butt end above the first floor. Under the colonnade, in nice cool shadow, there is a series of benches offering a good view of what is happening in the courtyard. On the platform, Novak managed to create an atmosphere of a Mediterranean town square.

On the left side from the entrance, a groundfloor gym sticks to the main building, which breaks a spatial concept symmetry and rounds up a large space of the entrance platform.

The entrance platform is separated from the street by a greenery belt which protects against noise and looks coming from the direction of pavement.

A wide, gently sloping and naturally lit staircase runs from a bright entrance hall, which receives daylight from entrance glass door, to the rooftop terrace.

By the words of a former pupil, architecture can in a very concrete way affect user's emotions. Not only the image of building, but also a sensible organisation of spaces emphasize the importance and substance of happenings inside the building (Štefanec, 2014).

Besides, the monumental building with its tiny details addresses the users. On each floor they can find a different design pattern of terrazzo flooring. The entrance door knob is modern disc—probably with a view to be reached by kids and older children.

By his school building design Novak undoubtedly managed to raise public awareness on the value of community development. From the school chronicle recorded since 1950, we gather the satisfaction with building quality of the employed. And how pupils of today feel the building? This is best reflect-

ed by a nice graphite which has already gained the right of domicile.

CONCLUSION

Novak's architecture matters to Murska Sobota in the same way as any historic core matters to other cities (N. Šumi v. Balazič, Hoyer, 1992: 148). Nevertheless, a number of his buildings presently fall into decay. Even their cultural heritage protection status cannot help safeguard these buildings. Also Novak's school building underwent numerous extensions with too little respect for its cultural heritage. The building preserved its original design at least when it comes to front views. Perhaps owing to a happy positioning of the school in the midst of meadow which has for some time enabled children to exercise outdoor physical activities.

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SENCE

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model **FURU**
designed circa 1962
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