

# Editorial For an Architect's Training towards Responsibility

2



The analysis of Modern architect's training is the issue of this **docomomo** Journal. The variety of discussions on architects' mission, on architectural discipline and the recall on some key figures explain the argument of this Journal entitled *For an Architect's Training*. The title quotes Walter Gropius' "Blueprint for an architect's training" spread through the French magazine *L'Architecture d'Aujourd'hui* in February 1950 (number 28), dedicated to "Walter Gropius, the spread of an idea" and realized by Paul Rudolph under the direction of Gropius himself who developed his ideas on design education between art and technique, creation, research and applied science.

In this context emerges Joseph Hudnut, at the time Harvard University Dean of the Faculty of Design. In his *Blueprint for a University* (1944), Hudnut shaped the liaison between "our universities" and "the evolution of a new social order in our cities." In fact, he advocates "a scientific attitude towards the problem thus created [by the immense industrial expansion] and the establishment of the intellectual forces in the effort to resolve them."

Facing what he calls as the social disintegration, he considers that "living needs a pattern [and] a framework of social purpose." **docomomo** acknowledges the major relevance of reflecting on the Modern Movement heritage focusing on two of the main issues: learning and responsibility. This duality between education and duty implies a collective attitude and a shared action. In fact, Hudnut "does not suggest that a social pattern can be created by an act of the individual will. It will be not invented. It will be the consequence of an evolutionary process [because] Planning is a term which includes both foresight and responsibility for change." This responsibility towards the future implies "the sense of historicity and evolutionary identity" in the terms defended by Juhani Pallasmaa in his "Newness, Tradition and Identity" **docomomo** Lectures published in this Journal. Pallasmaa argues referring to Álvaro Siza's conviction that "architects don't invent anything, they transform reality." Pallasmaa stands "the ground of culture" as a collective mental foundation taking into account that "the quick collapse of this collective mental foundation during the past decades is already a serious obstacle for education in the creative fields today."

If Hudnut stands that "planning is a tool of social reconstruction", Pallasmaa stands that "the primary task of architecture continues to be to defend and strengthen the wholeness and dignity of human life." The tradition of Modern Movement architecture is envisioned as a large concept that deals with forms, spaces, techniques and social responsibility. The contributions on this discussion put together learning and training, scientific research and design practice, the social mission and the responsibility of architects towards the future considering that "Modernity is an unfinished business" as Allen Cunningham reminds us.

I wish to thank Gonçalo Canto Moniz who has acted as guest editor. Due to his commitment and research in the field, together with the knowledge conducted by a range of researchers that accept to share their work, analyse and creative interpretation focused on some architectural education key figures [from Kahn to Rogers, Muratori or Quaroni to Leslie Marin, from Hilberseimer to the Russian *avant-garde* or the Brazilian Modernity process to the alive vital experience of Herman Hertzberger] it is possible to extend this debate over the reflection on the link between design and science, art and technique. And finally it is also the challenge to discuss this urgent contemporary issue in order to prepare the coming main **docomomo** discussion forum in the believe that seeking for the planning and architectural responsible mission is a way to approach the "Expansion and Conflict" key concept of the 13<sup>th</sup> International **docomomo** Conference, which will take place in Seoul, Korea, from the 24<sup>th</sup> to the 27<sup>th</sup> September 2014.

Ana Tostões, Chair of **docomomo** International



# "Training the Architect": Modern Architectural Education Experiences

By Gonalo Canto Moniz

In 1937, Walter Gropius wrote "Training the Architect"<sup>1</sup> for his presentation as Chairman of the Department of Architecture of Harvard University. It reinvented his experience in the Bauhaus, between 1919 and 1928, and became the pedagogical program for the new Modern paradigm of an architectural education. At that moment, the *Beaux-Arts* system was being revaluated and the American schools of architecture intended to approach the university through a scientific and technological curriculum.<sup>2</sup>

Harvard played a leading role in this process by inviting one of the Modern masters to teach architecture and to reform the school. Gropius was chosen by Joseph Hudnut, professor of Architecture History, who was close to the ideas of the American pedagogue John Dewey, who was fighting for a democratic education, well known for his "Learning by Doing" based on students' experience. This dictum is still present in every school of architecture.

The manifesto "Training the Architect" integrated the Bauhaus education in the American university system by seeking a relation between Art and Science. It also understood the architectural education starting from nursery up to higher education, granting it a cultural dimension. This continuous education focused on the methods rather than only on knowledge and skills.

This programmatic text was first published in 1939, in the cultural magazine *Twice a Year*. But it was the *Architectural Record* that stated its importance through an interview by Gropius in May 1937. Later, *L'Architecture d'Aujourd'hui* (AA) published it in English and French<sup>3</sup> in the context of an issue dedicated to "Gropius et son  cole" or, in English, "The spread of an idea" AA n  28 (1950) was edited by Paul Rudolph with texts by Siegfried Giedion, Serge Chermayeff, Michel Aime, a statement of a former student, Chester Nagel, some students' works, and professional projects by Gropius, The Architects Collaborative and Harvard trained architects. With this diverse material, AA explored Gropius' main ideas and methods and its consequences in the Harvard architectural education and in American architecture. This relation between theory and practice put the tonic in design and educational methodologies, refusing the creation of a "Gropius Architecture."

*It would be an absolute horror for me if my appointment would result in the multiplication of a fixed idea of "Gropius architecture. [...] My interest was in handing on my basic experiences and underlying methods."*<sup>4</sup>

< *L'Architecture d'Aujourd'hui*, "Walter Gropius et son  cole", 28, 1950.



Between 1937 and 1952, Gropius carried out an architect's education based on the cooperation of three departments of the Harvard Graduate School of Design (GSD)—Architecture, City Planning, Landscape Architecture—aiming to bring closer the student's projects to the real problems of society, thus endowing the architect's education with the ambitioned technical ability and tools to integrate the various specialties in the project. In order to accomplish this ambitious program, Gropius was counting not only on the professor of Architecture History, Joseph Hudnut, but also on Marcel Breuer, George Holmes Perkins, City Planning professor, Bremer Pond, professor of Landscape Architecture, and guest professors like Sigfried Giedion, who in 1943 taught several lectures that resulted in the publication of the famous book *Space, Time and Architecture*. Specific lecturers as Frank Lloyd Wright, who in 1941 managed to enthuse the students with the Organic Architecture, as did Bruno Zevi.

The Modern curriculum and the methodology of collaboration, not between arts and crafts as in the Bauhaus, but between landscaping and planning received international acknowledgement with *L'Architecture d'Aujourd'hui*. Like the Bauhaus, Gropius managed to make GSD international with students from all around the globe through a nuclear curriculum and a *collaborative studio*, founded in teamwork and in "methods more than skills", therefore generating "the greatest innovations of the century in project teaching."<sup>2</sup>

When the CIAM congresses restarted in 1947, Gropius created the Education Commission to debate the training of the Modern architect. This commission was first developed by Giedion, Jane Drew (MARS) and Jaromir Krejcar (Czechoslovakia) taking Gropius' manifesto as reference, with the title "In search of a better architectural education."<sup>5</sup> In this text, Gropius underlines ten principles for a new architectural education:

1. In an age of specialization, method is more important than information;
2. Three-dimension conception is the basic architectural discipline;
3. In the first year, basic design-and-shop practice combined should introduce the students to the elements of design—surface, volume, space and color—and simultaneously the elements of construction and building;
4. In the second and third year, the design-and-construction studio, supplemented by field experience during summer vacations and by activities in a laboratory
5. Construction should be taught as a part and parcel of design;
6. Students should be trained to work in teams;

7. History studies should begin in the third year rather than in the first, to avoid intimidation and imitation;
8. Teachers should be appointed after sufficient practical experience;
9. Schools of architecture of small size are more efficient than large size ones (100 to 150);
10. The efficiency of teaching [...] depends on the number of students per teacher (12 to 16)."

This commission proposed that the education discussion was based on the importance of the project method and on the three-dimensional conception, including Gropius' ground ideas in the group's collective speech. However, more than a school program, this debate would fall upon three themes: recruitment, early training and scholarships; school training and work; further training and specialization. In this debate, Giedion played an important role by presenting three texts on architect's education<sup>6</sup> and inviting Julian Huxley, president of UNESCO, who was trying to form a "Board for Architecture and Planning". Nevertheless, it was Gropius's text that established the commission themes to be followed in the next congress. In the CIAM 7 at Bergamo, 1949, Ernesto Nathan Rogers, Cornelius van Estereen (TU Delft), Serge Chermayeff (Institute of Design, Chicago) and Jaqueline Tyrwhitt (MARS) joined the commission and tried to build a Charter of Education. Serena Maffioletti's contribution to this Journal, "Ernesto N. Rogers and the CIAM: Teaching for Democracy", stresses the relevance of Rogers to this debate, tracing his ideas on a more humanistic and democratic education.

Although Walter Gropius did not attend the congress, he sent a new text "Topics for the discussion on architectural education", read by Jane Drew. This text was simply about his principles, already presented in the previous congresses, now adding two new items: "the architect had to be a coordinator"; "knowledge would come to life only by individual experience", which appear to equate with the former congress concerns, as seen in the previous note. The text was published by Bruno Zevi's *Metron* magazine, in 1949 with the title "*Un message de Walter Gropius au Congrès*" and in the Portuguese *Arquitetura*.<sup>7</sup> The text was already known by the professors of both schools of architecture,<sup>8</sup> Porto and Lisbon, through *L'Architecture d'Aujourd'hui* of 1950, but the Portuguese edition allowed a real impact on the architect's training as we can follow in Eduardo Fernandes' approach "Critical Eclecticism. The Way(s) of the Porto School", especially throughout the action of a young member of CIAM, Fernando Távora.

In Bergamo the debate received contribution from members such as Pierre Winter approaches to several





Figure 1. **Walter Gropius** with master students, Harvard, 1946. Source: Alofsin, Anthony, *The Struggle for Modernism. Architecture, Landscape Architecture, and City Planning at Harvard*, New York, London, W.W. Norton & Company, 2002, 210.

themes focusing aspects concerning the curriculum, like the relationship between architecture and medicine/biology (air, light, sound, water, climate); Alfred Roth stating the importance of the theoretical teaching and history (understand and interpret the present); Hugo Weber referring the schools organization (Mies' individual school or the Bauhaus's collective school); Lomacci, an Architecture student from Venice, hoping for "his school transformation within the Modern architecture guidance" and presents the collaboration between students and professors. In the end, Hugo Weber, from the *Institute of Design* of Chicago, suggested that CIAM members should start to implement the commission proposals, namely the Charter of Education, in their own schools. Although the commission did not produce a Charter, Gropius presented a new text "Architectural Education"<sup>9</sup> in the CIAM 8 where he spreads Harvard pedagogy, associating his educational idea to the tree rings. This perspective, as he himself quoted, of continuous learning and growing complexity rests in the theorists of the modern American pedagogy, like John

Dewey, already referred, and Earl Kelly, who had just published the book *Education for What is Real* (1947).

Other texts were presented at Hoddesdon, such as the one from the Commission 3A, by Norberg-Schulz, student at Zurich,<sup>10</sup> focused on Giedion's pedagogical experience in that school with a collaboration process with students. Also, Ove Arup (1895–1988), British engineer of the MARS group, presented the text "Architectural Education"<sup>11</sup> stating the idea of cooperation between the Architect, the Engineer and the Constructor.

The presentation of the texts and the report started a debate involving professors of several schools: Arne Korsmo described the Bauhaus teaching implemented in his school in Oslo, the Norwegian Arts and Crafts School (SHKS) between 1936 and 1941; Franco Albini, IUAV professor, announced a CIAM summer course in Venice, in 1952; Tyrwhitt raised the question of the coordination of disciplines; Enrico Peressuti, professor in Milan, conveyed the Architectural Association students' attitude in working collectively in order to better find the contempo-

aneous society expression; Lönnberg-Holm, professor at the Michigan School, revealed the need of connecting education to the industrial process.

The reflection on education was consolidated at Hoddesdon, allowing to reinforce the participation in the CIAM 9, in Aix-en-Provence, 1953, with 45 participants and 6 workshops. The president of the commission, Ernesto N. Rogers, integrated Jim Cadbury Brown and Erno Goldfinger, professors at the Architectural Association, to promote a debate focused on two questions: "What to teach?", "How to teach?"<sup>12</sup> The answers were systematized in a scheme that stressed out the humanistic approach, also claimed in all the CIAM commissions, through an educational methodology combining analyses with synthesis.

Although this would be the last debate in the commissions, the consequences in the schools were already alive, as the research presented in this issue addresses. In fact, after transforming the educational paradigm in America, the spread of Gropius idea leads to a debate in the architects training from Europe to Asia in parallel with the debate on Modern architecture.

Rogers was one of the main propagators of Gropius pedagogy, as Serena Maffioletti well explains, integrating a new democratic perspective that will be absorbed by many of the Italian schools. If the IUAV of Samona had a special role in this debate by organizing the CIAM Summer School, the Rome school developed an interesting dialogue with Modern education, by emphasizing the relation with urban history. Alessandra Capuano approaches the School of Rome, with a text titled "Unity of Architectural Organism and Urban Form. The teachings of Muratori and Quaroni in the School of Rome," where she explores the contamination by Severio Muratori in architectural design courses (Composition 4) and Ludovico Quaroni in the urban design ones. Both texts reveal important reviews to Modern education and architecture through history and social aims. The interchange of professors between schools also reflect the ideological character of education in Italy, if we consider that Bruno Zevi and Luigi Piccinato came from Venice and Adalberto Libera and Ludovico Quaroni from Florence.

In America, Mies van der Rohe promoted another pole of debate on architect's training at the Illinois Institute of Technology (IIT). Although he was criticized by building an individual school focused on his theory and practice, other architects played an important role in the school. Hilberseimer was the one who made a bigger impact in the school by teaching Urban Planning. "Ludwig Hilberseimer at the Illinois Institute of Technology: Architectural Education, Organic Democracy and Colonization", is the proposal of Plácido González Martínez to

trace his steps on the transformation of the American educational system, in parallel with Gropius. With a rigorous educational methodology supported by his *Settlement Unit*, he built the roles to promote the individual approach of each student. If the IIT disputed the Harvard protagonism, Pennsylvania took Gropius legacy and reinvented it through Louis Kahn. In "The Beginning of the Beginning: Kahn and Architectural Education in Philadelphia", David Letherbarrow looks to the transformations in Penn education through a continuous search for what architecture is about: the relation between theory and practice; the integration of the *beaux-arts* system in the modern methodologies and aims; the presence of the History and simultaneously the attention to social needs. The path that links Paul Cret and Walter Gropius to Louis Kahn is part of his attitude towards students.

If Gropius's and Mies' experience in Bauhaus travels towards West and transfers the educational debate to America, we can't forget the Russian experience around VUKTEMAS, as Elena Ovsyannikova and Vladimir Shukhov underline in the text "Phenomenon of the Russian Avant-garde. Moscow Architectural School of the 1920s". In some way, the Russian context emphasizes that the modern masters are the responsible for this transformation on education. The same happened in Brazil with Lúcio Costa's leadership in Rio de Janeiro's *Beaux-Arts* school. The incredible construction of Modern Brazil and its dialogue with the training of professionals that were able to understand that utopia is developed by Ana Goes Monteiro in "The teaching of architecture and urbanism in Brazil: 1930-1970."

One of the main topics of Gropius manifesto was the need to develop in schools the research on architecture, "in correlation with crafts-training in the schools of architecture, a laboratory-workshop should be established, where experiments and investigations could be carried on by teachers and students".<sup>13</sup> Cambridge, by the hand of Leslie Martin, transformed the *atelier* in a laboratory, moving architecture into science. In "Architectural Practice, Education and Research: on Learning from Cambridge", Mário Krüger relates, on the one hand, Martin's proposal to implement a university architectural education in the 50s and 60s and, on the other hand, Cambridge's recent attitude towards the school pedagogy, ignoring their legacy and their impact on European schools, as they did in Portugal.

The experiences developed in the Modern period built the identity of many schools of architecture. This identity was grounded in educational methods more than in a curriculum or an ideological perspective. "Notes on Education and Research around Architecture" is a reflection by Allen Cunningham on the challenges



Figure 2. **Walter Gropius** with **Sigfried Giedion** at CIAM 6, 1947. Source: Giedion, Sigfried, ed., *CIAM, A Decade of New Architecture*, Zurich, 1951.

that architecture has to face in the globalization system, and the pertinence of **docomomo** aim in the training of the architect.

Herman Hertzberger is a live example of this debate. Not only was he educated inside this fight for Modern methods, but he also reinvented them to build an education that integrates a social and historical dimension in design. His approach, founded in structuralism, is still operative to deal with the transformation of the territory, as he confirmed in the renovation of the Utrecht Music Centre (1973–78).

So, the manifesto “Training the Architect” and the Modern educational methodologies that, in some way, as we saw, follow its proposals are still the identity of most schools of architecture, from North America to Asia. We

are still trying to combine the artistic role of the architect with the technical and the social ones, as Gropius proposed:

*The architect of the future [...] should act as a coordinating organizer of broadest experience, who, starting out from social conceptions of life, succeeds in integrating all social, formal and technical problems of our time into organic relationships.*<sup>14</sup>

This review on the foundations of our education can help us debate new trends to train the architect today. To Document and Conserve the educational methodologies of the Modern Movement it is strategic to understand and to transform its architecture and urbanism, that are also the matrix of the contemporary city.



## Notes

1. In Walter Gropius archives the first manuscript has the title: "Suggestions for the curriculum of an architect's training at Harvard." [n.p., 1937]. <http://oasis.lib.harvard.edu/oasis/deliver/~hou00397>
2. Turpin, Bannister, *The Architect at Mid-Century. 1-Evolution and Achievement*, New York, AIA, 1954, 107.
3. "Blueprint for an architect's training", "Plan pour un enseignement de l'architecture."
4. Gropius, Walter, "Architecture at Harvard University", *Architectural Record*, May 1937, 10.
5. Gropius, Walter, "In search of better architectural education", Giedion, Sigfried (ed.), *CIAM, A Decade of New Architecture*, Zurich, 1951.
6. Giedion, Sigfried, *Architektur und Gemeinschaft; Tagebuch einer Entwicklung*, Hamburg, Rowohlt, 1956 (translated to Portuguese, *Arquitetura e Comunidade*, Lisbon, LBL Enciclopédia).
7. Walter Gropius, "Mensagem de Walter Gropius ao Congresso. Tópicos para a discussão sobre o ensino da arquitetura", *Arquitetura*, 40, October 1951, 14-15.
8. Carlos Ramos, Dean of *Escola de Belas-Artes do Porto*, translated it in 1950, but didn't publish the manuscript.
9. Walter Gropius, "Architectural Education", Hoddesdon, 1951, GTA Archives, ETH Zurich, CIAM 8.
10. Norberg-Schulz, Commission 3 (young architects), "Architectural education", Hoddesdon, 1951, GTA Archives, ETH Zurich, CIAM 8.
11. Ove Arup, "Architectural Education", Hoddesdon, 1951, GTA Archives, ETH Zurich, CIAM 8.
12. Commission III Formation d'Architects, "Final Report", Aix-en-Provence, 1953, GTA Archives, ETH Zurich, CIAM 9.
13. Gropius, Walter, "Training the Architect", *Twice a Year*, 2, Spring-Summer 1939, 150.
15. *Idem*, 143.

## References

Alofsin, Anthony, *The Struggle for Modernism. Architecture, Landscape Architecture, and City Planning at Harvard*, New York, London,

W.W. Norton & Company, 2002

- Bannister, Turpin C., *The Architect at Mid-Century-1-Evolution and Achievement*, New York, AIA, 1954.
- Giedion, Sigfried, *Architektur und Gemeinschaft; Tagebuch einer Entwicklung*, Hamburg, Rowohlt, 1956 (translated to Portuguese, *Arquitetura e Comunidade*, Lisbon, LBL Enciclopédia).
- Giedion, Sigfried (ed.), *CIAM, A Decade of New Architecture*, Zurich, 1951.
- Gropius, Walter, "Training the Architect", *Twice a Year*, 2, Spring-Summer 1939, 142-151
- Gropius, Walter, *Architecture et Société*, Paris, Éditions du Linteau, 1995.
- Gropius, Walter, *Scope of Total Architecture*, New York, Harper and Brothers, 1955.
- Gropius, Walter, *Staatliche Bauhaus*, Weimar, 1919.
- Gropius, Walter, *The New Architecture and the Bauhaus*, New York, 1936.
- "Walter Gropius et son École", *L'Architecture d'Aujourd'hui*, 28, 1950.
- Moniz, Gonçalo Canto, *O Ensino Moderno da Arquitectura. A Reforma de 57 e as Escolas de Belas-Artes do Porto e de Lisboa, 1931-1969*, Coimbra, University of Coimbra, 2011. PhD Thesis.
- Pearlman, Jill, *Inventing American Modernism: Joseph Hudnut, Walter Gropius, and the Bauhaus Legacy at Harvard*, University of Virginia Press, April 2007.
- Rogers, Ernesto Nathan, "L'insegnamento di Gropius (nel settantesimo compleanno)" (1955), Molinari, Luca, ed., *Esperienza dell'architettura*, Milan, Skira, 1997, 134-142.

## Gonçalo Canto Moniz

Graduated in Architecture at the Department of Architecture of Faculty of Sciences and Technology of University of Coimbra where he is a senior lecturer and editor of *e|d|arq*. PhD in Architecture at the University of Coimbra in 2011, with the thesis "Modern Architectural Education". Researcher and member of the Executive Board of the Centre for Social Studies. He has been researching and publishing about modern architecture in Portugal, namely about high school buildings and architectural education.

15

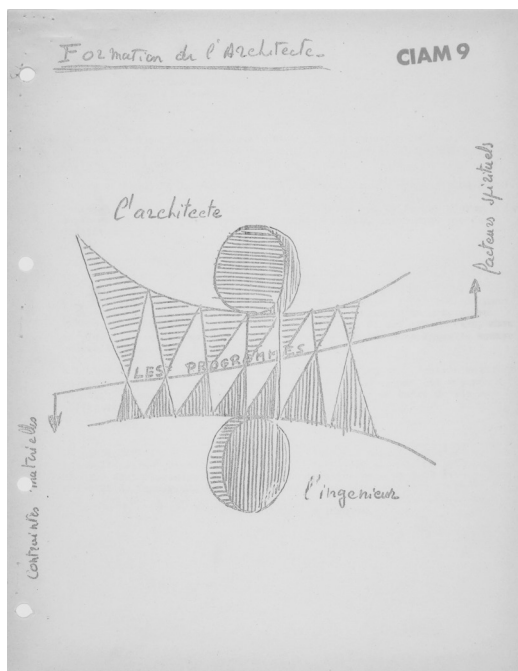


Figure 3. CIAM 9, "Formation d'Architects".  
Source: GTA Archives-ETH Zurich

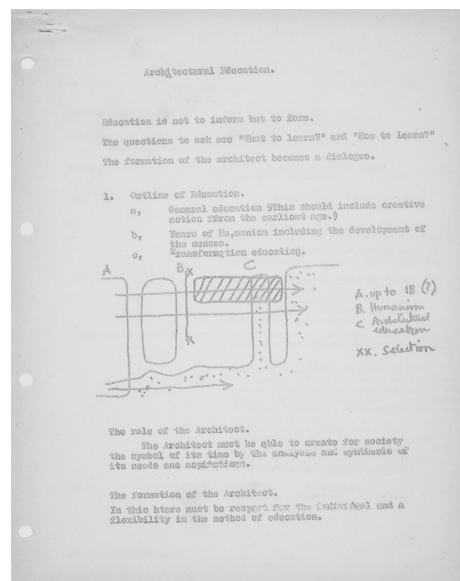


Figure 4. CIAM 9, "Architectural Education. Commission of Education and Training of the Architect. Subcommittee 2. 22 July 1953".  
Source: GTA Archives-ETH Zurich.

# Notes on Education and Research around Architecture

16



## docomomo is the answer — what is the question?

By Allen Cunningham

1

Twenty five years ago **docomomo** was conceived by two inspired architects residing in a tiny European country which, given its history of radicalism, unsurprisingly contributed significant impetus to the Modern Movement in the Arts, their agenda to rescue from material oblivion for perpetuity a 1926–9 poetic masterpiece conceived to serve a limited working life, the architecture already an enlightened and revolutionary conception, the task already a cultural paradox. In 2013, with sixty participating countries and the 2014 conference due in the heart of Asia, the original Eurocentric **docomomo** context has been transformed and the consequent content and direction of education and research around architecture it might promote will necessarily trespass on new territory.

*Modernity is an unfinished business.*

Jürgen Habermas

2

Given that the Modern Movement ideal has overtaxed its origins, the question hovers how may conservation of its works be intellectually reconciled with architecture dedicated to the future and on what basis may a **docomomo** qualitative base for education be contrived? In the 2002 *Back from Utopia* Introduction the opening paragraph moves outside the Documentation and Conservation of Buildings, Sites and Neighbourhoods of the Modern Movement box to free that remit from the protective custody of history by acknowledging that the lasting inheritance of the Modern Movement is to be found as much in the ideas generating form as the forms themselves, ideas formulated to contrive a better future, socially, technically and environmentally. Although many aspects of the Modern Movement, clarity of intention and execution to emulate rational procedures borrowed from science, social purpose, exploitation of advanced technology endure, and while conserving and recording the best models seals history and provides experiential evidence of the aspiration, aspic is no aphrodisiac. New

< **Le Corbusier**, sculpture of *Main ouverte*, Chandigarh.

horizons beckon. Architecture involves the vivid expression of ideas about social life, and although in debt to the past, the project apprehends what is imminent, the links between past and future being neither universal nor predetermining, the practice of architecture orients them within a system, in constant flux. However in AD2013, in the void left by MOMO, custom has displaced ideology, there are no flags to hoist up the pole and no inclination to salute anything anyway.

3

Ouch!

*Architecture is an attitude after all.*

John Habraken

4

If the Modern Movement recast the purpose of architecture, as a quasi-social cultural activity, an instrument of reform, what consequences of this revolution beckon in 2013? The ongoing remit of **docomomo** is, assuredly, to recognise, espouse and encourage the tradition of progress as practised by architects. Whereas conservation and preservation have been primarily concentrated on individual MOMO buildings, a task substantially fulfilled, what looms is a global order of concern upon which future generations of architects must surely direct their unique skills and influence urbanism.

*One-third of the developing world's urban population lives in slums, and the world's slum population is forecast to grow by six million a year.*

U.N. Habitat

5

The city, humankind's greatest invention, has emerged as a collective, ecological and environmental anachronism. Frank Lloyd-Wright described the cross section of a modern city as equivalent to that of a cancerous growth, an analogy that resonates. As physical manifestation it has become a liability—the centre is congested, the suburbs too dispersed and it cannot accommodate growth. At best the promise of urban centres as sources of inspira-



tion and beauty, places of social, cultural and intellectual development and joy, is precarious. At worst, cities loom as ghettos of economic greed and ecological disaster, cradle of crime and shattered dreams. Capitalism, with its handmaiden commercialism, has seen off architect/planner as synthesiser resulting in the concept 'city' becoming a symbol of control, multinational business and technical innovation combining to distort humanism. Cities must, as Colin Rowe observed, aspire to "the final emancipation from the tyranny of objects." The sum of innumerable plots as private investment cannot constitute a socially unified totality. The symbolism of public and social realms must be recovered.

Ten truisms follow, to concentrate the mind:

- *To build above five/seven stories expends more energy than can be recovered—the ecological skyscraper is an oxymoron as is the ecological city in its present form.*
- *Space is no longer available for free use but has become a commodity operating within the logic of market forces, creating densities related directly to market 'value' with consequent congestion.*
- *Today's urban centres consume 3/4 of the world's energy and create 3/4 of the world's pollution.*
- *The humane limits (area, population, density) governing the concept 'city' have not been defined—the view of the global village at the start of C21 reveals at least 600 million people living in life-threatening urban environments.*
- *By 2025 over 60% of the world's population, increasing by 90 million per year, will be living in cities, 60 housing over 5 million of which 44 will be in the developing world; such urban concentrations do not rationalise the conditions supporting humane living conditions.*
- *30%–60% of the population in many large cities live in shantytowns.*
- *The urban population increases by a quarter of a million people per day.*
- *Cities harbour the lowest standards of living and generate the greatest incidents of crime.*
- *The city, a collective device of concentration, and the car, a private instrument of dispersal, are antithetical—in most western cities more space is devoted to traffic than habitation.*
- *The world's population of seven billion plus has a current density of 50 people per square kilometre of land, 20,000 square meters per person, not a lot, and diminishing.*

The paradox revealed is of cities, the cradle of our civilisation, now threatening the welfare of humanity. Clearly, the context for aspiring architects is urbanism, which the individual building serves.

## Think Global, Act Local.

### 6

Future society is a knowledge society, but knowledge of the future will not be found within closed disciplines, it will be generated at intersection points between fields of knowledge, the sciences, arts, economics, ethics. Architecture is in the throes of a continuing global, technological revolution—advanced design software has invaded the industry at large providing small practices access to unimaginable resources to be harnessed in the service of dire environmental and habitation needs globally.

*Life belongs not to those who know but to those who discover.*

Le Corbusier

*Imagination is more important than knowledge.*

Albert Einstein

### 7

Be clear, architecture is not a subject, it is an activity, acquired through learning by doing in education and practice. In design, no branch of knowledge is autonomous, each project generating its own unique need for information, the outcome of investigation and experimentation, generated by idea, by theory. To design, to build is to research. Leslie Martin, practitioner turned pedagogue, set out the attributes of education around architecture:

- *One must develop a theoretical basis for work through which problems of relationship and unification can be assessed; the consideration is of total arrangements.*
- *It is important not just to absorb known solutions but to question them.*
- *The educational process should be concerned with how things relate, not with separate subjects or odd scraps of theory from other peoples specialisms.*
- *The learning process only has meaning when the student can identify with, and respond to, a problem he recognises as such.*
- *The important aspect is not the known professional habit but the discovery of processes of thought and their relevance to tasks in a changing world.*

The best teacher is experience, the best teachers architects doing their qualitative, competent thing. No prescriptions.

*Science now finds there is ample for all, but only if the sovereign fences are completely removed. The basic you-or-me-not-enough-for-both-ergo-someone-must-die-tenets... are extinct.*

Buckminster Fuller

## 8

To assist in establishing a qualitative basis on which to create a theoretical ambience, here is a reminder of the 1999 Beijing Charter:

- *Theory is indispensable—it is how we make sense of the world.*
- *The obvious must be perpetually repeated, that cities exist first and foremost to satisfy the social needs of communities.*
- *The conduct of C20 society was predicated on perpetual growth—this is a chimera and a mental adjustment to the reality of finite resources distributed for the greatest benefit of the greatest number is the ideal to which we should aspire, in short to do more with less.*
- *The planning of new urban centres must recognise that the bigger communities become, the greater the loss of social coherence.*
- *Environmental conditions should be at the heart of decision-making at all levels, with sustainability as the ethic of modern urban design.*
- *Those entrusted with planning must be enablers, not gods.*
- *Educational programs must be adjusted to include teaching children and adults about their environment so as to equip them to participate in the process of respecting and improving their environment.*
- *There is a necessity to mobilise creative thinking in general, and among environmental professionals in particular.*

The Charter then outlines what the coming century calls for

- *A methodology that guides the architect through all aspects of the built environment.*
- *A fusion of architecture, landscape architecture and city planning.*
- *An architectural process which views construction, op-*

*eration, maintenance, renewal and conservation as a whole.*

- *Multiple technologies that are rooted in indigenous cultures and societies, and are extended to the realm of human feelings.*
- *Regional initiatives that enhance visual and psychological identities.*
- *Incorporation of fine art, craftsmanship and industrial design in architect's work.*
- *Moral conduct that treats society as the ultimate client:*
- *An open and continuous education program for professionals, clients and the wider public.*

*Instead of despair, convictions; instead of whims, reason.*

Berthold Lubetkin

## 9

No universal prescription is possible or desirable to define future urban form—local determinants will combine with those defined, and agreed internationally, as ecologically imperative. Certain universal principles for consideration and refinement might be devised as referent for architectural interventions, to be unambiguous and as few as possible. Here are ten to ponder:

- *Establish the ecological limit to the height of buildings*
- *Define density limits which sustain social balance.*
- *Be aware, land is an increasingly scarce resource to be employed with maximum efficiency.*
- *Treat ground level as a pedestrian domain generating the morphology.*
- *Base distribution of dwelling, work and services within pedestrian/bicycle tolerance limits.*
- *Combine circulation of pedestrians and local traffic where possible.*
- *Create urban forms which are extendable*
- *Maximise the efficiency of public transport as generator of planning priorities.*
- *Green space, urban lungs, to be accessible within walking distance from all dwellings.*
- *Ensure that the urgency of resolving strategic objectives in sustainable form be resolved beyond pragmatism to the level of spirituality which distinguishes architecture from building.*

*For the Alchemists, not knowing that they'd never be able to transmute matter into gold was not their misfortune, but their reason for being.*

Orhan Pamuk

There exists a mine of wise texts to inform education and practice.

Alan Colquhoun offered a clarifying classification, city as Process and city as Form.

- *The city as Process is noteworthy since the principles it supports can function regardless of its physical pattern—it is concerned with means rather than ends—a technological utopia within which symbolic and cultural roles are not prescribed—form is independent of function*
- *The city as Form—the formal city—is rule-laden and subject to the ‘science’ of urban aesthetics; it is legible and coherent and concerned with ends rather than means; it is elementalised such that discrete parts are related to each other; the symbolic and cultural attributes are historically devised.*

Helen Rosenau explored how the ‘ideal’ can be applied to the concept ‘city’.

- *The desire to attain a perfect physical environment and a more satisfying way of life is characteristic of Western Civilisation, since it possesses dynamic force and incorporates economic and social change and experiment—it presupposes emphasis on freedom, and willingness to strive for progress.*
- *It is characteristic of European history that the concern with merely formal matters recedes in time, and the social function of the city and its inhabitants demands growing expression.*
- *One has to distinguish between the solution of a particular problem in a perfect manner, and the creation of a prototype of a supranational normative character, an ideal plan.*

Patrick Geddes originated urban planning as a globally responsive, humane, value-based activity.

- *Treated properly, the earth is fundamentally a co-operative planet on which to live.*
- *It is necessary to find out how to achieve ‘reasonable social conditions’ and to teach people how their environment might be ‘treated properly’.*
- *It is necessary to synthesise all the factors relevant to the case.*
- *The co-operative action of everyone involved must be combined in order to achieve the best result to include education, participatory citizenship and appreciation of the natural world.*
- *Economics is a matter of resources, not money.*

Ebenezer Howard, reacted against inhumane C19 urbanism to invent the Garden City.

- *Separate the utopian from the practical by rationalising those aspects of urban life which require to be collectivised from those left to private enterprise.*
- *Land values inevitably increase towards the city centre if privately owned, leading to over-exploitation and congestion at the centre.*
- *Eliminate private speculation, so the proper spacing of buildings and open space can be created.*

Alvin Toffler calls attention to three basic features of planning in industrial nations.

- *An obsession with economics to the exclusion of all other concerns.*
- *A time bias which regards five years as long range.*
- *An elitist character that removes decisions from the ordinary citizen and hands them to remote experts and bureaucrats.*

And proposes that:

- *The conventional view of problems must be expanded to include all those new ecological, technical and social factors which have not figured previously.*
- *Scenarios may be anticipated in which a combination of appropriate technology (such as clean energy sources and development of cheap sources of proteins) and humane programmes (creation of stable life-supporting economies in less developed areas) ensure that the emerging future is not pre-destined.*
- *The attempts to weaken environmental controls as a trade-off for immediate jobs, and/or profit will deepen, not solve, the crisis—one cannot mortgage the future for the sake of short-term gains.*
- *The idea of a quick economic ‘fix’ is as dangerous as the notion of a quick, neat technological ‘fix’.*
- *Economic policies must be combined with a battery of compatible policies dealing not only with money supply, wages, prices and balance of payments but also resource use, environment, education and cultural life, transportation, communications.*

## Sustainability as Global Ethic

# 11

The ongoing remit of **docomomo** must surely be to encourage the tradition of progress as practised by architects and ensure this is conveyed through educational

and professional programmes which promote a partnership of political ambition with the dynamism of market forces, for the greater good. The aspiration of the Modern Movement was to enable society to create conditions for the benefit of future generations generating the social realm as positive contributor to urban life; such ethical and social intentions need to be reformulated to inform a global, urban future. The Modern Movement changed perceptions of what is possible and this vision must inform the task of humanising future programmes of urbanisation, with sustainability as the global ethic.

*Conventional patterns of accommodating urban growth have become obsolete; lack of basic equity is the constant force undermining attempts to harmonize society and humanize its cities.*

UN report "Our Common Future"

architect worldwide might be built, denting the combined political and commercial interests which currently dominate urban projects is a one hundred year crusade, with no guarantees. Already there are green-field and brown-field precedents—Curitiba, Barcelona, Masdar Carbon Free City—and in 1997 Richard Rogers assembled Cities for a Small Planet, an informative mini-compendium. Some remote seeds have been planted, but the prospective harvest is not yet even a twinkle in the eye.

Ongoing resolution of two crucial questions must be sought in the test-beds which are our troubled urban environment:

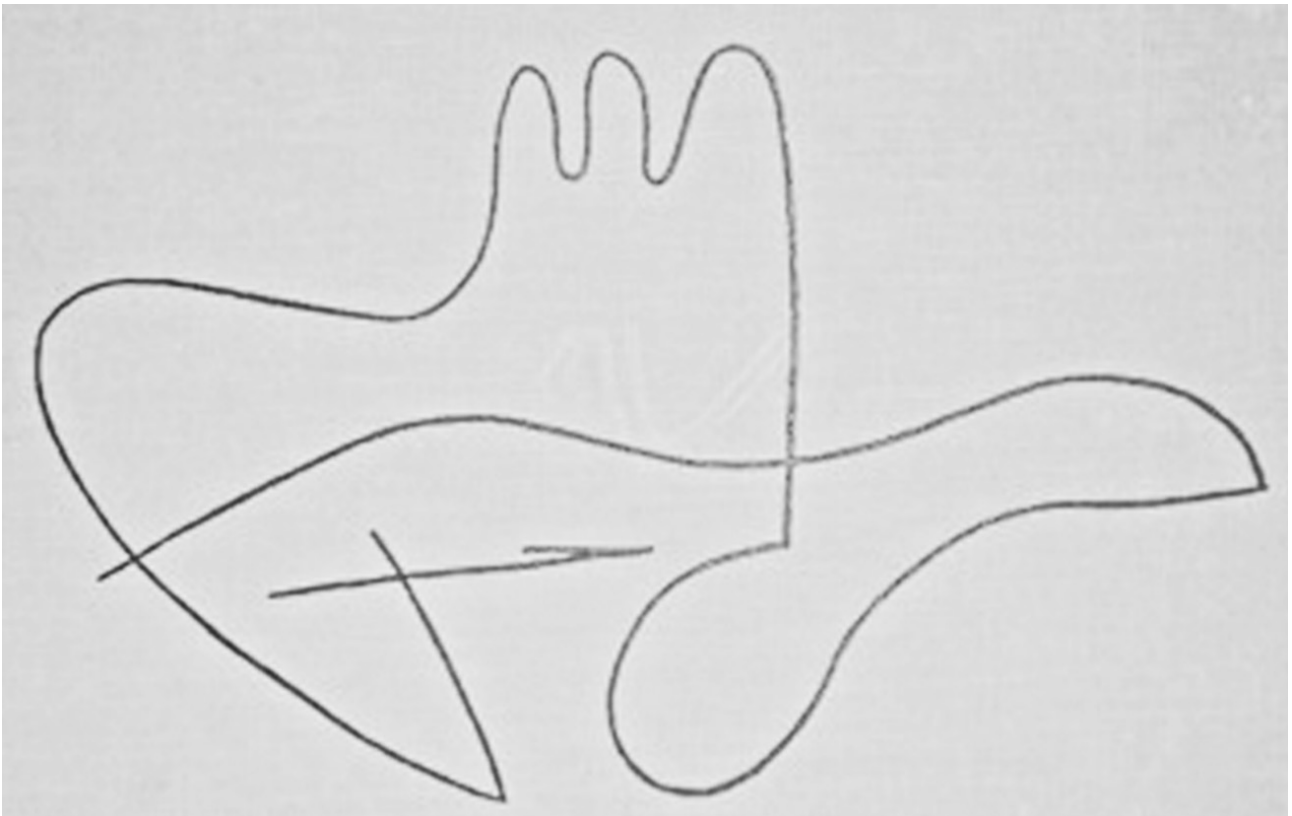
- Can materialism and sustainability be reconciled in future urbanism?
- How may vested interests be adjusted to accommodate the preservation of personal liberty?

## 12

No illusions. Should **docomomo** choose to endorse and promote a basis as outlined upon which the environmental education of the young, the mature and the aspiring

### Allen Cunningham

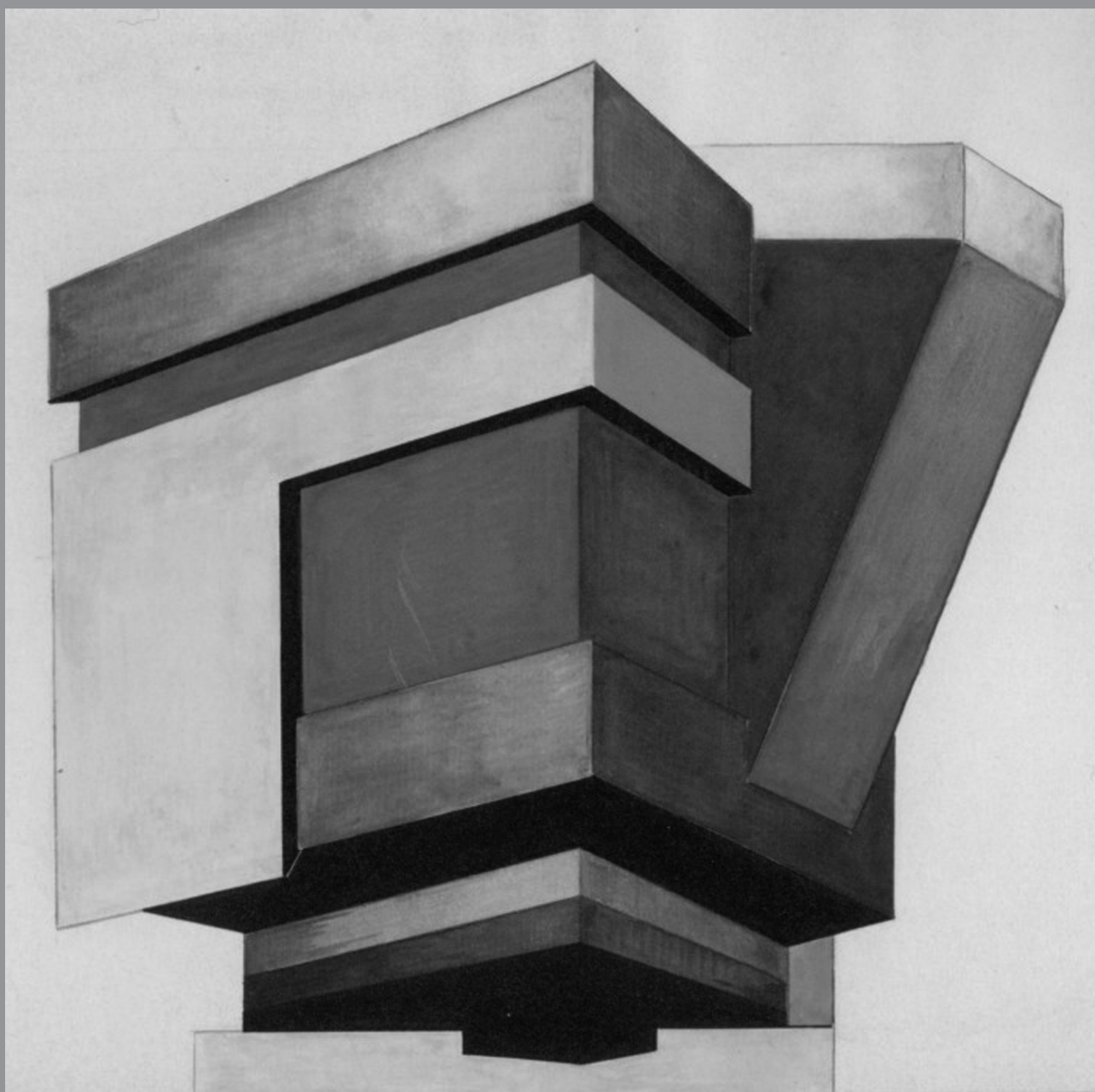
Architect who was in practice with firms in New York, Paris and Cambridge (UK), and now teaches at the University of Westminster. He is the founder and current editor of The Journal of Architecture.





# Phenomenon of the Russian Avant-garde. Moscow Architectural School of the 1920s.

22



**T**he phenomenon of the Russian Avant-garde architecture formed under the influence of the Moscow Higher School of Architecture and Art is today widely known by the name of VKHUTEMAS. This school is mentioned in the context of professional activity of the artists and architects who also worked in other institutes, but who had creative links. In the limelight is Nikolai Ladovsky, creator of the introductory course on architectural composition, lecturing along with many authoritative Moscow utilitarian architects, such as Alexander Kuznetsov, Vesnin brothers and others.

By Elena Ovsyannikova and Vladimir Shukhov

**T**he Higher School of Architecture and Art in the soviet Russia had a decisive influence on the formation of Avant-garde architecture. This school originated in the Mossovet Architectural Studio, where Ivan Zholtovsky, Ivan Rytsky and Alexey Shusev taught, further developed as part of the Free Artistic Studios, established on the basis of the former Moscow College of Painting, Sculpture and Architecture and the Stroganov College of Technical Drawing. At that time two innovative training studios were formed by Nikolai Ladovsky and Ilia Golosov, who worked with Konstantin Melnikov. From 1921 the whole training complex was called the Higher Artistic-Technical Studios (VKHUTEMAS), and from 1927 onwards it was called the Higher Artistic-Technical Institute (VKHUTEIN), which was discontinued in 1930.

The Architectural Faculty of the Moscow Higher Technical School—MVTU (Moscow Institute of Civil Engineers—MIGI)—also functioned in Moscow until 1930 under the guidance of Alexander Kuznetsov. Viktor Vesnin, Moisei Ginzburg and others taught there while more attention was given to the engineering part of the business than in VKHUTEMAS-VKHUTEIN. The important advantage was that one institution of Higher Education integrated the future architects, printers, painters, ceramists and craftsmen on the artistic work of metal, wood, etc. But in 1930 separate Institutions of Higher Education were established on all the professional lines including the Moscow Architectural-Structural Institute (ASI) and the Moscow Architectural Institute (MAI). The reason of this reorganization was the government's fear of student unrest prepossessed by the democratic atmosphere formed at that time. Also in 1930 many non-governmental organizations were also disbanded such as the "Old Moscow" committee, the Society for the Study of Russian Manor and others, while some of their members were repressed.

A strong influence on the development of innovative

architectural ideas was exerted by the Scientific Institute of Artistic Culture (INHUK) which was established in 1920 within the Department of Fine Arts of Narkompros on the basis of the early formed group of the artists-painters (Council of Craftsmen), among whom was Vasily Kandinsky who was the first to head its directorate. Many innovative principles of the form-generation, which exerted influence on the pedagogical system of VKHUTEMAS, also took shape in the works of the "Zhivskulptarkh" organization, the members of which strived to find ways for the development of art through the fusion of arts (the initial name was "Sinskulptarkh"). The leading role was played by Nikolai Ladovsky. He devoted a specific attention to the dynamics of forms and simple volumes, which the viewer "could not disintegrate", but which together formed complex compositional structures.

At the very same time Ilia Golosov strived to formulate the universal laws of architectural composition without leaving ways to chaos. Both architects were just united by their interest in dynamic forms, vividly manifested in their own projects. However, unlike Ladovsky, Ilia Golosov emphasized "the organic link of the architectural form with the design and main idea of the structure."

A significant point in Ladovsky's system was the design of models which the students made from clay. The whole work started from this and the plans and façades of the structures were drawn afterwards.

Many of Ladovsky's apprentices worked under his guidance further on within the United Studios—OBMAS (1921–1923), where Nikolai Dokuchaev and Vladimir Krinsky were on the payroll as chiefs. The "abstractive" task was the determination of geometric properties of form, spatial expressiveness, mechanical-and-physical properties (mass and weight), design, dynamics, rhythm and proportions. These themes were simultaneously worked also as "the production assignments" (small industrial facilities).

In 1923 the main department of VKHUTEMAS was established. It prepared experts on all the specialties, not only architects but skilled artists on subjects which were

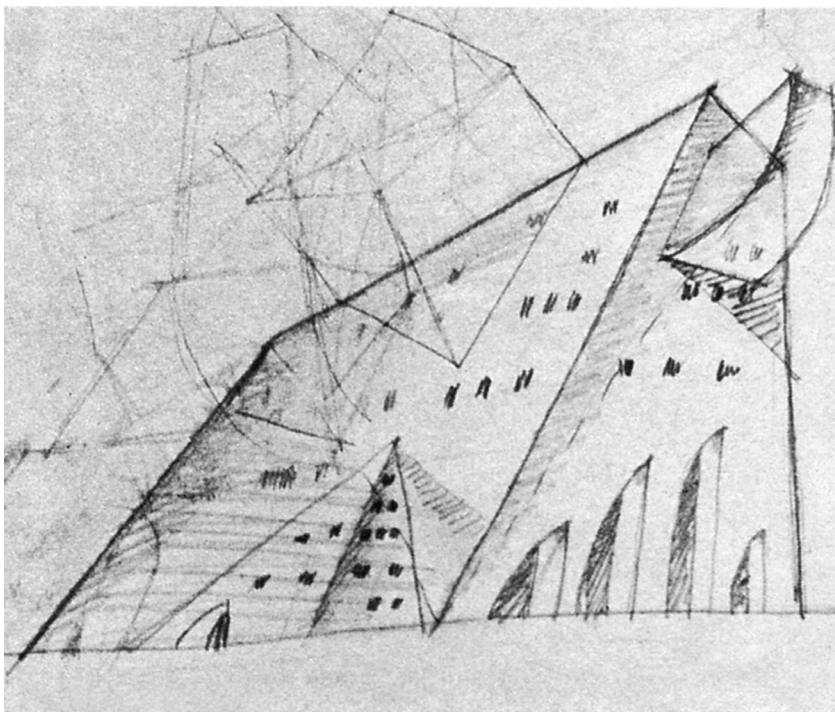


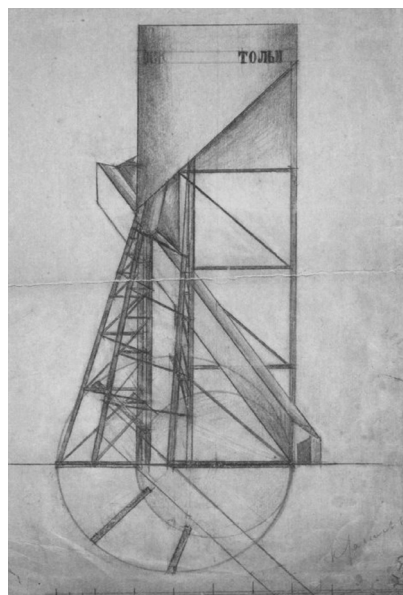
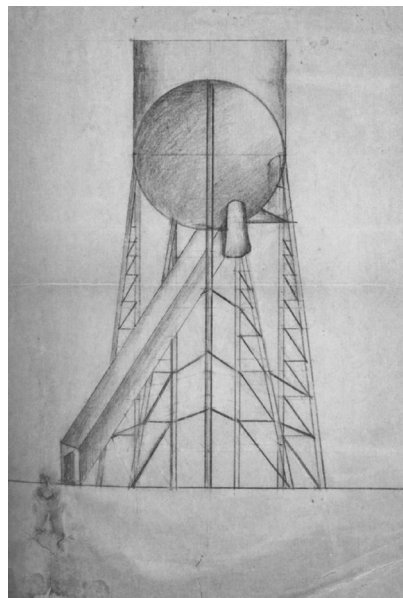
Figure 1. **N. Ladovsky**. Temple of the people communication. Experimental project in the Zhivskulptarkh group. 1919.

Figure 2. **N. Krasilnikov**. Production assignments. Water tower. Chief N. Ladovsky. 1921.

Figure 3. **I. Chashnik**. Monument on the Red Square in Smolensk. Chief L. Lisitsky. L. Lisitsky. Tribune. Mid 1920s.

Figure 4. **I. Lamtsov**. Assignment on the revelation of construction. Chief N. Ladovsky. 1922.

Figure 5. **K. Malevich**. Arkhitekton (State Tretyakov Gallery). Malevich, N. Suetin. Arkhitektony. End of the 1920s. Student's reconstructions under the guidance of E. Ovsyannikova.



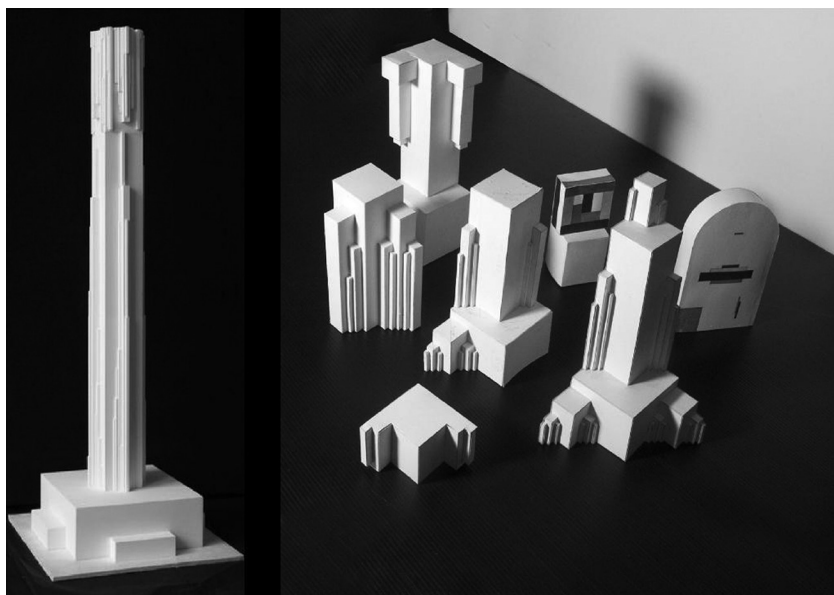
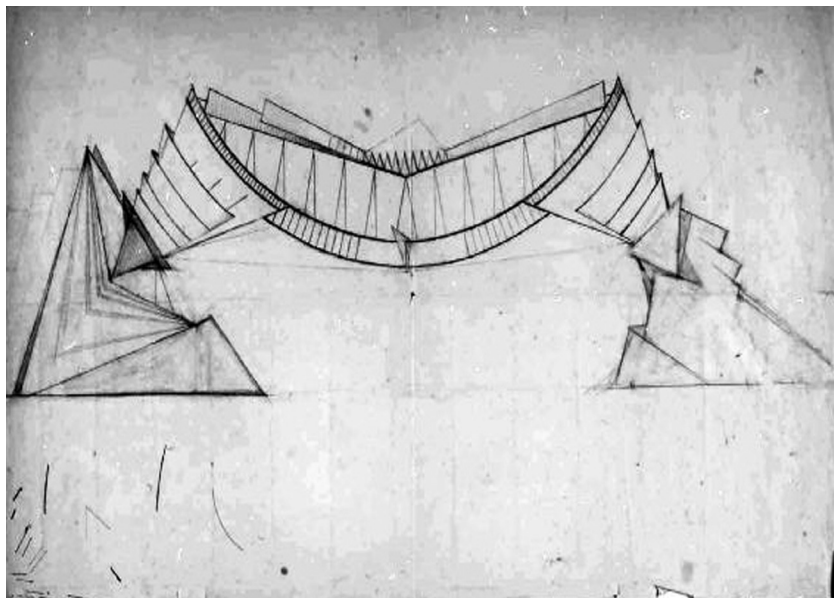
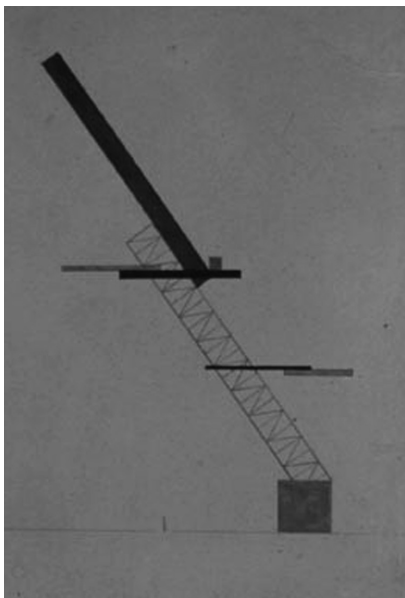
common for everybody: "Space" (Nikolai Ladovsky), "Graphic Arts" (Alexander Rodchenko), "Color" (Alexander Vesnin and Lyubov Popova, further on Gustav Klutis). In the estimation of Selim Khan-Magomedov, the subject "Space" was the key one in the architectural-artistic education. He saw this as the major difference of the Moscow Institution of Higher Education from the German Bauhaus, which had an effect on the development of the object design worldwide. In the 1960s the course of modeling according to Ladovsky's system was resumed in the Moscow Architectural Institute (MARKHI) by Vladimir Krinsky and his apprentices Mikhail Turkus and Ivan Lamtsov. But one should not forget that Vladimir Tatlin also worked at VKHUTEMAS, moreover exactly as a designer, and his creative work could not but have an effect on architects.

The specific "plastic" method of the form-generation, which reflected the concept of "rationalism", set forth by Ladovsky, supposed the "rational" perception of the architectural form (the term was used only within that epoch). Ladovsky equaled the compositions from simple geomet-

rical bodies (cube, parallelepiped, prism, pyramid, cylinder and cone) to the refusal from the architectural orb. This artistic process developed not without the influence of the European trends: Cubism, Futurism and Expressionism, which disturbed the traditional architectural logic.

The other method of form-generation – 'constructivism' – was manifested in the works of students from the senior classes of VKHUTEMAS-VKHUTEIN, done under the guidance of the well-known utilitarian architects and also in MIGI-MVTU under the guidance of Kuznetsov and his apprentices (George Vegman, Alexander Vlasov, Ivan Nikolaev, the Boris brothers, Vladimir and Gennady Movchan, and others), who focused on the new construction technologies. Relatively recently an interesting detail





3

4

5

was found out: at the same time some of them attended classes at VKHUTEMAS as well (Vegman, for example). This fact suggests the mutual influence of the two architectural institutions of Higher Education, as the number of teachers combined their work in these two institutions.

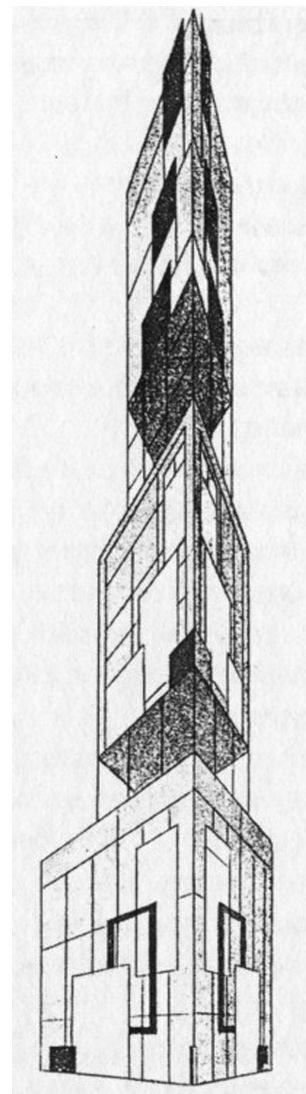
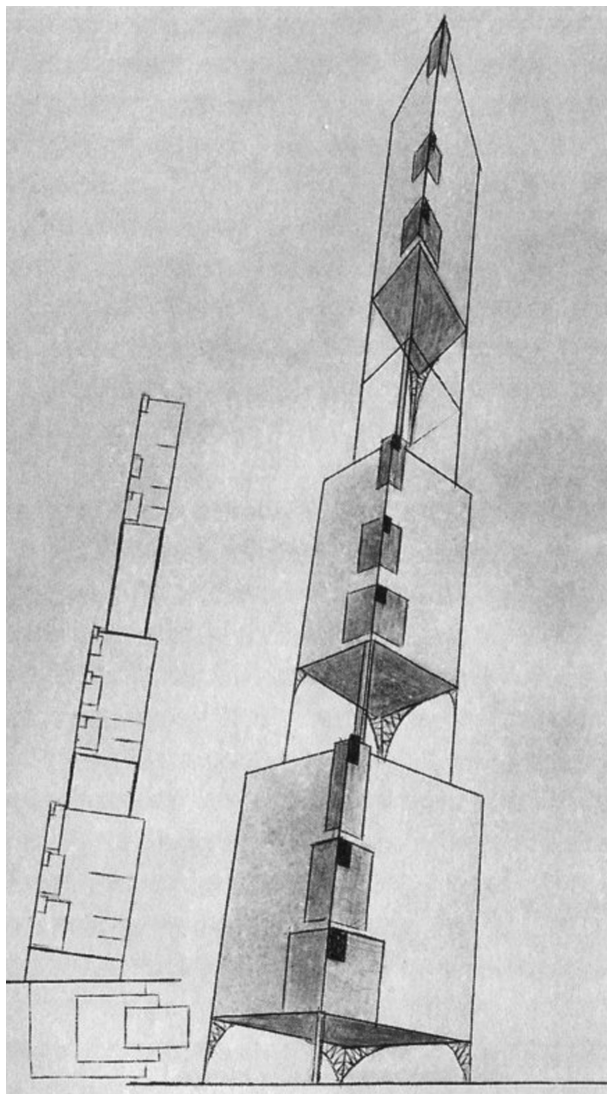
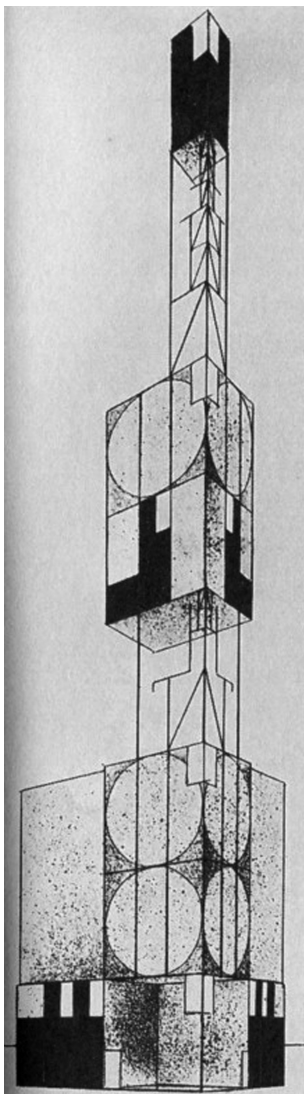
In 1923, Ladovsky established the Association of New Architects (ASNOVA), which was joined by his apprentices. The Union of Modern Architects (OSA) – more known abroad than ASNOVA thanks to the magazine *Modern Architecture*, edited by Alexander Vesnin and Moisei Ginzburg, the main theorist of that group – was formed in 1925. Ginzburg called the works of his like-minded fellows “Constructivism” (earlier the term was used in the context of creations of Avant-garde artists

such as Vladimir Tatlin, Alexander Rodchenko and others) and strongly criticized the creations of the ASNOVA members as “Formalism”.

Despite heated discussions between the teachers, projects of the VKHUTEMAS and VKHUTEIN students were often more extravagant than their own. Some examples include the project of the Lenin Institute of Library Science (diploma of student Ivan Leonidov) or the project of the Komintern Building (diploma of student Lidia Komarova), which became as famous as the works of their chief Alexander Vesnin.

The creative method of the VKHUTEMAS members correlated to a large extent with the sculpture works of Malevich and his apprentices at the Vitebsk Art School,





where the "Confirmers of the New Art" (UNOVIS) union was established. The works of Malevich's best pupils, Ilia Chashnik and Nikolai Suetin, were exhibited in Moscow, together with his own creations of the same kind in the form of pyramids and pillars first called "Planity" and then "Arkhitktony" by Malevich. Though he did not set

Figure 6. **G. Glushenko, A. Silchenkov, I. Yiozefovich.** Assignment on the revelation of dynamics, rhythm, vertical proportions. Chief N. Ladovsky. 1924.

Figure 7. **N. Ladovsky.** Communal house. Experimental project in the Zhivskulptarkh group. 1920

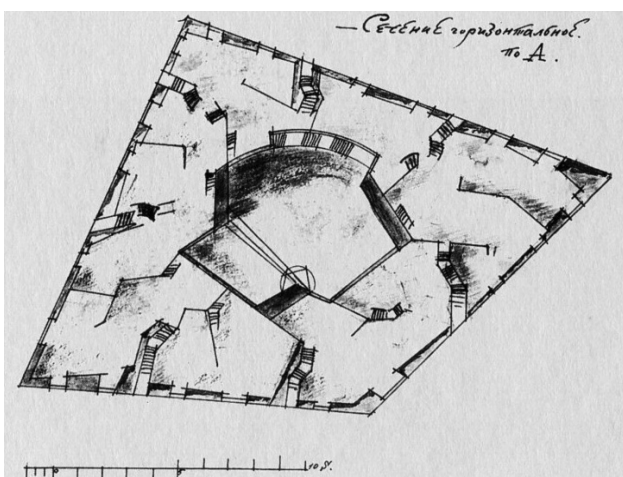
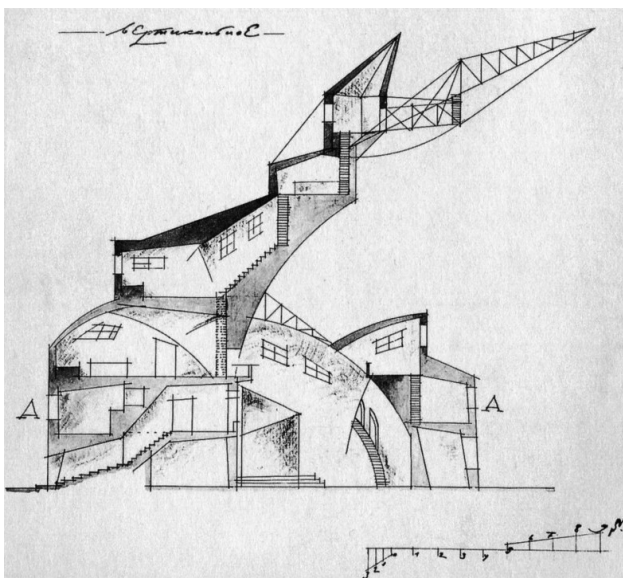
Figure 8. **S. Silchenkov.** Production assignment. VSNH skyscraper. Chief N. Ladovsky. 1924-1925.

Figure 9. Student **M. Korzhev.** Abstractive assignment on the revelation of mass and weight. Chief N. Ladovsky. 1921.

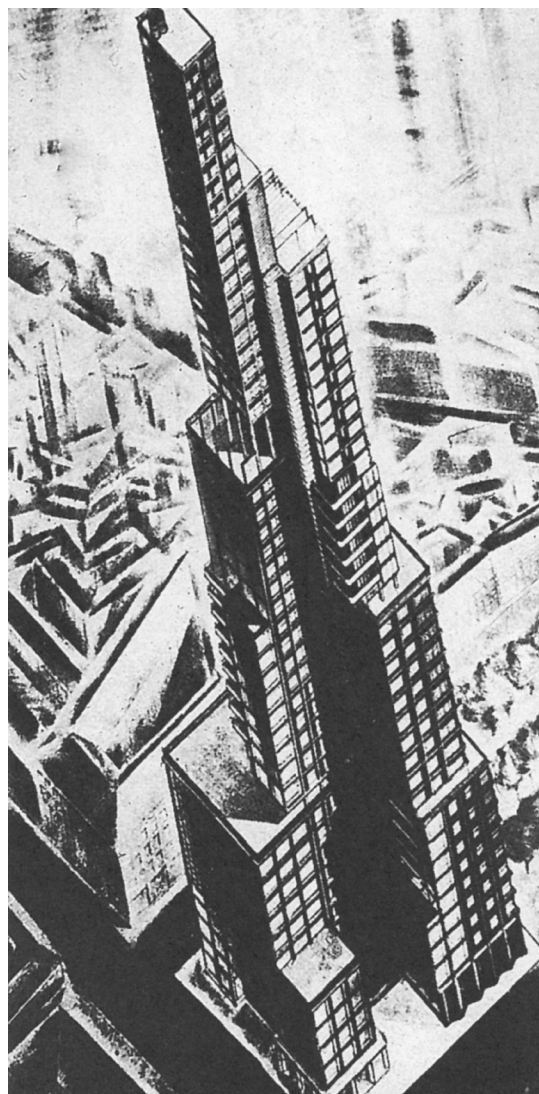
a task of remaking them into concrete buildings or monuments, he talked about architecture as of the most progressive field of artistic creativity of that time.

While working with Malevich in Vitebsk, Lazar Lisitsky (architect by education) created the experimental designs called 'Prouny' (Projects for the Affirmation of the New). It is worth noting that he was member of the Dutch group De Stijl, published his creations in the West, decorated the soviet exhibitions, taught at VKHUTEMAS-VKHUTEIN and intercommunicated a lot with the members of the OSA constructivist group. We can establish that many craftsmen of the *avant-garde* worked in the 1920s in cooperation or in the form of creative dialogue.

The reflections of philosophers of that time corresponded to the searches of the new architectural language. It is no coincidence that Vladimir Favorsky, while being the VKHUTEMAS rector (1923-1926), invited the outstanding philosopher, scientist-physicist and priest Pavel Florensky



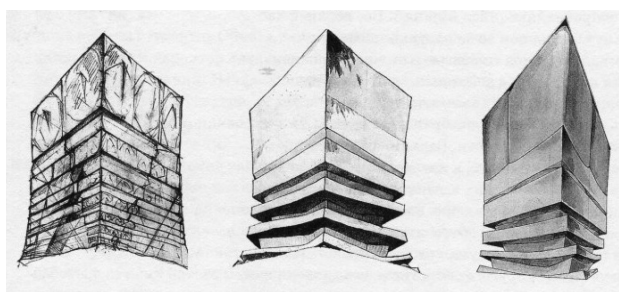
7



8

to give a series of lectures on perspective, which, as educational subject, he taught himself. Just as Ladovsky, Florensky addressed on the properties of geometry of the architectural form, its dynamics and statics, spatial movement, the duration of comprehension of the artwork and the condition of the viewer. That is to say, he developed the idea about searching a sort of "genetic code" of the artistic decision and, in particular, of the space arrangement.

The expression, specific to the creations of the Moscow Architecture School teachers and students, was partly induced by the absence of the latest construction technologies. The impossibility to implement the projects facilitated the stretch of their imagination without limitations. The search of the new architectural ideas was as well caused by the excessive social ambitions, what is distinctly shown by the projects of the spatial structures meant for the buildings of the far future and also for the space objects.



9

#### Vladimir Shukhov

Chair of **docomomo** Russia, President of Shukhov Tower Foundation, Artist, Art critic and Architectural expert.

#### Elena Ovsyannikova

Architect, Professor of MARHI (Moscow Architectural Institute), Author of books and articles on Vanguard art and architecture. She was the Winner of a competition between restorers Moscow-97 and she is a board member of **docomomo** Russia.



# Ernesto N. Rogers and the CIAM: Teaching for Democracy

28



**8** September 1943: The day the Italian army surrendered to the Allies is a—perhaps the most—decisive milestone in Ernesto N. Rogers’ life. From that transformative moment on, the young Italian architect<sup>1</sup> built an extensive, in-depth international dialogue that led him to be recognized as a master in other, even quite distant, cultural contexts. It was in this concurrence of public and private life, which was practically a coincidence for him, that the career he had established as a partner in the BBPR<sup>2</sup> and as a leading figure in the second generation of Italian rationalists would open to far broader horizons, enriched by his exile in Switzerland, where he, a Jew, fled just a few days after that terrible date.

By Serena Maffioletti

**F**rom 1932 on Rogers had focused his research, both individually and especially in the fusion of the BBPR, on the osmosis between the designer, the theorist, the critic of architecture (and early on of art), and the educator, all of which were nonetheless preceded by the importance of “essere cittadino.” Yet from the moment he arrived at the *Camp d’internement universitaire de Lausanne*,<sup>3</sup> all of his efforts—albeit in different ways, at different times, in different places, and on different topics—flowed into one undivided path, that of the educator who by experimenting prefigures, by dialoguing builds harmony, by taking risks proposes.

*We believe that building is not enough for the architect, but feel the need to state, to express, in the synthesis of our work, besides the contingency of life, the thinking and the character of the present day.*<sup>4</sup>

This statement was written collaboratively by Gianluigi Banfi, Lodovico Belgiojoso, Enrico Peressutti, and Ernesto N. Rogers and prefaced each of their graduation theses. It declared the need to listen and to interpret, therein defining a dialectical project stressing responsibility toward the reality of their time. From the very start and forever on, it would characterize all of their work, becoming the stable, cohesive, fertile humus for all the “educational” efforts that ensued. It motivated the experimentation with a multitude of “inventions” in exhibitions mounted by the BBPR and by Rogers in particular, especially in the pre-war years. It prompted encroachments into other, often new arts, such as photography and film, in quest of new themes for architecture, new spatial concepts for contemporary living, and new approaches to the dialogue between art and public. It also motivated the approach Rogers would take as editor of “Domus,”<sup>5</sup> first, and lat-

er of “Casabella,”<sup>6</sup> both of which were intended not as “magazines” per se but as platforms for interaction and dialogue aimed at building a “school,” an architectural tradition.

After all the ambiguities, sufferings, and limitations imposed by the Fascist regime, the interruption brought about by exile and the dialogue that became much easier to hold with Swiss friends—especially Alfred Roth and Max Bill—gave Rogers the room he needed to profoundly clarify his thoughts. In the lectures prepared for his first teaching assignment—a course on the theory of architecture and urban planning at the Faculty of Architecture at the *Camp d’internement Universitaire de Lausanne*—he outlined a new theory of architecture, reconstructing the vocabulary and syntax of architecture, identifying therein the key variables of his time, as evidenced in the lecture titles: *La variable mécanique*; *La variable du matériel*; *La variable de la mesure humaine*; *La variable économique*; *Conclusions sur la variable U*; *La variable du sentiment B*; *La variable de la proportion*; *La variable morphologique*.

*The Modern architect feels that his goals are subject to a moral imperative and plants the roots of his work in the fertile soil of human values. Like every poet, the architect must be a prophet and interpreter of the society in which he lives: forging a new artistic standard in the law history imposes upon him.*<sup>7</sup>

In his lectures he examined the elements of architecture understood as art “applied” to life, as an action devoted to humanity. While defending the continuity of Modern Architecture and the permanence of its goals, Rogers opened a new discourse on the development of the contemporary language of architecture, proposing a redefinition of the concept of function, in which usefulness and beauty act as dynamic paradigms that include the dialectical motion between subjectivity and objectivity, between individual and society, between time and space. Rather than stressing the construction of the elements of a new language, he advocated identifying new “vari-

< Figure 1. **Ernesto N. Rogers**, “Fumatore con filtro” (self-portrait), Serena Maffioletti Archive.



ables," mobile tools that could be interpreted subjectively and combined variously in architecture, understood as a responsible, individual response to a collective issue. Rogers remained faithful to this vision of architecture, expressed ironically with the formula  $A = f(B, U)$ ,<sup>8</sup> and referred to it constantly: "I call it pentagram because, rather than being a handbook of fixed things, it is a pentagram, where you can compose any music, perhaps even skipping a line [because] it serves all music, it permits new variations and new inventions in every work."<sup>9</sup>

Rogers' university lectures were probably among the first theoretical systematizations in Europe born of the ashes of the teaching inevitably racked by the war. Through them, he also reinvented the role of educators, recognizing them as individuals who, together with the unknown variables of the relationships between education and society, took on the wealth and complexity of a pedagogy based on the Socratic Method: "steering clear of any authoritarian approach, I do not avoid my full responsibility as an educator and a guide."<sup>10</sup> It is also interesting to note that Rogers, when invited through CIAM to teach in South America, chose a real, exigent theme for his semester at the University of Tucuman:<sup>11</sup> the design of the new University City.

Thwarted by the Italian academy, Rogers was unable to teach in Italy until the 1952–53 academic years at the Milan *Politecnico*, where he would eventually be appointed full professor in 1964, just a few years before his death in 1969. His teaching there was profoundly incisive, yet he was also quite actively involved in CIAM debates and actions on teaching and education, particularly in the 1950s. It is in these efforts at reforming architecture education that it is actually possible to grasp the breadth of a democratic, international, contemporary vision.

The VI Congrès International d'Architecture Moderne (Bridgewater, 1947), which was strongly influenced by the demands of postwar reconstruction and by the CIAM's geographic and thematic expansion, opened with the work of ad hoc commission formed to address the renewal of architecture education. Acknowledging the fundamental nature of this issue, the VII Congrès (Bergamo, July 1949) devoted the *Troisième Commission* to reforming the teaching of architecture and urban planning: Rogers (who had been a council member of since 1947) was president, Jane Drew was vice-president. The Commission's work was introduced by the *Réforme de l'enseignement de l'architecture et de l'urbanisme*, a text that emphasized the lack of correspondence between teaching methods and society's needs, the lack of integration between the disciplines—especially architecture and urban planning—and the fact that students were completely out of touch with professional and artistic en-

vironments. The Commission made several suggestions: it proposed that architecture education be based on developing individual personality and talent, that the history of architecture be interpreted as a function of creativity, that the humanities be combined with scientific and technical studies. With the aim of freeing teaching from academicism, it also emphasized the importance of studios and professional practice: "Method is more important than information, it must rely on intuition, analysis, critical thinking, and synthesis. Life in its constant evolution is the source of all inspiration."<sup>12</sup>

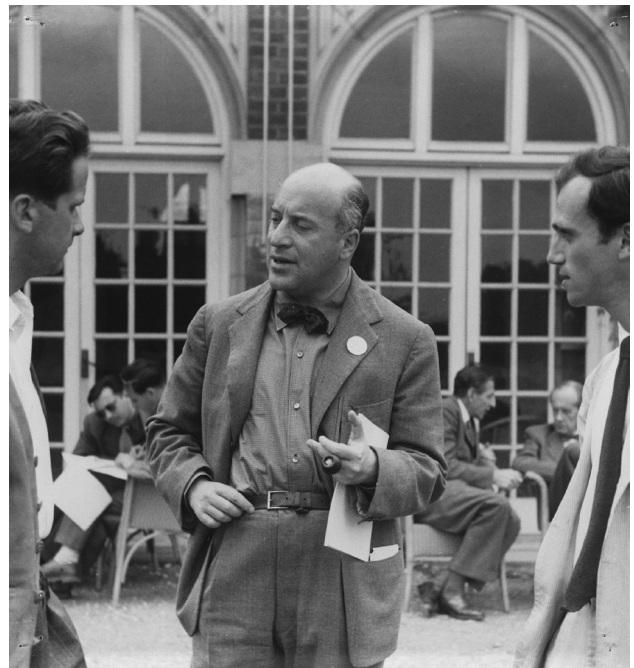


Figure 2. Ernesto N. Rogers with Vittorio Gregotti and Giotto Stoppino, "The Human Scale Architecture Room", IX Triennale di Milano, 1951.

The *Rapport de la Troisième Commission* recommended that the Commission be made permanent and be composed of one delegate from each country. This would permit a decisive international role in educational reform, making it possible to draft a *Charte de l'enseignement de l'architecture et de l'urbanisme* at some time in the future. With this goal in mind, the Commission requested that local groups identify their schools' weaknesses and possible remedies, that professional offices be opened to students, that international cultural exchanges be intensified, and that CIAM Schools be created. "We have such an important and grandiose task in Europe,"<sup>13</sup> wrote Alfred Roth to Rogers, whose international reputation was solid enough to be among the few invited to London for the first CIAM Summer School.



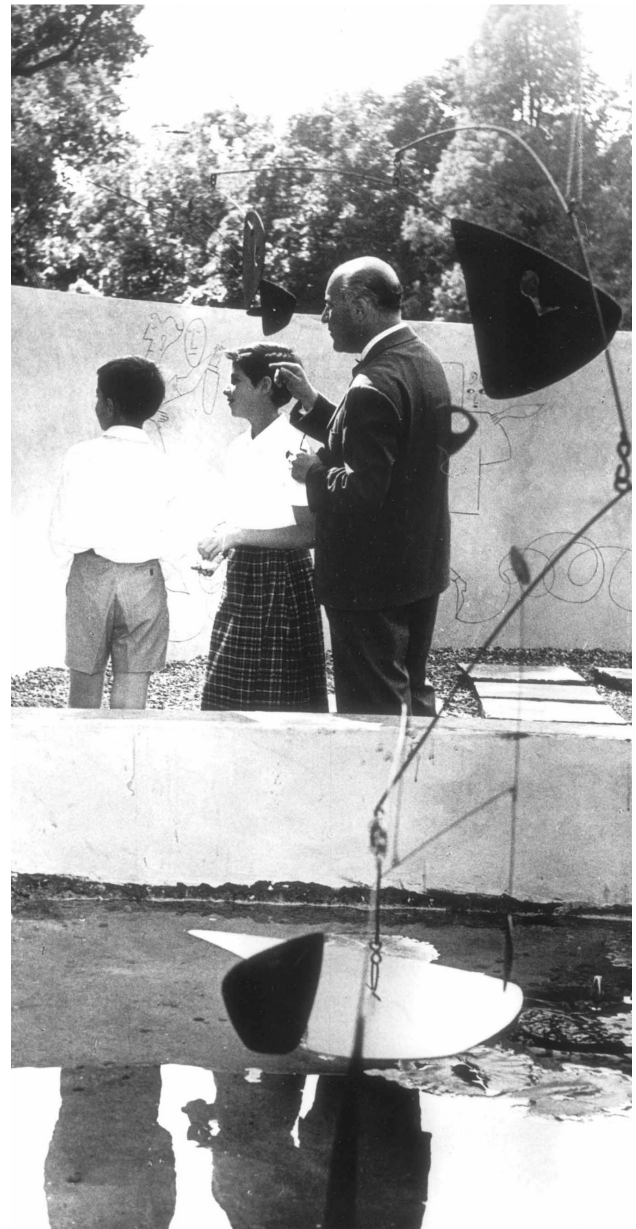
3



4



5



6

Figure 3. **Ernesto N. Rogers** and **Alfred Roth** at the X CIAM (Dubrovnik, 1956). gta/Archiv/ETH Zürich (42\_AR\_X\_72).

Figure 4. **Ernesto N. Rogers** with **J. Lluís Sert**. gta/Archiv/ETH Zürich (42\_AR\_X\_90).

Figure 5. **Ernesto N. Rogers** during the VIII CIAM (Hoddessdon, 1951). gta/Archiv/ETH Zürich (42\_IT\_9\_599).

Figure 6. **Ernesto N. Rogers** in the Children's Labyrinth, X Triennale di Milano, 1954.



The CIAM Council imparted their program to the First CIAM Summer School, organized in August–September 1949 at the Architectural Association in London: the projects focused on serious problems in London’s reconstruction and the teaching was freed of any predefined approach in favor of an open experience shared between students, professors, and practitioners from various disciplines.

On the whole the experience in London was positive and led to the idea of linking the Summer School to the CIAM Congresses. Holding them both in the same place at the same time would permit greater interaction between the two initiatives and ensure the necessary solicitation from international architects. The main theme of the VIII CIAM (Hoddesdon, 1951) was “The Heart of the City,” but emphasis was also placed on advancing educational reform, to the extent that the Council confirmed the Commission as championed by Rogers. His strength in the CIAM is further attested by his appointment as vice president of the Commission on Architectural Education (Gropius was president; the Commission members included, among others, Van Eesteren, Giedion, Chermayeff, and Tyrwhitt).

Based on the *Rapport de la Troisième Commission* of the VII CIAM, it was evident that, despite increasing efforts, a difficult situation loomed as architects were being progressively marginalized from a creative vision toward a business-based practice. The report suggested that industrial society demanded a better understanding of social conditions and technical know-how as well as the ability to take on a full gamut of projects ranging from the design of an object to a regional plan. This, in turn, required close collaboration between disciplines and the importance of teamwork as well as appreciation for individual artistic research was emphasized. Taken together, all of this necessitated an in-depth revision of pedagogy. Education in the humanities, the sciences, and the arts had to be prerequisite to technical training, which would then provide direct experience in construction, followed by advanced specialized studies. Education had to be based on method; history had to be taught in such a way as to provide an understanding of the continuity of the human experience; the study of technology had to be integrated with that of other subjects and approached as research. To get past the technical or humanistic specializations of the day, it was also suggested that curricula be defined in such a way as to include shared coursework for artists, architects, and engineers. CIAM architects were asked to take appropriate measures to achieve all of these goals, including the CIAM Summer Schools. Rogers closed the Commission’s work with the following statement: “Unity of method and of approach, diversity of architectural

language represent the basis of architectural progress to-day. They are the guiding principles in architectural education.”<sup>14</sup>

When it became clear that it would be impossible to hold the CIAM Summer School in London, Rogers—in 1950—took on its legacy. Sharing the widespread concern on the pressing renewal of the CIAM (from a generational perspective as well), combined with the Council’s on-going attention to and role in architecture education, he went to Giedion expressing the willingness to continue the experience in Venice.

The VIII CIAM was entrusted to the by then prestigious Faculty of Architecture in Venice, where the Summer School was directed by CIAM architects Albini, Gardella, Rogers, and Samonà. The first Venice Summer School (1952) focused on the relationships between the island city, the mainland, and the region. The second (1953), picking up on a suggestion from the Venice Biennale, addressed the redesign of the national pavilions in the Giardini. The third (1954) clarified the reflections of the first, concentrating on the relationship between the city’s historical center and the mainland at the points in which the road/rail infrastructures meet the city.

The Venice Summer School was heir to a realistic, international, interdisciplinary vision that respected a cross-section of academic roles, as proposed by the CIAM commissions on educational reform and in keeping with the fundamentals of Rogers’ conception of teaching. It was an educational opportunity based on real contact with the city, a complex node of the dynamics of conservation and the modernization of urban structures and community life, two issues that had ran parallel throughout the CIAM. Yet the CIAM Summer School in Venice came to a close here, anticipating the end of the CIAM by just a few years. Though Ernesto N. Rogers’ contribution to renewing architecture education has been less examined than his teaching in Italy, it intertwines a web of assumptions that were to build a fertile international network of postwar relationships and happy ending to a life generously spent building the new architecture. Seeking the continuity of the Modern in Gropius’ method and Le Corbusier’s invention, and a tradition for the Contemporary in history but especially in society: “You have to load up on utopia and set yourself goals that aren’t verifiable in the passing moment, distant goals that are not immediately possible and seem mad. This is building tomorrow: dropping fertile seeds deep into earth’s furrows.”<sup>15</sup>



## Notes

1. Ernesto N. Rogers was born in Trieste in 1909.
2. The BBPR or, if you like, the BBPR Studio was founded in 1932 after their graduation and included Gianluigi Banfi, Lodovico Belgiojoso, Enrico Peressutti and Ernesto N. Rogers.
3. Interned first in the Camp in Dagmersellen, Rogers took the *Fond Européen de Secour aux Etudiants* exams at Olten, competing for the position of teaching assistant in Architecture at the Geneva School of Architecture directed by Jean Tschumi. Placing *optimus*, he then moved to the Camp in Vevey and became a lecturer in Architecture and Urban Planning Theory at the *Camp d'internement universitaire de Lausanne* for three semesters, before returning to Italy in May 1945.
4. "Noi crediamo che non basti all'architetto il costruire, ma sentiamo il bisogno di dire, di esprimere, con la sintesi dell'opera nostra, oltre che la vita contingente, il pensiero e il carattere dell'epoca attuale." BBPR, *Presentazione ai progetti di laurea*, Rogers, Ernesto N., *Architettura misura e grandezza dell'uomo*, edited by S. Maffioletti, Il Poligrafo, Padua 2010, 112-3.
5. Ernesto N. Rogers was the editor of the magazine *Domus*. *La casa dell'uomo* from January 1946 to December 1947 (issues n° 205-223/5).
6. Ernesto N. Rogers was the editor of the magazine *Casabella-Continuità* from December 1953 to January 1965 (issues n° 199-294/5).
7. "L'architetto moderno sente che i suoi obiettivi sono sottomessi a un imperativo morale e fonda le radici della sua opera nel terreno fecondo dei valori umani. Come ogni poeta, l'architetto deve essere profeta e interprete della società in cui vive: forgiare una nuova misura artistica nella legge che gli impone la storia", Rogers, Ernesto N., "Problemi di metodo," Rogers, Ernesto N., *Architettura misura e grandezza dell'uomo*, cit., 243.
8. *Architettura = funzione* (Bellezza, Utilità)
9. "Lo chiamo pentagramma perché, invece di essere un decalogo di cose fisse, è un pentagramma, dove si può comporre qualunque musica, magari anche saltando una linea [perché] serve a tutte le musiche, consente nuove variazioni e nuove invenzioni a ogni opera", Rogers, Ernesto N., *Lezione*, 30.4.1965, "Corso di Storia dell'arte e Storia degli stili dell'architettura, a.a. 1964-65", *Il Pentagramma di Rogers*, edited by S. Maffioletti, Il Poligrafo, Padua 2009, 183.
10. "Schiavo da qualsiasi atteggiamento autoritario, non mi esimo dall'esercitare la piena responsabilità che mi compete come docente e come guida", Rogers, Ernesto N., "Lezione La prigione: tema del corso 1966-67, 9.12.1966", S.M., *Una scuola di coscienza*, in *Ibidem*, 16.
11. Rogers was in Latin America from May 1948 to May 1949, visiting and teaching in Argentina, Peru, and Chile.
12. "La méthode est plus importante que l'information, elle doit s'appuyer sur l'intuition, l'analyse, le sens critique et la synthèse. La vie dans son évolution permanente est la source de toutes inspirations" Cf. VII CIAM, *Rapport de la Troisième Commission: Reforme de l'enseignement de l'architecture et de l'urbanisme* (gta Archiv/ETH Zürich).
13. "Nous avons une tâche si grande et grandiose en Europe." Letter from A. Roth to E.N. Rogers, 22.11.1949 (gta Archiv/ETH Zürich).
14. Cf. VIII CIAM, *Report of Hoddesdon Conference CIAM 8 1951* (gta Archiv/ETH Zürich).
15. "Bisogna caricarsi di utopia e porsi anche quelle mete non verificabili al momento contingente, mete lontane che non hanno un'immediata attuazione possibile e sembrano follia. Questo è costruire domani: affondare nel solco della terra semi fecondi", Rogers, Ernesto N., "Elogio dell'architettura", *Casabella-Continuità*, n° 287, 1964.

## Serena Maffioletti

Architect from the *Politecnico di Milano*, PhD in Architectural and Urban Design and Associate Professor of Architecture and Urban Composition. She is the President of the Commission of the Faculty of Architecture, Member of the Board of the Luav Department Research, Head of the Design and Construction Research, and Head of Infrastructures for mobility Research. Responsible of the LLP Erasmus Luav program with the Faculty of Architecture of the EPFL (Lausanne) and the Academy of Architecture (Mendrisio).



Figure 7. Ernesto N. Rogers, J. Lluís Sert and other participants at a lunch during the VII CIAM (Bergamo, 1947). gta/Archiv/ETH Zürich (42\_AR\_X\_33).

# Ludwig Hilberseimer at the Illinois Institute of Technology: Architectural Education, Organic Democracy and Colonization.

34

Ludwig Hilberseimer's role at defining trends in architectural education in the United States is a relevant one, and deserves special attention due to its rigorous method. This article aims to cast light at his teaching experience at IIT, where he promoted an integration of urban theory and political ideals. Understood as an act of cultural colonization, architectural education appears as a powerful tool to reshape the territory in the United States and the world, as part of an ongoing process of Modern postwar globalization.

By Plácido González Martínez

It may seem paradoxical, but when asked about the names of his most influential teachers, Ludwig Hilberseimer did not mention one, but a list of books. Towards the end of his life and being the compulsive reader he had always been, he was convinced of the power of paper as an effective way of conveying knowledge, in contrast to the vanishing corporeity of old professors and the uncertainty of their variable opinions.

Nevertheless, Hilberseimer's teaching experience is quite an exceptional story within the evolution of architectural education in the United States. And following our thesis, books mattered to Hilberseimer because they provided him with ethical guidelines for the development of a curriculum. Hilberseimer specifically referred to Piotr Kropotkin's work in his interview for the *Aufbau* magazine in 1959, where he found organic and autonomous definition of society.<sup>1</sup> The civic ideals expressed by Kropotkin were transferred to the act of teaching, as an empowerment of students, both as future professionals and citizens.

By following the careers of Hilberseimer's former IIT students, we can observe how his rigorous Socratic method proved to be extremely successful. It fostered critical thinking and the constant questioning prejudices and opinions in the quest for the most successful results. But Hilberseimer's teaching strategies did not rely solely on his renowned ingenious wit. His strive to achieve an organic society also relied on the merging of theory and practice, in the didactic dimension of his urban model known as the *Settlement Unit*.

### Structure and Form: the Secrets of Practice

Defined by Hilberseimer in 1927, after his collaboration with Mies van der Rohe at the Weissenhof Siedlung in Stuttgart, the *Settlement Unit* was later published under Paul Theobald's label, in *The New City* (1944), *The New Regional Pattern* (1949), and *The Nature of cities* (1955).

The hierarchical scheme of the *Settlement Unit* served as a translation of Kropotkin's organic social ideals into urban forms and principles. The democratic ideals underlying its design provided a powerful ideological backing to Hilberseimer's teaching methods at IIT.

Following Mies van der Rohe's definition of architecture as "structure plus the expression of structure", the fish spine diagram of the *Settlement Unit* offered an urban structural archetype that remained undefined as of its formal expression. It showed a residential unit of minimal density, supported by a hierarchical circulation system and flooded by the overwhelming scale of the surrounding open space [figure 1].

For Hilberseimer, the *Settlement Unit* meant the accomplishment of his wish to merge city and nature, a notion that was rooted both in the mythical origins of the United States—through Thomas Jefferson's thoughts and projects—and in the philosophical basis of 19<sup>th</sup> century Transcendentalism. But, due to its character, it was meant to go beyond being a mere ideal: Hilberseimer gave life to the *Settlement Unit* expressing its structure through the four stage dynamics.

The four stage dynamics appears in Hilberseimer's projects and books, as well as in his teaching methods for the urban design courses at IIT—*City Planning*, *Applied City Planning* and *Applied Regional Planning*—, as a key-stone for urban form. The starting point of this process was a state of urban chaos, which slowly evolved through the rearrangement of streets, housing and industry, until a stable final condition was reached and guaranteed by the means of the fish spine diagram. The city was shaped by the *Settlement Unit* as an archetypal chisel under the design principles of physical planning, adopting an infinite variety of forms, due to different geographic, cultural and economical factors [figure 2].

### Principles and Methods: the Act of Teaching

Hilberseimer also pursued a further understanding of organic development by means of the definition of clear design principles to be applied through a strict teaching method. This set of rules would become the only guaran-

< Figure 1. "A New Settlement Unit", Ludwig Hilberseimer: *The New City*. Principles of Planning. Chicago, Paul Theobald, 1944, 106.



tee for the future development of cities regarding issues such as housing and landscape, which was Hilberseimer's main contribution to Modern teaching in urban planning after 28 years at IIT.

This implied a new freedom of form, which by no means contradicts the rigid structural constraints of the Settlement Unit. As useful teaching assets, the simple set of rules that Hilberseimer established deliberately left out the issue of defining specific solutions and served as a reference for solving universal problems:

- All houses should be exposed to at least 4 hours of direct sun light during the Winter solstice.
- All residents should live within 30 to 40 minutes walking distance from work.
- All children should be able to walk to school without needing to cross any streets.

As a man of principles, these rules were essential to Hilberseimer, even if, *a priori*, they could also mean a complete formal homogenization of the city and its territory. Nevertheless, the influence of geography was crucial to Hilberseimer, who showed a sharp sensitivity towards landscape and an ecological approach to planning.

Hilberseimer's teaching legacy, as seen through the 48 master theses that he supervised at IIT between 1943 and 1966, shows the overall influence of these principles applied through the tireless repetition of his method. These theses always adhere to the same structure, including a historical analysis, the detection of problems, the definition of an intervention plan through the four stage dynamics, as well as the reaching of conclusions, which served as guidelines for the development of the project [figures 3, 4].

Even if this may seem monotonous compared to contemporary architectural education, its main goal was to transfer Modern principles of order to society through architectural and urban design, following a strategy of colonization. Just as the Roman regulation did for the founding of new cities, the diagrammatic character of Hilberseimer's scheme had infinite potential, transcending the mere urban scale and reaching regional planning, a field traditionally taken over by the disciplines of geography and economy.

### Chicago as a Context

Structure and form, as well as principles and method, expressed the continuity of the Bauhaus in the United States through the curriculum of the IIT<sup>2</sup> and greatly influenced the postwar American architectural education system. Nevertheless, the beginnings were modest. As founders of the new school, Mies van der Rohe, Walter Peterhans and Ludwig Hilberseimer settled in Chicago one year before the outbreak of World War II, and

spent the first years of the conflict designing this new curriculum for the Armour Institute, as well as teaching the small amount of students that did not enroll the Army.<sup>3</sup>

But after 1945 the situation in American universities, and particularly at IIT in Chicago, completely changed. By going back to college, former American soldiers were aware of their contribution to the ascent of the United States as the new superpower in the postwar geopolitical scenario. The experience and skills they acquired in the Army, especially in matters of engineering, as well as their widened international scope after campaigning all over the world, boosted college activity. Meanwhile, the arrival of international students, attracted mostly by the mythical personality of Mies, further intensified cultural debate at all levels.

Amidst this optimistic postwar context of expansion, Hilberseimer's contribution to the IIT curriculum can be interpreted as a first class tool for cultural colonization. The geographic variety of the master thesis proposals to which he was the advisor, shows the international repercussion it had,<sup>4</sup> a fact later confirmed by the careers of some of his students. Even though at IIT, as well as at other famous Modern schools, we can confirm the fact that the new generations of architects taught by Hilberseimer and Mies did not achieve the international recognition that their masters had previously received, this poses no particular contradiction. Following the ethical ideals of an organic democracy, the main goal of this curriculum was not the creation of elites, but the more ambitious challenge of educating a generation of designers who could humbly approach the needs of everyday reality.

### Conclusion

The application of principles and to create structures and forms in Modern architectural education led to the adoption of new creative methods. These methods, based upon open discussion and critiques, showcase the creation of a new generation of professionals in architectural history, the first to become active players in western globalization, guided by the democratic practices instilled in their education and political ideals.

Further adoption of these principles helped to establish a pragmatic approach, not only in the practice of architecture, but also by setting the path to a new sense of citizenship and responsibility. In this sense, Hilberseimer certainly walked his talk, showing his advocacy of pedestrian cities by walking, every class day, the 8.5km that separated his apartment at 1510, North Dearborn Street, from the IIT campus in Chicago's South Side. However, he is remembered as someone who avoided the sun.<sup>5</sup> He always preferred walking under the shade.

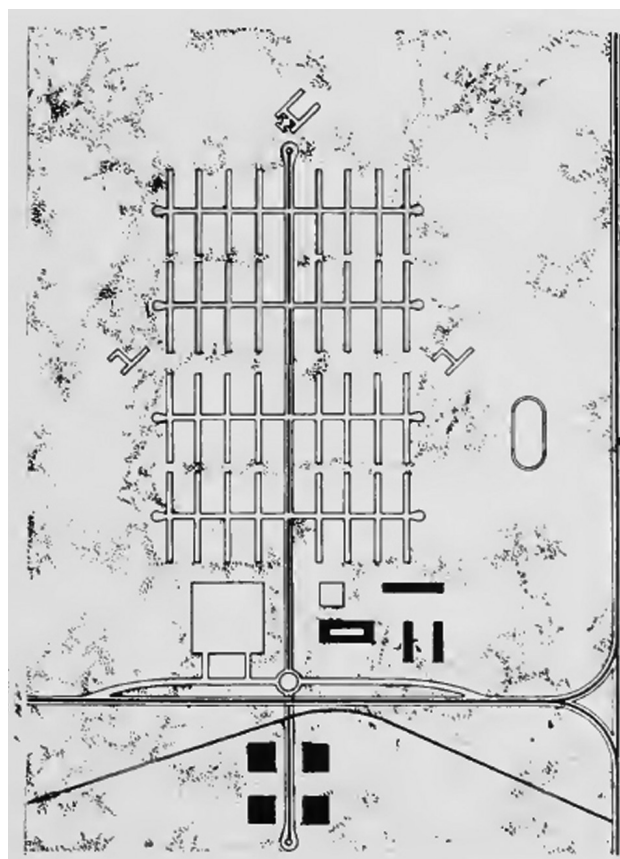
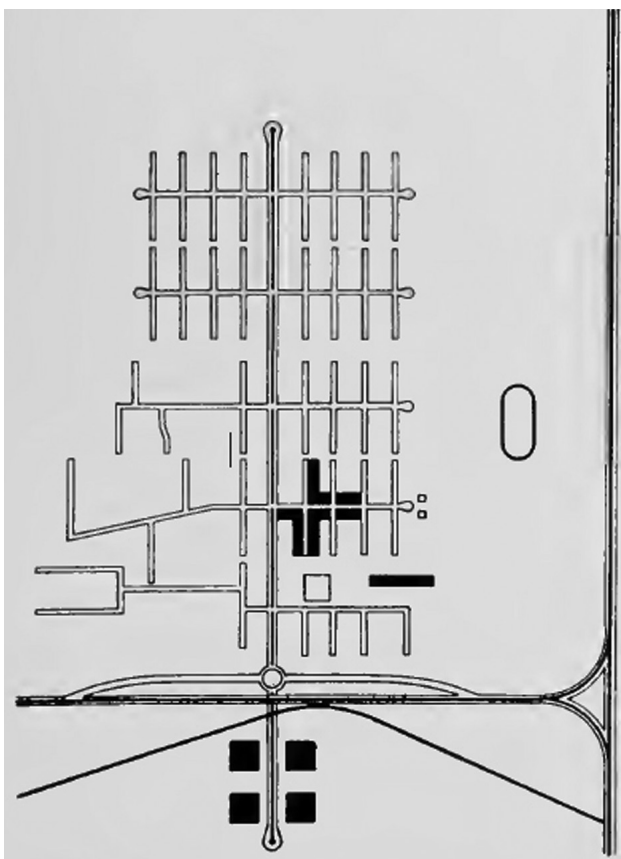
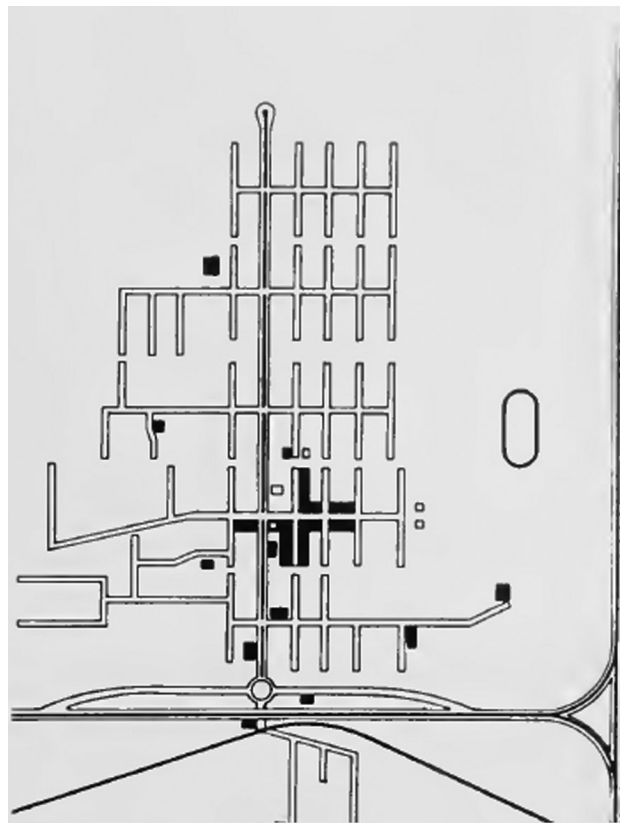
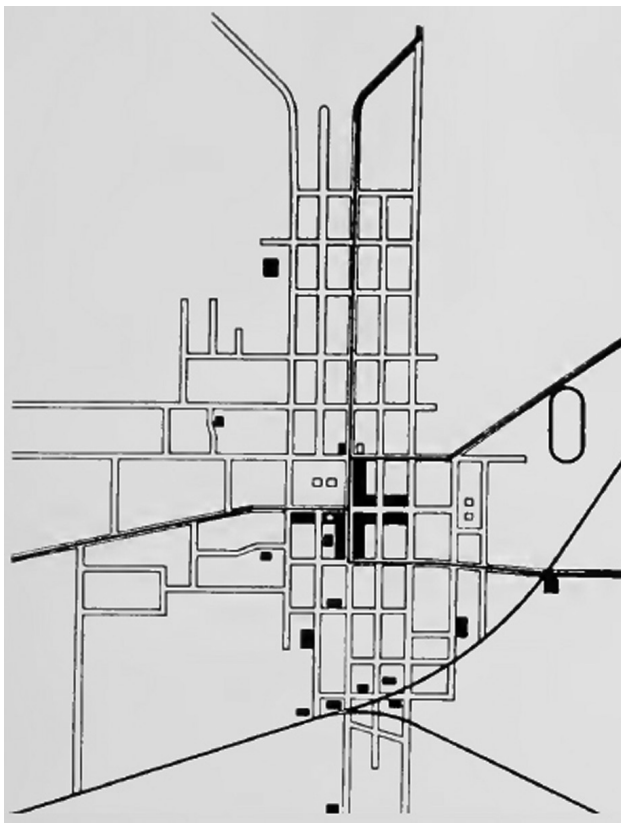


Figure 2. "Elkhorn Replanned", **Ludwig Hilberseimer**: *The Nature of Cities*. Chicago, Paul Theobald, 1955, 233.

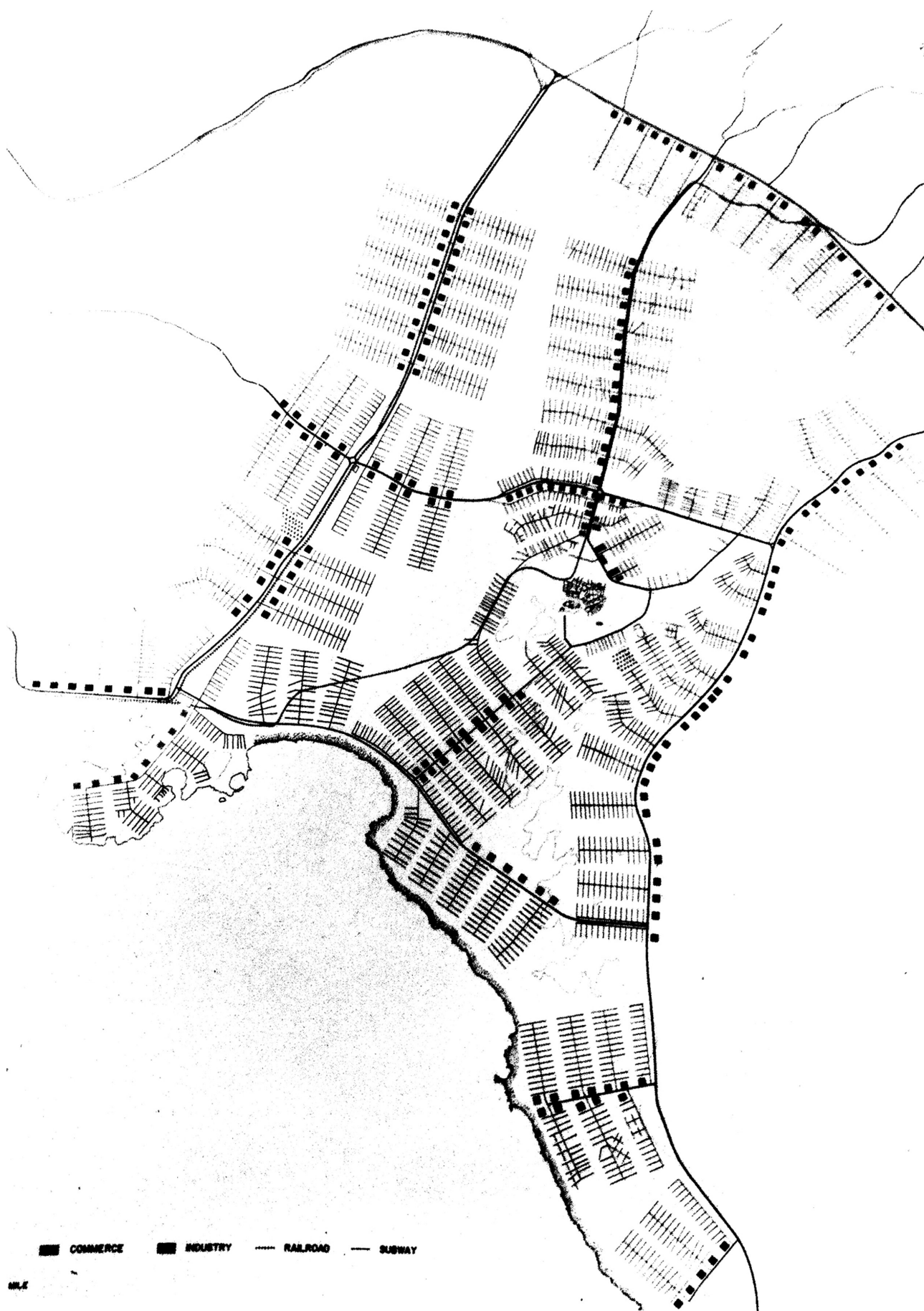


Figure 3. Myrto Costikas, *Athens Replanned*. Master Thesis (not published), Paul V. Galvin Library, Illinois Institute of Technology, 1960.





Figure 4. **Fikry Maguib Morkos**, *The Egyptian Village*. Ph.D. Thesis (not published), Paul V. Galvin Library, Illinois Institute of Technology, 1958.

#### Notes

1. This is confirmed by Hilberseimer's frequent underlining and side notes that appear in his two books at the Graham Resource Center Architecture Library at IIT: Kropotkin, Peter, *Selections from his writings*, London, Freedom Press, 1942, and Kropotkin, Peter, *Memoirs of a revolutionist*, Boston and New York, Houghton Mifflin Company, 1899.
2. A depiction of the controversy regarding the new foundation of the Bauhaus can be found at Harrington, Kevin, "Order, Space, Proportion—Mies's Curriculum at IIT", in Achilles, Rolf; Harrington, Kevin; Myhrum, Charlotte, ed., *Mies van der Rohe. Architect as Educator*, Chicago, Illinois Institute of Technology, 1986, 51.
3. Hilberseimer lectured almost all courses in those years. As well as other Universities in the United States, IIT contributed to the efforts of war through education, mainly engineering courses for the US Army Corps of Engineers, as well as urban camouflage seminars.
4. Besides the 18 master thesis projects that dealt with case studies in the United States, other locations were: Canada, Germany and India (4 projects), Peru, Puerto Rico and Greece (2 projects), and Lebanon, Ecuador, Jamaica, Egypt, Haiti, Ireland, Lithuania, Japan, Colombia, Switzerland, France and Iran (1 project). This speaks of the high degree of internationalization of IIT during Hilberseimer's years.
5. *Oral history of Jacques Calman Brownson* / interviewed by Betty J. Blum, compiled under the auspices of the Chicago Architects Oral History Project, Department of Architecture, the Art Institute of Chicago, 1996, 84.

#### References

- Achilles, Rolf; Harrington, Kevin; Myhrum, Charlotte, *Mies van der Rohe. Architect as Educator*, Chicago, Illinois Institute of Technology, 1986.
- Harrington, Kevin; Pommer, Richard; Spaeth, David, *In the Shadow of Mies. Ludwig Hilberseimer: Architect, Educator and Planner*, Chicago, The Art Institute of Chicago, 1988.
- Hilberseimer, Ludwig, "Raumdurchsonnung", *Moderne Bauformen* 34, January 1935, 29–36.
- Hilberseimer, Ludwig, "Raumdurchsonnung und Siedlungsdichtigkeit", *Moderne Bauformen* 35, February 1936.
- Hilberseimer, Ludwig, *The New City. Principles of Planning*, Chicago, Paul Theobald, 1944.
- Hilberseimer, Ludwig, *The New Regional Planning. Industries and Gardens. Workshop and Farms*. Chicago, Paul Theobald, 1949.
- Hilberseimer, Ludwig, *The Nature of Cities*, Chicago, Paul Theobald, 1955.
- L. Hilberseimer. *The Man and the Work. A Concordia*. Graham Foundation, Chicago, 21st March 1987.
- Spaeth, David, *Ludwig Karl Hilberseimer. An Annotated Bibliography and Chronology*, New York, Garland Publishing Inc., 1981.
- Paul V. Galvin Library, Illinois Institute of Technology.
- Ryerson and Burnham Libraries, Art Institute of Chicago.

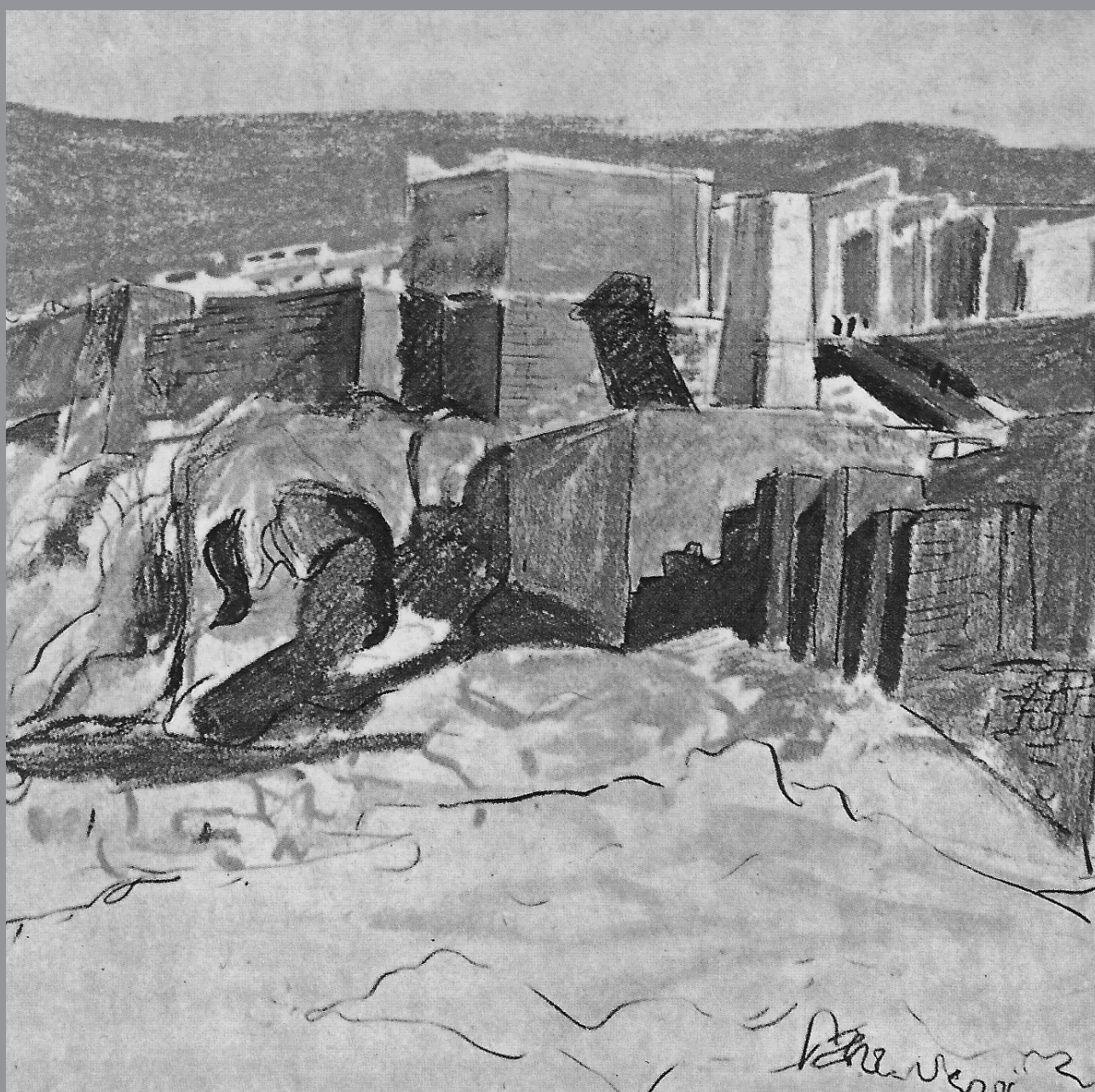
#### Plácido González Martínez

Ph.D. Architect, Assistant Professor at the University of Seville, Spain. Drafter of the 20<sup>th</sup> Century Heritage Plan for the Spanish Institute of Cultural Heritage. Member of the Registers Committee at the Iberian **docomomo** Foundation, he has been a director of the 8<sup>th</sup> Iberian **docomomo** Conference in 2013.



# Unity of Architectural Organism and Urban Form. The Teachings of Muratori and Quaroni in the School of Rome

40



The 60s were inaugurated with the Olympic Games, presenting the world with a new image of Rome: a city that was more modern, more efficient and definitively freed of the fascist period. The decade appeared (and not only in the Italian capital city) as a time of great political and cultural turmoil—and it was precisely the Faculty of Architecture in Rome that set one of the main stages for this struggle. The student movement began a process of profound questioning and transformation of the educational system.

By Alessandra Capuano

Protests zeroed in on a few university professors, particularly on Saverio Muratori who had been summoned from Venice in 1954 to hold his lectures in Rome. His teachings are considered the emblem of a detached and academic attitude, especially when referring to the Composition course in year 4 when he requested the design for a *masonry chapel with a central plan*. The mandatory use of traditional building techniques and a non-innovative typological design seemed like downright refusal of the acquired achievements made by the Modern Movement.

In fact, the considerations elaborated by Muratori already since the antebellum period did not only go in a direction aimed at recovering the past, but one overcoming the Modern; one that anticipated issues which would have soon led to a drastic change of perspectives in the culture of Italian and international architecture.

His book entitled *Architettura e civiltà in crisi* was published in 1963. With this book Muratori completed the conceptual project he had already outlined in 1944 with *Storia e critica dell'architettura contemporanea*,<sup>1</sup> which observed that the crisis of Modern architecture stemmed from a lack of cultural and historical continuity with the past.

According to Muratori, modernity and volume deconstruction lead to destroying the relation between form, structure and function. Simplification of form, deconstruction and accentuation of detail suffocate architectural unity. According to Muratori, the crisis began with the Enlightenment Rationalism period when “form was superimposed on the real matter and on the structure, being specifically intended as a decoration,”<sup>2</sup> what he defined as an actual “overflowing of the pictorial sense into the field of architecture.”<sup>3</sup> According to the author, it was with Le Corbusier that the conscience of an artistic problem arose in architecture: expressing by building. Muratori developed his critique of the Modern and, simultaneously, his will to overcome the crisis by searching for architectural unity and objective rules. Hence the need to find

materials endowed with internal coherence,<sup>4</sup> as Muratori probably considered the teaching exercise for a masonry chapel. He also conducted his first important studies on urban analysis, establishing a particularly productive disciplinary current in Italy from the 60s on. Then came *Studi per un'Operante Storia Urbana di Venezia* in 1959, which was followed three years later by similar studies inherent to the city of Rome. With this work, Muratori marked the transition to a working methodology “that would reach its height through his teaching experience in Rome. “In fact, teaching objectives in Rome became determining factors in the elaboration of a synthesis between theory and architectural design, between research and the architect’s task [...]. Muratori taught *Composizione Architettonica* (Architectural Composition) while being opposed to the dominant concept (typical of the Modern) of architecture as the exclusive product of creativity, of personal inventiveness and affirming the teaching of architecture as a “common language.” He proposed a project related to history since its objective was the production of an architectural organism that was the unified and organic summary of the complexity of environmental components—reinterpreted over the course of history.”<sup>5</sup>

Rejection of Croce’s idealist attitude and a willingness to delve into context and continuity were the conditions that induced Muratori into distancing himself from the Modern Movement and hence led the student movement into attacking the university professor. The bitter controversies that ensued led to the Faculty being occupied and to the famous General Assembly that was held on the premises of the Roxy movie theatre in 1963. On that occasion it was decided to call Adalberto Libera and Ludovico Quaroni back from Florence (to teach Composition and not Urban Planning as the latter had done from 1951 to 1954), in addition to Bruno Zevi and Luigi Piccinato from Venice.

It actually seems safe to say that, despite the considerable diversity of methods and arguments, there was a common perspective that inspired the work and teachings of Muratori and Zevi. In both cases there was an appreciation of history, meant as a subject that was func-

41

< Cover of the book *Progettare un Edificio* by Ludovico Quaroni.



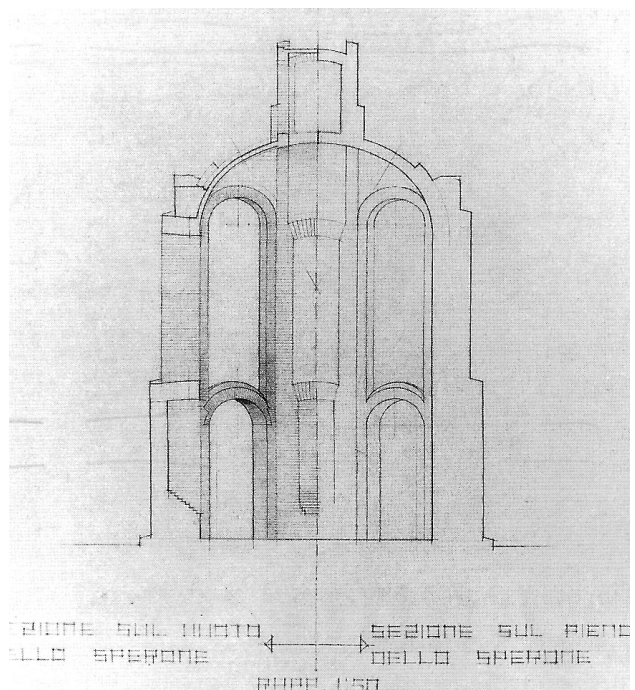
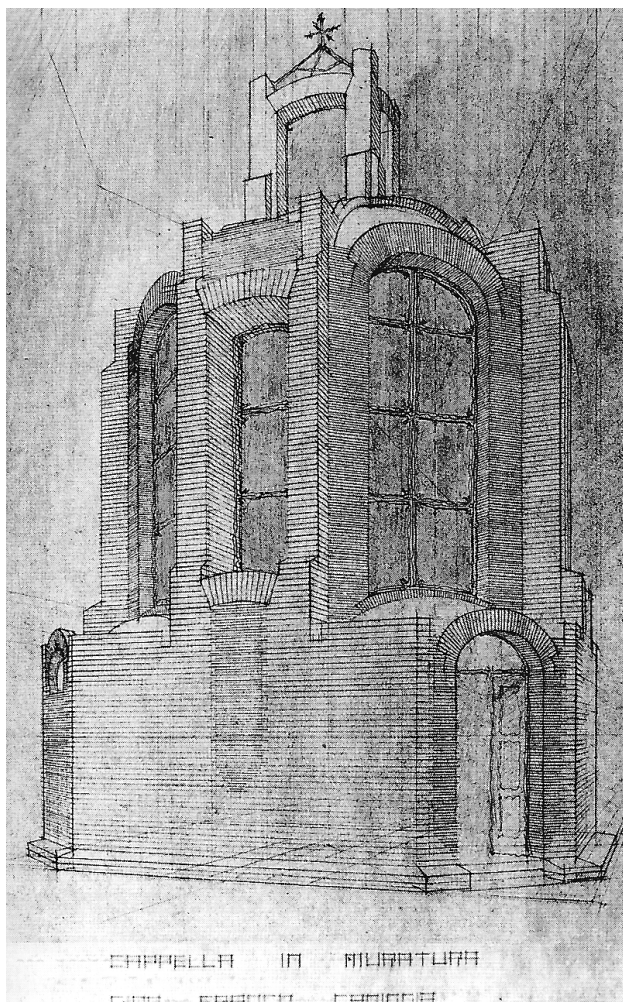
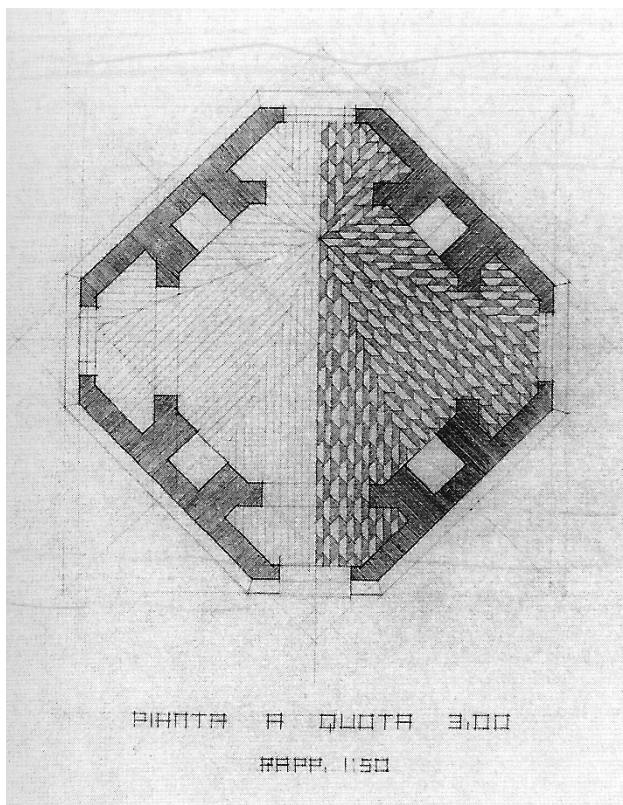


Figure 1. Course of **Saverio Muratori**, exercise for a masonry chapel with a central plan, 1954–55. Student: **G. Caniggia** (from *La Facoltà di Architettura dell'Università di Roma "La Sapienza" dalle origini al duemila Discipline, docenti, studenti, a cura di V. Franchetti Pardo, Gangemi editore, 2001*).



tional for design, and the recognition of the importance of architectural organism as expression of the unitary coherence of architecture. Whereas their views of the Modern Movement were distant from one another: Muratori considered it a failure in its will to recover a global reason for architecture; while Zevi, on the other hand, believed it was the highest manifestation of culturally revolutionary thought, one that would lead to continuous experimentation that was antithetical to the academia.

*La città come ambiente costruito è il vero centro del mito personale*<sup>6</sup> (The city as a built environment is the true nucleus of personal myth) by Ludovico Quaroni. Quaroni accompanied us through the milestones of debates regarding architecture and the city, from the fascist period to post-modernity. He believed "that design interpreted in the complete significance it had in ancient times for us and that maintained in Anglo-Saxon culture<sup>7</sup> is the true problem of the Modern city and that utopia meant as the natural offspring of imagination and experience, of art and of rational science"<sup>8</sup> is the solution able to revitalize the process of urban design. The planning of ancient cities was determined through clear hierarchies that were established between building fabric and emergences—"ancient cities were beautiful", wrote Quaroni in *La Torre di Babele* (The Tower of Babel)—continuing with a shared



and global architectural structure, part of the consciousness of all, of inhabitants and architects alike. Modern city design is instead a marginal factor.

In this *spiral-shaped* text entitled *La Torre di Babele*, Quaroni used many standpoints to face issues regarding expressions of the Modern metropolis, widespread quality, the invention of architecture, without ever neglecting the essential aspect whereby architecture (like the city) is not only an object for mankind to contemplate. Beyond the physical form of the city, its social aspect, management of the urban form through its regulatory and procedural legacy and according to different scales of intervention, the complexity and multiplicity of problems were, for Quaroni, equally central issues. He did not consider urban science as a separate discipline or as architecture theory, but as a structure governing relations between things.

According to Antonino Terranova, those were the years in which the *first disappointments* emerged. Quaroni was hanging in the balance between those who, as “pure architects,” asserted their disciplinary independence and those who followed the debate about the city-region and the complexity of contemporary cities. Although the common objective was the form of the city.<sup>9</sup>

*La Torre di Babele* is accompanied by a rich collection of images testifying to the figurative idea of cities. Quaroni has these images of cities seeming like works of art roll by as a film, offering us a repertoire going from ancient Greece to contemporary times.

Modern reality is complicated, as the city of Rome is multiform. And two years later Quaroni dedicated his most beautiful book, entitled *Immagine di Roma*<sup>10</sup> (Image of Rome), to the capital city.

*La Torre di Babele* had already clearly explained that the figure is formed through both disciplinary and heteronymous knowledge; and that to understand a city one needs to know (in addition to the specific architectural aspects) even its aspects linked to sociological, political, geographical, visual and humanistic interpretations. Quaroni’s *Immagine di Roma* now demonstrates that creativity is stimulated through a profound knowledge of the true character of a city. That same character that for Rome took time to become what it is now and that always comes to the surface in every one of its manifestations and not only from the exterior appearance.

By rendering his vision of Rome, Quaroni reminds us that language is only one of the many aspects making up the structure of the city; and that therefore self-referentiality is not enough in solving problems.

In 1977 Ludovico Quaroni published a teaching manual entitled *Progettare un edificio. Otto Lezioni di architettura*.<sup>11</sup> While trying to collect some considerations concentrated on the controversial issues of a discipline going through a deep crisis, and attempting to reassemble architecture unity that was more and more divided in the various components of the Vitruvian Triad, Quaroni explained the reasons campaigning against a simply technological form of architecture, one only interested in

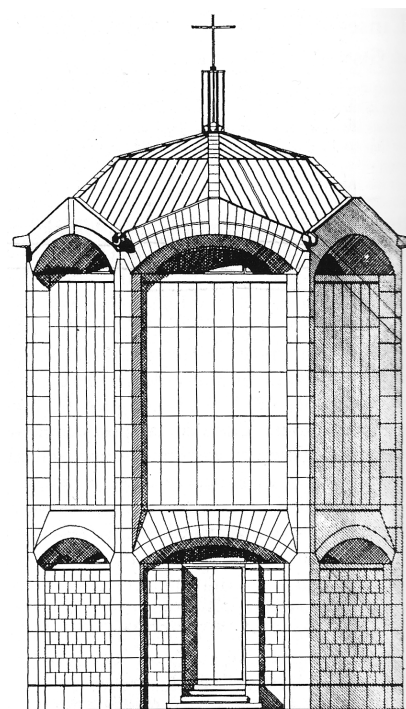
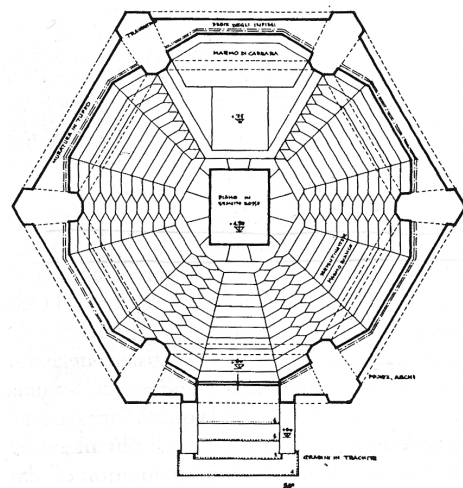


Figure 2. Course of **Saverio Muratori**, exercise for a masonry chapel with a central plan, 1955–56. Student: **M. Greco** (from *La Facoltà di Architettura dell'Università di Roma "La Sapienza" dalle origini al duemila Discipline, docenti, studenti, a cura di V. Franchetti Pardo, Gangemi editore, 2001*).

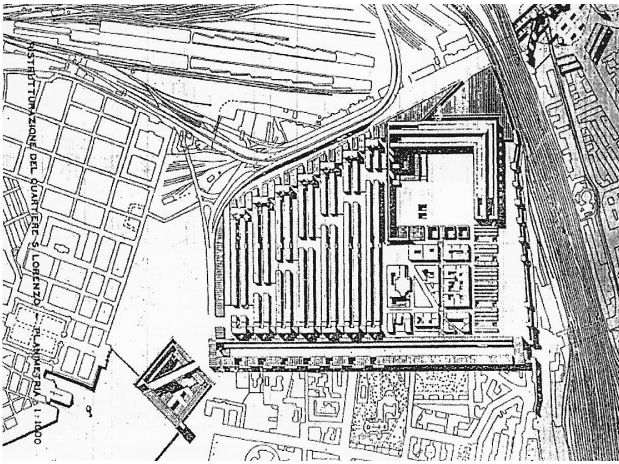
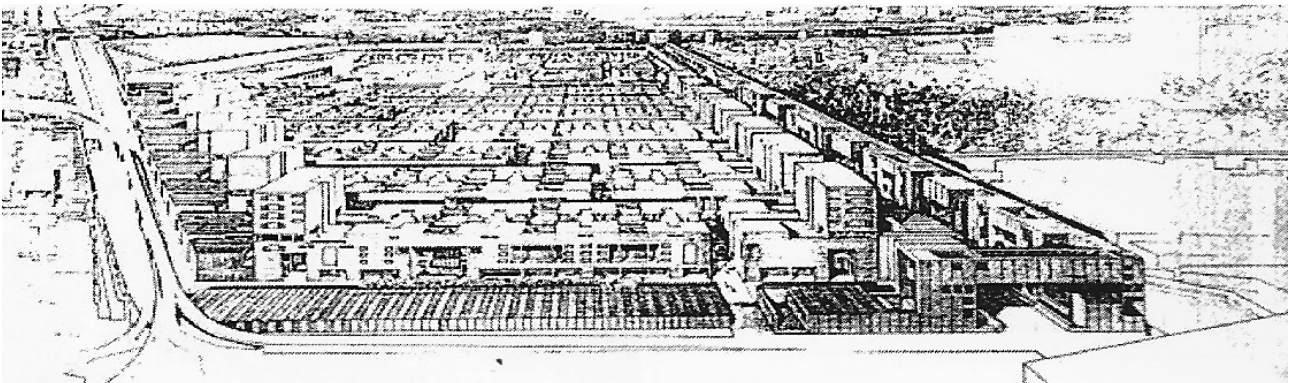
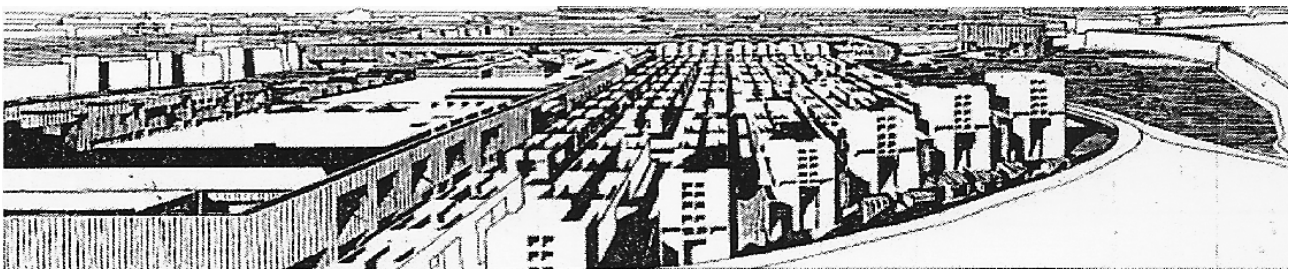
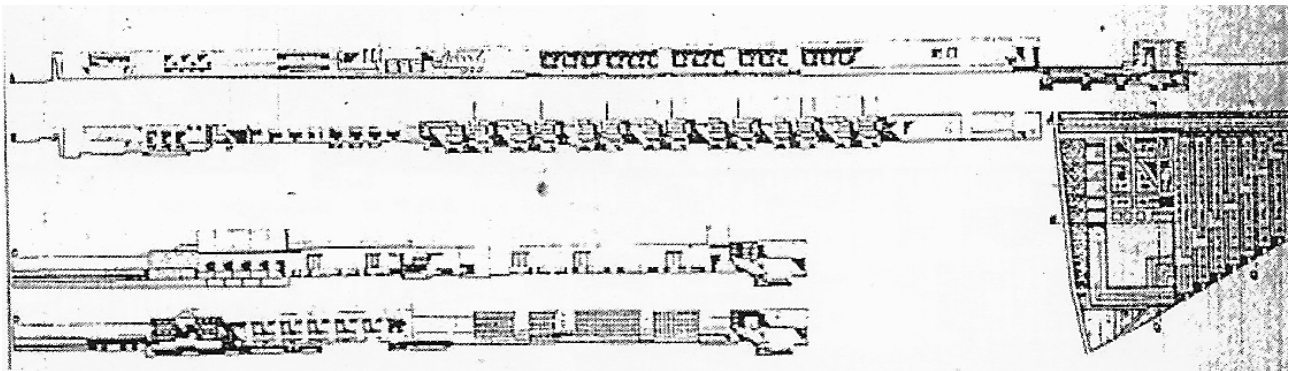


Figure 3. Course of **Ludovico Quaroni**, exercise on the continuity of the urban texture, 1969-70. Student **L. Thermes**, proposal for the rehabilitation of the S. Lorenzo neighborhood in Rome (from A. Riondino, *Ludovico Quaroni e la didattica dell'architettura nella Facoltà di Roma tra gli anni '60 e '70. Il progetto della Città e l'ampliamento dei confini disciplinari*, Gangemi editore, 2012).

functional uses or simply careful about aesthetic-formal results. He attempted to describe all the precautions that should be kept in mind when one is about to design a building.

However, architecture for Quaroni meant action at the different design levels; once attempting to re-establish the rules one must (if anything) match this against the objective of reporting problems without going through pacifying simplifications.

*We also sustain the need to re-establish the foundations [...] But we do not agree at all about the opportunity of setting off (for this disciplinary re-establishment) from the construction of a linguistic code that can "teach" a simple and safe method (for a dime a dozen) to anyone who wants to get involved in architecture. If there is something certain in the historical period we live in [...] it is insecurity and complication, a turmoil of ideas, hence we believe every attempt at "coding", at drawing up a "manual" that copies (albeit in a new and differ-*





ent way, perhaps the direct opposite) regulations of the past "orders" can be defined as a childish exercise (but we might be wrong). The present crisis (similar to those from other moments in history) does not depend upon a lack of ideas; it is a crisis that depends upon the difficulty, and not only in architecture, to sum up in a few strong ideas all the many, very many, too many feeble ideas that circulate, and circulate in their own right, precisely because of the numerous contradictions characterizing this critical stage of culture. One that has suddenly gone from local, domestic or continental dimensions to the worldwide, global dimensions of a humanity and civilization that is heterogeneous in its manifestations as much as it is in its problems.<sup>12</sup>

An "active" kind of teaching that is still very much alive in the schools of Rome, namely the teachings of Muratori and Quaroni, which inseparably conjugate form of the city and architectural organism. Architectural design is a project of forms, of relations between forms and space, a structure of forms for a structure of life

[...] Purpose and plan for a future city that perhaps willing it to be marvellous would suffice. But is there anyone who truly wants it, other than me?<sup>13</sup>

#### Notes

1. The first critical history of the Modern Movement written in Italy, confronting the essay by M.G. Corsini, "Saverio Muratori e il problema critico e storico dell'architettura moderna in Facoltà di Architettura dell'Università di Roma 'La Sapienza' dalle origini al duemila. Discipline, docenti, studenti", edited by V. Franchetti Pardo, Gangemi editore, Rome, 2001, 388.
2. M.G. Corsini, cit., 401.
3. Muratori, Saverio, *Storia e Critica dell'Architettura Contemporanea* (1944), presently in a posthumous work edited by G. Marinucci, Centro studi di Storia urbanistica, Rome, 1980, 43.
4. Tafuri, Manfredo, *Storia dell'Architettura Italiana 1944-1985*, Einaudi, Turin, 1982, 79.
5. M.G. Corsini, cit. 396.
6. Terranova, Antonino, "Introduzione", Quaroni, Ludovico, *La città fisica*, edited by A. Terranova, Laterza, Bari, 1980.
7. Quaroni, Ludovico, *La Torre di Babele*, Marsilio Editori, Venice, 1967, 48.
8. Quaroni, Ludovico, idem, 49.
9. Terranova, Antonino, "Gli Anni 50/60, Sviluppo e Modernizzazione nella Nuova Dimensione della Città, dal Livello Intermedio del Town Design alla Meta Progettazione", Quaroni, Ludovico, *La città fisica*, edited by A. Terranova, Laterza, Bari, 1980, 151.
10. Quaroni, Ludovico, *Immagine di Roma*, Laterza, Bari, 1969.
11. Quaroni, Ludovico, *Progettare un Edificio. Otto Lezioni di Architettura*, Mazzotta editore, Milan, 1977.
12. Quaroni, Ludovico, *Progettare un Edificio*. cit. 12.
13. Quaroni, Ludovico, *La torre di Babele*, cit. 144.

#### References

- Capuano, Alessandra, *Temi e Figure dell'Architettura Romana 1944-2004*, Gangemi editore, Roma, 2005.
- Riondino, Antonio, *Ludovico Quaroni e la Didattica dell'Architettura nella Facoltà di Roma tra gli anni '60 e '70. Il Progetto della Città e l'Ampliamento dei Confini Disciplinari*, Gangemi editore, 2012.



Figure 4. Cover of the book by Ludovico Quaroni *Progettare un edificio*.



Figure 5. Cover of the book by Ludovico Quaroni *La Torre di Babele*.

Pardo, V. Franchetti, *La Facoltà di Architettura dell'Università di Roma "La Sapienza" dalle origini al duemila. Discipline, docenti, studenti*, Gangemi editore, 2001.

Spagnesi, G., "L'insegnamento di Saverio Muratori: la Cappella in muratura a pianta centrale", *La Facoltà di Architettura dell'Università di Roma "La Sapienza" dalle origini al duemila*.

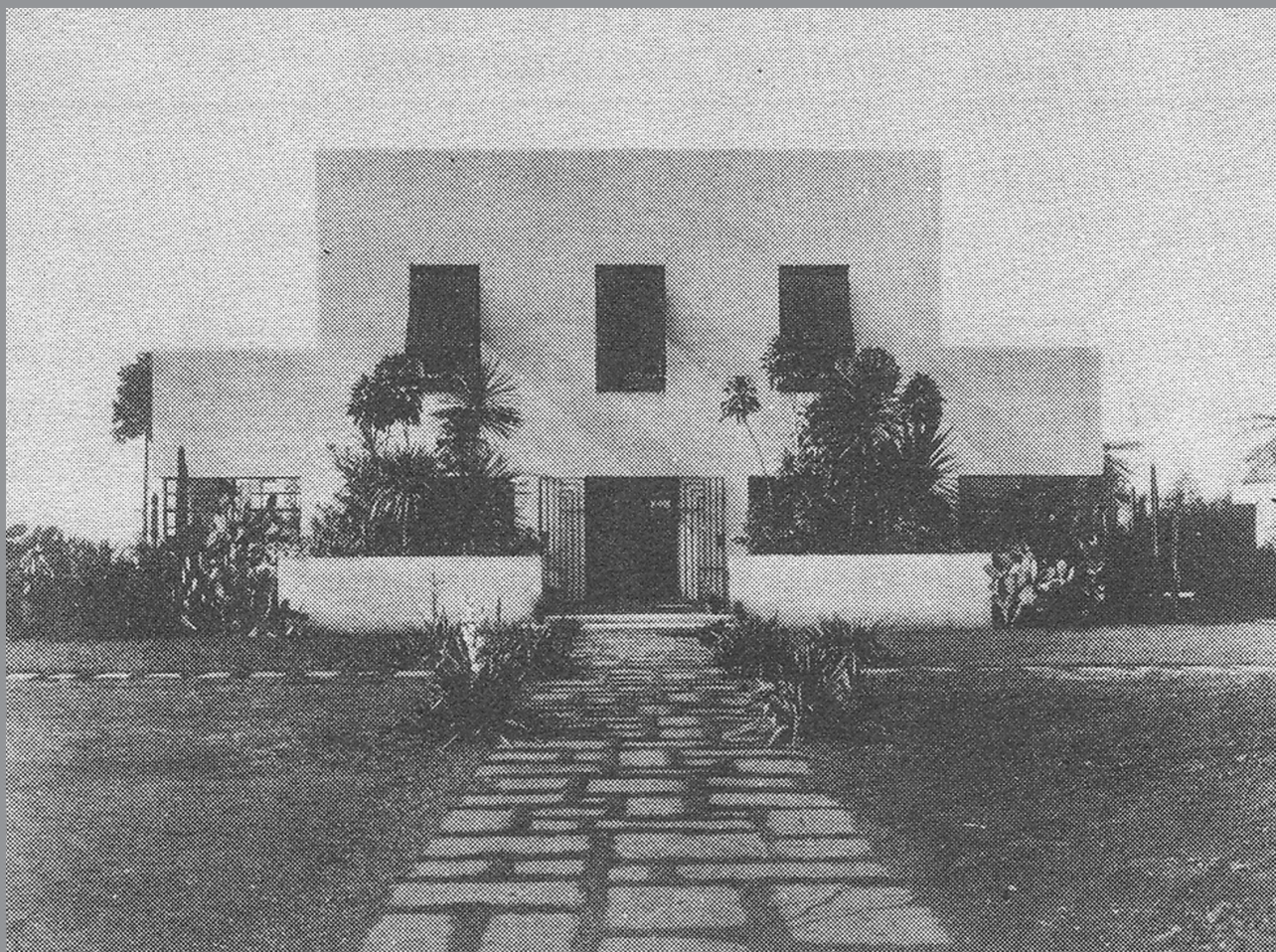
**Alessandra Capuano Milan (1958)**

MHP Columbia University, PHD Sapienza/Rome. She teaches urban design and architecture design in the MArch of the School of Architecture of Sapienza. She is author of *Temi e Figure dell'Architettura Romana 1944-2004* (2005), *Iconologia della Facciata nell'Architettura Italiana* (1995), and co-author of *Il Territorio Storico dell'Appia nel Futuro di Roma* (2011), *Italia gli Ultimi Trent'Anni* (1988).



# The Teaching of Architecture and Urbanism in Brazil: 1930–1970

46



The objective of this article is to present the scene which gave rise to the consolidation of the teaching of Architecture and Urbanism in Brazil in accordance with the precepts of Modern Architecture. Between 1930 and 1970 professional training and practice were intimately related to Brazilian political, social and economic contexts. This fact has led to the structuring of this article into three periods. In the first (1930–1945) the debates concerning the strengthening of the profession that took place. In the second (1945–1960) the courses disassociated themselves from the teaching of the Academies of Fine Arts and the Engineering Schools. In the third (1960–1970), despite the economic growth of the previous decade, the recognition of a Brazilian architecture and the consolidation of the system of teaching based on the precepts of Modern Architecture, Brazilian society saw itself turn into a dictatorial political regime. The years 1930 to 1970 were critical in strengthening Brazilian Modern Architecture, as well as being the decades that saw the launching of the basis of a teaching that echoes to the current day.

By Ana Maria Reis de Goes Monteiro

### 1930–1945: The Affirmation of Brazilian Architecture and of its Teaching according to the Precepts of Modern Architecture

Up to the beginning of the 1930s the teaching of Architecture in Brazil can be divided into three phases. In the first, starting from the middle of the 17<sup>th</sup> century, Portugal established Military Academies in Salvador, Rio de Janeiro, São Luis, Recife and Belém. The military engineers trained there were responsible for religious and civil architectural projects and works and for the planning out of various cities. In the second, in 1827, the Architecture course was initiated at the Imperial Academy of Fine Arts (AIBA), in the city of Rio de Janeiro. The course, which was unique in the country, followed the French academic model, aiming to create the architect–artist in the service of the Portuguese Court, which had been transferred to Brazil in 1808. In the third, the AIBA ceased to exist and the National School of Fine Arts (ENBA) was created in its place, mirroring the republican regime that came into being in 1889. However, during the first three decades of the 20<sup>th</sup> century the teaching of Architecture was little changed from the now extinct AIBA. As a counterpoint, 1894 saw the inauguration of the Polytechnic School of São Paulo, an institution inserted into a city in the free process of industrialisation. There, there was no place for the architect–artist, but there certainly was for the engineer–architect.

However, from the 1920s onwards, events like the Modern Art Week of 1922, Gregori Warchavchik’s man-

ifesto *About the Modern Architecture* [figure 1], amongst others, contributed so that the Modern ideas that were circulating gained followers among professionals and students of the subject. To this, add the first visit to Brazil by Le Corbusier (1929) and the teaching reform at the ENBA as proposed by Lúcio Costa, which gave rise to the introduction of the canons of Modern Architecture to the teaching of Brazilian architecture.

In 1930 Lúcio Costa, who had already aligned himself to the corollary of Modern Architecture, assumed the directorship of the ENBA. He proposed the contracting of teachers and professors aligned with the concepts of Modern art, with the aim of developing a suitable Architecture course for the *machine civilization*. From that moment onwards, given that as until then the sources of inspiration were the *Concours d’école* and the *Concours Chénard* of the Paris School of Fine Arts, a different theoretical and project reference came about. Lúcio Costa intended a reform of teaching that would prepare “a School of a technical–scientific education, as far as possible perfect, and to guide the teaching in to a sense of a perfect harmony with construction. The classics to be studied as disciplines, the historic styles as critical orientation and not for direct application” (Costa, 1995). In September 1931 Lúcio Costa was released from the role of Director and disconnected himself from the ENBA. However his academic proposals had a profound influence on the direction of teaching and on Brazilian architectural production.

It was at that time when the Ministry of Education and Health was inaugurated [figure 2] and which saw the training of Oscar Niemeyer, Carlos Leão, Luiz Nunes, Jorge Moreira, Alcides da Rocha Miranda and Affonso Eduardo Reidy [figure 3], names that transformed Brazilian Architecture.

< Figure 1. First Modern house in Brazil. Project by Gregori Warchavchik, 1927, in São Paulo. Source: Yves Bruand, *Arquitetura Contemporânea no Brasil*, São Paulo, Perspectiva, 1981.



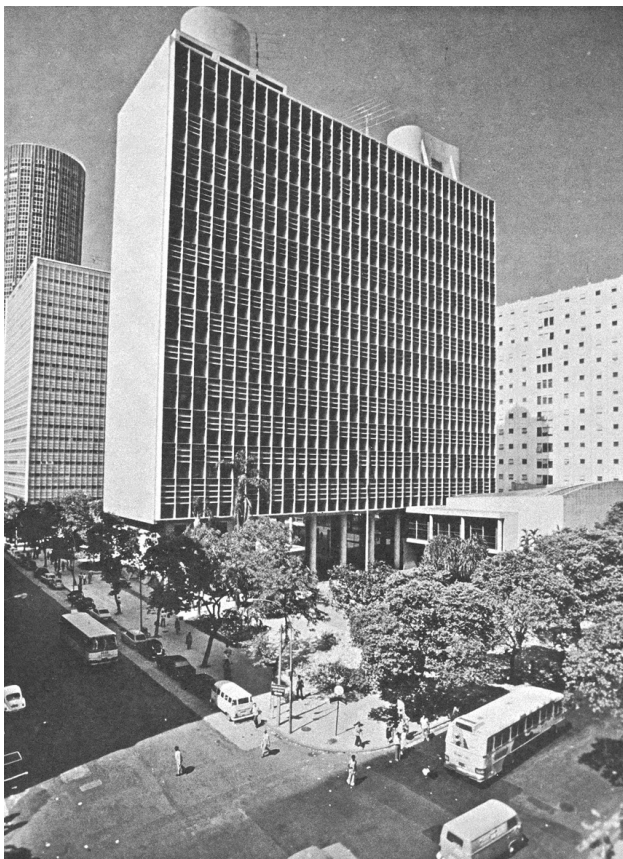


Figure 2. Ministry of Education and Health, the current Gustavo Capanema Palace. Project by **Lúcio Costa, Affonso Eduardo Reidy, Carlos Leão, Ernani Vasconcelos, Jorge Moreira** and **Oscar Niemeyer**, 1936, in Rio de Janeiro. Photo by Hugo Segawa. Source: Sylvia Ficher e Marlene Milan Acayaba, *Arquitetura Moderna Brasileira*, São Paulo, Projeto Editores Associados, 1982.



Figure 3. Social Housing Mayor Mendes de Moraes-Pedregulho. Project by **Affonso Eduardo Reidy** in collaboration with **Francisco Bolonha**, 1950–1958, Rio de Janeiro. Source: Pontifícia Universidade Católica do Rio de Janeiro, *Affonso Eduardo Reidy*, Rio de Janeiro, Solar Grandjean de Montigny, 1985.

In spite of the architects sharing European ideas with respect to art, architecture and society, the Brazilian reality was quite distinct. The architects were concerned about their professional affirmation. The times gave rise to the expansion of various urban centers, creating new working opportunities. For an effective answer to be given to these new demands it was necessary that training were specific and autonomous, and that more architects be trained. In this context new courses were opened<sup>1</sup> and new strategies drawn up.

### 1945–1960: the Winning of Autonomy for Architectural Courses as a Reflection of Professional Affirmation

It's a fact that in 1945 [figure 4] the Brazilian Modern Architect had been affirmed in the national field of culture and had won international prestige. However, Architecture courses still placed themselves in opposition to the precepts of Modern Architecture. At the time the Brazilian Institute of Architects presented a series of events which discussed the teaching situation and recommended the creation of new faculties of Architecture within Universities. In 1945, as an outcome of this initiative, the Decree Law nº 7918 talked about the closing of the ENBA and the creation of the National Faculty of Architecture, whose regulations considered the organization of courses of Architecture and Urbanism<sup>2</sup> across the entire country, disassociating themselves from Engineering courses. As a consequence of this the Faculties of Architecture and Urbanism at the Mackenzie Presbyterian University and at the University of São Paulo were created in São Paulo, though in a different context to that of the city of Rio de Janeiro.

From the second half of the 1950s the academic community proposed the implementation of the Minimum Curriculum for the whole country, based on the professional profile developed by the Modern movement and disassociated from the teaching at the Academies of Fine Arts and Schools of Engineering. The Minimum Curriculum, approved in 1962, foresaw that the training of architects would include broad social actions that would show themselves through Architectural projects. At that time the Urbanism course was incorporated into Architecture courses forming, from then on, the professional Architect and Urbanist. There were various innovative experiments such as those in São Paulo [Figure 5], Porto Alegre and Belo Horizonte. In this context the Faculties of Architecture and Urbanism were created at the Federal Universities in the States of Rio Grande do Sul, Bahia, Pernambuco, Paraná, Ceará, and Pará and also at the University of Brasília and at the Catholic University of Goiás.

Architecture came to be known as a "total" work of



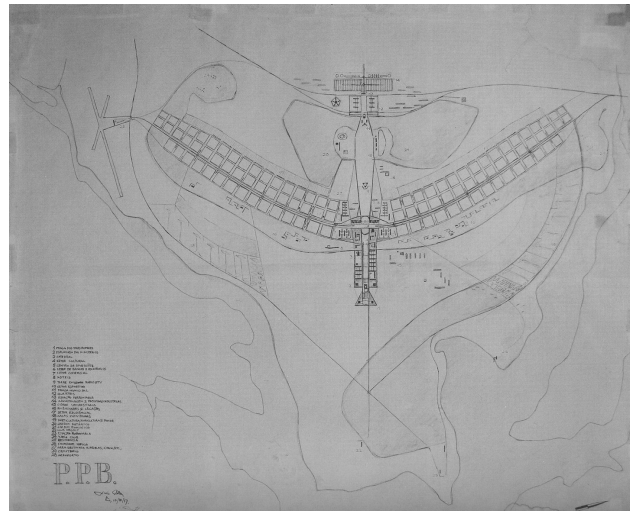
5

art. In this scenario the house and all the everyday objects were subject to being planned. The city came to be expressed as a functional unit in which its functions should be rethought and planned, as it happened in Brasília. The argument was about the teaching of architectural projects, rather than architectonic styles, and this necessitated the incorporation of the use of a language more in keeping with the architectonic projects that presented themselves. Allied to such circumstances, political-will transformed Modern Architecture into an opportunity to show the world the modern face of a predominantly agricultural country.

### 1960–1970: Under the Regime of Exceptions

In 1960 Brasília was inaugurated. Lúcio Costa's pilot plan [figure 6] associated itself with the principles claimed in CIAM, especially in the Athens Letter. His project expressed a functional rationality that imagined itself capable of stimulating the birth of a new man, of a new, fair and harmonious society [figure 7]. Oscar Niemeyer was charged with planning the institutional buildings [figure 8]. However, despite the concepts and utopias present in Brazilian architecture at the time, in 1964 the country descended into a Military Dictatorship which lasted until 1985.

Between 1964 and 1970 a series of institutional acts were implemented that guaranteed an absolute hegemony for the Military Regime. Such measures affected, in a violent way, the direction of Brazilian universities and culminated in the Reform of Higher Education, undertaken in 1969. Its objectives were to privatize Higher Education, eliminate student interference in university administration and to structure Universities in a business mould. The result was that private initiative had unprecedented growth. Between 1961 and 1970 the field of Architecture and Urbanism showed the greatest percentage growth in relation to other areas of study. In 1974 there were 30 schools of Architecture and Urbanism<sup>3</sup> located primarily in the South, South-East and North-East regions and the majority in private institutions.



6



7

Figure 5. Faculty of Architecture and Urbanism at the State University of São Paulo. Project by **João Baptista Vilanova Artigas** and **Carlos Cascaldi**, 1961-1968, São Paulo. Source: Photographic Archive, Vilanova Artigas Foundation.

Figure 6. Pilot plan of the Brasília Project. Project by **Lúcio Costa**, 1957, Brasília. Source: Collection of House of Lúcio Costa.

Figure 7. Monumental Axis (Eixo Monumental) in Brasília. Photo by Fabio Colombini. Source: Exhibition Catalogue Brasília 50 years-half a century of the capital of Brazil, Madrid, 2010.

Furthermore, the repression that descended from 1964 onwards meant a brutal setback in professional practice as well as in the teaching of architecture. The Regime supported the Minimum Curriculum of 1962 and it was then reduced until it was transformed into a set of juxtaposed and disconnected disciplines. Such a scenario had disastrous consequences for the teaching of architecture and urbanism, since it would define a model of teaching that, *whilst* supposedly based on professional practice, prepared a style of workmanship that would really only serve the productive system in force *at the time*.





Figure 4. Aerial view of Ibirapuera Park. Project by **Oscar Niemeyer, Hélio Ulhôa Cavalcanti, Zenon Lotufo, Eduardo Kneese de Melo, Gauss Estelita** and **Carlos Lemos**. Landscape architect: **Otávio Augusto Teixeira Mendes**. 1951–1955, São Paulo. Photo by Percival Tirapeli. Source: <http://brazilbusinesstourism.blogspot.com.br>.





## Final Considerations

The years before the implementation of the Minimum Curriculum of 1962 were fundamental for the consolidation of the teaching of Architecture and Urbanism and demonstrated a continual quest for better conditions. From 1964 onwards the Military Regime developed a cultural, social and political repression without precedent. It implemented reforms of higher education that gave rise to the start of the commercialization of higher education. The result was that Brazil during the 1970s had nothing new with respect to the training of architects and urbanists, as the majority of new Schools limited themselves to repeating and impoverishing the existing models. Only at the end of the 1980s did they return to the debate, approving new quality standards in Architecture and Urbanism courses.

## Notes

1. In 1933 the School of Architecture of Minas Gerais was opened in Belo Horizonte, the first Architecture course not associated with the Schools of Fine Arts or Engineering.
2. At that time Urbanism courses were separate from Architecture courses. Urbanism Courses had a duration of two years and were administered by those who had concluded courses in Architecture or Civil Engineering.
3. Today, according to data from the Ministry of Education, there are more than 350 courses in Architecture and Urbanism in Brazil.

## References

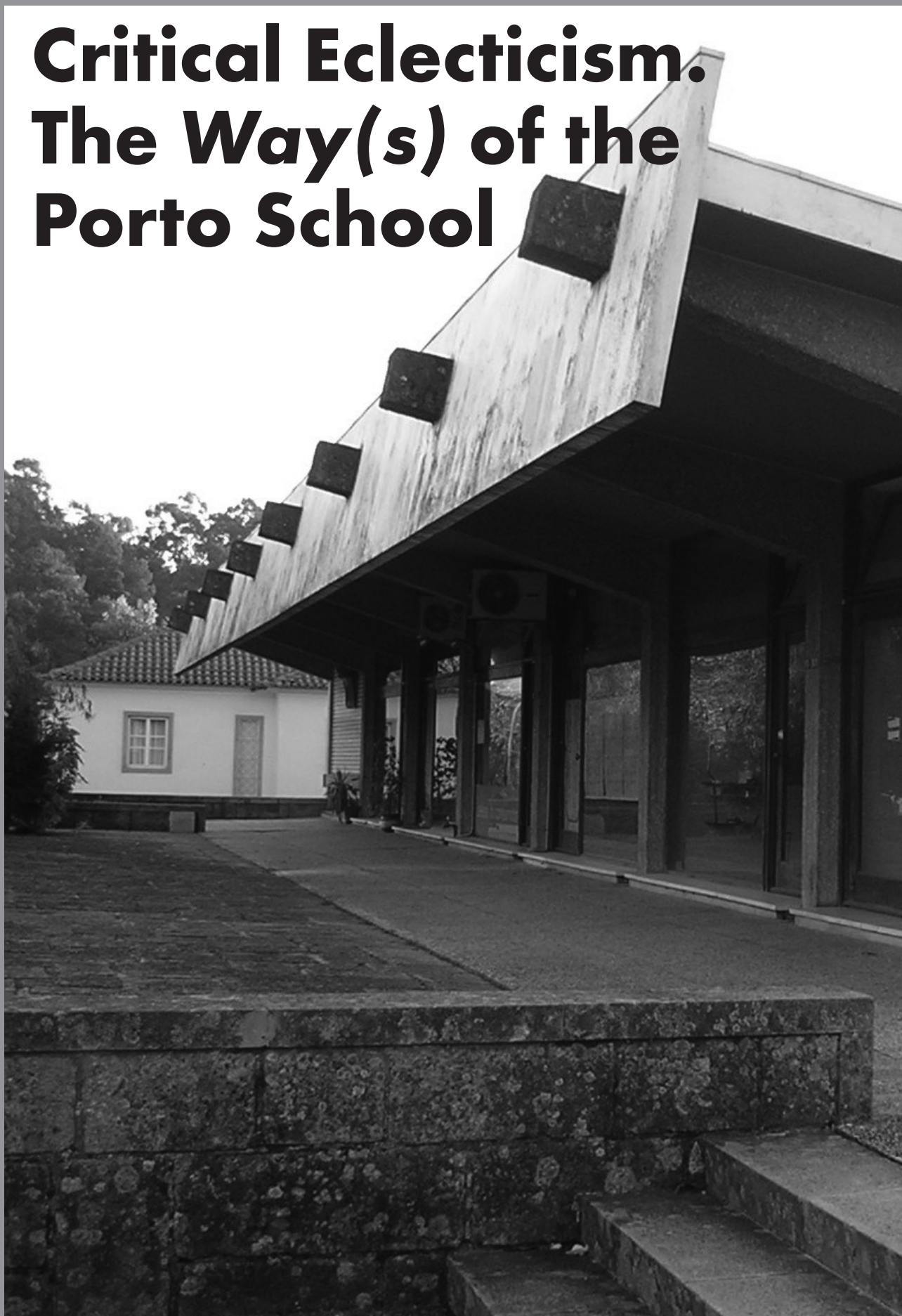
- Xavier, Alberto (org.), *Arquitetura Moderna Brasileira: Depoimento de uma Geração*, São Paulo, Pini, 1987.
- Graeff, Edgar A., *Arte e Técnica na Formação do Arquiteto*, São Paulo, Studio Nobel, Fundação Vilanova Artigas, 1995.
- Costa, Lúcio, *Lúcio Costa: Registro de uma Vivência*, São Paulo, Empresa das Artes, 1995.
- Cunha, Luiz Antônio, *A Universidade Temporã: o Ensino Superior da Colônia à Era Vargas*, São Paulo, UNESP, 3ª edição, 2007.
- Mindlin, Henrique E., *Arquitetura Moderna no Brasil*, Rio de Janeiro, Aeroplano, 2000.
- Santos, Paulo F., *Quatro Séculos de Arquitetura*, Rio de Janeiro, IAB, 1981.
- Silva Telles, Pedro C. da, *História da Engenharia no Brasil—Séculos XVI a XIX*, Rio de Janeiro, Livros Técnicos e Científicos, 1984.

## Ana Maria Reis de Goes Monteiro

Graduated in architecture and urban studies, Masters in Urban Studies, and Ph.D. Professor at the State University of Campinas – Unicamp. Coordinator of Architecture and Urban Design Graduation Course (2010-2012). Director of the Brazilian Architecture and Urban Design Teaching Association.

# Critical Eclecticism. The Way(s) of the Porto School

52



The term “Porto School” designates an *identity* that relates the pedagogy of a teaching institution with the ideas and the architectural practice of its professors and / or former students, resulting of the transmission (and update) of a way of *thinking* connected to a way of *doing*: a concern with social responsibility (perceived through the notions of *collaboration* and *relationship with the context*), a timeless concept of modernity, an intentional appropriation and miscegenation of models (in a process that we can call *critical eclecticism*), the belief that architecture should be considered *figurative art* (perceived in the pace of a promenade thoroughly controlled in time and space), a *Vitruvian* understanding of the education of the architects, the *practice of manual drawing* as a primary method of conception and the requirement of *accuracy* in the processes of work and communication.

By Eduardo Fernandes

The term “Porto School” designates more than just a School of Architecture; it implies an *identity* that relates the pedagogy of a teaching institution with the ideas and the architectural practice of its professors and/or former students, resulting of the transmission (and update) of a way of *thinking* connected to a way of *doing*.

Throughout the history of the *School*, the basis for the transmissibility of this *identity* was the official teaching of architecture in Porto (first in the School of Fine Arts, after 1984 in the Faculty of Architecture); but it also occurred in the studios of the architects (teachers and/or former students), where common principles of thought, method and taste were shared with the young disciples. The educational system of the *School of Porto* is thus complemented by the practice of the studios, where the small scale allows the proximity between master and apprentice. There are similarities between the work methods in the *School* (where the Studio classes simulate the work of an office, in a process called *school-atelier*) and in the studios (where the same kind of approach is more realistical, because it takes place in a professional environment); so, the *ateliers* of the Porto architects are an unofficial complement of the pedagogy of the *School*: successive generations of students/employees, will become teachers/chief-architects, influencing new generations with their experience.

## Genesis

The origins of this identity can be related to the work of Fernando Távora, as a theoretician, an architect and a professor; but it would be incorrect not to mention two of the antecedents that contribute to the emergence of these ideas: Marques da Silva and Carlos Ramos.

We must go back to the time when the presence of Marques da Silva<sup>1</sup> dominated the teaching of the School of Fine Arts of Porto (EBAP) to find the source of some of the features that still exist in the present teaching of the *School*: the accuracy in the drawings, the importance given to the function and to the construction in the design options, the eclectic use of different languages and the practice of the *school-atelier* (Cardoso, 1997).

Later, we can find a very important contribute in the pedagogy of Carlos Ramos,<sup>2</sup> who achieves a clear modernization of the teaching of EBAP, introducing new methods (influenced by the pedagogy of the Bauhaus) and surpassing the remaining anachronistic features of the “Beaux-Arts” legacy (Filgueiras, 1986). However, if we can find in the ideas of Carlos Ramos the will to seek a Modern Portuguese Architecture, he was not able to clearly point out *the way*, neither in his writing nor in his architecture.

Thus, the birth of the *Porto School* is mainly related to Fernando Távora. In his text “The Problem of the Portuguese House” (Távora, 1945) we can find the three principles that will support this *identity*: learning from the past, thinking about the present and projecting the future, combining the specificity of each site and of each context with the modernity of the coeval foreign architecture. This attitude (considering context, history and modernity as major references) is the genesis of what we can call “the Architecture of Porto” and the basis that underlies this *School*.

This text marks the beginning of a theoretical construct that Távora formulates from 1945 to 1955. In the beginning of his long teaching career in EBAP (from 1951 to 1993), he laid the seeds for the genesis of a *School* and found fertile ground in the period between 1955 and 1961, when several events of major importance for the recognition and consolidation of these ideas occurred: in 1955 the field work of the “Surveys on Portuguese Vernacular Architecture” begins and Álvaro Siza starts his

< Figure 1. Municipal Market of Vila da Feira, Fernando Távora, 1953–59. Photo by Eduardo Fernandes.





2



4



3

Figure 2. Tennis Pavilion of Quinta da Conceição, Leça da Palmeira, **Fernando Távora**, 1956–60.

Figure 3. Cedro Primary School, Gaia, **Fernando Távora**, 1954–59.

Figure 4. Holiday House in Ofir, **Fernando Távora**, 1957–58.

Figure 5. AXA Stadium, Braga, **Eduardo Souto Moura**, 2004.

Photos by Eduardo Fernandes.

collaboration in Fernando Távora's office; in the following year, a delegation of Porto architects participates in the CIAM X; in 1957 an important Reform of the teaching of the Fine Arts begins to be applied in Portuguese Schools; in the next year Siza leaves Távora's studio and starts working in his own office; in 1960, Nuno Portas starts to disclose the work of these two architects in the magazine *Architecture*; finally, in 1961, the book that summarizes the results of the "Surveys" is published (SNA, 1961). Also in this period, we should notice the beginning and / or conclusion of some important projects: the Municipal Market of Vila da Feira, the house of Ofir, the tennis pavilion in Quinta da Conceição and the school

of Cedro (Távora), the Tea House in Leça da Palmeira and the swimming pool in Quinta da Conceição (Siza) [figures 1,2,3,4,5,6]. The signs of the genesis of a Modern Portuguese Architecture appear in all these buildings, where we can recognize the full realization of the intentions expressed in Távora's theoretical work: their modernity is expressed in the *quality and accuracy of the relationships they create with life, in a seamless integration of all elements* (Távora, 1952).

### Common Grounds

The teaching of Architecture in Porto was always based on a *Vitruvian* understanding of the role of the

architect, considered to be an expert on general knowledge (a technician/artist who knows how to relate with other technicians and artists). This concept implies an idea of comprehensive (but not specialized) education of the architect, in the belief that he is the single professional that, by the scope of his training, can synthesize all the different disciplines converging in architectural work. But implicit in Távora's approach there was a new disciplinary attitude: he believed that the architect should learn to put his efforts in the service of the collective, assuming architecture as a result of a *collaboration* between all the individuals involved in the planning, design, construction and use of buildings and spaces. This concept of *collaboration* was intended in two categories: *horizontal, manifested among men of the same time*, and *vertical, which takes place between men of successive times*, because the culture of the present should manifest the legacy of the past (Távora, 1953).

The teachers/architects of the Porto School also share a common understanding of the role of manual drawing as a *primary method of conception and synthesis* in the process of design. In the most interesting examples of their architecture we recognize the use of this instrument to combine different models and languages in a *compound that aggregates responses to multiple factors* (Távora, 1957), relating the building with the site in an exercise of figurative art organized along a *promenade architecturale*.<sup>3</sup>

Therefore, the *School of Porto* is a *theoretical construct*, the result of a long journey through a winding road, guided by a set of conscious choices, in which the consciousness of the discarded paths is as important as the choice of the way(s). However, beyond the evidence of this common ground, the theoretical identities of the *School* (like its architectural expression) do not present themselves as a coherent whole, with a linear sequence and a unitary language. They never did: their higher quality lies, precisely, in the richness of its evolutionary process, built around some (few) consensus and diverging on everything else.

### To Be or Not to Be

Throughout the 20<sup>th</sup> century, the teaching of architecture in Porto lived in a permanent state of convulsion. The departure of the Marques da Silva (in the end of the 30s) and Carlos Ramos (in the end of the sixties) caused the emergence of two important identity crises and (in the 90s) the retirement of Fernando Távora triggered a similar feeling of emptiness. Before and after the Portuguese Revolution of 1974, the social and political involvement of teachers and students almost paralyzed the *School*. In the late seventies and the early 80s, the process of transition from the Fine Arts School to the University im-

plied great internal debate and some difficult pedagogic battles. Finally, along all this years, the implementation of the *school-atelier* paradigm had to face successive difficulties in achieving a good teacher/student ratio. Yet, throughout the history of the *School*, it seems clear that the transmissibility of the ideas and methods that we can relate to its *identity* has been achieved, despite the successive crises and problems.

However, the ideas of the *Porto School* were more cohesive and coherent, as a response to the Portuguese context, when this background inspired clear reactions. At the end of the 80s, Porto architects cease to be motivated by the response to a hostile context (the ancient fascist regime) or a dramatic situation (the needs of the populations in the SAAL Program); we can even speak of a growth crisis, triggered by the growing international impact of the work of Álvaro Siza. Facing this new and friendly context, the *School* loses coherence and internal cohesion; the interrelated critical discourses of Nuno Portas, Álvaro Siza, Manuel Mendes, Alves Costa and Jorge Figueira represent a reaction to this new condition, less clear, more diffuse and dominated by the appearance of a stereotypical idea of the architecture of the *School* (a *Porto Style*).





This new internal criticism leads to the generalization of a negative discourse, that proclaims that the term *School of Porto* designated an entity that no longer exists (namely, that Porto has a Faculty of Architecture, but not a *School* with a shared Identity). This is the result of a change of scale: the *School*, seen as the result of the transmission mechanisms of a way of *thinking* connected to a way of *doing*, is now expanded into a complex network of mutual influences of many architects and materialized through a great number of buildings, texts and images. The list of masters is no longer limited to the inevitable names of Fernando Távora, Álvaro Siza and (more recently) Eduardo Souto Moura: it includes many other architects or critics with published work.

This implies that there isn't a consensus around an idea of *School*: there are many theoretical and practical interpretations of its ways. However, we can find new common principles in the writings of Alves Costa and in the work of Álvaro Siza (in the 80s), allowing the update of the *identity of the School* in a new interpretation that is justified by the history of Portuguese architecture, highlighting the *miscegenation* processes that characterize its specificity. It explains why the languages of the *Porto School* can differ, according to the intentional choice of external influences, deliberately used in a process of *critical eclecticism*,<sup>4</sup> considering the intentional relations between context, scale, function, image and meaning.

### Porto Style or Porto School?

Today, we continue to recognize in the work of the *School of Porto* the results of the transmission of a way of *thinking* related to a way of *doing*, connecting a concern with social responsibility (perceived through the notions of *collaboration* and *relationship with the context*) with a timeless concept of modernity, the belief that architecture should be considered *figurative art* (perceived in the pace of a promenade thoroughly controlled in time and

space), a *Vitruvian* understanding of the education of the architects, the *practice of manual drawing* as a primary method of conception and the requirement of *accuracy* in the processes of work and communication. Although we can find in the different approaches of Álvaro Siza and Souto Moura [figures 7,8] the same principles of this current *identity of the School of Porto* (sharing the legacy of Fernando Távora as a common ground), there is an increasing variety of interpretations that the multiple agents of the *School* can do, following the same concepts.

Throughout the long history of the *School*, two phenomena seem to coexist. The first is an uncritical reuse of formal references, reproduced from published images of the work of the main architects of Porto, which establishes what we can call a *Porto Style*: a tendency to perpetuate the repetition of images without understanding the processes that generated them. It is the awareness of the existence of this *Porto Style* that justifies the various statements on the *death of the Porto School* that we can find, since the 90s, in most of the discourses on the subject.

But we can also find recent examples of the transmissibility of the *identity of the School*; they imply the consideration of the theoretic values of each external reference and its conscientious use, facing a given context and program, in an attitude that may be more or less critical of these circumstances. In this case, the ways of *Porto* are understood and can be updated by the new generations of architects, working with new references of the present international architectural context (exponentially more complex, profuse and accessible) and with new national values, allowing the appearance of languages and shapes that are (apparently) distant of what is usually called *the language of the Porto School*.

In the globalized world in which we now live, the habit of *miscegenation* and the *meeting of cultures as a condition* can no longer be considered a Portuguese specificity. But the cultural heritage of the *School of Porto*







7



8

Figure 6. Faculty of Architecture, Porto, **Álvaro Siza**, 1986–96.

Figure 7. Tea House in Leça da Palmeira, **Álvaro Siza**, 1958–63.

Figure 8. Swimming Pool of Quinta da Conceição in Leça da Palmeira, **Álvaro Siza**, 1958–65.

Photos by Eduardo Fernandes.

can still present an important set of lessons on how to consciously undertake these mixing processes. Therefore, the full transmissibility of the ways of the *School* implies an equidistant position between the respect for this inherited principles and the will to update them. After all, it was this process of evolution that allowed the survival of this *identity*, from 1945 to the present day.

Today, as always, the relationship between architectural practice, theory and education is crucial: to survive the trivialization of the formal models it creates, the *School of Porto* needs a permanently renewed theoretical construct, adapting its pedagogy to the information society and maintaining the vitality of the methods of transmission of its way(s).

#### Notes

1. Marques da Silva was Professor of Architecture since 1907 and the Director of the School after 1913.
2. Carlos Ramos was Professor of Architecture since 1940 and the Director of the School from 1952 to 1969.
3. *Promenade architecturale* is a concept theorized and applied by Le Corbusier and implies that buildings can be perceived as a sequence of forms and spaces in a path ordered, controlled and paced by the architect.
4. *Critical eclecticism* (Fernandes, 2011) is an expression that we con-

sider more appropriate to designate the architecture of the Porto School than the former denomination *Critical Regionalism* (Frampton, 1985), which was very accurate to describe the work of Siza in the 60s and early 70s, but is no longer valid from the 80's to the present day.

#### References

- Cardoso, António, *O Arquitecto José Marques da Silva e a Arquitectura no Norte do país na Primeira Metade do Século XX*, Porto, FAUP, 1997.
- Fernandes, Eduardo, *The Choice of Oporto: Contributions to Update the Idea of a School*, Ph.D., Guimarães, School of Architecture of the University of Minho, 2011.
- Lixa Filgueiras, Oliveira, "A Escola do Porto (1940/69)", Carlos Ramos, *exposição retrospectiva da sua obra*, Lisbon, Fundação Calouste Gulbenkian, 1986.
- Frampton, Kenneth, *Modern Architecture: a Critical History*, London, Thames and Hudson, 1985 (1<sup>st</sup> ed. 1980).
- SNA, *Arquitectura Popular em Portugal*, Lisbon, Sindicato Nacional dos Arquitectos, 1961.
- Távora, Fernando, "O Problema da Casa Portuguesa", *ALÊO*, Lisbon, November 10, 1945, 10.
- Távora, Fernando, "O Porto e a Arquitectura Moderna", *Panorama* n.º 4, 1952.
- Távora, Fernando, "Da Colaboração em Arquitectura e Urbanismo", *Comércio do Porto*, March 24 1953, 5.
- Távora, Fernando, "Casa em Ofir", *Arquitectura* n.º 59, Lisbon, July 1957.
- Vitruvius (2006), *De Architectura Libri Decem* (1<sup>st</sup> century a.C.), Lisbon, IST Press.

#### Eduardo Fernandes

Architect (1992, Faculty of Architecture, Porto University), Master in Planning of the Urban Environment (1998, Faculties of Architecture and Engineering, Porto University). He is Assistant Professor (and Course Director) of the Master in Architecture of Minho University, Portugal and author of several architectural projects and published texts.

# The Beginning of the Beginning: Kahn and Architectural Education in Philadelphia

58



**P**aul Philippe Cret was one of Penn's greatest teachers and one of the city's greatest architects. Louis I. Kahn, the University's most well-known teacher, was one of Cret's students. Holmes Perkins, educated at Harvard under Walter Gropius, reshaped the School and changed its orientation. The key task of the three architects was to articulate a new understanding of what is specific to the discipline, recreating its professional and intellectual center and orientation. This would not require the replacement or elimination of what had been developed in the preceding years; instead the task was to augment it with a more focused sense of what architecture itself is all about.

By David Leatherbarrow

*Education is something which is always on trial because no system can ever capture the real meaning of learning.*

Louis I. Kahn, "I love Beginnings" 1972

*Questions in class today about where is Architecture going were very easy to answer because it is not going anywhere else than it ever was... But Architecture itself is constantly waiting for a new aspect of it...*

Louis I. Kahn, "Architecture" 1972

**T**he basic task of teaching architecture is to instruct in the skills and knowledge that constitute the discipline. Architecture is a specific way of knowing and acting in the world, and this can be taught. Given the discipline's richness, one might think that learning is a life-long process. Educational programs, however, must perforce have limits. Penn's professional program, for example, is three years long. Obviously, a student with a first degree in biology or art history cannot learn all there is to architecture in three years. Because there is so much to learn, teachers must help students prepare themselves for continual learning. This can be done by getting students into the habit of asking primary questions, wondering about key topics, risking action based on untested premises. When students develop in this way they not only continue to learn, but also to express their own thoughts and values, and care for the world in which their work will find its place.

Teachers approach their task from different points of view, based on their own experience, interests, and abilities. Those who emphasize the interrogative aspects of architectural education teach theory and history. Others,

who concentrate on modes of architectural description and representation, instruct in drawing (in its range of techniques). Still others attend to the building's physical realization. These different points of view have different means of instruction suited to their subjects. That diversity is an inevitable consequence of a primary intention to build a foundation for continued learning.

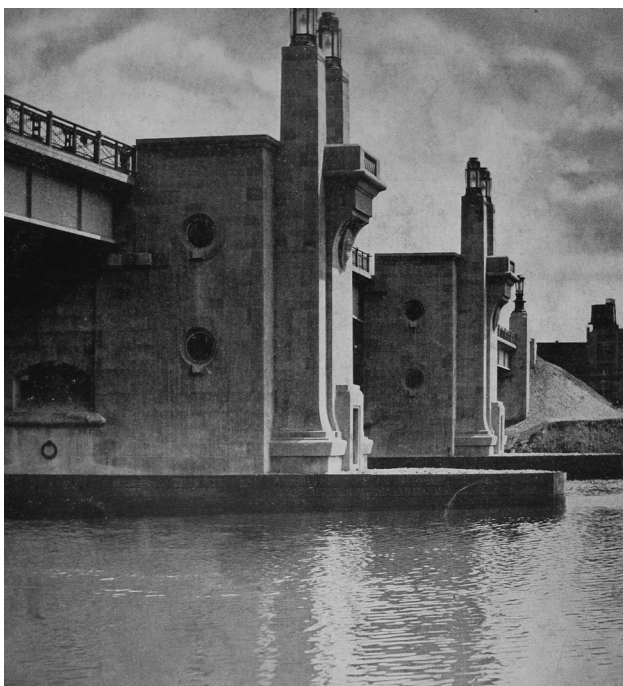
Penn's program in architecture has a long and distinguished history. Yet, in 1984, when I first arrived there, the program did not have a clear direction or orientation in the field. About a decade and a half before, Kahn, Penn's most well-known teacher, had died. With a figure like Kahn on the faculty there is little need for a vision or structure of a curriculum. He was a magnet to students throughout the world. Nor was the need for a core educational program, nor anything like a sequence of studio or theory courses; he was the center of the school. After his death there was an enormous vacuum and a struggle for identity. There were, of course, studios at the various levels, also technology and theory courses. They had been in place since the 1950s, when an incoming dean, G. Holmes Perkins, reshaped the School and changed its orientation.

Holmes Perkins was educated at Harvard under Gropius. After leaving the Bauhaus and spending some time at Harvard, Gropius concluded that universities were far too bookish for architectural education. Architectural knowledge was to be advanced through architectural practice, in the office not the library. Holmes Perkins, despite his awareness and acceptance of Gropius' position, not only remade the School at Penn (to include architecture, landscape architecture, city planning, fine arts, and urban design) but established Ph.D. programs in architecture and city planning—students would learn in the studio and its workshops *plus* the library. The paradox of coupling these divergent orientations was clear from the start: what kind of research and study would help advance architectural creativity? What sort of reflection is internal to action in this field? How could critical thought, disciplined by theoretical and historical study, contribute to design while challenging it? More simply and finally:





1



3



2

Figure 1. **G. Holmes Perkins**, House in Brookline, Massachusetts, 1938.

Figure 2. **Paul Philippe Cret**, Rodin Museum, Philadelphia, 1929.

Figure 3. **Paul Philippe Cret**, University Avenue Bridge, Philadelphia, 1930.

in what ways would architecture as a productive activity benefit from scholarly inquiry and research?

The creation of the Ph.D. programs was not an answer to an obvious need. They were (and are) relatively new when compared to programs in other subjects, and those that do exist are relatively few in number. No single or simple reason explains these facts, but their comparative youth and scarcity will be less surprising when one remembers that architectural study at all levels is relatively new to universities. Until a century ago education in architecture occurred in other settings, most often professional offices, ateliers, workshops, or building sites, sometimes academies. Insofar as they were places of professional activity, one might explain architecture's recent arrival to the university as a consequence of the difference between professional and academic knowledge, on the assumption that the first cannot be conveyed through the channels of the second. But the long-standing and important roles of other professional disciplines in the university, law and medicine for example, cast doubt on that explanation. A more useful distinction is one that arose in the early history of Penn's program; namely, the division between research that is *productive* and scholarship that is *descriptive*. Marx's dream for philosophy—to change, not merely interpret the world—is an unremarkable commonplace of architectural thought. Architecture is a form of engagement *par excellence*, aimless if not oriented toward given conditions, intent on their transformation. Obviously there are many "ways of world making," just as there are many media of creative expression. But the particularity of architecture's productive sort of knowledge, that it gets its hands dirty in the actual transformation of the environments in which we live, makes it something of a misfit in universities [figure 1].

Holmes Perkins appointed and retained only those faculty who were and would remain active in both theory and practice; which is to say, all professors—no matter what their subject area—were expected to maintain some involvement in project making and design work. This policy set the stage for a distinguished line of architect/authors within the School: Louis I. Kahn, Aldo van Eyck, and Robert Venturi in architecture, and Garret Eckbo (as a studio critic) and Ian McHarg in landscape architecture, and Denise Scott Brown in urban design. Generally speaking, the guiding premise was that involvement in practice insured awareness of current realities. Thus, professors who taught in studio also taught in seminar and lecture rooms. This is still true at Penn. The idea was that if students could see that their professors observed no distinction between reflection and making, a synthetic view of the discipline would arise in them quite naturally. Over the years, however there have been some problems with

this arrangement. Insofar as the architecture programs are part of a university that contains departments of art history, engineering, and other faculties that have more than a little expertise in the subjects taught in architecture, disagreements have arisen between these groups, particularly with respect to rival claims about depth of knowledge and relevance. Each of the architects listed above discussed matters of architectural history and building technology in their writings, but not exactly in the ways that these subjects were treated by art historians and engineers.

Thus, the School at Penn had a number of unique characteristics; it was comprised of a faculty capable of showing connections between theory and practice, who were not only dedicated to the Modern tradition along humanist lines, but also aligned with colleagues in related disciplines (city planning, landscape architecture, and the fine arts), and were deeply aware of architecture's historical and scholarly traditions [figure 2].

The story of architectural education in Philadelphia does not begin with Holmes Perkins, however; rather, with Paul Philippe Cret, who was not only one of the School's greatest teachers but one of the city's greatest architects. Cret arrived to Philadelphia in 1903, having practiced in Lyon and completed his studies at Paris' *École des Beaux Arts*. He regarded Julien Guadet's *Éléments et Théorie de l'architecture* as the sole "authorized document on the Modern teaching in the École in the last fifty years." Yet, he was also the figure who guided the School toward acceptance of Modern architecture—less as a matter of style than in response to wider cultural and political transformations. In a paper from 1933 on the progress of modern architecture he alluded to "barbarism" of certain aspects of contemporary culture.<sup>1</sup> He seems to have been prompted by events in Germany at the time, events that led to a measure of brutality previously unknown in the whole of human history [figure 3].

Looking more narrowly at architecture, he acknowledged the likelihood of doubts about 19<sup>th</sup> century methods when the facts of modernization were taken into account, and the need for continual questioning. In 1938 he wrote "any complacency we might have had [...] about standards and theories has been rudely shaken during the last ten years." No school could avoid "the conflict rending the profession." It was time to think again about what to teach, to rediscover what was primary in the discipline. In response to teachers and students who urged for a thoroughgoing adoption of modernism and corresponding rejection of traditional methods, he argued instead for a reinterpretation of foundational principles, in anticipation of what he called a "new classicism." Louis I. Kahn was one of his students [figure 4].



Kahn's texts show that he, too, was aware of the productive role of doubt about inherited methods and the need to research into basic principles and methods. Only when the university is "cleaned of the market place," he warned, can it become a site of real research.<sup>2</sup> "Only the purest kind of thinking [only the kind that] leads the individual mind to its specific way of thinking should be in the university."<sup>3</sup> Thought as pure as Kahn intended begins with wonder, the courageous and frank admission of unknowing, of doubt about basic things, such as a room, a wall, or a window. The first impediment to teaching and learning such as this is the notion that study programs are dedicated to solving problems, such as the disorder of American cities in the inter- and post-war years. Kahn maintained that even if clients pay for answers, architectural research depends on questions, as creative design does. A good question, he said, is much more valuable than a brilliant answer. Why? Because questions bridge between what he called architecture's *measurable* and *un-measurable* dimensions. One way to think about this distinction is to couple it with another that was very provocative when he first posed it: the difference between buildings and architecture. Architecture, Kahn said, does not exist; only buildings exist. For this reason architecture must be searched for, as if it has been lost, sought after, as if were out of reach; and not once or twice, but repeatedly. What the philosopher Edmund Husserl said of

himself, that he was a perpetual beginner, can be said of the architect who has a research program. This self-identification also defines the central and simple meaning of design research: its real challenge is that it is a *quest without an object*. This explains Kahn's familiar question: "how am I doing Le Corbusier?"<sup>4</sup> Kahn, too, was moving towards an *architecture*, in full recognition that one did not exist. At the same time, he felt one can only imagine architecture through specific buildings [figure 5].

Defining education in this way couples it with the issue of beginnings, what Kahn called the search for *volume zero* or *minus one*. Each problem in the design studio was an opportunity for students and teachers to begin again, to reverse the roles of the clear and the obscure, not to make the second the preamble to the first but to discover what is unclear in what seems so obvious. Moving forward depends on going backward. The target of this kind of inquiry can be called *the beginning of the beginning*. While radically preliminary, this kind of start anticipates its end. For this reason he also called the beginning an "eternal confirmation" that reveals what is natural to man. "I try to look at my work," he said, "with a sense of what is forthcoming," the yet not said and yet not made, for that, he advised, is what "puts the sparks of life into you."<sup>5</sup> But again, the subject matter is "his work;" which is to say, the set of tasks he was given *in those days, in that city*. There can be no approach toward architecture apart from ex-

Figure 4. **Louis I. Kahn**, Fisher House, Philadelphia, 1967.





plorations of the concrete problems of a particular building—its location, program, kind of construction, and so on. Here, then is the unavoidable paradox: the search for beginnings unfolds in the midst of current conditions. Research finds its foothold in the middle of things, but in that context it seeks beginnings that anticipate ends.

Kahn's sense of unending beginnings allowed him to offer a surprising view of teaching: "as you know," he said, "I am a teacher which means really I am teaching myself and whatever rubs off, the student gets."<sup>6</sup> The work of teaching "is to present the yet not said[,] the not yet made. It is [a form of] self-inspiring."<sup>7</sup> The key in both the professional office and the academic studio was questioning, beginning again. Kahn wrote: "Now I wish to tell you what I feel when I enter the classroom. To me the class is a check. I really couldn't practice without it. I consider the students sort of pure in their way, and I consider myself as having to answer to that purity."<sup>8</sup>

In each of the three cases of education at Penn I have briefly described, Cret, Holmes Perkins, and Kahn, the key task was to articulate a new understanding of what is specific to the discipline, recreating its professional and intellectual center and orientation. This would not require the replacement or elimination of what has been developed in the preceding years; instead the task was to augment it with a more focused sense of what architecture itself is all about.

## Notes

1. Cret, Paul Philippe, "A Recent Aspect of an Old Conflict," (1938), White, Theo B., *Paul Philippe Cret Architect and Teacher*, Philadelphia: Art Alliance Press, 1973, 83–87.
2. Kahn, Louis I., "The Profession and Education" (1970), Wurman, Richard Saul, *What Will Be Has Always Been*, New York, Rizzoli, 1986, 92.
3. Ibid.
4. Kahn, Louis I., "How'm I Doing, Corbusier," (1972) Latour, Alessandra, ed., *Louis I. Kahn. Writings, Lectures, Interviews*, New York, Rizzoli, 1991, 297–312.
5. Wurman, Richard Saul, *What Will Be Has Always Been*, New York, Rizzoli, 1986, 92, 176, 177.
6. Latour, Alessandra, ed., *Louis I. Kahn. Writings, Lectures, Interviews*, New York, Rizzoli, 1991, 102.
7. Latour, Alessandra, ed., *Louis I. Kahn. Writings, Lectures, Interviews*, New York, Rizzoli, 1991, 309.
8. Wurman, Richard Saul, *What Will Be Has Always Been*, New York, Rizzoli, 1986, 92, 176, 248.

## David Leatherbarrow

Professor of Architecture and Chair of the Graduate Group in Architecture at the University of Pennsylvania School of Design, Philadelphia, where he has taught since 1984. He received his B.Arch. from the University of Kentucky and holds a Ph.D. in Art from the University of Essex. He has also taught in England, at Cambridge University and the University of Westminster (formerly the Polytechnic of Central London). He is primarily known for his contributions to the field of architectural phenomenology. Questions of how architecture appears, how architecture is perceived, and how topography shapes architecture often direct his research.

Figure 5. **Louis I. Kahn**, Yale Center for British Art, New Haven, 1974.



# Architectural Practice, Education and Research: on Learning from Cambridge

64



This paper reports firstly on the interrelated roles of architectural practice, education and research and focuses on the unique contribution of the Cambridge School in this area. The following section presents the drawbacks derived from a research assessment exercise where architecture was no longer considered an academic subject to be developed in a research intensive university and, finally, concludes that architecture in Cambridge succeeded in spite of its problems, not in the absence of them, which suggests strongly that other European architectural schools can learn from it.

By Mário Krüger

Established in 1912, the Cambridge School of Architecture celebrated last year its centenary within an adverse economic climate for architectural education, practice and research all over Europe.

If it is certain that the School in its early years can be "best interpreted as a combined school of architecture and art history" (Saint, 2006), it is equally true that it had its *momentum* when Leslie Martin was appointed its first professor of architecture in 1956.

Let us recall, in this respect, Martin's words at the 1959 Conference on Education in Architecture held at Oxford and organized by the Royal Institute of British Architects (RIBA) where he raised the advantages of architecture teaching in a university background (Martin, 1983): "The fundamental feature of education in architecture is that it involves different types of knowledge. From the university point of view this raises two questions. Were architecture to occupy the place it deserves in the university and if the knowledge it promotes were taught at the highest level it will become necessary to establish a link between the [...] arts and the sciences [...]. Furthermore, universities will be asked to provide much more than the study of the techniques or parts of this or that form of knowledge. It is to be hoped that knowledge will be orientated and developed by principles, that is, by theory. Theory [...] is the set of principles which explain and interrelate all the facts of an area of knowledge. Research is the instrument by which theory advances. Without it teaching can have no direction and thought no incision."

As Professor at Cambridge, Martin developed to the full the significance of architecture being taught at the University and not, as in the past, at specialist schools like the Beaux-Arts and the Bauhaus. With his appointment as head of the Department of Architecture at Cambridge the institutional refoundation with the Arts and Crafts tradition, which still prevailed in the university at the time, took place. In fact, in the Department and until 1961, only three years were taught which led to a B.A. degree but which was not recognized by RIBA for professional practice. Besides this, the kind of teaching was, to a large extent, a subsidiary of a tradition founded by Edward James Prior in 1912 when he was appointed Professor of Fine Arts at Cambridge. Prior, who had been a student of Norman Shaw and an active member of the Arts and Crafts movement, wanted to "establish at Cambridge, where there were countless researchers, a school of research on the fundamentals of construction" (Hawkes, 1996).

This objective, pursued but not achieved by Prior, was not immune from the intellectual climate of Cambridge



< Figure 1. Sketch made by **Le Corbusier** illustrating the Doctor Honoris Causa's procession in 1959. *Carnet de Croquis* n° 57. © Fondation Le Corbusier.



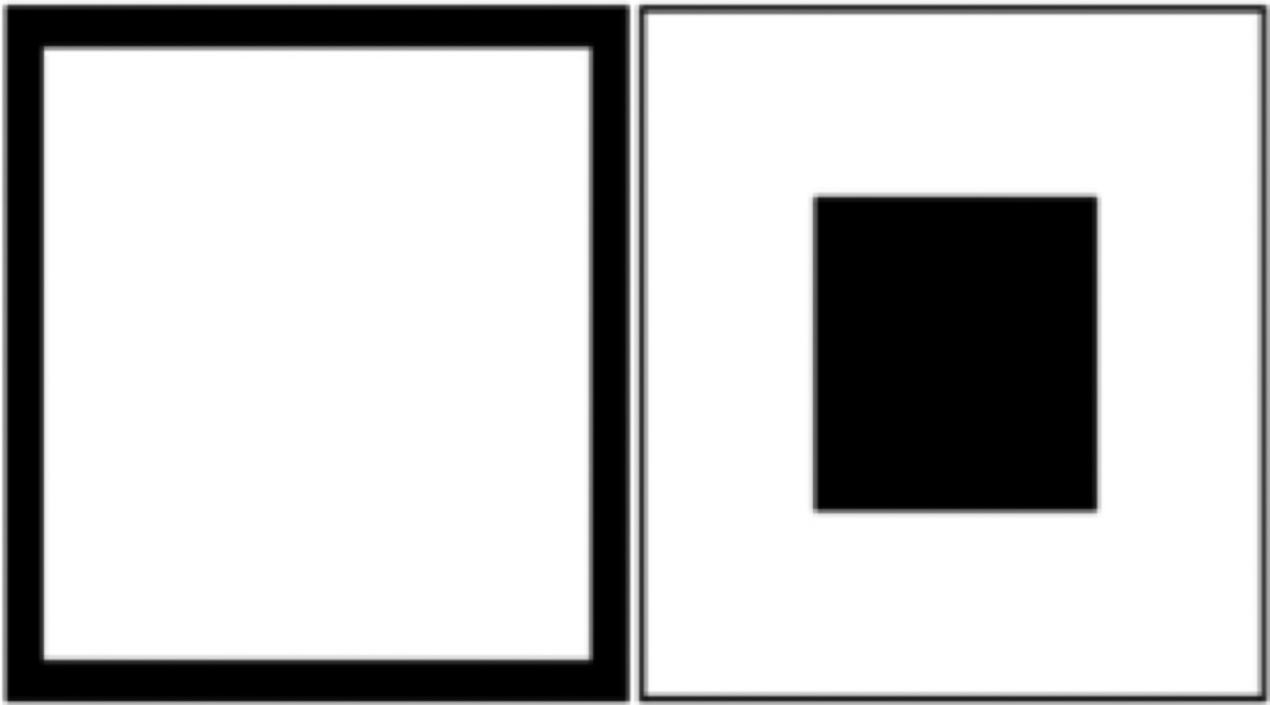


Figure 2. Emblem of LUBFS and Martin Centre for Architectural and Urban Studies showing diagrammatically land use occupation for perimeter and centralized built forms.

in the 30s and 50s. Earlier, Bertrand Russel with Alfred Whitehead had proposed the logical fundaments of mathematics, Ludwig Wiggstein was developing an analytical way of understanding language even going as far as to ask his students at King's College "and why not an arithmetic of forms" and Alan Turing, while still an undergraduate at the same college, was creating a theoretical machine which could pass through one stage to another by following a set of proscribed rules, thus anticipating the logical structure of today's computers.

In 1957 Le Corbusier visited the Department of Architecture at Martin's invitation where, in a moment of jubilation after Le Corbusier's lecture the sculptor Henry Moore with his back to the blackboard sketched the figure of the eminent architect.<sup>1</sup> In an expressive way, Martin's program for the Department of Architecture at Cambridge was symbolically mapped out for him—look straight ahead, adopt design as a disciplinary instrument and deepen the legacy of the Modern Movement. In other words, research, compose and develop.

It was under the proposal of Martin that Le Corbusier received the honorary Doctorate by the University. In this event, as the traditional procession left the Senate House, three architectural students started "showering the great man with confetti and shouting 'À bas l'Académie!' (Down with Academia!)", Le Corbusier's well-known tirade against the *École des Beaux Arts*" (Sergeant, Su-

met & Mullin, 2012). That event today sounds like music [figure 1]. Let us see why?

While transforming the School Martin managed to have Colin St. John Wilson, Colin Rowe and Peter Eisenman appointed and he also attracted students from other departments at Cambridge who, under the double option system, studied the Mathematics degree course together with the degree in Architecture. Thus Christopher Alexander, Lionel March and Philip Steadman ended up by joining Leslie Martin's Department. Martin, together with Lionel March, who had been accepted by Cambridge to read Maths on Alan Turing's personal recommendation, founded the Centre for Land Use and Built Form Studies (LUBFS) in 1967.

Three lines of inquiry were developed at the time in LUBFS, with the aim of producing environmental and urban simulation models as well as a university study and, in 1973, this research unit was transformed into the Martin Centre for Architectural and Urban Studies with the purpose of, in nowadays, successfully to cross research boundaries with other disciplines, to develop postgraduate courses and to make an impressive amount of research contracts, mainly founded by research councils [figure 2].

This story of success had, however some drawbacks. In fact, a "hand note" was addressed to several schools of architecture in 8 November 2004 asking to send a

letter of support to the University Vice-Chancellor under the heading "The closure of the Cambridge architecture school suggests that Architecture as a University subject is under threat".

As a matter of fact this document informed that "The University's General Board has recommended the closure of the Department of Architecture. A decision will be taken on 8 December and, if there is no reprieve, the matter will go before the University for a vote. The reason for the decision is said to be academic but the root cause is the financial loss caused by the Department's slippage from a 5 grade to a 4 in the 2001 Research Assessment Exercise (RAE). The recommendation for closure was totally unexpected."

This document also stressed that "Following the RAE, the Department lost £350,000 per annum" and also that "the loss of Cambridge graduates would diminish the standing of the entire profession..

As a consequence a fantastic support was felt in Cambridge, namely from several practitioners and professors in Portugal that were extremely concerned to hear about the recommendation that the Department of Architecture should be closed. It is worthwhile to review the main issues raised in this letter dated 21 October 2004:

*We in the Portuguese architecture community hold the Cambridge school in great affection and respect. Its first Professor of Architecture, Sir Leslie Martin, played a major part in supporting and inspiring younger architects during the latter days of the Salazar regime. He did this through his work in Lisbon for the Gulbenkian Foundation and through the home that he built here for himself. In the years since, a number of Portuguese architects (including two of those signing this letter) have studied for higher degrees at Cambridge, taking advantage of the broad spectrum of research areas which Sir Leslie encouraged and which have continued to develop up to the present.*

*This breadth of research activity (and its relation to teaching) has been a model for university architecture schools all over the world and we can hardly believe that the place where it began may close. Only last year, there was a major contribution to a conference in Coimbra by a group from Cambridge which had, under the leadership of the Department, done some outstanding and internationally widely admired work on urban design and regional development. Our contacts also suggest that research in, for example, the field of environmental design (of particular interest here) and aspects of IT continue at a high level. We understand that the Department*

*has recently lost a substantial amount of income as a result of an external assessment. We also understand that the conduct of the latter has been widely criticized and that, as a result, changes to the framework of the next review are being made. We ask you to provide continued support so that the Department is not penalised following this unsatisfactory review but can continue its work within a more appropriate Framework.<sup>2</sup>*

The answer given by the University Pro-Vice-Chancellor, dated 3 December 2004, can be summarized in three points.

Firstly, research made in the Department of Architecture is not at the level of a "research intensive university" as Cambridge:

*I wish to correct a general impression which has arisen in a number of quarters that the General Board's decision was determined solely by the outcome of the United Kingdom's 2001 Research Assessment Exercise (RAE). It is true that this result formed an important element in General Board's consideration of two further separate reviews of the Department. In view of our international reputation as a research-intensive University, it would have been impossible for this not to be the case. What the General Board has determined both from these reviews and from serious concerns expressed by the School some two years after the 2001 RAE, is that the Department's research performance has not been satisfactory for some considerable time. This is evidenced by the fact that, in all but one RAE dating back to the 1980s, the Department's research has not been judged as being of mainly international standing which is the level of performance expected by the University. The University's RAE Review Committee was fully cognisant of the very real difficulties that Cambridge's Architecture Department faced in the 2001 RAE. However, comments from the Chairs of the other Schools in the University drew attention again as recently as 2003 to underlying areas of research weakness that are not compatible with a research intensive university such as Cambridge.*

Secondly, a teaching only school does not make part of the University academic strategy:

*There has been no criticism of the Department's teaching role and, indeed, the University as a whole recognizes that the Department is renowned for the quality of its teaching provision. Cambridge, howev-*

er, enjoys an international reputation as a research intensive university. Accordingly, the establishment of a teaching-only Department does not form part of the General Board's current academic strategy. It is also recognized that the Department's excellent teaching reputation hinges to a considerable extent on its very high level of individual teaching provision. This is very expensive and is difficult to justify at a time when the University is under considerable financial pressure, not least because our Funding Council allocation for undergraduate teaching falls far short of our expenditure in this area. In addition, the Department's performance in the last Research Assessment Exercise has resulted in a significant fall in income, which will adversely affect other arts subjects based within the same School.

Thirdly, architectural research interests will continue to flourish at the University level even if the Department is going to be closed:

*If the decision is taken ultimately to close the Department, this does not imply that the University will no longer accommodate architectural research or postgraduate teaching in the subject. We all share the view that the crossing of discourses is of vital importance, and that this is as true in Architecture as it is in all other areas within the University. Aspects of architecture would continue to flourish with the increasingly fluid boundaries between subjects and the corresponding growth of interdisciplinary research activities.*

In short, as such architecture is no longer an academic subject to be developed in a research intensive university but possibly elsewhere, since founding is not able to support entirely teaching provision. Furthermore, due to the "crossing of discourses" some aspects of architecture will naturally continue to be developed within the university but not necessarily in an architecture Department. As a consequence, if someone wants to get a more orientated professional degree the advisable action to take is to enrol in a more polytechnic orientated school and not in a research based university.

What Leslie Martin tried to achieve, the three inextricable strands of his architectural life—practice, education and research—were at stake.

At the moment a great number of Architectural Departments in continental Europe are under pressure to make research assessments with consequences which are not entirely acceptable within an academic environment where these strands are inextricable concurrent in order

"to establish a link between the [...] arts and the sciences."

Furthermore, the criteria for recognition of valuable research of most European universities appears as overvalued. It should be emphasized, instead, of what happens in other more descriptive and less purposeful scientific areas, particularly in the natural, physical as well as in social sciences, where there are no citation's indices in the field of architecture meaning that it is not possible, in the present state of development, to assume the reliability of this criterion alone, i.e. the relevance of the publications in the field of architecture measured by impact factors and other productive indices.

This quantification of scientific literature does not take into account a qualitative assessment, essential to a proper understanding about the disciplinary implications for the advancement of knowledge in architecture.

Indeed, a single architectural design can be of exceptional quality, regardless of the footage to be built, just as a scientific paper may also be of paramount importance, in addition to funding required for its development.

How to combine a vocational subject with the demands of a research intensive university that is the question. As Marcial Echenique (2012) replies: "The teaching of architecture requires both; the vocational teaching of design which is learnt through practice, and the academic research that advances knowledge through deduction and experimentation. It is quite remarkable that this little school—the UK's smallest—has managed to survive within Cambridge—a world leading research university. But it has always been able to combine pioneering research with practical design, which is the core of its ethos."

Coming back to Leslie Martin proposals to unite practice, education and research, Architecture in Cambridge succeeded in spite of its problems, not in the absence of them. That's surely not only a lesson to be learned but also another way of shouting again 'À bas l'Académie!'

#### Notes

1. Information provided by Professor Lionel March in March 1999, who attended Le Corbusier's lecture in the Department of Architecture at Cambridge University in 1957.
2. This letter was signed by Álvaro Siza (Professor of Architecture at the Oporto Faculty of Architecture, Oporto University, 1968-2003, and Pritzker Prize in Architecture, 1992); Nuno Portas (Secretary of State for Housing, Portugal, 1974-1975, and Professor of Architecture at the Oporto Faculty of Architecture, Oporto University, 1983-2004); Domingos Tavares (Professor and Head of Oporto Faculty of Architecture, Oporto University); Eduardo Marçal Grilo (Minister of Education, Portugal, 1995-1999, and Head of Education Department, Calouste Gulbenkian Foundation, Lisbon); Maria Clara Mendes (Professor and Head of Lisbon Faculty of Architecture, Technical University of Lisbon); Teresa V. Heitor (Professor and Director of the Course in Architecture at the Instituto Superior Técnico, Lisbon, 1999-2004); Manuel Correia Guedes; (Professor and Director of the Course in Architecture at the Instituto Superior



Técnico, Lisbon. Ph.D. Cantab, 1996); António Bandeira (Professor and Head of Department of Architecture at the University of Coimbra); Mário Krüger (Professor and Head of Departments of Town Planning at the University of Brasília, 1980–1982, and Department of Architecture at the University of Coimbra, 1998–2001. Ph.D. Cantab, 1978).

## References

- Echenique, Marcial, *Theoretical Research and Practical Design*, 2012. Accessed December 10, 2013, <http://www.arct.cam.ac.uk/Downloads/100-symposium-marcial-echenique>.
- Martin, Leslie, *Buildings and Ideas. From the Studio of Leslie Martin and his Associates*, Cambridge, Cambridge University Press, 1983.
- Hawkes, Dean, "The Cambridge School: Tradition, Research and Development", Carolin, Peter; Dannatt, Trevor, ed., *Architecture, Education and Research. The Work of Leslie Martin: Papers and Selected Articles*, London, Academy Editions, 1996, 122–127.
- Saint, Andrew, *The Cambridge School of Architecture: a Brief History*, Architecture Department's Compendium Exhibition catalogue, 2006. Accessed December 10, 2013, <http://www.arct.cam.ac.uk/aboutthedept/aboutthedept/home>.
- Sergeant, John; Sumet, Jumsai; Mullin, Stephen, "À bas l'Académie!": *Le Corbusier and Cambridge*, 2012. Accessed December 10, 2013, <http://www.arct.cam.ac.uk/Downloads/100-symposium-john-sergeant-sumet-jumsai-stephen-mullin>.

**Mário Krüger** ([kruger@ci.uc.pt](mailto:kruger@ci.uc.pt))

Full Professor at the University of Coimbra, was a member of the Centre for Land Use and Built Form Studies at the University of Cambridge, which in 1978 awarded him a PhD in the area of architectural and urban morphology. He was head of Department of Town Planning at the University of Brasília, 1980–1982, and of the Department of Architecture at the University of Coimbra, 1998–2001.

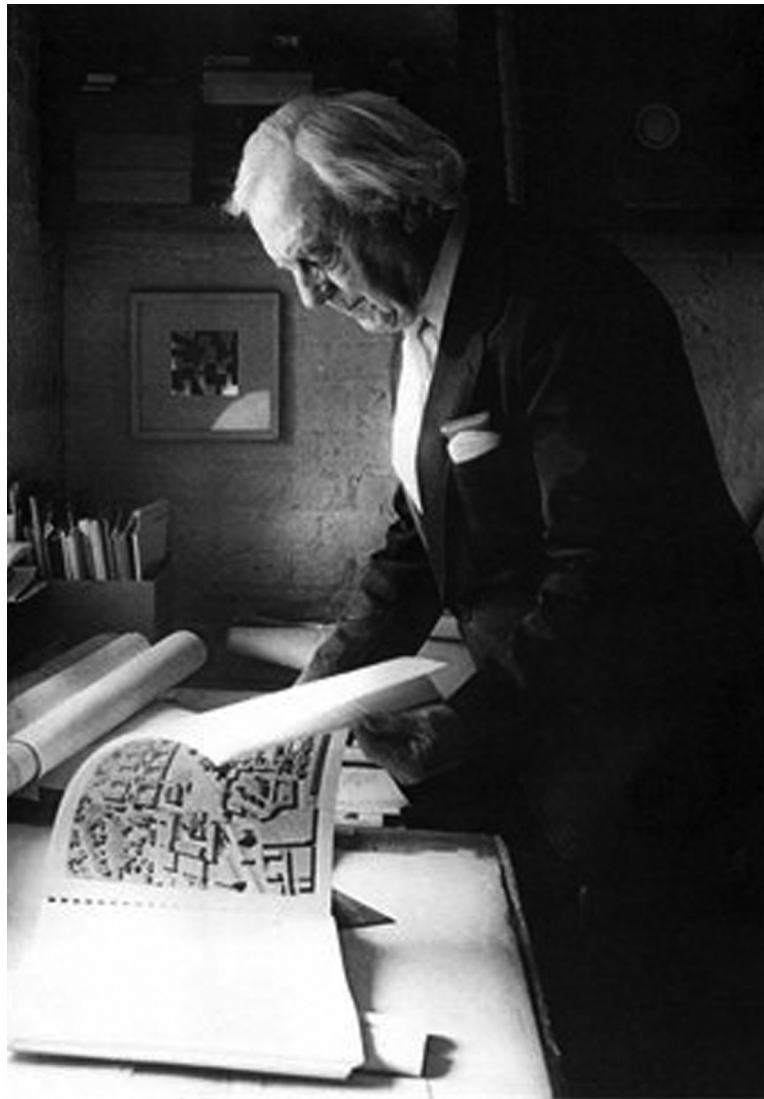


Figure 3. **Leslie Martin**, head of the Department of Architecture at Cambridge.

# The Restoration of Central City Alvar Aalto Library in Vyborg

By Maija Kairamo and Tapani Mustonen<sup>1</sup>

**The restoration of the Central City Alvar Aalto Library in Vyborg is completed and was officially inaugurated on 23<sup>rd</sup> November 2013.**

**The restoration has been a long process which started in 1991. The work was carried out as a Russian–Finnish joint cross-border project within the context of two different socio-cultural societies, customs difficulties, economic fluctuations and currency rates, which could change the situation overnight. The project has been a learning process for all who have participated during the past years.**

The building is a world famous masterpiece of 20<sup>th</sup> century Modernism. The tectonic forms are a result of functions. The architectural values are composed of modern technical solutions, which are the essential object of preservation, conservation and restoration.

The goal of the restoration has been to restore the original architectural values of the building. Some fragments from the Soviet renovation 1955–62 are preserved as a historical layer and some new solutions have been necessary in order to provide modern spaces and technology for the library.

The Aalto Library is a potential site to be included to UNESCO's World Heritage List. The WH selection criteria on authenticity of forms and design, materials and substance, use, techniques

and function were bared in mind during the work.

In the beginning due to limited resources, the restoration was divided into sub-projects which were carried out in order of urgency to stop the further degradation of the building. First it was necessary to ensure the adequate functioning of the technical infrastructure, electricity, heating, fresh-water supply and drainage.

## The Glass Façade 1994–1996

In order to propagate the aesthetic values of Modern architecture and as a manifestation of the restoration of Aalto's architecture the great glass wall was chosen. The original steel frame of the glass façade was conserved, as were the original brass hinges. All the metal parts were given rust-protect-

tion and painted and the wooden parts were protected with linseed oil. This method was later used to renovate all the steel windows, which mostly are originals from the 1930s.

## The Former Library Caretaker's Apartment 1997–2000

The apartment was converted into a work studio as a pilot project for the restoration of the library interiors. All the surface materials (carpets, paints) of the floors, walls, and ceiling, as well as the building components, were removed as far as the bare structure. The walls and the ceiling were plastered with lime plaster to the original level and painted with Sax Tempera. The corners were given the traditional pencil rounding profile. The floor was levelled and covered with linoleum and rubber carpet. The new doors were built in accordance with the original specifications, measurements, materials and finishes.

## The Roofs and Skylights 1996, 1999–2001, 2001–2003.

Already early in 1929 Aalto had studied flat roof technology and roof heating systems both in Finland and abroad in order to solve the problems of the library project. The original construction was probably an aerated concrete slab, with an insulation layer and concrete screed. The rainwater was led away along inner pipes and drains installed close to the eaves.

The restoration of the leaking roofs was important for technical reasons, but the roofs are also an essential characteristic of the architecture, and thus were a visible restoration object. The small



1



2



3



4



5



6

roof terrace above the caretaker's flat was repaired in 1996 as a pilot project to test the restoration methods for the roofs.

The first major roof repair was the lecture hall wing roof in 1999–2001. The later deteriorated bitumen and insulation layers above the original bearing concrete slab were removed. The inclination on the roof slab was improved with cement screed K20 to a minimum of 1:100. New bitumen waterproofing was installed all the way to the edges of the eaves and by the vertical structures up to a height of 500mm. The original inner rainwater pipes were cleaned and new stainless-steel drains were installed.

As new thermal insulation, 50mm polystyrene was installed as a dense layer on top of the felt insulation. Filter cloth was installed over the insulation layer. A new reinforced frost-resistant concrete slab was cast on top. Special attention was paid to the installation of the 20x20mm pine battens to form the slab joints. The original height of the parapet of the lecture hall wing was restored and the eaves covered with copper sheeting.

The roofs of the lending and reading halls were the first ones where Aalto used a large number of skylights as the main source of natural lighting of the interior. Later, this became one of the characteristics of his architecture. The 58 skylights were reconstructed to the original form. However, modern laminated glass was used instead of the original roughcast glass, and an additional pane of laminated glass was installed in the skylight drums to improve energy efficiency.

### The Exterior Stairs of the Lending Hall Terrace 2001

The stairs originally consisted of prefabricated reinforced concrete elements installed as beams cantilevered out from the brick wall. The concrete had deteriorated, the reinforcement bars had rusted and its bearing capacity had gone.

In the restoration, the carbonated concrete was removed, the reinforcement bars sandblasted and corrosion-protected, a few new reinforcement rods were added and new concrete was cast.

The restoration of this concrete structure is an example how to treat carbonated concrete, a problem which the restorers of modern architecture will face throughout the world.

### The Entrance Doors 2001–2005

With the exception of the main doors, which had bronze door jambs, the entrance doors of the library were originally steel-framed glass doors with brass handles.

The doors to the periodicals room, Children's Library entrance and the Northern Entrance doors had most of the original 1935 steel profiles preserved. As originals, they were conserved in an as authentic state as possible; even original hinges were preserved and conserved. The handles were reconstructed according to the original drawings, old photographs and a comparison with similar handles used in the Paimio Sanatorium.

### The Children's Library Entrance 2004–2005

The work entailed the restoration of both the interior and the exterior of the entrance. The exterior repair was the first test of exterior restoration of the whole building. It included rendering the walls with lime plaster and whitewashing them. The plinth was restored and the entrance flagstones were levelled. The ground around the entrance was lowered to its original height, which is a necessity around the whole building.

### The Periodicals Reading Room 2004–2005

Nowadays, the newspaper reading room accommodates both readers and Internet users. The space was restored to an appearance close to the original interior. The room is equipped with electricity lines, a telephone line, a TV and computers. The lighting follows the original system whereby the light fittings hang from chrome-coated steel pipes. All the surface materials (paints and carpets) of the floors, walls, and ceiling, as well as the building components, were removed as far as the bare structure. Unlike other wall and ceiling finishes here the walls and ceiling were plastered with Knauf Goldband gypsum plaster to the original level and were painted with white Auro Natural Resin Oil Professional Paint.

The existing electric conduits were used as much as possible. New cable routes could be taken directly from the cellar without the need to make new channels in the structure.

The floor is covered with new marble-figured Norament Vario Rubber Carpet by Freudenberg.



## The Lecture Hall and the Bay Window 2001–2003, 2006–2010

During the period 2001–2003 the lecture hall window was conserved and restored. The wall below the window was lowered to its original height and the corner detail of the window was re-constructed. The height of the frame was increased by 20cm, and is now 317cm, the single laminated glass panes being 315cm high. The ventilation grilles have been reconstructed in accordance with old photographs. The glazing beads of oak, in accordance with the old details were given a teak stain and oiled with linseed oil.

The restoration of the lecture hall, including the undulating wooden ceiling, began in January 2006. The work started with dismantling most of

the 1960s constructions, the entrance wall, the wooden ceiling and the worn-out parquet flooring. The carbonated concrete was removed from the ceiling beams and slabs; the visible steel reinforcement bars were brushed clean and given two layers of an anti-corrosive cement coating.

The entrance wall was completely reconstructed. The lower part of the entrance wall was laid with brick. The ventilation ducts, which penetrate the concrete floor, were installed from the floor openings up to the new brick wall. The upper part of the wall consists of a wooden frame, covered with 12mm veneer boarding, which is faced with textile fabric. The boarding is removable and electrical and ventilation installations are hidden behind it.

All the walls have been given a lime wash fin-

ish. The steel pillars were brushed clean, corrosion protected, given lime-cement plaster and finished with natural oil paint. The floor required a thorough repair. The final floor covering is solid oak parquet placed over veneer sheet underlay.

The original ceiling was built on site probably by carpenters who normally specialised in boat construction. The ceiling was destroyed after the war and then rebuilt in 1958–1961; unfortunately without adequate knowledge about the original. The new wooden frame for the ceiling hangs from the covering slab by the preserved original steel clamps. Totally 9 kilometres of pine strips were needed for the ceiling panelling, which two skilful carpenters nailed to the frame. The ceiling was completed at the end of December 2008.



7



9



10



8



11



12



13

Figures 1–13. Different views of the Central City **Alvar Aalto** Library in Vyborg. After being inaugurated in 1935, the most recent restoration process was finished on 23<sup>rd</sup> November 2013 after a 22 year process. Some of the images show the former state of the building and how the Russian–Finnish joint cross-border project has been a success despite the context of two different socio-cultural societies, customs difficulties, economic fluctuations and currency rates.

Images show the glass façade, the skylights, the exterior stairs of the terrace, the entrance doors, the children's library, the reading room, the lecture hall and the exterior final aspect of this learning process.

The side corridor was restored at the same time as the lecture hall.

The wall between the two spaces comprises the ventilation channels coming up from the cellar. The floor of the corridor is covered with Freudenberg's grey rubber marble carpeting.

### The Big Break through December 2010

The Decree of the Government of Leningrad region from 29.12.2010 No 378 allocated 255.5 million Roubles (c. 6.5 million €) for the restoration works in the building of the Vyborg Central City Alvar Aalto library. Subsidy granted by the order of the RF Government 08.12.2010 No2196–r and the order of the Russian Prime Minister Vladimir Putin, running number 44–7269. The decision gave 2.5 years to complete the project.

The restoration works still remaining in the end of 2010 were the main entrance and vestibule, the interiors of the lending and reading hall, the children's library, the office corridor and rooms, the two office stairs, the book storage in the basement, most of the wooden and some of the steel windows, and the rendering and whitewashing of the exterior walls. The whole building needed fire alarm and security devices and heating and ventilation installations in the cellar. Also some of the above mentioned restored parts needed maintenance. Also the necessary and urgent work of lowering the ground level around the building awaited implementation.

Aalto Library which was going to manage the works, agreed with the Finnish Committee about consulting, granting of the iconographical materials,

original documents, restoration design, technical and architectural supervision on the restoration works and presence at the library once a week during the construction period. The library functions, which had continued in Aalto Library during the slow renovation process, were obliged to move to a provisional space in a nearby block.

The experiences gained during the 20 years efforts helped now to handle the fast works. The tested methods of repairing floors, walls, ceilings, windows, doors, fittings and installations were used.

The supply of building materials similar to 1930s originals gave the project real international character. To get lime from France and Finland, lime paints from Germany, rubber carpets from Germany and France, linoleums from Germany, fittings from Finland, Estonia, Sweden and Russia, lamps from Germany, Finland and Russia, handles and hinges from Finland and Russia caused additional challenge with customs duties. Modern standards and norms, official certifications, demands of fire security and alarm devices needed creative solutions and negotiations with the authorities.

The final works were executed in two phases. After a tender the public company Soyuzstroirestavratiya based in St. Petersburg was chosen and started the restoration of the most difficult part of the library in 2011.

### The Lending and Reading Halls 2011–2012

The works of the lending and reading department started in the beginning 2011 and were finished in May 2012. To renovate the ceiling heating

system of the lending and reading halls took one year. The dense network of new heating pipes was hanged with the preserved original steel clamps and additional new clamps and covered with thick c. 80–100mm plaster. Galvanized steel nets were used inside the four layer lime plaster. Originally Finnish kiln lime was planned to be used but due to bureaucracy only bagged dry lime was available. French St. Astier Natural Hydraulic Limes were used. The necessary level of temperature and humidity was maintained in the halls to ensure proper setting of the plaster.

Brick walls were plastered with three layer St. Astier-lime plasters. Old loose and damaged plasters (on top hard soviet cement plasters and partially under old Finnish lime plasters) were removed from walls.

The book shelves, lending hall counter, the book lift and its wooden cowering, the stair railings were reconstructed according to Aalto's original specifications, drawings and photographs from 1930's. Floor and stair coverings are DLW linoleum and Artigo Rubber, Multifloor/DN-UNI carpets. Great amount of work was needed to recreate the original architectural features of the lending and reading halls and equip them with modern library technology, Wi-Fi, fire alarm system, video etc.

### The Final Works 2012–2013

The final works included all the parts of the library, which were not yet restored, started in October 2012 and were finished in November 2013. At best there were over seventy workers labouring in the labyrinth of scaffoldings, corridors, stairs and spaces of the building.

## The Renovation of the Basement and Cellar

The works in the cellar began with the dismantling of the jungle of old pipes and heating systems.

The trench around the whole basement was excavated. New external double ground water drains were installed around the library. The work contained drains and pipes and water wells, from which sub water is pumped to the city rainwater system, the height of which is higher than the basement level of the library. For outer thermal insulation and vertical drainage system Isodrain sheets were installed outside the cellar walls and Xypex waterproofing treatment on inside surfaces. New heating and ventilation machines were installed. The sprinkler system was installed on the ceiling of the book storage, which was entrusted with Compact bookshelf system. The original entrance ramp from Suvorovsky Street to the cellar, which was out of use after the Soviet repair, was reopened and its original concrete surface was conserved. The original fire-door, which was found under the Soviet cellar floor construction, was conserved and installed to its original place.

## Children's Library

Reconstruction of the interior was restored to its original state according to original drawings and original building descriptions. The photos taken in 1941 by the Finish army gave also useful information about the original interior and furniture. The ceiling heating, walls, floors and steps were treated on same manner as the ceilings and walls in lending and reading halls. The original steel frames of the large windows were cleaned and corrosion treated and painted and thermal glass panes were assembled to these frames, which slightly altered the details. New sun blinds with electric steering according to the original photos were installed. Most of the furniture was bought from ARTEK. The handmade parchment lamps were produced in St Petersburg according to original photographs.

## Office Rooms, Corridor and Stairs

Additional soft board insulation was necessary on the concrete wall in the North West office room. Walls and ceilings were plastered with pure three layer Kiln lime plaster and painted three to four times with Auro Natural Resin paints. Wooden window frames in office rooms and corridor were renewed and modified from the original drawings. Flax is used as insulation between the frames and the building body. The terrace door was renewed and modified from the original drawing. Original fresh air inlets under windows were cleaned, re-

paired and assembled back. Floors were levelled in two phases and after a proper time for drying and a new 2.5mm DLW Armstrong Linoleum Granette carpet was assembled with push joints according to the original building description. The doors of the corridor have original steel frames, and are rebated pine frame doors with birch veneer sheets on according to original drawings. The office wing staff stair with its wooden railing was restored to its 1960s appearance and the main entrance staircase's new wooden railings were produced according to the original drawings. The marble mosaics of the both stairs were repaired. Fire detectors, security cameras etc. in the corridor were assembled asymmetrically on neutral places not to disturb the corridor's original minimalistic appearance.

## Main Entrance and Lobby

The exterior granite steps were removed; the concrete base was partly renewed and the old granite steps were installed back. The old foot scraper grilles were used and if needed the new parts were produced according to the older ones.

The black polished granite stone cladding from the Soviet period was removed and new soap stone cladding was built following the original appearance. The soap stones were excavated from the same quarry than the original ones in the 1930s although much deeper. Main entrance doors from the Soviet era were dismantled and new bronze doors were reconstructed according to the original design. All glass parts were strengthened with 6mm safety glass.

In the main lobby and the drought chamber there is ceiling heating which was renewed on the same manner than in other spaces. Ceilings and walls were rendered and painted with lime plaster and natural resin paints. New toilets were built in the original places. The cloth storage space from the 1960s renovation was preserved. A new information desk was built and the Soviet steel and glass doors preserved at the entrance to the reading and lending halls. A new connection from the lobby to the children's library was opened. The main lobby floor was covered with french Dalsouple rubber plates.

Paimio lamps on the ceiling of the lobby and the drought chamber were cast and produced in St Petersburg according the original lamps borrowed from the Paimio hospital.

## The Exterior

The exterior plasters and paints were badly damaged. Like on the inside, in the early 1960s the whole exterior was plastered with hard cement plasters on top of remaining Finnish lime plasters

and painted with various organic paints. The whole exterior was renewed with St. Astier lime plasters and painted with lime paint.

Most of the window sills were made of copper sheets 0.7mm thick and edges were curved according to the original details. Exterior doors were maintained according to the old restoration descriptions. The North entrance door extra frame and handles were dismantled and replaced with a new one following the original appearance. The fresh air inlets on the southern façade were renewed and profiles were produced according to the original totally rusted ones. All the roofs and skylights were maintained.

It deserves to be mentioned that in Russia there are still good craftsmanship. This made it possible that the goal to keep high quality was achieved and the well-trained working team managed to bear this demanding job to a successful result.

The official opening of the Alvar Aalto Central City library took place on 23 November 2013 attended by President Tarja Halonen and the chief of the office of the President of the Russian Federation Sergey Ivanov and the governor of the Leningrad Oblast Alexander Drosdenko.

## Notes

1. Maija Kairamo did her Master of Architecture at the Helsinki University of Technology and has specialized in restoration planning and design. She has been the Conservation Architect at the National Board of Antiquities of Finland, Office Engineer at the Finnish Ministry of Education, Lecturer at the Faculty of Architecture of the Helsinki University of Technology, and has had her private architecture practice with Erkki Kairamo.

She has been committed to the restoration of several office buildings from 1977 to 1998 such as the Turku Dome (1977-79), the Turku Naval Museum (1978-85), the Palace of the State Council (1982-85), the Paimio Sanatorium (1993-98), and the Helsinki Olympic Stadium refurbishment project (1991-94). She has been a member of the board and design team of the Finnish Restoration Committee of the Viipuri Library since 1994 and is a member of the Finnish Association of Architects and of **docomomo** International.

Tapani Mustonen graduated in architecture from the Tampere University of Technology. He subsequently worked as an architect at Alvar Aalto Architects Ltd (1989-1994), before founding his own practice in 1991 (Architects Livanainen & Mustonen, known since 2002 as Mustonen Ltd). He also undertook research and advisory work in restoration and renovation projects at the Alvar Aalto Foundation (1995-1998). His main expertise lies in the conservation and restoration of architecture of the Modern Movement. He has published and lectured on the subject throughout Finland and elsewhere in Europe. The restoration of Villa Tammekann in Estonia, executed under his guidance, was awarded a Europa Nostra Medal in 2002. He has been a member of the board and design team of the Finnish Restoration Committee of the Viipuri Library since 1994. He is also a member of the Finnish Association of Architects and of **docomomo** International.



# The *Universidad Laboral de Cheste*, a Modern Heritage Site Under Threat

By Carmen Jordá and Maite Palomares<sup>1</sup>

**Universidades laborales, or workers' universities, were set up throughout Spain during the years of the dictatorship, and were aimed at professionally training the working classes. Their charitable-educational nature was established by law in 1955, although several date back to before that official date. The *Universidad Laboral de Gijón* (1946–1957) was the first to be built, as reflected in the traditional and academic architecture of Luis Moya. Fernando Moreno Barberá, one of the most important architects involved, was the author of four centres: those of Las Palmas, 1970–73, Toledo, 1970–78, Malaga 1972–78 and Cheste 1967–69, his work reflecting an undoubted assimilation of the Modern legacy.**

The *Universidad Laboral de Cheste*, the largest of these, represents an important increase in scale as it was designed to house as many as 5,000 boarding students of up to 14 years of age. Its architect, who graduated in Madrid in 1940, is well-known by the publications of **docomomo Ibérico**.<sup>2</sup> His career is outstanding for his mastery of

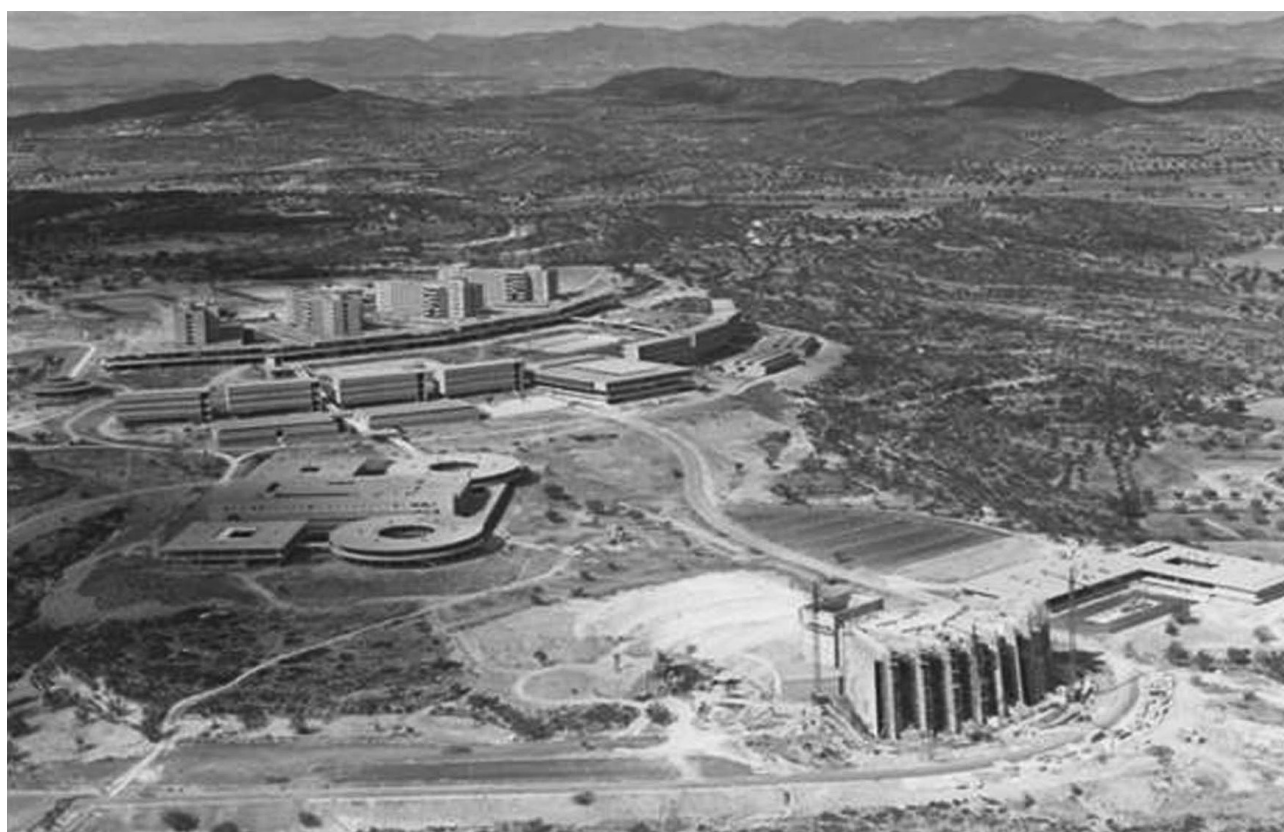
the trade and for his notable planning skills. Both characteristics may have been strengthened during his stay between 1941 and 1943 at the office of professor Paul Bonatz, an outstanding architect from Stuttgart, who was at the time building the bridges for the motorways of the Third Reich. Later, his possible relationship with Richard Neutra, dur-

ing the installation of North American bases in Spain, could also have been significant.

Before starting work on Cheste, Fernando Moreno Barberá had shown notable skill in designing university buildings in Valencia, which present similarities with those of this workers' university. The Modern Movement once again appears as the point of reference, being masterfully interpreted and evident in a vigorous plasticity that trusts in the expressive possibilities of concrete and several elaborate solar protection systems. The Cheste complex fits comfortably within several other similar international experiences, such as those of Brazil, Mexico and Caracas, all of which a cosmopolitan professional would have been familiar with through his travels or publications.

This ambitious project, envisaged for a different site on the coast, had to be urgently adapted to a hillier site within 22km of Valencia. The better conditions of the latter site recommended the change of location. Thus, a rural landscape was transformed into a small garden city aimed at training young people, as part of the policy of General Franco, whose propaganda boasted of "record construction in Spain, built in a minimum period of time".

The complex program of requirements was approached by grouping together the various functions onto levels, under the dual premise of taking advan-





2

tage of the topology and of avoiding the drawbacks of overcrowding that simultaneous usage would produce. The sports facilities were installed on the highest level with the four-building residential area built on a common platform lower down. Beneath these were two swimming pools and, still further down, the teaching areas with eight classrooms and four workshops, as well as the departmental building which, as it occupied the greatest space in the centre, provides a hierarchical structure to this area. The nucleus of dining rooms, of great importance for so many students, consists of two circular and two square buildings situated around the grand services building. The complex also has, to one side, a medical centre and oratory with columned peristyle, similar to a *tempietto*. Finally, the representation zone is given special emphasis through the singular volume of the Main Hall that looks out onto an open-air auditorium.

Outstanding in the work of Moreno Barberá is both his talent for coming up with technical solutions and for building, which, in Cheste, is evident in the impeccable execution achieved, with reinforced concrete playing the lead role, although sharing responsibilities with brick and wood. This provides a

good example of his very characteristic treatment of textures, all of which was governed by a strict economy and a module of 1.60 m throughout the entire work.

### Sports Area, Residences, Public Space and Teaching Sector

Next to the sports fields, at the top, two large gymnasiums were built consisting of two delicately positioned box-like structures in the *Miesian* manner, whose main entrances have sliding doors that open almost completely. The structure is bare, with large ribs providing a technical solution for the roofing, at the same time as acting as identifying elements, along with its *brise soleil* and a horizontal louver awning.

When it came to finding a solution to the accommodation of a large number of boarders with simultaneous activities, the criterion of avoiding overcrowding is clearly evident in the residences. His approach was to divide the accommodation up into four six-storey buildings on the same level, each with its own staircase, so resulting in a singular elevation composition, alternating parapets with empty spaces.

As in the *Athens Charter*, traffic is segregated, the study of pedestrian circulation constituting a particular point of interest. These architectonic elements take on a leading role, the concrete strips marking and gradually colonizing the territory by creating spaces for coexistence and shelter for daily transit.

The change of location meant greater space for the teaching sector, as, in Cheste, there was space for eight classrooms in a row, as well as four independent workshops situated in front, whose magnificent section presents lateral and overhead illumination. As with most of his installations, there is the reiterated use of horizontal parasols, being this the resource most commonly used by Moreno Barberá and, obviously, reminding us of Le Corbusier.

This area was developed upon two circular segments, with good views and parallel to the perimeter of the grand residential platform, its centre being occupied by a luminous departmental building with an enormous garden courtyard that was covered with creeper plants thanks to several spectacular prefabricated beams. Next to the sculptural spiral staircase, of Brazilian inspiration, the free-standing ground floors provide another example of Modernity, as well as facilitating the sheltered enjoyment of students and having an interesting visual permeability that, regrettably, has been lost in the lecture room buildings.



3

Figure 1. The Universidad Laboral de Cheste under construction, 1969.

Figure 2. The Aula Magna. Present state with recent interventions.

Figure 3. External louvers of the Representation Pavilion. Photos from *Arquitectura* 142, 1970.

### Services Area, Dining Rooms, Main Hall and Representation Area

The services building, with kitchens, laundry and staff dormitories put the organizational capacity of the architect to the test. He had to consult abundant international bibliography, dedicating



4a



4b

many pages of his technical report to the minute study of the various jobs and huge storage space that had to be provided. The fact that most of the activities were going to be simultaneous for large groups and that the decision had been taken to reject the depressing model of immense common dining rooms meant that the building program had to be divided into four constructions, which in turn, were sub-divided by partitions into six ambients, in harmony with the layout of the four residences. All the dining rooms have a large open central garden area.

#### Main Hall Area

The *Aula Magna* of Cheste, with its 5,234 seats, was among the largest halls of its time, even though it was built under strict economic criteria. It is complemented by an outside amphitheatre, providing a sculptural sounding board. However, the singular image of the so-called Main Hall is characterized by its supporting structure, given that, taking its inspiration from the known Project for the Soviets,<sup>3</sup> it consists of several powerful concrete ribs, with carefully elaborated textures created by the formworks. The enormous volume dominates the landscape, but exhibited in its day the perforations of its strategic system of accesses and circulations—a visual delight—which today has been greatly undermined due to a perimeter enclosure wall whose elimination is recommendable.

Close by is a public square bordered by cypresses that open out to the representation space. Within the two grand intersecting rectangles are located the cafeteria, administration and President's office in a large single-storey pavilion, which, with con-

tinuous paving, provides an open and fluid space. The most interesting piece is the *Salón de Grados* or auditorium, the ceiling of which reflects the attractive play of light and shade of the external louvers, similar to the meshes of the Brasília<sup>4</sup> Campus.

#### The Master Plan

With the arrival of democracy, the educational dismantling of the worker universities resulted in them becoming functionally obsolete, giving way to the partial abandonment of their installations.

The architectural interest in the *Universidad Laboral de Cheste* is undoubted and now is a good time to focus attention on it as it is gradually deteriorating. A Master Plan<sup>5</sup> is advisable as a tool for diagnosing and coordinating intervention strategies, as without that tool, which is commonly employed in heritage projects, isolated actions have been undertaken that have greatly undermined the essence and character of the work.

Without attempting to arrive at a definitive plan, certain observations can be made on any future undertaking:

1. To begin with the *Universidad Laboral de Cheste* should be considered as a whole. The aim should be to establish a balance between its historical significance and its program of future uses. A new educational program must always take into account its grand scale as the principle identity factor. Currently, widely differing educational uses are housed there with the management shared between two regional ministries, which independently promote activities oblivious to the site as a whole. Im-

provided actions must give way to a long-term and strategic program.

2. It would be desirable to classify future interventions by architectural and landscaping criteria, as the harmony of the Cheste complex lies mainly in how its layout attends to the relationship between architecture and nature. As a hierarchical criterion, the topography has been taken advantage of in order to situate and functionally group together the various zones, as well as to strategically place certain architectural elements. Fortunately, this particularity has not been altered and must be preserved.
3. It must be stressed that the vegetation was structural in the Modern sense, constituting the zero level where the supports of the buildings were situated, so enabling a horizontal reading. Another interesting aspect was the presence of native species, with easy-to-convert plantations, which provided shaded areas as well as color. One of the best examples was the “*umbráculo*”, or landscaped walkway, of the departmental building, covered with red bougainvilleas that acted as climate regulators. Today it is quite depressing to stroll through those formerly leafy areas.
4. It should also be remembered that the entire site has been formally designed and marked with a common language, using only three materials: “bare concrete for structures, especially manufactured grey brick walls, a little darker than the concrete, pinewood windows in their natural color to be opened onto vegetation and to incorporate them into the landscape.”<sup>6</sup> To preserve such a striking projective idea, it is essential that any future interventions take note of the original construction code that maintains the balance between details and the whole.
5. The use of horizontal and terraced *brise-soleil* on the façades, in Le Corbusier fashion, became a recognizable stamp of Moreno Barberá, which, therefore, must remain.

Regrettably, the need for urgent intervention has been noted. It is difficult to understand why the impressive and functional solution of the *Aula Magna*, determined by its skeletal structure and by the open air layout of its generous circulation system was eliminated in the 1980s by an unnecessary enclosure wall. As well as eliminating the attractive play of perforations and the relationship with the landscape, problems of ventilation have been created in the services area. The original character has to be restored by knocking down that inappropriate peripheral barrier.



Figure 4. Residences.  
Vertical communications core.  
Photo from *Arquitectura* 142,  
1970. Present state with recent  
interventions.



5

Figure 5. Damage on the  
structure.



6a

Figure 6. Free-standing ground  
floors. Original image from  
*Arquitectura* 142, 1970 and  
present situation with recent  
interventions.

Photos by Ximo Michavila.



6b

As mentioned above, the peculiarity of the residences lies in its singular system of vertical communications. Recent interventions have eliminated the compartmentalization that individualized accesses and the play area on the ground floor. The staircases have been transformed into disproportionate spaces and errors of authenticity, so removing a valuable architectural contribution to the residential typology. The only piece that has been saved is without use and in danger, awaiting better times. General reconstruction would be necessary in order to recover the communications nucleus.

Under the pretext of organizing large classrooms for undertaking official exams and without appreciating the versatility of the fixtures, the appropriate partitions have been eliminated, which in the dining rooms provided privacy for the diners. Once again, then, those very useful elements must be recovered.

The wooden carpentry, which the architect chose "because it grows old in a dignified way, as man does"<sup>7</sup> has also been replaced. However, this replacement is the material that has fared worse over time and its lack of maintenance has caused the familiar appearance of aluminium profiling. In the minute constructive details one may see Moreno Barberá's intention of enhancing the relationship with the landscape, as the composition of the window space with its large glazed wall shows. Its vertical make up consists of three panes that can be opened and one fixed one, its horizontal measurement being a multiple of 1.60m, the same as the structural modulation. The idea was to combine standardized elements in order to reduce costs and achieve large usable surfaces. The replacement carpentry clearly spoils the whole effect.

Regarding the *in situ* concrete, Moreno Barberá decided to leave it bare and to have wooden lath formworks made for all the design parts and with meeting points at 90 degrees. This recognized finish is present throughout the whole, although today the designs are suffering various types of damage mainly through oxidation of the frames due to leaks and lack of maintenance.

Finally, the occupation of the free-standing ground floors, a product of building greed, has eliminated the visual transparency so common in Modern architecture.

In short and following the above account of the situation, the main tasks of a Master Plan would be to reorganize, restore and revitalize the Universidad Laboral de Cheste.

To conclude, it is significant that a web page of the Association of Former Pupils of the Universidad Laboral de Cheste now exists, where users are appealing for action. There it says:

*On the initiative of the Association of Former Pupils of the Universidad Laboral de Cheste and with the support of recognised professionals, the undersigned appeal to the competent authorities of the Comunitat Valenciana to, as soon as possible, restore the original image of the Main Hall of the Educational Complex of Cheste, formerly the Universidad Laboral, a masterpiece by Fernando Moreno Barberá, in order to remove the brick wall that encloses its main façade [...]*

## Notes

1. Carmen Jordá is a Ph. D. Architect and Chair of the Department of Architectural Composition of Polytechnic the University of Valencia. She has been granted the Award "Premio de Arquitectura del Colegio Oficial de Arquitectos de la Comunidad Valenciana" and, since 1996, she is a member of the Registers Committee of **docomomo** Iberia. She is the author of several texts on the Comunitat Valenciana in the *Guía de Arquitectura de España. Siglo XX* (Ministerio de Fomento, 1998). She has curated the exhibition "De Stijl", "20x20 Siglo XX, veinte obras de arquitectura moderna" and "Young Architects." She is also the author of the book *Eduardo Torroja, la vigencia de un legado* (2002).
2. Maite Palomares is a Ph. D. Architect. Assistant Professor at the Department of Architectural Composition of the Polytechnic University of Valencia. She has undergone research studies on Modern heritage and construction history. She participates in **docomomo** activities both in Chile and Mexico.
3. Costa, Xavier; Landrove, Susana, dir., *Arquitectura del Movimiento Moderno. Registro docomomo* Ibérico, 1925-1965, Barcelona, Fundació Mies van der Rohe/**docomomo** Ibérico, 1996. AA.VV., *Equipamientos I. Lugares Públicos y nuevos programas. Registro docomomo* Ibérico 1925-1965, Barcelona, Fundación Caja de Arquitectos, 2010.
4. Jordá Such, Carmen, *Universidad Laboral de Cheste, 1967-1968*, Colegio de Arquitectos de Almería, *Archivos de Arquitectura España siglo XX*, 2005.
5. Rosenthal Schlee, Andrey, "The Campus of the University of Brasília". **docomomo** International Journal 43, 2010.
6. Palomares Figueres, Maite, "La singularidad de la Universidad Laboral de Cheste: la gran escala, el abandono y la necesidad de intervenir", Paper presented at the VIII Congreso **docomomo** Ibérico, Málaga, 2012.
7. Moreno Barberá, Fernando, "Centro de Orientación de Universidades Laborales Jesús Romero, Cheste, Valencia", *Arquitectura* 142, 1970, 18-26.
7. Project report. Personal archive of Carmen Jordá.

# Modern Industrial Heritage in Romania: Extending the Boundaries to Protect the Recent Past

By Oana Tiganea<sup>1</sup>

**T**he term “Modern industrial heritage” is usually associated, in the Romanian context, directly with the 1920s–30s built legacy. This period is in fact commonly perceived as representative of the Romanian Modern Movement, in synchrony with the western Avant-garde. However, industrial traces even with Modern influences were left on the national territory mostly by the 1945–89 Communist “forced industrialization.” The manifestation of the Communist industrial architecture was analyzed through the case study of Hunedoara Steelworks. It was also possible to investigate its destiny in the present context, dominated by a general resentment directed towards “political labeled” built environment. This analysis highlighted the vulnerability of the Romanian industrial heritage in the present context.



1

In the Romanian post-Socialist context, the 1920s and 1930s Modern architectures are generally considered as the peak of the 20<sup>th</sup> century architectural history, commonly perceived as disrupted in evolution by the Socialist transformations. The Modern architecture of those years was thus transformed into a connecting bridge between the pre- and post-Communist eras, soon after the fall of regime in December 1989, becoming also a constant reference point in the Romanian architectural battle for identity of the 1990s.<sup>2</sup> Starting from 2000–2001, the Modern architecture of the 1920s–30s found

its patrimonial recognition, as demonstrated by the listing as historic monuments of projects deemed emblematic for the Romanian interwar architectural culture [figure 1].<sup>3</sup> Simultaneously, the built environment associated with the Communist period continued to be neglected and regarded with general resentment, being subject of brutal interventions under real estate speculations. In the last 20 years, the most affected from this “political labeled” built environment was the industry, especially in the case of the heavy industry [figure 2].

During the Communist years (1945–89), and

under the push of forced industrialization, the industrial architecture represented a true leitmotiv of the state’s propaganda, in a more general context of direct political involvement in the architectural practice. For this reason, the industrial architecture dating 1945–89 started to be commonly perceived as one of the Socialist state’s ideological instruments. Despite this, during 2000–2005 some architects took a stance, declaring that it was possible to identify a sort of continuity between the Modern architecture of the 1920s–30s and the industrial architecture of the 1945–89 period. Architect Ion Mircea Enescu, who was educated in the Modern principles of the 1940s in Bucharest and was practicing throughout the entire period of Communism, repeatedly suggested that the 1945–89 industrial architecture embodied some of the ‘most radical modernist manifestations’ among the other architectures of the time.<sup>4</sup>

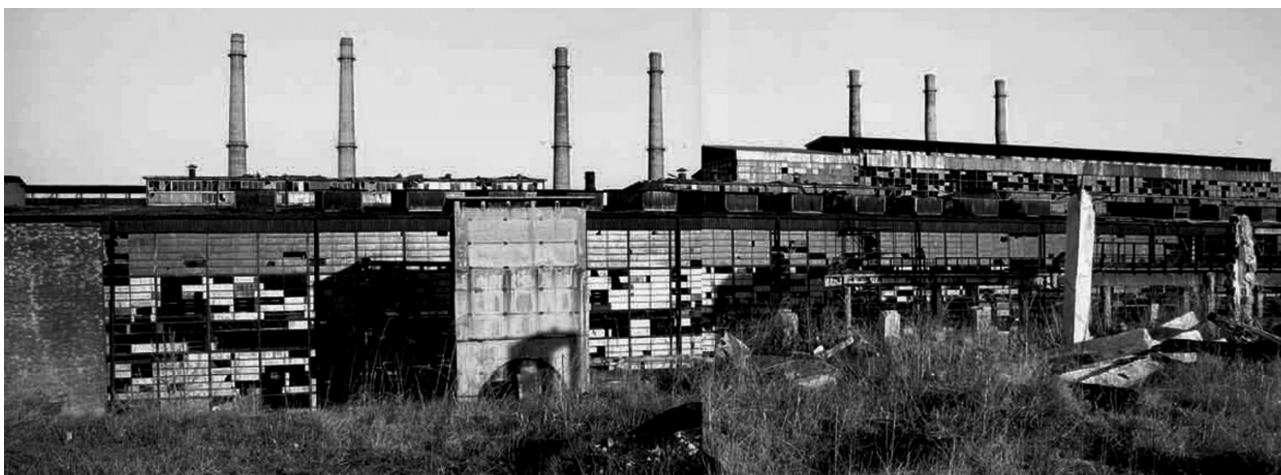
Starting from these premises, and driven by the belief that a thorough material understanding of these architectures analyzed in the context of their socio-political years would be fundamental in preparing the grounds for an actual step forward in their acceptance as a built legacy with patrimonial assets possibility, I have directed my attention towards the process of “forced industrialization” of the Communist period, with a critic attention towards its architectural manifestations. These aspects were analyzed through the case study of Hunedoara.<sup>5</sup>

Positioned in south-west Transylvania, and presenting already an iron and steel production from the late 19th century, Hunedoara became a ‘metallurgic icon’ for the Romanian context during Communism. In fact, the industrialization boom transformed the town completely, determining its tenfold increase in extension during the interval between 1947 and the mid-1970s [figure 3].<sup>6</sup> This is one of the main reasons that made Hunedoara a paradigm of the Romanian industrialization during Communism.

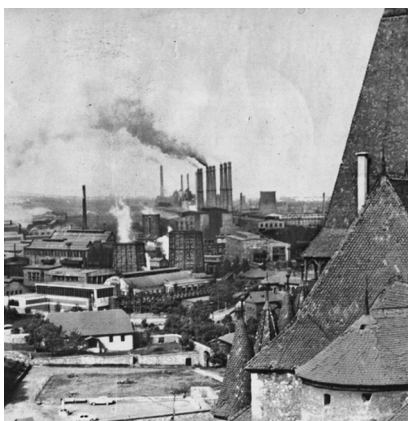
Interestingly, some of the first pilot industrial projects in the post-war years were created in Hunedoara, thanks to its role of national investment priority. This phenomenon is even more striking when considering the national context of complete change and reorganization of the architectural practice under the pressure of Socialist centralization and political control. The complexity of an “integrated metallurgic site” such as the one developed in Hunedoara, resulted in a wide variety of industrial projects, from the large production plants of the steel and rolling mills to the smallest maintenance pavilions, all interconnected through the industrial production flow.

In a context when the architecture usually responded directly to the political ideology, the in-

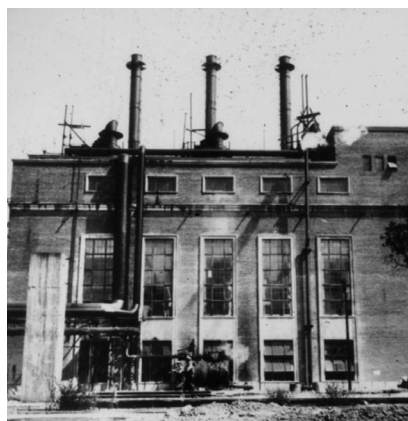




2



3



4a



4b

83

dustrial architecture from Hunedoara appeared as following the general shifts from the 1950s Socialist Realism to the later on return to Modernity,<sup>7</sup> but with a rather different 'aesthetical manifestation' than the civil architecture. During the Socialist Realism years (1952-55) the industry from Hunedoara was less bound by the Socialist 'aesthetical canon' in comparison with the civil architectural programs [figure 4]. Conversely, in the late 1950s and early 1960s, the return to Modern principles brought the industrial projects becoming examples of the 'modernist monumental industrial architecture' in the national context [figure 5].<sup>8</sup>

The study of the industrial architecture from Hunedoara helped also defining the architectural models of influences adopted during the Cold War, in the context of the shifting of the political Romanian balance from eastern to western affiliations. Indeed, at Hunedoara Steelworks, projects were designed with both of Soviet and western models of influence. During those years, ideologically, the 'foreign' model of industrial architecture became a reference point in the Romanian architectural scene

By mid 1970s, Hunedoara metallurgic site arrived to its territorial and industrial peak, bearing a

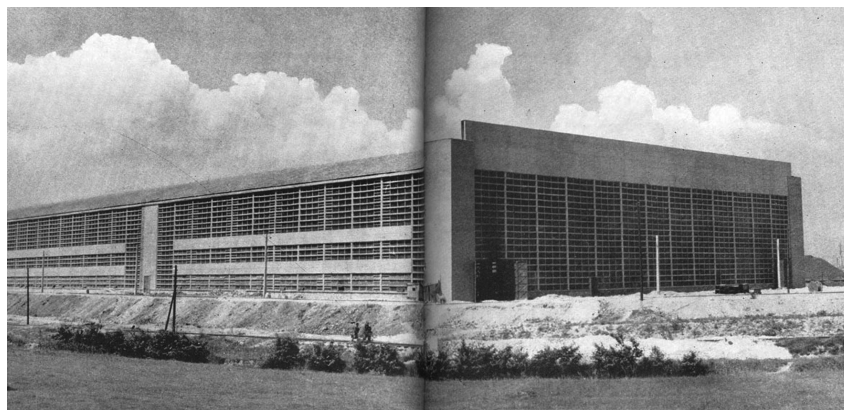
Figure 1. Malaxa Industries, Bucharest (1930-31), by architect **Horia Creanga**; listed as historic monument. Source: Machedon L, Scoffham E., *Romanian Modernism: The Architecture of Bucharest, 1920 -1940*, MIT, 1999.

Figure 2. Hunedoara industrial ruins (2007). Source: Bonciocat S., *Kombinat. Industrial Ruins of the Golden Age*, Igloo Patrimoni, Bucharest, 2007.

Figure 3. Hunedoara: general view towards the metallurgic site (1960s). Source: Hunedoara Steelworks Photographic Archives.

Figure 4. On the left the electric power plant of the steelworks (1951-50). On the right the collective housing from Hunedoara (1952-54). Source: Hunedoara Steelworks Photographic Archives.

Figure 5. Rolling mill built starting with 1959. Source: Adler L., *Arhitectura industrial in RPR*, Bucuresti, 1964.



5



powerful impact on its surrounding. Moreover, the workers' town was constructed in parallel with the industrial site, giving birth and space to a local community based on the industrial culture.

After 1989, just like majority of the other Romanian metallurgic sites, Hunedoara started to go down on the path of deindustrialization, due to the globalization of the markets and the State decreasing direct financial support. Finally, during a general trend of transition and adaptation to capitalism, the production shut down in 1999.<sup>9</sup> The obsolete industry from Hunedoara became an avoided and abandoned place, subject to material decay due both to weathering processes and to controlled demolitions in certain cases [figure 6]. The disappearance of industry contributed to the inversions of the hierarchy

between the spatial elements: the industry, which was considered the driving factor of all transformations, bearing a central role both at local and territorial level, became the depraved periphery shortly after losing its main productive function. Conversely, the leading role shifted towards the town, where the life of the communities continued its course. Even at the present moment, this community represents one of the greatest sources of tangible and intangible traces of the industrial heritage.

The disappearance of the main production plants during the years 1999–2011 is associated with the loss of the industrial past in both the local and nation-wide contexts. Moreover, the remaining material traces that were once part of the complex metallurgic site, continue to be neglected.

This attitude towards derelict industries overlaps with the perception of 'patrimonial values' as associated with a certain antiquity. This is defined by the legislative tools officially as dating prior to 1945.<sup>10</sup> Even more, a law directly focused on the industrial heritage was issued in 2008, structuring a clear and detailed definition of this patrimonial typology.<sup>11</sup> However important, this new law had no actual impact on changing the perception and acknowledgement of industrial heritage, especially in the case of legacies labeled as of 'Communist origins'.

Despite the loss of many of the industrial facilities, Hunedoara's territory still presents material traces of its industrial past. However, to search for these physical evidences, it is fundamental to follow the logic of the metallurgic production flow, from the suppliers' territory to the production place itself, and finally to the urban built environment, generated by the industrial needs and connected with the production plant itself [figures 7, 8].

Such physical evidences are characterised by a high degree of heterogeneity, possibly deriving from the different industrialization phases of Hunedoara. This heterogeneity can be identified also in the architectural manifestations. In fact, by posing as an 'industrial architectural sample', it is possible to connect and integrate the specific history of Hunedoara with the entire Romanian 20<sup>th</sup> century architectural history. These conclusions are based on a thorough research analyzing the phases of the industrial reconstruction of Hunedoara, through the inclusion and critical analysis of all industrial architectures from here, considered as material results of the political, economic and socio-cultural intertwining nets. Such approach, directed towards the comprehension of the material culture, could hopefully pave the way for new and diverse preservation strategies in the future, especially when the national context provides legislative tools concerning the safeguarding of industrial heritage in all its complexity: from the preservation of industrial landscape, to urban areas, individual structures or buildings, technical equipment and documentary material.<sup>12</sup>

However, neither local nor regional strategies coordinated by the local authorities, and focused on the endorsement of its industrial past are pres-



6

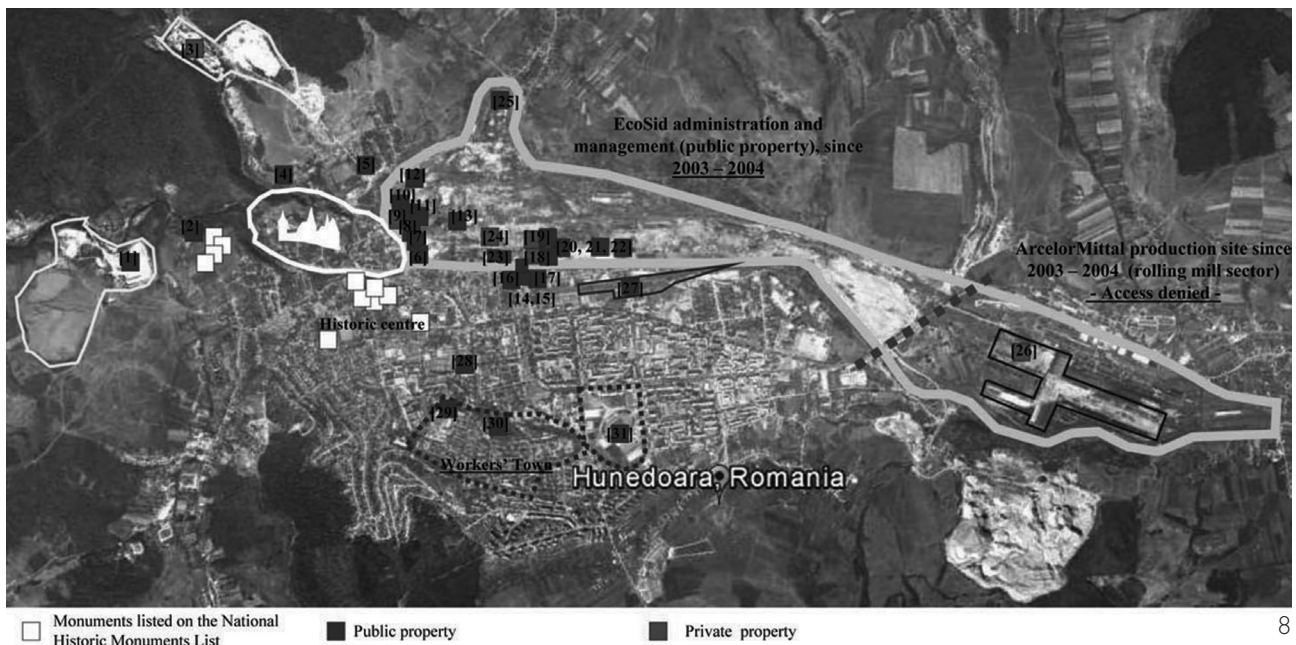


7

Figure 6. Industrial ruins from the ex-industrial site (2007). Source: Mara Marginean.

Figure 7. Elements of the industrial traces at present moment (2013). Source: Paolo Mazzo.

Figure 8. 2013 mapping of the industrial remains in Hunedoara. Source: Oana Tiganea.



ently being applied in the case of Hunedoara, leaving the little physical traces still existing at risk of disappearance. Interestingly, some initiatives came directly from the steelworkers' descendent community, concerned with the issues of their industrial identity and giving an important contribution to the safeguarding of the ex-Steelworks' archival documentation. This initiative coincided with the demolition of important landmarks belonging to the metallurgic site in 2010–2011, such as the chimneys, which for decades represented the symbol of the rise of Hunedoara as a metallurgic icon. This archival documentation represents the main physical connection of the present with the recent past industrial architectures, especially in a general context of 're-interpretation' of the Romanian history of the second half of the 20th century.<sup>13</sup>

In conclusion, the case study of Hunedoara represents an important testimony of how vulnerable the industrial legacy can be in the Romanian context. The demolitions occurred in fact at an even faster pace than the evolution of the legal preservation framework, maybe even faster than the change in the general acknowledgement and endorsement of this built legacy. This study retraced the construction and destiny of Hunedoara through its material manifestations, and it can represent a starting point for the recent past reconsideration from a patrimonial perspective.

## Notes

1. Dana Tiganea graduated in architecture at the Technical University of Cluj Napoca (Romania) in 2007. In 2010

she enrolled in the doctoral program in Preservation of Architectural Heritage at Politecnico di Milano (Italy), and in November 2013 defended the PhD "Industrial Architecture in Communist Romania. Hunedoara: Construction and Destiny of a Major Steel Plant, 1947 – 1999" under the supervision of Professor Carolina Di Biase.

2. During the early 1990s a variety of exhibitions focused on the interwar years resuscitated the scholarly interest in the Romanian Modern Movement. For more information, refer to: Luminita Machedon, Ernie Scoffham, *Romanian Modernism: The Architecture of Bucharest, 1920–1940*, MIT 1999.
3. The "protected historic areas" law was issued in 2000, while in 2001 the first post-1989 historic monuments law was published. Both legislative acts were including in their safeguarding patrimonial list architectural works dating the years 1920s–40s.
4. Cosmin Goancea, "Interviu cu Ion Mircea Enescu – *Civili si industriali dupa al doilea razboi mondial*", *Arhitectura*, 2000; Ion Mircea Enescu, *Arhitect sub comunism*, Bucuresti, Paideia, 2006.
5. The research "Industrial Architecture in Communist Romania. Hunedoara: Construction and Destiny of a Major Steel Plant" was carried out during the period 2010–2013, in the doctoral program in Preservation of Architectural Heritage (DASU–Politecnico di Milano, Italy), under the supervision of Professor Carolina Di Biase.
6. In 1947, at the beginning of the Communist industrialization process, Hunedoara was summing barely 7,000 inhabitants. By 1989, the town reached 80,000 inhabitants, mostly due to a direct effect of the metallurgic site's development.
7. In the Romanian architectural context, the Socialist Realism was proclaimed as the official accepted style only in 1952. The return to modernist principles, triggered during Khrushchev's Thaw, is considered to have been delayed to the end of the 1950s due to political divergences with the Soviet Union.
8. For more information, refer to: Ladislau Adler, *Arhitectura industrială in RPR*, Bucuresti, 1964.

9. Hunedoara Steelworks remained part of the State properties until 1999, when the primary production flow was shut down. After this date, the site became divided between productive and non-productive areas. While the first were privatized starting with 2003–2004, the latter became subject of several demolition phases under the coordination of the local administration.

10. The present methodology concerning the listing of historic monuments ensures priority on the basis of the antiquity value, excluding completely the post-1945 period. See: Normative no. 2260, published in 2008.

11. Law n° 6 from 2008 concerning the juridical administration of the industrial and technical heritage.

12. By the end of 2013, the variety of legislative acts from the field of architectural preservation as well as of urban development offer a variety of national and territorial tools directed towards preservation of all forms of industrial heritage, on the basis of its recognition as patrimonial value.

13. The matter of the recent Romanian past was started to be widely approached in the last 10 to 15 years at an academic level, from a multitude of interdisciplinary fields, with the desire to fill the major gaps left by the regime in the local history of the 20th century.

## References

- Arhitectura* magazine (1906 onwards)
- Adler, Ladislau, *Arhitectura industrială in RPR*, Bucuresti, 1964.
- Luminita Machedon, Ernie Scoffham, *Romanian Modernism: The Architecture of Bucharest, 1920 – 1940*, MIT, 1999.
- Goancea, Cosmin, "Interviu cu Ion Mircea Enescu – *Civili si industriali dupa al doilea razboi mondial*", *Arhitectura*, 2000.
- Mircea Enescu, Ion, *Arhitect sub comunism*, Bucuresti, Paideia, 2006.
- National Archives Hunedoara County (Deva, Romania).
- Hunedoara Steelworks Archives (Hunedoara, Romania).
- Hunedoara Steelworks Photographic Archives (Hunedoara, Romania).



# From Industrial Site to University Campus. Sümerbank Kayseri Textile Factory

By Burak Asiliskendr<sup>1</sup>

**Even though Turkish Modernization in the 20<sup>th</sup> century was explained as a political revolution, it dealt much more with the transformation of space and social identity. As a result, the Turkish State built several industrial sites in Anatolian cities to strengthen their urban and social development.**

The Sümerbank Kayseri Textile Factory was the first industrial site, built like its Western models, by the Turkish Government under the aim of Modernization. It was built in 1935 near the existing

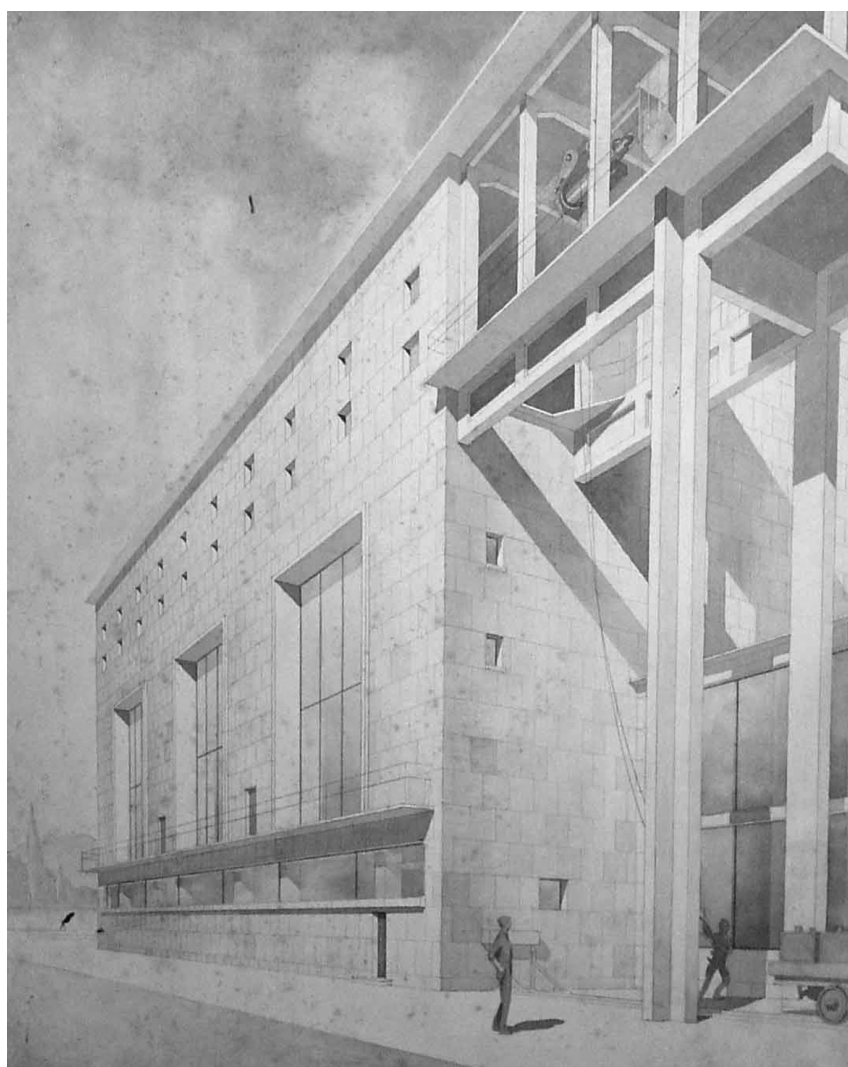
urban forms to create a change and provide development with its Avant-garde context. Ivan Nikolaev, a well-known Russian architect, designed this complex in Moscow. Actually, two contradictions

on Sümerbank Settlement that settled up to install Modern attitudes were remarkable. One of them was the support to acquire a Western (European) outlook from the Soviet Union, which was managed in a socialist manner. It could be easily read from the settlement that there was a socialist manner on both its space organizations and its management. The settlement qualified as a metropolis with its utilities consisting in managing, dwelling, entertaining or training activities that were controlled and supervised by the authority. The other contradiction was the constructivist approach of the Soviet Union at that period, which had a major role on the designing process of some buildings in the settlement. Some examples would be the operating building, the powerhouse, the main entrance or the *ateliers* or the repair house. These buildings could be evaluated as significant signs of Soviet constructivism buildings, whereas their appearance had a machinery outlook, which was formed under the idea of the "Modern" (Western) architectural context.

From a critical point of view, it could easily be evaluated that the Sümerbank industrial site was not only founded for economical development, but also constructed with an ideological point of view to transform the social order and spatial form, especially with the comfort conditions, as a reconstruction project. Sümerbank illustrated the essence of Modern life in the city of Kayseri, as an architectural symbol. The settlement consisted of many different types of buildings, each of which could be identified as an icon with its architectural context. Hence, especially the residences were the most effective elements for the re-constructing practice of the social and the urban order. As an effect of the Sümerbank, Kayseri re-ordered its urban form and architectural outlook.

In 1996, the Turkish State decided to end the industrial activities of the state-based factories, according to the national economic development planning. As an effect of that, Sümerbank Kayseri Factory was shutdown in 1999, and has been left abandoned inside the city. Site was registered as national cultural property by the Kayseri Regional Committee on the Conservation of Cultural Property due to the application of Docomomo Turkey in 2003. There were several cancellation trails on its historic monument registration to demolish some parts of the site. Moreover, some parts of the buildings were demolished. Original furniture and the operating machines were lost. In 2012, Abdullah Gül University intended to transfer the site to a university campus, aware of its historical importance.

Figure 1. Original hand drawing Perspective view of the Power House.







2



3

Figure 2. Sümerbank Kayseri Settlement, 1935.

Figure 3. Inside the Operation Building, 2013.

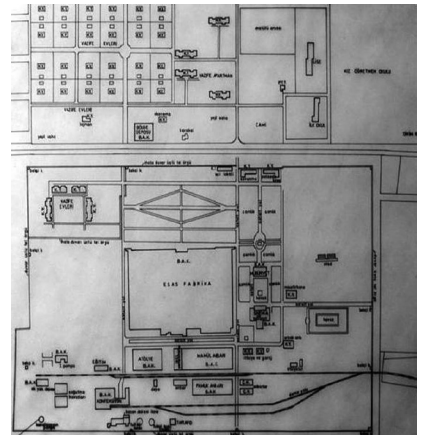
Figure 4. Operation Building of the Sümerbank Kayseri.

Figure 5. Site plan of Sümerbank Kayseri.

Figure 6. Power House, 2011.



4



5



6

## Sümerbank Kayseri Factory as a Modern Agent

Turkish State encouraged the private entrepreneurs to constitute industrial sites during the first decade of the Turkish Republic. However, as an effect of the economic crisis of the 1930s, economic growth decreased and profits both for inhabitants and entrepreneurs were reduced as the acceleration of economic growth that was related with the private sector was inadequate for the desired development. For that reason, the government searched for new solutions for economic growth and modernization. They mentioned to control the industrialization process, which was constituted as one of the major needs of modernization. Therefore,

a state based mechanism in industrialization was shaped between 1931 and 1932 and it became true in 1933 (Boratav, 1989).

Sümerbank Kayseri Textile Factory was founded to produce cotton fabric. It was the first state-based organization in Turkey. The factory was founded in an un-inhabited area of the city centre in 1935. The settlement was designed by Ivan Nikolaev from Moscow at the Turkstroj Company, founded with Turkish and Russian funds to develop industrial sites in Turkey in the 1930s (Asiliskender, 2002).

The factory was constructed by Russian funds and labour. Turkish Government used a credit of 8.5 million Turkish Liras from the Soviet Union to establish the Factory. Its foundations were set on May

20, 1934. After its 16-month construction process, the enterprise started its service on September 16, 1935. There was a population of 155 officials and 2100 workers in the first years, while Kayseri had 46.000 inhabitants.

The buildings were the first examples of the concrete and steel framed structures in Kayseri. The site consisted in the operation building, the administration building, the power house, the repair houses and some public places such as the infirmary, schools, cinema, and some semi-public ones for workers and their families (tennis courts, swimming pools, clubs...etc.) and residences.

All of the buildings and urban plans of the Sümerbank Kayseri Settlement were shaped from plain



Figure 7. AGU Summer Campus Site Plan.



Figure 8. Inside view of the Warehouse.

and basic forms similar to the pioneer ones. It could be easily comprehended that these buildings had an Avant-garde outlook and were designed within a Modern context. They were unique examples of Russian Constructivism. Besides their new form, they were constructed in very new ways for the time being. Therefore, the factory with all its units created a change in Kayseri and the whole country.

### Re-defining Kayseri as a Modern City

Kayseri, one of the leading metropolises of Turkey, is the city where this state-based approach was firstly put in practice, because of its strategic location and city-culture that had a leading role in its milieu. Kayseri is one of the oldest trade cities in Anatolia and at that time it had a nearly 6000 year fundamental historical background. As it had been the capital of the Cappadocia before, it was

selected as a capital city nominee for the foundation process of Turkey.

As the first state-based industrial site, the Sümerbank Textile Factory affected the social, cultural and spatial order of the city. It was not only an industrial facility, but it also leded a conceptual transformation of space and society throughout its Modern concept and outlook. (Asiliskender, 2005)

One of the lucid features of establishments such as Sümerbank, is that they constituted a new local-market for the whole country by manufacturing daily and main consumption goods. Besides this native economic effect, these companies collected a great deal of workers from both the city and the whole country as a major industrial occupation zone. Therefore, it had social and spatial effects on the city with a rapid population growth. This was one of the desired improvements of the "Modern" Turkish Government that was linked with its city pol-

icies; cities were founded under the "Modern" idea of social and economic aspects to achieve a contemporary perspective.

A Modern city could be evaluated as a center; "a network or a phenomenon" that had attractive attitudes on the transportation and communication activities of it or its reactions (Deleuze, Guattari and Massumi, 1987). From this point of view, the city of Kayseri was re-identified as a center; "a network" of trade systems of the "Modern" state by founding these establishments, which had a great role in the revitalization progress of city and state economy.

In Kayseri, the Sümerbank Textile Factory also re-constructed the urban space and social order. It identified the place and its individuals definitely, in spite of the lack of progress of the Modernizing practice. Actually, it was extremely remarkable that an industrial complex and its residences re-created and defined its milieu: the sites were perceived as homes by the workers and their families, with the residences, social spaces and "cooperative settlements" more than as a working complex or an office building. The residences and the social spaces such as schools, trade centers, cinemas or sport centers converted the attitudes of its inhabitants and also people from the city, and upgraded their living habits and rituals under the ideology of 'Modern' thought (Asiliskender, 2008).

### Re-defining Sümerbank as a University Campus

In 1996, the Turkish State decided to resign from the industrial activity according to the national economic development plan. The Sümerbank Kay-



seri Textile Factory lost its function due to this decision and stopped its service in 1999. As it was the first industrial site of Turkey, its ownership was transferred to Erciyes University. The place was registered as a cultural site by the Ministry of Culture Conservation Committee of Kayseri due to the application of **docomomo** Turkey in 2003. Unfortunately, the university did not intend to use the site and its buildings and there were several trail cancelations to register this historic monument which allowed the demolition of some parts of the site.

The site survived with the assistance of volunteers: there were several national and international petition campaigns to make awareness of its importance, and to create a public sense to prevent its demolition. There were several paper and poster presentations in national and international **docomomo** events. The site was questioned in a national workshop, *Understanding Modernity from Early Republican Heritage*,<sup>2</sup> held by the UIA Chamber of Architects in Turkey Kayseri Branch in 2008 and numerous ideas were developed for its re-use. Moreover, the site was issued in photography exhibitions like, *kayserimodern*<sup>3</sup> based on Modern heritage of the city, or some art-installations<sup>4</sup> in Istanbul, Paris, etc. There were several evaluations and critics of the site and its effects in Kayseri, in the book *20<sup>th</sup> Century of the Kayseri*,<sup>5</sup> published in 2012.

Nonetheless, several parts of the site were demolished: the power house was modified to become a garment-fabrication *atelier* in the 1980s, and the original machines that produced electricity from coil, were mostly dismantled. However, this change did not affect the overall planning, and the original architectural concept has been conserved.

In 2003, just after the registration process as a cultural site, Bachelors' Apartment, a significant part of the residential units, was adapted to a youth centre by the Metropolitan Municipality of Kayseri based on a special agreement with the Erciyes University. Unfortunately, the spatial form of the building was destroyed. The university also intended to modify some parts of the operation building, in a unique rectangular plan of 30.000m<sup>2</sup> (232mx132m), to make *ateliers*, classrooms and office rooms. While this renovation process was interrupted from the Ministry of the Culture Conservation Committee, the spatial form of the building and the original machines were badly damaged.

Erciyes University left the site and gave the forest area at the back side to the Metropolitan Municipality through an exceptional agreement based on fostering a new high-rise residential zone in 2007. Besides that, the university also allowed the use of

some residences from the units to the Police Headquarters of Kayseri. Four residential apartments for workers, in a unique plan type, were demolished, and some parts of the residences for officials were also damaged. Furthermore, there were also several proposals to transform the site, such as to use it as a recreation area or an exhibition hall, but all of them ran into national and international petitions.

In 2012, Abdullah Gül University, a newly founded public university in the city, took its ownership with the intention to transform the Sümerbank Site into a university campus, with the aim to not alienate the existing buildings by regarding them untouchable nor to over-intervene and damage their existing character.

The main idea of the transformation was to create an open-city campus to generate a new impact for the urban and social development of the Kayseri city, as had happened before when the factory was initialized. Sümer will be a secondary campus for AGU. The main campus outside the city centre is also in its construction process. AGU intended the use the Sümer Campus as a cultural and activity centre, as the interaction midpoint between the city and its citizens. It will be full of cultural and intellectual activity to invent a creativity impression sensing its historical background. As a gated complex in the centre, it should provide the adequate spaces and activities that Kayseri has been lacking for long time.

Whereas there were several spaces to transform in order to use them for educational and administrative activities of the university, a new building was added to the site to point out the significance of the site. Nonetheless, the idea consisted in not only a brand-new building, but also a transfiguration process of the old warehouses. EAA, as the chief architect of this idea, proposed to convert the small warehouse with a new building addition, into a facility that will house the activities of the university. According to this idea, the roof of the warehouse was removed and a new structure for new spaces above it was added. Besides, EAA used existing arcades of the large warehouse as a generative element, and constructed a new addition above the small one, and formed an arcade view in front, mirroring the other warehouse. The idea of this renovation project was awarded in the World Architecture Festival 2012, in Singapore.

AGU School of Architecture is in the process of updating the site master plan with a heritage management plan, which would provide appropriate re-use of the building stock. All of the buildings in the AGU Sümer Campus will be renovated one by one in contemporary architectural approaches sensing its historic background and significance.

## Conclusion

It is hard to create a general public opinion for the conservation of Modern and industrial heritage such as the Sümerbank Site. On account of this, the AGU Sümer Campus renovation is a unique example on handling Modern heritage. While there were numerous troubles and difficulties, damages and demolitions, the site survives with its unique characteristics. On the other hand, there has been a sense of belonging resulting from the former workers and their families, which was the key protection component. While the preservation arguments or registration process was based on the idea that the Sümerbank Kayseri Settlement was a significant masterpieces of the Turkish modernization process, the key issue has been the idea of belonging, which has been encouraged by the volunteers' assistance. This leading attempt on managing change could be comprehended as a milestone on the conservation of Modern and industrial heritage in Turkey.

## Notes

1. Burak Asiliskender (Architect, MSc, PhD) is an Associate Professor at Abdullah Gül University, and the head of the Department of Architecture. He is also one of the co-founders of Argeus Architects in Kayseri. He has been one of the international members of the **docomomo**. He has several papers, articles on Modernity, identity, space and place concepts, modernization and especially spatial reflections on Turkey and Kayseri at early times of the Turkish Republic, published national and international wide.
2. *Understanding Modernity from Early Republican Heritage*, Seminar and Workshop, UIA Chamber of Architects in Turkey Kayseri Branch, October, 6-10, 2008. Kayseri.
3. *Kayserimodern*, Photography Exhibition on Modern Heritage in the Kayseri, October, 6-10, 2008, in UIA Chamber of Architects in Turkey Kayseri Branch, Kayseri.
4. There have been several exhibitions and art-installations held by Ahmet Albayrak, in Paris, Kayseri and Istanbul.
5. *20<sup>th</sup> Century of the Kayseri* was published by AGU in 2012. (Asiliskender, B., Ceylan, B. ve Tozoglu, A.E. (ed.), 2012. "Kayseri'nin Yirminci Yüzyili: Mimarlık, Kent Tarihi ve Kulturu", Abdullah Gül Üniversitesi, Kayseri.)

## References

- Asiliskender, B., 2002. *Developing 'Modern' Identity On Architecture At The Early Years Of Turkish Republic: A Case Study Of Sümerbank Kayseri Cotton Factory*, Master Thesis, ITU, Istanbul.
- Asiliskender, B. 2005. *Installing 'Modern' Life Style with Architecture*, in DC Papelas, Revista Semestral de Critica Arquitectonica, Departament de Composicio Arquitectonica, v.13&14, pp.216-223, October, UPC (*Universitat Politècnica de Catalunya*), Barcelona.
- Asiliskender, B. 2008. *Modernity and Housing: Spatial and Social Change in Kayseri by Industrial Enterprises of Turkish Republic*, PhD Dissertation, ITU, Istanbul.
- Boratav, K. 1989. *Türkiye İktisat Tarihi 1908-1985 (History of Turkish Economy 1908-1985)*, Gerçek, Istanbul.
- Deleuze, G., Guattari, F., Massumi, B. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*, The Athlone Press, London.



# Herman Hertzberger: an Interview on Education

By Gonalo Canto Moniz

**H**erman Hertzberger is one of the main actors of the debate that relates Architecture with Education. He is not only the architect of many school buildings, but he is also the author of the book *Space and Learning*<sup>1</sup> where he reflects about education and more specifically about how architecture contributes to the education issue and vice-versa.

He was educated in the 50s at Delft where he witnessed, as a student, the fight for a Modern architectural education. As he told us, the debate was politicized by two groups of professors: the left wing was trying to implement Modern pedagogies and Modern models and the right wing was preserving traditional architecture.

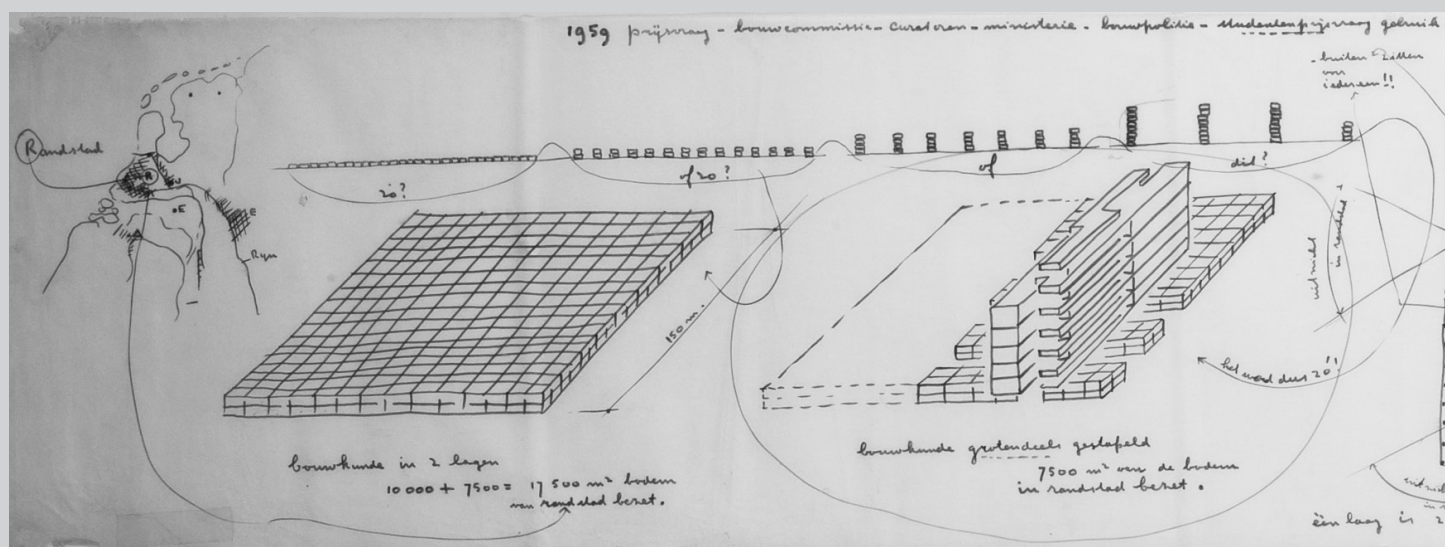
This ideological fight was connected to the struggle for Modern architecture spread by CIAM through all its members. After the war, Gropius and Giedion created a new commission to promote a debate on education, considering that schools should have a special role in the process of consolidating Modern ideas, principles and methods. Cornelius Van Eesteren and Ernesto Na-

than Rogers joined this commission in 1949 and together proposed to present a Charter of Education at CIAM 8, which never happened.

In the other European schools the problem was more or less the same: how to change the traditional approach to architect's education, based in classical or nationalistic references, supported in *Beaux-Arts* methodologies, specially the copying system?

At Delft, Hertzberger says that the right wing was also divided in two lines—the catholic and the protestant—which created an even more complex problem, although it is still easy to identify these two approaches to architecture, as both were looking for a national Dutch style. He says that this was imposed by the professors: "in one of the first projects I did, the brief was very explicit, '[...] in the roof, the house should have a room for the children[...]'". Flat roofs were not done and in this way students were in fact forced to design pitched roofs.

On the other side, the 'left wing', led by Modern architects as Jaap Bakema and Van Eesteren, aimed to



*As far back as the design phase, the building was discussed extensively as an educational instrument during the debating society lectures given by Van den Broek, who taught at the Faculty of Architecture at the time.<sup>3</sup>*

Hertzberger started to teach after the Van den Broek and Bakema building was inaugurated in 1970, notably in “a period that nobody was interested in architectural design, but only in a political approach.” The meeting place became the most important place in the building, for it was the public space.

Hertzberger developed a new pedagogical program in his design studio to integrate history and social problems in the design process, with emphasis on the public realm. The results of this humanistic approach are well reflected in his books *Lessons for Students in Architecture* (1991), *Space and the Architect* (2000) and *Space and Learning* (2008).

In these series of essays, Hertzberger integrates his projects as a laboratory to develop his ideas about space, about education and about the public domain. The Montessori School in Delft (1960–66) and the Central Baheer office building, Apeldoorn (1968–72) are the best examples of a complementary relation between theory, pedagogy and practice.

71

inrichting - architectuur - 3 jaren onrust  
 inrichting - architectuur - 3 jaren onrust  
 inrichting - architectuur - 3 jaren onrust

100 x 10 m<sup>2</sup>  
 000 m<sup>2</sup> rondheid (of drager)  
 waarden vrij in de dalen!

inrichting in rondheid!  
 inrichting in rondheid!  
 inrichting in rondheid!

inrichting in rondheid!  
 inrichting in rondheid!  
 inrichting in rondheid!

inrichting in rondheid!  
 inrichting in rondheid!  
 inrichting in rondheid!

inrichting in rondheid!  
 inrichting in rondheid!  
 inrichting in rondheid!

inrichting in rondheid!  
 inrichting in rondheid!  
 inrichting in rondheid!

Hertzberger is now developing his educational perspective in the light of structuralism. At the Berlage Institute, the master class "Open Structures" explored the possibility of buildings adaptable to change, extension, and reprogramming, in 2012.<sup>4</sup> This approach is particularly important to think the destiny of Modern buildings and to find design methodologies for transformation.. Hertzberger has just finished the renovation of the Utrecht Music Centre (1973–78) which is to be considered as "more sustainable architecture, in a structuralist perspective," says Hertzberger.

#### Notes

- 1 Herman Hertzberger, *Space and Learning*, Rotterdam, 010 Publishers, 2008
- 2 To learn more about the building visit Nai website, [http://en.nai.nl/collection/view\\_the\\_collection/item/\\_rp\\_kolom2-1\\_elementId/1\\_279382](http://en.nai.nl/collection/view_the_collection/item/_rp_kolom2-1_elementId/1_279382)
- 3 NAI, "Faculty of Architecture Building TU Delft still exists on paper, drawings from the Van den Broek en Bakema Archives", access in [http://en.nai.nl/collection/view\\_the\\_collection/item/\\_rp\\_kolom2-1\\_elementId/1\\_279382](http://en.nai.nl/collection/view_the_collection/item/_rp_kolom2-1_elementId/1_279382)
- 4 Berlage Institute, "Open Structures" (Research Projects with Dirk van der Heuvel and Tom Avermate), [http://www.theberlage.nl/galleries/projects/details/open\\_structures](http://www.theberlage.nl/galleries/projects/details/open_structures)

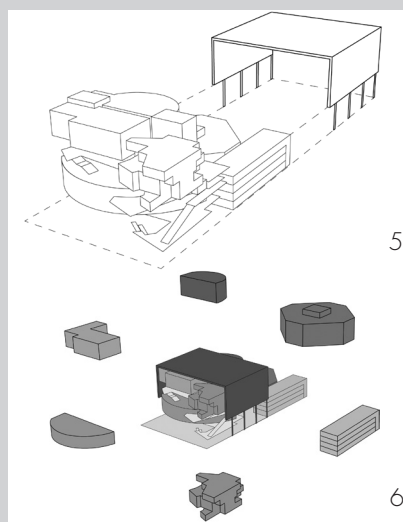
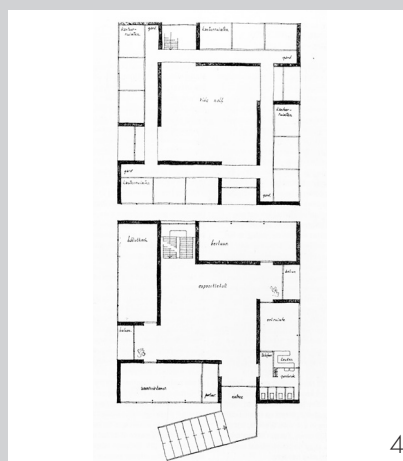
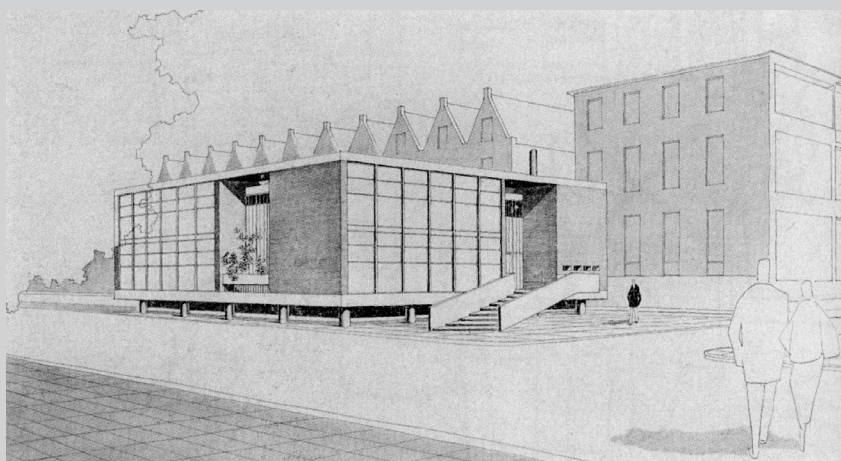


Figure 2. Weekend sketch of the Achtergracht Office Building at Frederiksplein, Amsterdam, 1955, by **Herman Hertzberger**. ©HH.

Figure 3. Drawing by **J.B. Bakema** showing an impression of the main hall as a meeting place, 1972. Seated on the right a figure that looks like J.B. Bakema. Collection Het Nieuwe Instituut archive: BROX inv. n° 1140r2.

Figure 4. Weekend sketch of the plans of the Achtergracht Office Building at Frederiksplein, Amsterdam, 1955, by **Herman Hertzberger**. ©HH.

Figures 5, 6. In 2005 plans were presented to partially demolish and enlarge the Vredenburg Music Centre (1973-1979) by **Herman Hertzberger** under his own direction. Of the original building only the main auditorium is retained. The new design adds a tower of auditoria, each designed by a different architect (Jo Coenen & Co, NL Architects, Architectuurcentrale Thijs Asselbergs). Diagrams ©HH.



# Rethinking the Museum of Modern Art Kamakura

By Kenji Watanabe

An exhibition about the works of Japanese Modern architect, Junzo Sakakura, entitled “*Une architecture pour l’homme* Junzo Sakakura in Architectural Documents”, took place from 27 November 2013 to 23 February 2014. The exhibition was organized by the National Archives of Modern Architecture, Agency for Cultural Affairs which was established in May 2012 for the first time in Japan. This exhibition could promote to rethink MoMA Kamakura as facing on dangerous situations to inherit as cultural heritage of Modern Movement in Japan.

MoMA Kamakura was designed by Junzo Sakakura who was one of the disciples of Le Corbusier. The building has been surviving over 60

years, even though it was built in the post-war period, when construction had to deal with the lack of materials.

MoMA Kamakura was substantially the first work in Japan, built at a historical site and surrounding the greenery landscape of the historical town of Kamakura, adjacent sacred district of the Tsuru-gaoka-Hachiman-gu (Hachiman Shrine).

The main issue of this exhibition is to collect and document the original drawings by Sakakura Associates, to introduce the work to the public and to prompt evaluation of Modern Movement in Japanese architecture. This is on the agenda of **docomomo** since its establishment, however,

in Japan, these facilities and archive networks for architectural documents are eventually coming up, consequently, some of documents have been already transferred to the museums or, regrettably, to institutions overseas. Therefore, this exhibition could be a significant first step for the constitution of architectural archives in Japan.

Kanagawa Government owns and runs MoMA Kamakura since 1986. It has obtained its leasehold from Hachiman Shrine for 30 years. After then, it should finish its role as a museum by 31 March 2016 returning to be a vacant lot.

Perhaps new proposals should be considered, as the original idea by Sakakura, whose ideal of Modern architecture was to integrate rational and functional thinking to traditional aesthetics; whose mentioning “One cannot ignore the unique localities that are shaped by differences in environment and human customs” as entitling the exhibition. Kanagawa Government has announced to decide some kind of directions including any possibility of conservation and maintaining this masterpiece by the end of 2014.



## Ministério da Educação e Saúde. Ícone urbano da modernidade brasileira 1935–1945

By Roberto Segre

Publisher: Romano Guerra, São Paulo

ISBN: 978-85-88585-40-9

Language: Portuguese

Year: 2013

Revisiting the headquarters of the Ministry of Education and Health in Rio de Janeiro<sup>1</sup>

Architects, researchers and Brazilian critics found many ways to try to define the uniqueness of a certain office building built in Rio de Janeiro in the late 1930s. It hosted the Ministry of Health and Education (MES in its Portuguese acronym), the Ministry of Education and Culture, called now the Palácio Gustavo Capanema. Lúcio Costa credited the headquarters of the MES to be the revelation of the genius of architect Oscar Niemeyer, which in itself would have a special recognition in the historiography of Modern architecture. But Lúcio Costa also stated that it was “[...] a project that would belong to [...] the general history of fine arts as a lasting mark of a new and fruitful cycle of the timeless art of building. It was indeed in this building of considerable size—carried out with such care and full comprehensive conceptual purity—where, for the first time, it was possible to carry out the main ideas that 25 years before the creative genius of Le Corbusier had presented with the passion, the fearlessness and the faith of a true crusader. Of all the seeds that he had generously thrown all over the world [...] this one, left here, [...] was the one, after all, that in fact avenged.”<sup>2</sup>

For Carlos Eduardo Comas the palace is “prototype and monument,”<sup>3</sup> Ruth Verde Zein considers it a “mandatory quote, frame of any historical approach of Modern Brazilian architecture”<sup>4</sup>; for Mauricio Lissovsky and Sergio de Sá “born monumentally, the construction of this building immediately assumes a mythological character,”<sup>5</sup> Italo Campofiori says the building is “graceful, gentle and strong [...] touched with elegance, delicacy and force [...] a perfect portrait of Modernism when Young.”<sup>6</sup> The authors of *Le Corbusier and Brazil*<sup>7</sup> referred to it saying that “from the invitation to provide feedback on the project of the MEC in Rio de Janeiro the roles of teacher and students” redefined itself to make a new “Modern and Brazilian” architecture. The bold entrepreneurship and autonomy of Brazilian students annoyed the European Master: “How have these youngsters managed to do, in a country like Brazil, what I was not able to do here in Europe?”<sup>8</sup> The incident came to undermine the relationship

between teacher and students when Le Corbusier, disagreeing when credited as project consultant, committed the “slip” of publishing in *Ouvre Completa, 1934–1938*, “a sketch made a posteriori based on photos of the built building”, pointing out Lúcio Costa in correspondence: “(you) publish (the sketch) as if it were an original design, (which) caused a sad impression.”<sup>9</sup>



The formula that Roberto Segre found in order to summarize all the previous ones and that will suit the title for the book that will review, complete and delve into the story of this Modern palace—clarifying once again the authorship issue among many others—was “urban icon of Modernity”. To understand and situate a debate that had gone on for so many years—and that was only exposed in final consensus with critics and Brazilian researchers—Roberto Segre assembled a team of collaborators. He then undertook a life that would arise, as he explains in the Introduction, from his passion for the city of Rio de Janeiro where he established himself as a researcher and professor in 1994. He also continued with his other passion, the architecture of Le Corbusier, which had aroused when he was a young Italian architecture student immigrant in Buenos Aires.

The academic research started in 1998 became the book *Ministério da Educação e Saúde—Ícone urbano e modernidade brasileira* in 2006. Two years later Segre was appointed responsible of the application of the Palácio Gustavo Capanema as a World Heritage Site, a long standing claim that the Brazilian government has not yet presented to UNESCO. It could even complement the 1987 Brazil entry since the city was accepted primarily as it represented “un événement majeur dans l’histoire de l’urbanisme.”<sup>10</sup>

In 1948, the MES was listed by the Brazilian Office for National Artistic and Historical Heritage, as national heritage. Just three years after its opening—anticipating its unusual uniqueness as a monu-

ment and the issues surrounding the protection of Modern Movement architecture—the building was inscribed in the book *Livro do Tombo das Belas Artes*, as “it was the first monumental building aimed at public services’ headquarters, ever planned and built worldwide in strict compliance to the principles of Modern architecture.”<sup>11</sup>

The Palácio Gustavo Capanema—named after Getúlio Vargas’ Minister who played a key role in the recruitment of the *carioca* architects, in bringing Le Corbusier to Brazil and in the viability of the project—was designed by a team of young architects then composed by Lúcio Costa (1902–1998), Carlos Leão (1906–1983), Óscar Niemeyer Soares Filho (1907–2012), Affonso Eduardo Reidy (1909–1964), Ernani Vasconcellos (1912–1989) and Jorge Machado Moreira (1904–1992). Le Corbusier participated as a consultant. Other partners who joined were Roberto Burle Marx (1909–1994), responsible for the design of the green areas, and artists Candido Portinari (1903–1962), who designed the tiles and executed murals; Bruno Giorgi (1905–1993), Jacques Lipchitz (1891–1973), Adriana Janacópulos (1897–1978), and Celso Antônio (1896–1994), author of the numerous sculptures that populate the building, plus the engineer Emilio Baungart responsible for the structural calculations.

The beginning of the long process that includes the design and construction of the palace was marked by the launch of an official competition for the new headquarters for the Ministry of Health and Education in April 1935, and its subsequent annulment. It continued with the appointment of the Modern Movement architects and artists, the coming of Le Corbusier to Rio de Janeiro in 1936, and with the laying of the cornerstone of the building in April 1937. It ended with the official opening on October 3, 1945. These ten years faced the difficulties of economic and political contradictions that marked the government of Getúlio Vargas; years lived in the context of World War II in Europe; and the cultural clashes that made the work of the MES a privileged field to weigh up between the academic tradition and the *avant-garde* art, both confronted since the 1920s in Brazil.

In 544 pages and 945 reference notes, the teams of the author of the book, Roberto Segre, and Publisher Editora Romano Guerra, articulate and organize bibliographic sources, and reveal and publish documents, thus casting new light on the debates surrounding the long gestation of monumental Modernity in Brazil and showing the headquarters of MES from different sides. The first one emphasizes the role of the building in the transformation of the city of Rio de Janeiro. Located in a new area of expansion, the project discusses the provisions of the

development plan devised by the French Urbanist Donat Alfred Agache for Rio de Janeiro in 1927. It breaks with the classical proposal of compact occupation with blocks to release an important space of land for gardens and pedestrian circulation under *pilotis*.

The development of the design, in all its phases, is dissected and scrutinized by posting sketches, drawings, photographs and texts, explaining compositional, constructive and even conservation and restoration issues. In the presentation of the book, Jean-Louis Cohen draws attention to some of these aspects, such as the fact that the headquarters of MES usher in a new type of skyscraper, establishing not only a lexical rupture—with the use of *brise-soleils* and the corbusian matrix of *pilotis*—but a structural rupture referring to the elongated plant, the decentralized core and the flat roof crowning the volume.

During a trip to Brazil in 1936, Le Corbusier writes the text "*L'architecture et les Arts Majeurs*"<sup>12</sup>—aboard the Zeppelin airship— which he entrusts to Lúcio Costa when he returns to France. There he develops his ideas, still embryonic, on the possibility of an effective relationship between the three major arts—architecture, sculpture and painting—and these with other means of expression. Among other principles, the MES implements and inaugurates the Synthesis of Arts mainly through the themes of the works of art associated with the design and use of the traditional blue and white tile panels. From this dialogue between the arts appears the seed of the characteristic Brazilian nascent Modern architecture of Rio de Janeiro: "[...] the very national character is expressed through architectural collaboration of authentic artists, thus preserving what is imponderable, but genuine and irreducible in the differentiated character of each people."<sup>13</sup>

By illuminating the path through the most remote corners of the Palácio Gustavo Capanema, the research now published unveils some of its mysteries, clarifies old doubts and raises new ones. It points to the importance of the debate about Modern architecture, while it also confirms an old suspicion: as for most palaces regarded as milestones in the history of exceptional architecture, the existence of this Modern palace can be regarded as a happy occasion which brought together the power and the determination of a *Prince*, Minister Gustavo Capanema, and the genius and intelligence of an artist, architect Lúcio Costa.

#### Notes

1. Segre, Roberto, *Ministério da Educação e Saúde-ícone urbano e modernidade brasileira*, São Paulo, Romano Guerra, 2013
2. Costa, Lúcio, "Carta a Gustavo Capanema datada

de 3 out. 1945", Leonidio, Otavio "Lúcio Costa: palavra definitiva", I ENANPARQ, Rio de Janeiro, 2010, <http://www.anparq.org.br/dvd-enanparq/simpósios/138/138-794-1-SP.pdf>

3. Comas, Carlos Eduardo Dias, "Protótipo e monumento, um ministério, o ministério", *Revista Projeto*, ago. 1987, nº 102.
4. Verde, Ruth Verde, "*Segundo a ordem das razões e mais além*", editorial do número especial da Revista Projeto dedicado ao centenário de Le Corbusier, August 1987, nº 102.
5. Lissovsky, Mauricio; Sá, Sergio M de, "*Mais vale saber de Le Corbusier que conhecê-lo aos pedacinhos*", *Revista Projeto*, August 1987, nº 102. By the same authors: Lissovsky, Mauricio; Sá, Paulo Sérgio Moraes de, *Colunas da educação: a construção do Ministério da Educação e Saúde*. Rio de Janeiro: MINC/IPHAN: Fundação Getúlio Vargas/CPDOC, 1996.
6. Ítalo Campofiorito interviews Hugo Segawa, *Revista Projeto*, August 1987, nº 102.
7. Santos, Cecília Rodrigues dos; Pereira, Margareth da Silva; Pereira Romão da Silva; Silva, Vasco Caldeira da, *Le Corbusier e o Brasil*, São Paulo, Tessela/Projeto, 1987.
8. Carmem Portinho interviews Hugo Segawa, *Revista Projeto*, August 1987, nº 102.
9. Letter from Lúcio Costa to Le Corbusier, 27/11/49, FLC, C1.18.76 a 78, Santos, Cecília R. dos, et alt. Op. cit.
10. Cf.: <http://whc.unesco.org/fr/list/445>
11. Segre, Roberto. *Ministério da Educação e Saúde-ícone urbano e modernidade brasileira*, São Paulo, Romano Guerra, 2013, 456–457.
12. Le Corbusier, "*A arquitetura e as Belas-Artes- As tendências da arquitetura racionalista relativamente à colaboração da pintura e da escultura. O estudo da tendência que, ao contrário, impera na arquitetura racional de excluir como supérfluo, seguindo uma lógica rigorosa, o concurso das artes figurativas*". Translated by Lúcio Costa and published for the first time in *Revista do Patrimônio Histórico e Artístico Nacional*, Rio de Janeiro, IPHAN, nº 19, 1984, 53–69.
13. Costa, Lúcio. "O arquiteto e a sociedade contemporânea", Xavier, Alberto, org. *Lúcio Costa: sobre arquitetura*, Porto Alegre, Editora Uniritter, 2007, 2.

**Cecilia Rodrigues dos Santos**

PhD Architect and Researcher  
Faculdade de Arquitetura e Urbanismo  
Universidade Presbiteriana Mackenzie,  
São Paulo, Brazil

## Maledetti Vincoli

By Ugo Carughi

Publisher: Allemandi

ISBN: 978-88-42221-96-8

Language: Italian

Year: 2013



In a territory reduced to an exclusively market-based instrument, the excesses of new interventions, the delays of administrative culture and the media driven accelerations of contemporary architecture are shortcomings in the basic protection legislation. This volume explores incidents that have sparked lively discussions and put forward the need to formulate a system of shared criteria to update the Code of Cultural Heritage and Landscape. The study compares the development of the law of conservation and the current intervention strategies on an international scale linked to identity which is in continuous transformation.

The editor

## Ernesto N. Rogers 1909–1969

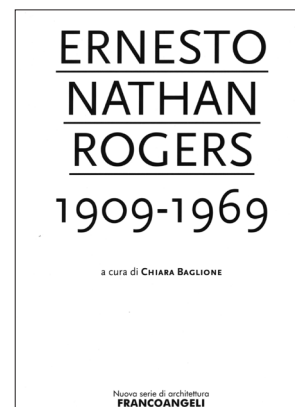
By Chiara Baglione

Publisher: Franco Angeli, Milan

ISBN: 978-88-20419-42-4

Language: Italian

Year: 2013





This volume contains new studies on Ernesto Nathan Rogers. It offers a critical review of his cultural heritage. Two generations of architects and historians are confronted with the figure, the thought and the work of Rogers. The memories and reflections of Rogers' students are intertwined together with the unpublished research of young scholars who look with renewed interest to his experience and lessons. The essays are arranged in thematic chapters that reflect the various areas deployed in the complex and multifaceted activities of Rogers (architect, professor of architecture, intellectual, director of Domus and Casabella) without, however, wanting to create an artificial separation between fields of action which he always considered closely related, as shown in the many references and connections detected in the content of the essays.

The editor

### Habiter en hauteur

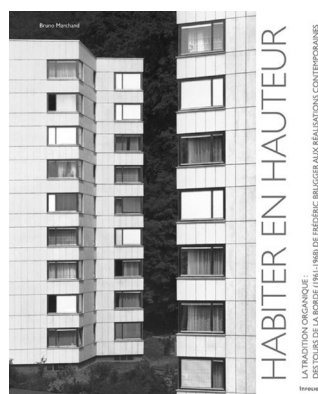
By Bruno Marchand

Publisher: Infolio éditions, Gollion

ISBN: 978-28-84744-59-1

Language: French

Year: 2013



*Habiter en hauteur. La tradition organique: des tours de la Borde (1961-1968) de Frédéric Brugger aux réalisations contemporaines* is the complete title of this book which focuses on an exemplary cooperative example of the second post-war, which is part of an "action to encourage the construction of buildings with a social purpose" launched by the government to fight against the low rent housing shortage. They confirmed the reputation of the Vaudois architect Frederick Brugger. The study of the towers of the Borde illustrates a specific way of living "in height", the "neighborhood unit" proceeding from a logic that seeks to achieve high densities in the construction of tall buildings.

This choice resulted in lively debates and, curiously, it is still today the subject of intense discussions. The study of the towers of the Borde puts into perspective the quality of a construction of organic inspiration, in the wake of the humanistic trajectories of Frank Lloyd Wright, Alvar Aalto, Hans Scharoun, Otto Senn or Ernst Gisell.

The editors

### Kinshasa

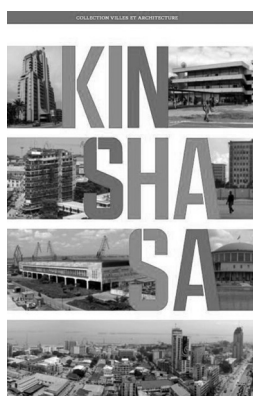
By Johan Lagae and Bernard Toulrier

Publisher: CIVA, Brussels

ISBN: 978-29-30391-48-9

Language: French

Year: 2013



The book has been published by CIVA (Centre International pour la Ville, l'Architecture et le Paysage) and the University of Brussels's Faculty of Architecture La Cambre Horta, under the direction of Johan Lagae and Bernard Toulrier, and with the support of TMB.

*Kinshasa* aims to be the definitive guide to the architectural heritage of the Congo's capital and will be an important resource for researchers and lovers of the city alike. The guide is the first of a series of guides dedicated to Congolese cities, including Lubumbashi and Kisangani. The series will seek to reflect the diversity of Congo's architectural heritage and to highlight the evolution of architectural forms across the country.

The editors

### Maputo cidade aberta, open city

By Fabio Vanin

Publisher: Fundação Serra Henrique

ISBN: 978-98-99862-40-1

Language: Portuguese and English

Year: 2013



The book is the result of the investigation conducted in the Mozambican Capital by the author for his Ph.D in Urbanism (IUAV University of Venice, IT) and aims at highlighting some of the most relevant urban, architectural, social and cultural features of the city that are today confronted with the rapid transformations caused by the economic growth of the country. This delicate moment poses urgent questions on the future urban development that is divided by opposed forces: the ambition of becoming another Dubai and the struggle of keeping the existing identity.

The editor

### Los pueblos de colonización de Fernández del Amo.

Arte, arquitectura y urbanismo

By Miguel Centellas Soler

Publisher: Arquia/Tesis

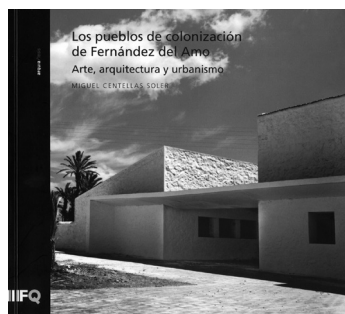
ISBN: 978-84-937857-0-3

Language: Spanish

Year: 2013

The value of the authentic, of the traditional, of what always sometimes has gone straight past in the history of contemporary architecture. The intrinsic characteristics that define a culture, in all its aspects developed by the draft of the passing of time, they should always be an element of reference and work guideline for the architect. In the book of Miguel Centellas Soler, *The Villages of Colonization of Fernández del Amo. Art, architecture and town planning* the importance of architectures

is more than adequately highlighted based on the vernacular and the direct contact with the place, in the broadest sense of the word, in which they are inserted. Through the work carried out by the Spanish architect José Luís Fernández del Amo between 1951 and 1969 for the National Institute of Colonization, as a public body responsible for conducting the ex novo villages to house the settlers, we learn how the tools and almost artisan and economically meager working techniques fail to respond to a deployment system and modern domestic solution system architecture with an image of transition between traditional Spanish house and the utopia of modern European housing.



The book likewise analyzes a total of 12 villages of colonization by a clear structure. First, it refers to all the urban scale parameters, from the layout of the new plan of what used to be small towns, from the organization of the roads, in some cases differentiating the rolled from the pedestrian, to the strategic placement of public buildings. It's what the author defines as "Projecting the place" where you discover the links between what was to be a new urban landscape and the surrounding natural environment.

Secondly, the home is discussed in detail at all scales. The plot of land as a basic organizational element and the home itself within it. The latter position regarding the plot leads to functional optimization of the courtyard as an element and vital mechanism in the project. The use of the courtyard served as transition between the home and the work in the field. The materiality of the houses is studied with delicate care and it's the details that make up the image of the rudimentary wager of Spanish architecture through pure and truly modern language. In the book it is called "Projecting the necessary", which represents the minimum housing requirements that are performed on the villages.

The third and final section includes one of the most interesting elements of the book. It has to do with Centellas' successful work regarding the artistic content of public buildings that develops with

greater intensity in the churches. The integration of the arts and the reflection of a golden age of Spanish contemporary art are apparent in this austere architecture as a socialization of the culture that reaches the inner corners of the country. This, let's say, didactic spirit of the proposals of these villages on all levels accurately reflects a new way of doing things within the Spanish culture of mid-twentieth century.

In excellent writing, research depth, quality graphics and architectural interest, this book represents the opportunity to re-read our most recent past and find in it seemingly outdated tools and, at the same time, show immense contemporaneity.

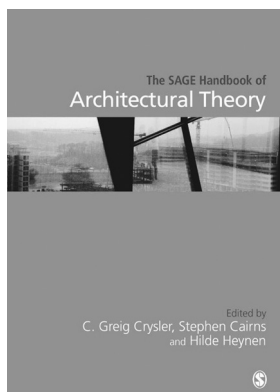
Juan Pedro Sanz Alarcón,  
Architect

## The Sage Handbook of Architectural Theory

By C. Greig Crysler, Stephen Cairns and Hilde Heynen (ed.)

Publisher: Sage Publications, London  
ISBN: 978-14-12946-13-1

Language: English  
Year: 2012



The core of architectural theory for the past several decades has looked to architecture's autonomous structures and formal procedures as its primary material for analysis. Now in this collection, architectural theory expands outward to interact with adjacent discourses such as sustainability, conservation, spatial practices, virtual technologies, and more.

K. Michael Hays

Eliot Noyes Professor of Architectural Theory,  
Harvard University

## To & Fro: Modernism and Vernacular Architecture

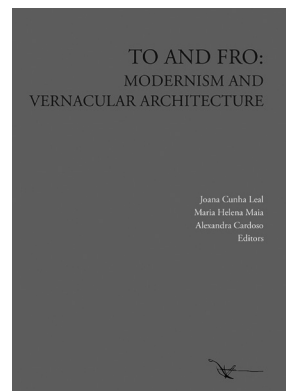
By Joana Cunha Leal, Maria Helena Maia and Alexandra Cardoso

Publisher: CEAA, Porto

ISBN: 978-97-28784-48-8

Language: English

Year: 2013



This book results from a research project entitled "The Popular Architecture in Portugal. A Critical Look" which began in April 2010 under the leadership of Pedro Vieira de Almeida. The aim of the project was to undertake a re-reading of the book *Arquitetura Popular em Portugal* as a clearly delimited reference basis in order to put to the test the two expressive variables in architecture: 'transition-space' and 'thickness', the latter understood to give rise to a poetics of thick walls and a poetics of thin walls. These two variables were characterized by Pedro Vieira de Almeida in 2010 as mezzo voce architectural parameters, a term which we used as an overall title for a series of four volumes published between 2010 and 2013 with the results of our research. The project ended up generating a second line of work. Published in 1961, the book *Arquitetura Popular em Portugal* had a significant impact on Portuguese architectural culture. Thus two distinct yet complementary focuses were encompassed by this project: the Survey used as a pretext for theoretical reflection and the Survey taken as object of study in itself. This second line of enquiry is what brought this book into being.

The editors

**Universidad Laboral de Chestre,  
1967–1969. Fernando Moreno  
Barberá**

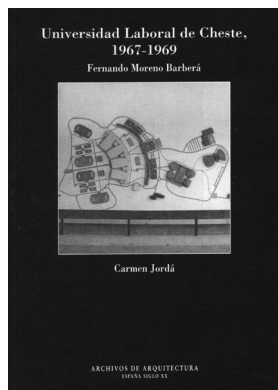
By Carmen Jordá

Publisher: Archivos de Arquitectura

ISBN: 978-84-92103-89-8

Language: Spanish

Year: 2005



The Universidad Laboral de Chestre allows us to observe a particular process of interpreting Modern legacy through an act of extraordinary magnitude. The Spanish Dictatorship propaganda described it as a 'Spanish record'. Its author, having demonstrated a remarkable qualification, displayed total confidence in the technical and expressive possibilities of a discourse that was still considered valid in 1967 although crisis symptoms had already appeared or at least changes in the international scene had already begun. Entering this place today means meeting the powerful images associated with the vibrant rhythm of concrete umbrellas; remembering Mies' delicacy in building definition; feeling the warmth determined by Nordic interiors; and the Californian and Mediterranean appropriation of outdoor living of architecture... All this in a personal synthesis governed by a great building and planning talent, such as that developed by Fernando Moreno Barberá.

**The editor**

**Modern Architecture in Africa:  
Angola and Mozambique**

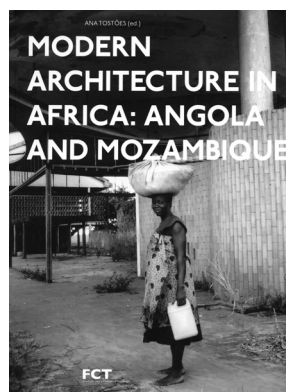
By Ana Tostões (ed.)

Publisher: FCT / Técnico Lisboa

ISBN: 978-98-96582-39-5

Language: English / Portuguese

Year: 2013



The book is the result of the research project "Exchanging World Visions: Modern architecture in Lusophone Africa" which assumes the importance of Lusophone Africa Modern heritage and the urgency of documenting its built set. Focusing on the production of the architectural Modern Movement erected in Angola and Mozambique, the in-depth study of this universe was developed seeking to establish relationships with various sources and influences, relating a possible continuity with the Modern Brazilian production but also with references that emerge in the second half of the 50s.

The chronological limits consider the year 1943 as the beginning of the research, being the year when *Brazil Builds* was published by the MoMA in New York confirming the wave of international diffusion of Modern Brazilian architecture, and the year 1974 as marking the revolution process of the 25<sup>th</sup> April in Portugal and the fall of the colonial regime that led to the independence of these countries.

During these years, the pioneers of the Modern Movement in Africa have demonstrated how Modern design could be interpreted, transcended and enriched in its content. In fact, they were able to cope and respond to diverse physical and social conditions; experiencing innovative solutions that still remain valid and stimulant. At that time, issues now called "environmental sustainable" began to be considered as conceptual key design. Modern buildings were being designed to offer better and more comfortable living conditions. Modern buildings were being designed on economic and flexible solutions capable of responding to new situations,

using either the available technics at the time, whether the local building traditions.

The research methodology establishes an order of criteria for the selection and description of urban spaces and buildings which constitute the case studies. The research integrates different sources of information (bibliography, archives and direct observation) crossed with the projective and constructive analysis performed by drafting basic drawings of the selected works, in order to conduct a comprehensive description of the buildings, the layout to detail constructive devices and passive thermal control. These drawings are the basis of the interpretative work and critical essays that follow the desirable future developments based on the reusability of many of these structures.

This research project confirms and reveals the existence of a vast heritage built during the last period of Portuguese colonial regime (1945-1974) in Angola and Mozambique, materialized into qualified works of Modern architecture. A large number of buildings from the 40s and 50s survived to very adverse circumstances: heavy use compounded by a total lack of maintenance, severe economic constraints and consequent social unrest. These buildings show how Modern ideas could be locally interpreted and adapted physically, socially culturally (climate raw materials in a social and cultural context) by solutions so well achieved that after the 50s, remain valid in particular for following the route of designing with climate, as happened in other parts of sub-Saharan Africa, India and Brazil. After the independence of these territories, the spontaneous process of appropriation of this modern architecture by the local population has been attested by the vocation of the Modern model to adapt to the specificities of different contexts and cultures.

We are now approaching a crucial moment. Today, profound changes threaten this architectural and urban heritage. We find ourselves at a decisive crossroads for the survival of this heritage and the community that uses it, pointing to the reuse strategy, committed to examining its full potential, cultural and material, in order to avoid the path of destruction and consequent replacement by new structures without identity, nor any concerns to energy performance. In this research sight, these modern buildings are still cost-effective and flexible, able to adapt to contemporary physical, environmental, and social uses. In the near future, it is believed that these are the premises of an absolutely unique opportunity to deepen and expand to its real dimension the research herein presented.

**Ana Tostões**

*Architect*