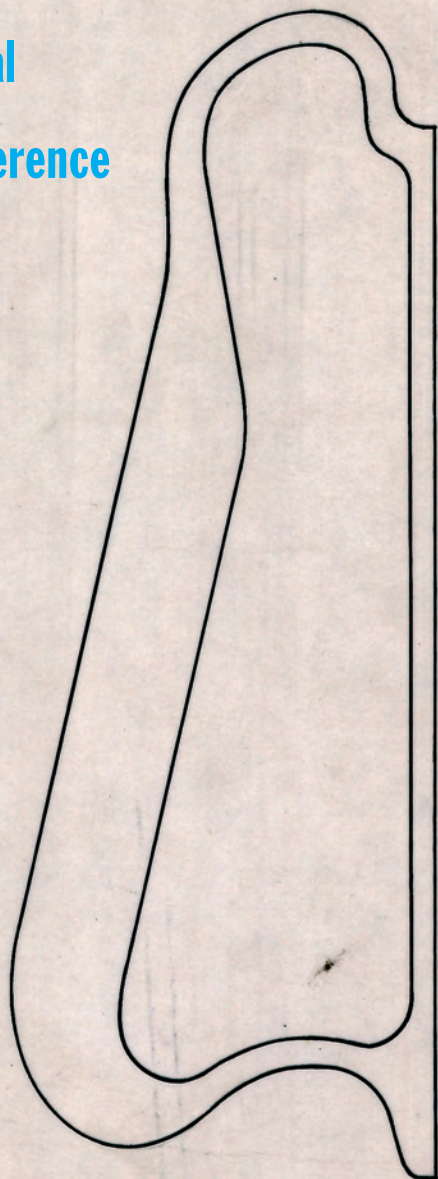


Proceedings of the
12th International
Docomomo Conference

The Survival of Modern
From Coffee Cup to Plan

August 7-10, 2012
in Espoo, Finland



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FROM THE EDITORS

The editorial board wishes to thank all contributors who painstakingly stuck to deadlines and acted according to agreed rules concerning footnoting etc. While all possible care was taken to edit and publish all existing material at the time of going to press, we greatly appreciate that most papers could be included and handled with equality. The 12th International Docomomo Conference and Workshop in Espoo (Finland) was supported by a number of collaborators, among them the Finnish Ministry of Education and Culture, the Ministry of Environment, the National Board of Antiquities, the City of Espoo, the Espoo City Museum, the City of Helsinki, the Helsinki City Museum, the Vantaa City Museum, the Museum of Finnish Architecture, the

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Timo Tuomi
Tommi Lindh
Miia Perkkiö
Jenni Sahramaa

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Survival Through Modern Design

Ana Tostões

The Proceedings published here are, we can say, the most durable achievement and knowledge transfer assignment of the discussions that took place during the Twelfth International DOCOMOMO Conference held in Espoo, Finland, between August 7 and 10, 2013, under the theme “The Survival of Modern, From Coffee Cup to General Plan”. Combining Richard Neutra’s *Survival Through Design* (1961), and Gropius’ statement about designing “everything from the cup of coffee to city planning” (1918), the aim of the conference was to face the new worldwide challenges.

Looking towards the future currently seems to entail the search for a sustainable future. This was a challenge that underlay the theme of the conference “The Survival of Modern, From Coffee Cup to General Plan”. In fact, global design is a main theme for DOCOMOMO International, as an organization looking towards the future and committed to ethical values and a large social vision.

Quoting Richard Neutra’s *Survival Through Design* (1961), the theme of the Twelfth International DOCOMOMO Conference was a challenge to the discussion of Modern Movement architecture and town planning from a compre-

hensive point of view. The fact that it took place in Helsinki is both symbolic and obvious in the sense that the Nordic countries of the 1950s and 1960s have been recognized worldwide as an international model for a universal project approach, from design to town planning.

The modern movement architecture has included the ideal of designing whole environments. Nowadays, new challenges arise for increased building densities and improved energy performance, which seems to imply new ecological and economic responses, and a discussion about the concepts of space and scale. To create a good environment means giving a good form and functionality to a complete range of issues, from the cup of coffee to the urban plan, as a total environment. The contemporary need to create good environments is an important issue when policies concerning the welfare of societies are changing. It is this view of universal design and the improvement of this approach in the future that the Twelfth International DOCOMOMO Conference had wished to discuss.

The Proceedings are presented in accordance with four sub-themes that examine the concepts of space and design in four different scales and offer views on how the fundamental

urban qualities of modernism can be preserved, reused or improved for contemporary planning and design: 1) Environment; 2) Urban Space; 3) Open Plan; 4) Interior Design.

The first theme, Environment, debates the concept of a good living environment and the sense today to preserve the modern heritage. It also deals with the relations between a large range of topics, from questions of scale to urban density, nature and the environment as well as the challenges of sustainable development, landscape architecture or the architecture of infrastructures.

The second theme, Urban Space, relates to the concept of modern urban space and the form of the modern city within the scope of a socially responsible approach. The question is of how to preserve the ideal of spatial openness and the concept of a generous public space when building pressures are increasing and the contemporary requirements for sustainable development, and ecologically and economically motivated requirements for density challenge sustainable urban planning.

The third theme, the Open Plan, relates the modern concept of flexibility to the implications of reuse within the scope of adaptive uses concerning functional organization and space. The main question of debate here is, where does one draw the line between the architect's intention and the preservation of modern building? Issues such as the open floor plan, the ideal of flexible space and the anticipation of the future

needs in relation to the original arrangement of spaces and original interior program are brought together for debate. The limits of the reuse intervention placed the question of conservation in situations regarding shifting purposes or function in terms of the everyday environment and its changes, as well as, finally, the main issue regarding durability and change.

Finally, the fourth theme concerns the preservation of modern interior designs and furnishings. This issue deals specifically with the main modern approach to art and architecture, the total work of art. It also discusses the innovations in details and materials, and the importance of furniture design for the progress of a modern environment. For the first time, furniture is balanced between the interior and its surroundings, the detailed scale and the concept of global design.

I wish to highlight the conference organization with a special mention to the Fourth DOCOMOMO Workshop that was held at the Aalto University Department of Architecture. The discussion focused on the transformation plan for the Aalto University Otaniemi campus, which is presently under development, and which is a case study that allows us to stress the uniqueness and the character of one of the most important patterns in the modern movement: the hinge between the landscape and the built environment complex. We all know how the Nordic countries during the 1950s and 1960s were a model for sustainability; that is, achiev-

ing a balance between nature and progressive development. The philosophical concept under the conception of the Aalto University Otaniemi campus lies precisely on this sensitive and skilled approach to the built environment, as perceived from design to large scale town planning. An understanding of the intentions behind this landscape and building stock is a condition for developing it in a good way, a most topical task stressing best practices. In fact, the “The Survival of Modern” concepts and practices are more and more essential when a dominant financial revolution seems, more than ever, to contaminate daily life, from the great territorial policies to every equipmental detail. All of a sudden, it seems that social and environmental concerns, usually justified by a necessary vital balance, start to be moved from our life. That’s why it is so important to stress the work DOCOMOMO cares about, involving interdisciplinary skills, from architects to urban planners, from restorers to designers, from art historians to engineers, from landscape designers to urban and territorial economists.

Thanks to the DOCOMOMO International Conference in Finland, the motto “Survival of Modern” connected the stimulus of the Espoo city center area and the Aalto University Otaniemi campus as a starting point that justified going deeper into the relations that connect form and function, esthetics and ethics, profiting from the greater Helsinki region being the World Design Capital 2012. That’s also why the argument of the DOCOMOMO Journal presented at the Conference is titled “Designing

Modern Life”. The aim of this collective and interdisciplinary reflection is to contribute to the discussion that relates to the Modern heritage and interior space, common daily life and the *musealization* of Modern interior spaces, gathered under a global strategy, in order to better understand and preserve these delicate monuments. In fact, the interior space, with all its devices and pieces of furniture, is frequently not appreciated as an essential matter in safeguarding interventions. DOCOMOMO wishes to pay tribute to the Finish culture and its original contribution to design. Indeed, through the conception of organic forms and the use of natural materials, a different path had been explored in Finland, namely by Aino and Alvar Aalto, answering to sensorial and tactile comfort, beginning an approach that privileges economy and beauty, utility and simplicity; and at the same time, improving regional roots in order to fulfill the sense of the place.

On this occasion of the presentation of the Conference Proceedings, I wish to thank first all the conference speakers, who generously shared their knowledge and agreed to allow their papers to be published. Also, I would like to thank many people: the perseverant initiative of Timo Tuomi; the daily support of Tommi Lindh; the workshop keynote speakers; Aino Niskanen and Olli-Paavo Koponen and all the Workshop participants; Ola Wedebrunn, who acted as observer; Panayotis Tournikiotis, who acted as facilitator; and finally the Conference Scientific Committee and DOCOMOMO Finland for their active support.

Ana Tostoes

Docomomo International Chair

Greetings from Docomomo Suomi Finland

Modern architecture holds a very special place in Finland as the building stock of our country is very young in age. Up to about 95% of the buildings have been completed since 1920, which is exceptional in the international context. Docomomo, as an expert organization, therefore holds a key position in Finland, having achieved a respected status. An example of this is that all the key sites in the Docomomo Finland registry are defined as nationally significant cultural environments.

Finnish modern architecture is known, even abroad, for its high quality. It is obvious, however, that appreciation is not to be taken for granted. Conservation issues are never easy. It is concrete values more than cultural ones that often carry more weight when decisions are being made. These challenges are shared everywhere. An international community such as Docomomo and the expert meetings it holds play a very important role in disseminating information and experiences about good practices and exemplary sites.

The theme of the Espoo conference was the idea in modernism of a Gesamtkunstwerk, the idea of how in creative design the scale can be

anything from a coffee cup to a master plan. Many Finnish architects are indeed known for their comprehensive thinking. According to Alvar Aalto, the architect should master the whole spectrum of design, from a door-handle to urban design. Eero Saarinen in turn thought that a good environment is created by repeating the same theme in different scales.

Today change prevails all over the globe. With this in mind, and having organised last summer's conference, we wanted to bring up for discussion the endangered status of modern architecture. The Gesamtkunstwerks typical of modernism, irrespective of scale, are often rather vulnerable when changes occur.

A change in use is part of the lifespan of many buildings. The change can be detrimental if activities are placed in the building that go against its nature or character – and often the culprit is an over-dimensioned room programme. A change can also work out for the better because sometimes the use – as in the case, for example, of hospitals – has become rather heavier compared to what it was when the building was designed. The Paimio Sanatorium (Alvar Aalto, 1928-33) presently awaits



Figure 2. Stadion. Helsinki City Museum.



Figure 1. Paimio. Piero Berengo Gardin, Alvar Aalto –museum.

a decision about its future, because it is no longer required as a sanatorium. At the present moment there is a search going on to find a new user. There would surely be takers, but it is hard to find a use that would not only fulfil the requirements of respecting the unique characteristics of a protected building but also be economically feasible to the extent that it would enable the maintenance of the significant building.

Architecture made in accordance with more stringent dimensioning – for example, the small-scale buildings from the 1950s – suffers when technology is inserted that was not required at the time of its construction. In Finland people react very strongly to interior climate problems and a lot of ventilation renovations are currently being carried out. The idea of the

Gesamtkunstwerk comes under threat when the building is filled with ventilation infrastructure in accordance with the requirements for new buildings. The task of the architect planning the renovation is challenging when he or she should make the technology seem invisible.

Often buildings are expected to meet much more rigorous expectations regarding efficiency than previously. In Helsinki there are currently considerations for a new kind of use of the Olympic Stadium (Yrjö Lindegren, Toivo Jäntti, 1933–52) to allow for a larger number of spectators than at present. In addition to the normal sports competition activities, there is a wish to bring the Stadium into full-time active use, which would require quite a lot of additional building. The renewal of the Stadium is being planned with international coopera-

tion. Wessel de Jonge, the driving force behind Docomomo, has been appointed as one of the foreign consultants.

Efficiency ideology is also directed at the urban planning level, which means condensing the urban structure. The metropolises of the world are growing, and so is Helsinki and its surroundings – or at least they would grow if there were sufficient housing. Hence, there is a necessity to increase densities. In the capital region there is currently a study underway in which all possible locations for infill building are being investigated. The study also includes the cultural-historically most valuable, uniformly built residential areas from the 1930s-1960s. Each can be seen as a Gesamtkunstwerk, where greenery, closeness to nature and spaciousness are values in themselves. All expertise and particularly good cooperation skills are necessary when considering how land use can, as discretely as possible, be made more effective. Also in Tapiola Garden City in Espoo (Aarne Ervi, Viljo Revell and others, from 1953 onwards), where the summer 2012 conference was held, the question of increasing densities has become acute. Many heated debates have occurred, but the authentic 1950s appearance of the original centre of Tapiola will not be preserved.

Behind the idea of increasing densities is also the global objective of energy conservation. Reducing traffic and utilising existing infrastructure are important objectives in urban planning.

Energy issues are in any case a point of focus. In Finland new renovation and energy efficiency regulations are presently being prepared. Docomomo Finland has monitored this work and also arranged a debate event on the topic, wanting to ensure that despite best intentions



the baby is not thrown out with the bathwater: energy must be saved by all means possible, but not at any cost.

Such preservation issues and threats linked with modern architecture are currently topical in Finland. We look forward with great interest to the next Docomomo conference, to be held in Seoul in 2014, and where the problems will be partly different yet very likely also shared. Modernism is after all by its nature an international trend and the contemporary world is becoming increasingly uniform around our globe.

Docomomo Suomi Finland

Leena Makkonen

Chairperson



Figure 3.
Tapiola,
postcard,
1970's.
Pentti Harala
/ Espoo City
Museum.



Figure 4.
Tapiola,
2013.
Jyri Vilja /
Espoo City
Museum.

Newness, Tradition and Identity

- Existential Meaning in Architecture

Juhani Pallasmaa

*Time present and time past
Are both perhaps present in time future,
And time future contained in time past.
If all time is eternally present
All time I unredeemable.¹*

T.S. Eliot, Four Quartets

An interest in the significance of tradition is today usually seen as nostalgia and conservatism. In our age, obsessed with progress, our eyes are exclusively fixated on the present and the future. During the past few decades, uniqueness and newness have become the criteria for quality in architecture, design and art. The coherence and harmony of landscapes and cityscapes, and their rich historical layering are not any more seen as essential objectives of architecture. Artistic uniqueness and formal invention have, in fact, replaced the quest for existential meaning and emotive impact, not to speak of the desire for a spiritual dimension or beauty.

In his acceptance speech of the 2012 Pritzker Architecture Prize in Beijing, the Chinese Lau-

reate Wang Shu confessed that he had begun his career with works in the then fashionable Postmodern and Deconstructionist idioms, but he had eventually realized that his country was losing its connection with the Chinese tradition and cultural identity. After this realization he has devotedly endeavoured to tie his architecture with the long and deep cultural traditions of China.² This was an unexpectedly outspoken message in the presence of top Chinese officials.

In his more recent work Wang Shu has, indeed, succeeded to create buildings, such as the Xiangshan Campus and the Historical Museum at Ningbo, which deliberately reconnect with the invisible undercurrents of timeless Chinese images and traditions. These buildings do not echo any distinct formal attributes of the country's rich architectural past, but they evoke atmospheres and moods that make one feel a depth of time and a groundedness in time and history. This sense of rootedness does not lie on a formal language or allusion but the architec-

tural logic itself, its cultural deep structure, as it were. This architecture also projects comforting and enriching experiences of participation in a meaningful historical continuum. The architect's repeated use of re-cycled materials, such as old bricks and roof tiles, speaks of inherited crafts, timeless and selfless labour, and a sense of collective and shared identity passed on to coming generations.

Visiting Wang Shu's buildings made me recall Louis Kahn's powerful Parliament Buildings in Dacca, which project an authoritative condensation of traditions, ageless and contemporary, geometric and mystical, European and Oriental. Kahn's architecture in Bangladesh succeeds in giving a proud and optimistic cultural identity for a new Islamic state with ancient traditions but extreme poverty today. These examples show that a respectful attitude to traditions does not imply regressive traditionalism, but its acknowledgement as a source of meaning, inspiration, and emotional rooting.

The Ecstasy of Newness

The loss of the sense of historicity and evolutionary identity is clearly becoming a major concern in numerous countries developing at the accelerated rate of today's aggressive investment strategies, expedient methods of construction, and universal architectural fashions. But, is newness a relevant aspiration and criteria of quality in art and architecture? Is a future without its constitutive past even conceivable?

Our ultra-materialistic and hedonistic consumer culture seems to be losing its capacity to identify essences of life and experience as well as to be deeply affected by them. Quality, nuance and expressive subtlety are replaced by such quantifiable aspects as size, loudness, shock value, and strangeness. The interest in uniqueness and newness shifts the artistic encounter from a genuine and autonomous experience to a com-

parative and quasi-rational judgement. Intellectual speculation replaces emotive sincerity, and experiential quality is unnoticeably replaced by quantitative assessment.

Newness is expected to evoke interest and excitement, whereas any reference to the traditions of the artform in question, not to speak of intentionally attempting to strengthen the continuum of tradition, are seen as reactionism and a source of boredom. Already in the 1980s, Germano Celant, one of the Postmodern critics, used such notions as "contemporaryism", "hyper-contemporary", "terror of the contemporary", and "the vertigo of newness" and referred to "a pathological and conformist anxiety ... that turns the present into an absolute frame of reference, an undisputable truth". Today we can undoubtedly speak of "a vertigo of newness" when thinking of the scene of art and architecture during the first decade of the third millennium. New artistic images keep emerging like an "unending rainfall of images", to use an expression of Italo Calvino.⁴

The constant and obsessive search for newness has already turned into a distinct repetitiousness and monotony; unexpectedly the quest for uniqueness seems to result in sameness, repetition and boredom. Newness is a formal surface quality without a deeper mental echo that would energize the work and its repeated encounter. The Norwegian philosopher Lars Fr. H. Svendsen points out this paradoxical phenomenon in his book *The Philosophy of Boredom*: "In this objective something new is always sought to avoid boredom with the old. But as new is sought only because of its newness, everything turns identical, because it lacks all other properties but newness".⁵ "Boredom with the old" becomes replaced by boredom with the new.

Artistic newness is generally associated with radicality – the new is expected to surpass previous ideas in quality and effect and to cast prevailing tradition from the throne. But is there

really any identifiable progress in art and architecture, or are we only witnessing changing approaches to fundamental existential motives? What is the quality that makes us experience a 25,000 year old cave painting with the same affect and impact as any work of our own day? Hasn't art always been engaged in expressing the human existential condition? Shouldn't art be oriented towards the timeless questions of existence rather than the appeal of the momentary and fashionable? Shouldn't art and architecture seek deep and permanent essences of human existence instead of obsessively trying to generate a passing experience of newness? I do not believe that any profound artist is directly interested in newness or self-expression, as art is too deeply engaged in deep existential issues to be concerned with such passing aspirations. "No real writer ever tried to be contemporary", Jorge Luis Borges asserts bluntly.⁶

Newness is usually related with extreme individuality and self-expression, but self-expression is another questionable objective in art. Indeed, since the emergence of the modern era, art and architecture have increasingly been seen as areas of self-expression. However, Balthus (Count Balthasar Klossowski de Rola), one of the finest figurative painters of the twentieth century, expresses a converse view: "If a work only expresses the person who created it, it wasn't worth doing ... Expressing the world, understanding it, that is what seems interesting to me".⁷ Later, the painter re-formulated his argument: "Great painting has to have universal meaning. This is really no longer so today and this is why I want to give painting back its lost universality and anonymity, because the more anonymous painting is, the more real it is".⁸ Echoing the painter's view, we can say that we also need to give architecture back its lost universality and anonymity, because the less subjective architecture is, the more real it is, and the more it has the capacity to support our individual identities. The more subjective a

work is, the more it focuses on the subjectivity of the author, whereas works that are open to the world provide a ground of identification for others. Just think of the assuring sense of the real evoked by the vernacular building traditions around the world.

Balthus also scorns self-expression as an objective of art: "*Modernity, which began in the true sense with the Renaissance, determined the tragedy of art. The artist emerged as an individual and the traditional way of painting disappeared. From then on the artist sought to express his inner world, which is a limited universe: He tried to place his personality in power and used paintings as a means of self-expression.*" The painter's concern clearly applies to architecture, also, although architects rarely write about the mental dimensions in their work.

Tradition and Radicality

In his Harvard lectures of 1939 Igor Stravinsky, the arch-modernist and arch-radical of music, presents an unexpectedly forceful criticism of artistic radicalism and the rejection of tradition: "The ones who try to avoid subordination support unanimously the opposite (counter-traditional) view. They reject constraint and they nourish a hope – always doomed to failure – of finding the secret of strength in freedom. They do not find anything but the arbitrariness of freaks and disorder, they lose all control, they go astray..."⁹ In the composer's view the rejection of tradition eliminates the communicative ground of art: "*The requirement for individuality and intellectual anarchy ... constructs its own language, its vocabulary and artistic means. The use of proven means and established forms is generally forbidden and thus the artist ends up talking in a language with which his audience has no contact. His art becomes unique, indeed, in the sense that its world is totally closed and it does not contain any possibility for commu-*

nication.”¹⁰ The fact that Stravinsky’s *The Rite of Spring* was considered so radical at its time that the premier in Paris in 1913 turned into a cultural riot, gives an added significance to the composer’s view of the dialectics of tradition and artistic radicalism.

I wish to reiterate that newness and uniqueness alone are hardly relevant aspirations for art. Meaningful artistic works are embodied existential expressions that articulate experiences and emotions of our shared human situation. Works of art from poetry to music, painting to architecture, are metaphoric representation of the human existential encounter with the world, and their quality arises from the existential content of the work, i.e. its capacity to re-present and experientially actualise and energize this very encounter. Great works of architecture and art re-structure, sensitize and enrich our experiences of our encounters with the world. As Maurice Merleau-Ponty significantly points out: “We come to see not the work of art, but the world according to the work.”¹¹ A fresh and sensitized articulation of the fundamental artistic issues gives the work its special emotive power and life force. Constantin Brancusi formulates the artistic aim forcefully: “The work must give immediately, at once, the shock of life, the sensation of breathing.”¹² This master sculptor’s requirement also applies to architecture; an architecture that does not evoke sensations of life, remains a mere formalist exercise. Formal, cultural, and sociological criteria and preconceptions, such as uniqueness, have only a subservient value in relation to the mental task of art. When art is seen in its existential dimension, uniqueness as a formal quality loses its significance.

Another arch-radical, Ezra Pound, the Imagist poet, also confesses his respect for tradition and the historical continuum of various artforms as he points out the importance of the ontological origins of each artform: “...[M]usic begins to atrophy when it departs too far

from dance [...] poetry begins to atrophy when it gets too far from music ...”¹³ Similarly, in my view, architecture turns into mere formalist visual aesthetics when it departs from its ordinary motives of domesticating space and time for human occupation through distinct primal encounters, such as the four elements, gravity, verticality and horizontality, as well as the metaphoric representation of the act of construction itself. Architecture withers into a meaningless formal game when it loses its echo of the timeless myths and traditions of building. Instead of portraying newness, true architecture makes us aware of the entire history of building and it restructures our reading of the continuum of time. The perspective that is often disregarded today is that architecture structures our understanding of the past just as much as it suggests images of future. Every masterpiece re-illuminates the history of the artform and makes us look at earlier works in new light. “When one writes verse, one’s most immediate audience is not one’s own contemporaries, let alone posterity, but one’s predecessors”, Brodsky asserts.¹⁴

Cultural Identity

Cultural identity, a sense of rootedness and belonging is an irreplaceable ground of our very humanity. Our identities are not only in dialogue with our physical and architectural settings as we grow to be members of countless contexts and geographic cultural, social, linguistic, as well as aesthetic identities. Our identities are not attached to isolated things, but the continuum of culture and life; our true identities are not momentary as they have their historicity and continuity. Instead of being mere occasional background aspects, all these dimensions, and surely dozens of other features, are constituents of our very personality. Identity is not a given fact or a closed entity. It is a process and an exchange; as I settle in a place, the

place settles in me. Spaces and places are not mere stages for our lives, as space and mind are “chiasmatically” intertwined, to use a notion of Maurice Merleau-Ponty. As this philosopher argues: “The world is wholly inside, and I am wholly outside myself.”¹⁵ Or, as Ludwig Wittgenstein concludes: “I am my world.”¹⁶

The significance I am giving to tradition, not only as a general sense of cultural history, but also as the need of understanding the specificity and locality of culture, raises critical concerns of today’s careless practice of designing in alien cultures merely for commercial interests. As anthropologists, such as Edward T. Hall, have convincingly shown, the codes of cultures are so deeply ingrained in the human unconscious and prereflective behaviour, that essences of culture take a life time to learn. Do we really have the right to execute our designs in cultures that are very different from our own merely for our own economic interests? Isn’t this yet another form of colonialization?

Architecture and Identity as Evolutionary Processes

Let me be clear, I do not support nostalgic traditionalism or conservatism, I merely wish to argue that the continuum of culture is an essential – although mostly unconscious - ingredient of our lives as well as of our individual creative work. Creative work is always collaboration: it is collaboration with countless other thinkers, architects and artists, but it is collaboration also in the sense of humbly and proudly acknowledging one’s role in the continuum of tradition. Every innovation in thought – both in sciences and the arts – is bound to arise from this ground and be projected back into this most honourable context. Anyone working in the mental sphere, who believes he/she has arrived at his/her achievement alone is simply self-centered and naïve.

Architectural and artistic works arise in the continuum of culture, and they seek their role and position in this continuum. Jean Genet expresses this idea of presenting the work to the tradition touchingly, indeed: “In its desire to require real significance, each work of art must descend the steps of millennia with patience and extreme caution and meet, if possible, the immemorial night of the dead, so that the dead recognize themselves in the work.”¹⁷ When a work of apparently extraordinary uniqueness is not accepted in this ever expanding gallery of artistic tradition, it will be quickly forgotten as a mere momentary curiosity. On the other hand, even the most original and revolutionary work that touches upon essential existential qualities, in addition to its initial novelty and shock value, ends up reinforcing the continuum of artistic tradition and becomes part of it. This is the basic paradox of artistic creation: the most radical of works end up clarifying and strengthening tradition. The Catalan philosopher Eugenio d’Ors gives a memorable formulation to this paradox: “Everything that remains outside of tradition, is plagiarism.”¹⁸ The philosopher’s cryptic sentence implies that works of art that are not supported and continuously re-vitalized by the constant blood circulation of tradition are doomed to remain mere plagiarizations in the realm of arrogant and pretentious newness. These works do not have an artistic life force, and they are doomed to turn into mere curiosities of the past.

The most eloquent and convincing defence of tradition is surely T.S. Eliot’s essay “Tradition and Individual Talent” (1929), but its wisdom has been sadly forgotten today. The poet states that tradition is not a static “thing” to be inherited, preserved or possessed, as true tradition has to be re-invented and re-created by each new generation. Instead of valuing mere factual history, the poet argues for the significance of “a historical sense”, an internationalised mental dimension. It is this historical sense

that ties the artist and the architect to the continuum of culture and provides the backbone of his/her language and its comprehensibility. The fundamental issues of identity in terms of the questions “who are we” and “what is our relationship to the world” are constitutive. This historical sense also brings about collective cultural meanings as well as a societal purposefulness. It is this historical sense that gives profound works their combined humility, patience, and calm authority, whereas works that desperately aspire for novelty and uniqueness always appear arrogant, strained, and impatient. Although T.S. Eliot’s essay has been frequently referred to, I wish to quote its most essential message which is more pertinent today in the age of globalization than ever before:

Tradition is a matter of much wider significance. It cannot be inherited, and if you want it you must obtain it by great labour. It involves, in the first place, the historical sense ... and the historical sense involves a perception, not only of the pastness of the past, but of its presence; the historical sense compels a man to write [and to design] not merely with his own generation in his bones, but with a feeling that the whole of the literature [architecture] ... has a simultaneous existence and composes a simultaneous order. This historical sense, which is a sense of the timeless as well as of the temporal and of the timeless and the temporal together, is what makes a writer [an architect] traditional and it is at the same time what makes a writer [an architect] most acutely conscious of his place in time, of his own contemporaneity.

No poet, no artist of any art, has his complete meaning alone. His significance, his appreciation is the appreciation of his relation to the dead poets and artists. You cannot value him alone; you must set him, for contrast and comparison, among the dead.¹⁹

The poet’s arguments make it clear that creative work is always bound to be a collaboration, a collective effort of the artist with his/her contemporaries as well as predecessors. The views of the artistic thinkers I am quoting in this lecture also de-mystify the myth of the solitary and isolated genius. Great works of art and architecture cannot arise from cultural ignorance; they emerge in the midst of the evolving story of the history of the artform. The masterpieces emerge equipped with an unexplainable capacity for eternal comparison and dialogue.

Tradition and Innovation

I want to repeat that I do not wish to praise tradition because of a nostalgia for the past. Neither am I speaking about traditionalism as an alternative to individual invention, but about an embodiment of the essence of tradition as a necessary precondition for meaningful creativity. I speak about the value of tradition because of its fundamental significance for the course of culture and human identity, as well as for the arts, for that matter. Or any other creative endeavour. Tradition maintains and safeguards the collective and accumulated existential wisdom of countless generations. It also gives a reliable direction to the new and maintains the comprehensibility and meaning of the new. We can appreciate the genuinely new of our own time because of Dante, Michelangelo, Shakespeare, and Rilke.

It is evident, that artistic meanings cannot be invented as they are mostly unconscious and pre-reflective existential re-encounters of primal human experiences, emotions and myths. As Alvaro Siza has written, “Architects don’t invent anything, they transform reality.”²⁰ In the case of Siza himself, this attitude of humility has produced more lasting qualities in architecture than the self-assurance of many of his celebrated colleagues, who have deliberately

adopted the role of aradical formal innovators. The continuum of tradition provides the ground from which all human meaning arises. Architectural meaning is always contextual, relational, and temporal. Great works achieve their density and depth from the echo of the past, whereas the voice of the products of superficial novelty remain feeble, incomprehensible and meaningless.

The Ground of Culture

Tradition is mostly a non-conscious system that organizes and maintains a sense of historicity, context, coherence, hierarchy and meaning in the constant forward flow of culture. A coherence of tradition is created by the firm foundation of culture, not by any singular and isolated characteristics or ideas.

The quick collapse of this collective mental foundation during the past decades is already a serious obstacle for education in the creative fields today. It is difficult, indeed, or often totally impossible, to teach architecture when there is no inherited tradition of knowledge in relation to which new knowledge can be understood and structured. The fragmentation of knowledge into isolated facts and bits of information, due to the dominance of new digital search media, reinforces the lack of an integrating background of culture, and gives rise to a rapid fragmentation of world view. A wide knowledge of classical literature and arts has been a crucial ingredient of an understanding of culture as a background and context for novel thought and artistic creativity. How do you teach architecture and art when the mentioning of almost any historically important name or phenomenon is met with an ignorant stare? Our personal identities are not objects, they are not things; our identities are dynamic processes that build upon the core of an inherited cultural tradition. The sense of self can

only arise from the context of culture and its historicity.

In today's widely publicized and applauded avant-garde architecture, formal uniqueness is sought *ad absurdum* at the cost of functional, structural and technical logic, as well as of human perceptual and sensory realities. Architectural entities are conceived as a-historical, detached and disembodied objects detached from their context, societal motivation, and dialogue with the past.

It is likely that societies and nations do not possess a capacity to learn; only individuals do. It is sad to observe that city after city, country after country, seems to go through the same fundamental mistakes that others, slightly ahead in cultural and economic development, have already committed earlier. Particularly the ecstasy of wealth seems to blind societies, make them undervalue or neglect their own histories, traditions and identities. In the case of newly wealthy contemporary societies, it is as if, at the moment of sudden wealth, we would become ashamed of our past, regardless of its human integrity and qualities of its settings. It is as if we would suddenly want to forget who we are and from where we have come.

What is at stake in the loss of the lived sense of tradition, is our very identity and sense of historicity. We are fundamentally historical beings, both biologically and culturally. It is totally reasonable to think that we are all millions of years old; our bodies remember our entire evolutionary past by means of the biological relics in our bodies, such as the tailbone from our arboreal life, the *plica semilunaris* (horizontally moving eyelid) of our eyes from our Saurian life, and the remains of gills in our lungs from our primordial fish life.

In his book on slowness, Milan Kundera argues that forgetting is in direct relation with speed, whereas remembering calls for slowness.²¹ The obsessively accelerated change of fashion and life style makes an accumulation of tradition

and memory mentally difficult. As Paul Virilio has suggested, the main product of contemporary societies seems to be speed. Indeed, two of the disturbing characteristics of the Post-modern era, according to philosophers like David Harvey and Fredrik Jameson, are depthlessness and the lack of an overall view of things.²²

The Task of Architecture

The primary task of architecture continues to be to defend and strengthen the wholeness and dignity of human life, and to provide us with an existential foothold in the world. The first responsibility of the architect is always to the inherited landscape or urban setting; a profound building has to enhance its wider context and give it new meanings and aesthetic qualities. Responsible architecture improves the landscape of its location and gives its lesser architectural neighbours new qualities instead of degrading them. It always enters a dialogue with existent conditions; profound buildings are not self-centered monologues. Buildings mediate deep narratives of culture, place and time, and architecture is in essence always an epic art form. The content and meaning of art – even of the most condensed poem, minimal painting, or simplest house – is epic in the sense of being a metaphor of human existence in the world.

The fascination with newness is characteristic to modernism at large, but this obsession has never been as unquestioned as in our age of mass consumption and surreal materialism. Designed aging of products, as well as the adoration of youth, are deliberate psychological mechanisms at the service of ever accelerated consumption. However, these characteristics are also ingredients of today's collective mental pathology. Also architecture is increasingly promoting distinct life styles, images and personalities instead of strengthening the individual's sense of the real and of him/herself.

The task of architecture is not to create dream worlds, but to reinforce essential causalities, processes of rooting, and of the sense of the real. The fascination with novelty is deeply connected with the self-destructive ideology of consumption and perpetual growth. Instead of contributing to meaningful and coordinated landscapes and cityscapes, the structures of today's businesses (and almost everything is considered business in the world of fluid capital) turn into self-centered and self-indulgent commercial advertisements. Whereas responsible buildings are deeply rooted in the historicity of their place and they contribute to a sense of time and cultural continuum, today's monuments of selfishness and novelty flatten the sense of history and time. This experience of flattened reality leaves us as outsiders in our own domicile; in the middle of today's abundance we have become consumers of our own lives and increasingly homeless. Yet, as Aldo van Eyck insisted: "Architecture should facilitate Man's homecoming."²³

Great works possess a timeless freshness and they present their embodied enigma always anew as if we were looking at the work for the first time: the greater a work is the stronger is its resistance to time. As Paul Valéry suggests: "An artist is worth a thousand centuries."²⁴ Newness has a mediating role in revealing the existential dimension through fresh and unexpected metaphors. Only in the sense of the perpetually re-charged and re-energized image, timeless newness is a quality in artistic and architectural works. This is where also anonymity turns into a specific value. Such works constitute the realm of tradition and they are reinforced by the authority and aura of this continuum. I personally like to repeatedly revisit certain masterworks of painting and architecture, and re-read my favourite books to find myself equally fascinated and moved each time. I have had the fortune of visiting the Villa Mairea by Alvar Aalto in Noormarkku (1937-39) numerous times during half a century, but at each new visit this archi-

tectural miracle welcomes me with the same freshness and a stimulating sense of expectation and wonder. This is the power of a true artistic tradition that halts time and re-introduces the already known with a seductive new freshness and intimacy. This is also the kind of architecture that empowers both the dweller and the occasional visitor, and strengthens his/her sense of being and identity.

*In our age... there is coming into existence a new kind of provincialism, not of space, but of time; one for which history is merely the chronicle of human devices which served their turn and have been scrapped, one for which the world is the property solely of the living, a property in which the dead hold no shares.*²⁵

T.S. Eliot

(This lecture is based on an essay written for the Human Experience and Place: Sustaining Identity III Conference at the Victoria & Albert Museum in London on 29 November, 2012.)

Notes

- 1 'Burnt Norton' in *Four Quartets* (New York – London: Harcourt Brace Jovanovich, 1988), 13.
- 2 A memorized reference to Wang Shu's speech at the Pritzker Architectue Prize Ceremony in the Great Hall of the People in Beijing on 25 May 2012.
- 3 Germano Celant, *Unexpressionism – Art Beyond the Contemporary* (New York: Rizzoli International Publications, 1988), 5-6, 10.
- 4 Italo Calvino, *Six Memos for the Next Millennium* (New York: Vintage Books, 1988), 57.
- 5 Lars Fr. H. Svendsen, *Ikävystymisen filosofia* [The Philosophy of Boredom] (Helsinki: Kustannusosakeyhtiö Tammi, 2005), 75.
- 6 Norman Thomas di Giovanni, Daniel Halpern, Frank MacShane, eds., *Borges On Writing* (Hopewell, New Jersey: The Ecco Press, 1994), 53.
- 7 Claude Roy, *Balthus* (Boston, New York, Toronto: Little, Brown and Company, 1996), 18.
- 8 Balthus, *Balthus in His Own Words: A Conversation with Cristina Carrillo de Albornoz* (New York : Assouline, 2001), 6.
- 9 Igor Stravinsky, *Musiikin poetiikka* [The Poetics of Music] (Helsinki: Kustannusosakeyhtiö Otava, 1968), 75.
- 10 Stravinsky, *Musiikin poetiikka*, 72.
- 11 As quoted in Iain McGillchrist, *The Master and His Emissary* (New Haven and London: Yale University Press, 2010), 409.
- 12 As quoted in Eric Shanes, *Brancusi* (New York: Abbeville Press, 1989), 67.
- 13 Ezra Pound, *ABC of Reading* (New York: New Directions, 1987), 14.
- 14 Joseph Brodsky, "Letter to Horace," in *On Grief and Reason* (New York: Farrar Straus Giroux, 1997), 439.
- 15 Maurice Merleau-Ponty, *The Phenomenology of Perception* (London: Routledge and Keegan Paul, 1962), 407.
- 16 Ludwig Wittgenstein, *Tractatus Logico-Philosophicus eli Loogis-filosofinen tutkielma* (Porvoo and Helsinki: Werner Söderström, 1972), 68.
- 17 Jean Genet, *L'Atelier d'Alberto Giacometti* (Cárbelét: Marc Barbezat, 1963). (Transl. Juhani Pallasmaa).
- 18 Igor Stravinsky includes this sentence in his book *The Poetics of Music* (Poétique musicale, 1962), however, without any reference to the source, Eugenio d'Ors. Curiously also Luis Buñuel, the arch-radical of cinema, also refers to the same thought in his autobiography *My Last Sigh* (Mon dernier soupir, 1982), however correctly crediting the Catalan philosopher.
- 19 T.S. Eliot, "Tradition and Individual Talent," in

- Selected Essays*, new ed., (New York: Harcourt, Brace & World, 1964).
- 20 As quoted in Kenneth Frampton, "Introduction", in *Labour, Work and Architecture: Collected Essays on Architecture and Design* (London: Phaidon Press, 2002), 18.
- 21 Milan Kundera, *Slowness*, (New York: Harper Collins Publishers, Inc., 1996).
- 22 See, David Harvey, *The Condition of Postmodernity* (Cambridge: Blackwell, 1990); and Frederic Jameson, *Postmodernism, or the Cultural Logic of Late Capitalism*, (Durham: Duke University Press, 1991).
- 23 Herman Hertzberger, Addie van Roijen-Wortmann, Francis Strauven, eds., *Aldo van Eyck* (Amsterdam: Stichting Wonen, 1982), 65.
- 24 Paul Valéry, *Dialogues* (New York: Pantheon Books, 1956), XIII.
- 25 T. S. Eliot, "What is a Classic," in *Selected Essays*, new ed., (New York: Harcourt, Brace & World, 1964).

Modern Synthesis Revisited

Interior Design (1966-70) and Renovation (2001-03) of the Japanese Ambassador's Residence in Paris by Perriand, Prouvé and Hayama

Irène Vogel Chevroulet

Yasushi Zenno

The context of this paper is a five-year PhD collaboration between Irène Vogel Chevroulet and Yasushi Zenno focused on Charlotte Perriand's work. It considers the Residence designed and built in Paris between 1966 and 1970 by Junzō Sakakura and Jean Riedberger for Toru Haguiwara, then Japan's ambassador to France.¹ For this purpose, he succeeded in buying an eminent ground at Faubourg St Honoré and convincing the Historical Monuments Service to demolish the previous *hôtel particulier* on the site. The entrance porch was kept, however, thus preserving historical continuity with the surrounding 18th century façades. Invisible from outside, the Residence was erected in the middle of a long and narrow plot closed on either side by an entrance court and a walled garden.

Ambassador Haguiwara himself gave outlines to the architects and let them freely choose the right details. At that time, Sakakura was extremely busy with his office in Japan,² which therefore put Perriand not only in charge of the interior design but also made her the true project leader. She chose to work with Jean Prouvé in order to design the elevations

and the major interior structural elements. She was also assisted by Reiko Hayama, a young architect previously trained at Kunio Maekawa's office in Tokyo.³ She worked on and drew the building plans done from Perriand's sketches. This building has not yet been the subject of a thorough analysis due to confidentiality exigencies. It is therefore all the more interesting to present its original interior design and the renovation done by Hayama from 2001 through 2003. She is indeed the major witness to the creation of the Residence: a fruitful work harmonizing Japanese and French *savoir-faire* with Modulor scale.⁴

Intentions: Modulated, Simple, and Spiritual Japan-inspired Interior

When Perriand started designing the Residence with Sakakura in December 1966, they already had enjoyed a partnership that started in 1928 at the Le Corbusier atelier. Later, in 1940, Perriand was invited to work in Tokyo by Japan's Ministry of Commerce and Industry. Though she had to leave Japan in 1942 when WWII made



Figure 1a. North court façade. Irene Vogel.



Figure 1b. South garden façade. Irene Vogel.

her stay as a French citizen very difficult, she returned to Japan on several occasions after the war. These experiences acted as a catalyst for her project methodology. From the 1950s onward, she convincingly interpreted the modernity of the traditional Japanese house and presented it as a prototype for Western dwellings.

Perriand selected the following principles: close harmony between architecture and nature, modularity, normalization, and a plan conception done from the interior toward the exterior including “equipped walls.” This last principle meant that Perriand first systematically evaluated the various volumetric quantities needed for each kind of equipment: clothes, objects, and dishware. Then, she designed the containers fit for these needs and organized them in groups belonging to the structure. She is famous for having created, in several projects, equipped walls where sliding doors hide a flexible interior dispersal. Finally, she proportioned this equipment with Modulor and then drew the building envelopes following this same modularity. This is the method she applied while designing the interior of the Residence.

Perriand disagreed with Riedberger’s first sketches, as seen in a July 1966 letter to Sakakura in which she explained her visions and intentions:

We should always bear in mind that everyone is waiting for an exemplary Japanese modern architecture (...). For a successful embassy, we have to consider that it is a residence and not a radio palace or one for Unesco. The residence should be human, express qualities of sensibility and kindness as well as being prestigious (...) Our starting point is a very ordinary conception, nearly academic modern without any interesting structure, and we end up with a traditional rigidity (...). We have to break out of this frame with gestures and details of a perfect simplicity and create on the interior a play of proportions, and bring a new fresh spirit (...).⁵

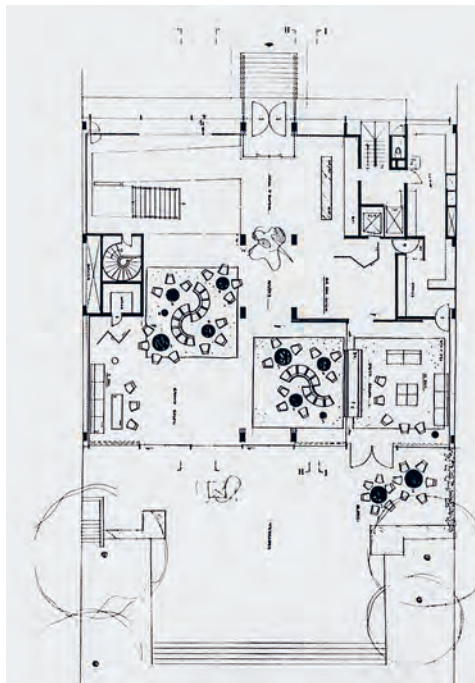


Figure 2. Ground floor plan - *rez de chaussée* 12 December 1968. CPA.

Realization: A Balance of Modern and Traditional Refined Simplicity

Following the principle in Japanese traditional architecture, which posits a harmony between architecture and nature, Sakakura and Perriand worked on the idea that the Residence should offer an eye contact from the entrance court, through the ground floor until the back garden (Figures 1a and 1b).

Since the building structure was to be made of concrete, this idea was fulfilled thanks to Jean Prouvé, who designed a metallic skeleton for elegant extruded aluminum sheet fillings. The elevations are supported on each side by the site’s walls.

Perriand achieved an overall harmony by enhancing the ambassador’s professional space with Japanese phenomenological and material features, using an extraordinary wooden *voilette* (Figure 3). In creating it, Perriand was inspired by traditional merchant houses in Kyoto where a wooden screen allows women to look



Figure 3. The entrance court and porch seen through the voilette. Irene Vogel.



Figure 4. Wooden sliding doors. Irene Vogel.

onto the street without being watched. This thin and high sequoia screen brings much warmth into a marble-floored interior otherwise surrounded by glass and metal.⁶ It also makes it comfortable for residents being able to wait in discretion while observing guests approach through the court.

Together, Perriand and Jean Prouvé designed a grand staircase and two sets of innovative grand sliding doors regulating the flood of light and connecting the trees and greenery through the open-plan ground floor to the court (Figure 4). These sequoia doors include a skeleton made of panelled boards (16mm x 22mm) and stiffener.

It took Perriand four years to design the interior according to her principles of modularity, normalization, and integrated equipment. She used the Modulor rule, thanks to the help of Hayama. They also took inspiration from the Japanese proportional space situated under the ceiling, called *ranma*. The *ranma* is a decorati-

ve transom above sliding doors found between adjacent rooms. They left it glazed or empty (Figures 4 and 7).

In her sketches showing the ambassador's private spaces, we can recognize the following elements that appear in many of her projects: sliding doors closing cupboards, elegant sofas, mural bookshelves.⁷ Of the bookshelves drawn here (G. H.), we can only guess that they are built following the principle she used for the previous ones: plain wood for horizontal elements and metal for supporting plots. On the top drawing, (E. F.) we see the patio giving natural light to the bathroom on the right. On the first floor (I. J.), the chimney is spectacular and has been preserved. Perriand also designed a *tokonoma* or ceremonial alcove of which we unfortunately have no details, as of the ambassador's private office. Note the *tsukeshoin* table just next to windows (E. F.; G. H. I. J.).

All rooms have "equipped" walls and sliding doors. For all spaces, Perriand chose natural-

colored carpets, linen screens and contemporary Japanese art objects, selecting them with care in order to create a harmonious and warm interior bathed in indirect light: the perfect complement to the Residence's metallic architecture.

Reiko Hayama's Interior Renovation (2001-03)

At the time of the project's completion in 1970, Hayama was appointed to be in charge of the Residence's maintenance.⁹ In 1981, cracks appeared in the freestanding hall staircase, particularly in the landing's extension. (Initially, there had been long discussions about the overrated length of the staircase, and Perriand's wish had finally been realized: a seven-meter long flight of stairs.) In 1982, after an analysis of the concrete structure, Hayama added a bearer beside the landing to support the staircase. She designed it as a *voilette*, in several pieces of wood, so that it would be more discreet. She also designed a metallic iron piece running under the stairs and tightening the two landings, painted the same color so as to become invisible.

The renovation overseen by Hayama lasted from the end of 2000 until the end of 2003. She undertook three urgent and major repairs: First, the kitchens—underground, service, and flat—and their annexes had to be totally rearranged. Prior to this renovation, only partial maintenance had been done. Regulations concerning fire and staff security had to be considered, which led to the complete refurbishment of the kitchen appliances. The underground technical units were entirely renovated, including the canalizations, water and ventilation ducts.¹⁰

The second renovation involved several waste-water ducts that had been designed to run for very long distances without soundproofing. Especially the toilet ducts running above the ground-floor living room ceiling were noisy and

defective. In addition, access to water ducts had not been planned originally. Therefore, Hayama integrated soundproofing materials into the ceilings.

Third, concerning the first and second floors, compliance to contemporary regulations had to be guaranteed, especially regarding electrical codes. The long and narrow wooden table built under the window had to be cut so that a short piece could be removed to allow access for cleaning. The electrical tracks behind the table presented electrocution risks, so were totally changed.

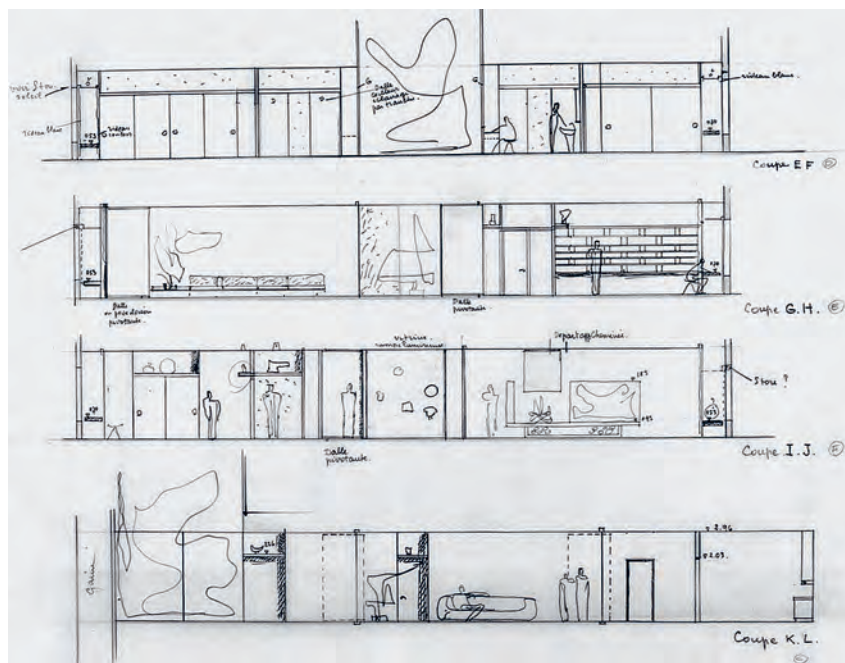
Smaller tasks such as the renewal of the entrance dressing also had to be undertaken. Moreover, on the ground floor, the beautiful linen screens created by Simone Prouvé had to be removed.

Preservation of Free-standing Furniture

On the ground floor, Perriand's original furniture pieces such as the heavy metallic chairs were taken away to leave room for the ambassador's official activities. Indeed, they had already been broken and proved too difficult to move. Unfortunately, to replace the chairs, French-style furnitures have been introduced. The original carpets also have been replaced by oriental carpets (Figure 7).

Preservation of Built-in Furniture, Lighting, and Bathrooms

In the recent renovation, the ambassador requested that rooms, wardrobes, lighting fixtures, and bathrooms be brought in line with contemporary regulations and comfort standards. On first, second and third floors, the built-in furniture has been preserved while being fixed and improved for daily use.¹¹ For example, wardrobes were redone both on the exterior and interior.



Their sliding doors were originally too heavy and the cupboards too small to fit kimonos because they had been calculated following the Modulor. The handles chosen by Perriand for these doors were of the type originally meant for lightweight sliding panels and had to be changed. Hayama kept the lighting brochettes on the ground floor where the ceiling height is sufficient (4m 09cm), but removed them on the first floor where the height is only 3m 36cm. She also designed new brighter pale pink bathrooms following the ambassador's taste. Indeed, the original Japanese-style bath had been done in three parts: shower, bath and an area of black tiles with window and small wooden tables. According to Hayama, Perriand had imposed this color scheme against the wishes of Ambassador Haguiwara.

Modernity and the Site's Historical Spirit

From July 1967 until the completion of the Residence in 1970, Perriand had to struggle with a shrinking budget for interior design. She nevertheless managed to build the monumental wooden sliding doors and voilette, the metallic sliding doors, the *jardin d'hiver* and the narrow wooden table, which much improved the Residence's quality of life, both everyday and official.¹²

Some of Perriand's ideas became controversial points that sparked long discussions during the project phase; these included the length of the staircase, the living-room iron chairs and the black tiles in the bathrooms. Hayama told us that she won each battle when Haguiwara, Riedberger, and Sakakura got tired of arguing. It is exactly on these points that renovation work had to be undertaken. Unfortunately, regulations concerning kitchen safety had the last word over the yet-to-be-documented designs made by Perriand.

Hayama transformed some of Perriand's idealistic aspects into more comfortable yet aesthetical settings for the ambassador's daily life.

It is interesting, according to Hayama, that at the time of the Residence's inauguration, only the American ambassador had admired this modern synthesis: a successful juxtaposition of traditional Japanese-inspired devices and refined simplicity matching Prouvé's innovative prefabricated elevations.¹³ It seems that the established taste of succeeding ambassadors' wives for French antique furniture not only won out over Perriand's original visions but also over contemporary Japanese works of art which have been removed. Interestingly, this kind of taste recalls the soul of the previous *hôtel particulier*: the lasting spirit of a powerful historical site.

We are convinced that a complete study of the Residence from design to renovation should be undertaken. Then, the ambassadors would at last have all the elements needed for an accurate understanding, as well as all the arguments necessary for the preservation of the exceptional qualities of the Residence's spaces and original equipment.

Notes

- 1 Most information about the Residence was kindly given by Reiko Hayama in an interview on 6 February 2006 at her office in Paris, and in a document written on 23 March 2012. Letters and plans come from the Charlotte Perriand Archive (CPA) in Paris. Two visits to the Residence were made with Ambassador Iimura and his wife, on 6 February 2006 and 27 December 2006. All photographs were taken by I. Vogel.
- 2 Letter from Sakakura in Tokyo to Perriand in Paris (17 September 1966) explaining he is creating the project's sketches according to the ambassador's wishes but is entrusting her to carry out the project, CPA.
- 3 Maekawa himself worked in Le Corbusier's atelier with Perriand from 1928 until 1930.
- 4 Due to reasons of confidentiality, we are al-



Figure 7. Ground floor salon used for official and ceremonial activities. Irene Vogel.

lowed to present only the public ground floor plan but no other drawings, construction details, or specific information.

- 5 Letter from Perriand to Sakakura, 30 July 1967, CPA.
- 6 Bars (65mm x 22m) are assembled with iron tubes and placed at 20mm space intervals.
- 7 Following her first stay in Japan, Perriand designed self-supporting standardized shelving units for students rooms at the Maison du Mexique in Paris (1952) in collaboration with Jean Prouvé, a bookshelf *Nuage* (1960) directly inspired by a *kasumidana* shelf she had seen at the imperial villa Shugakuin in Kyoto, and a bookshelf *Tunisie* (1960).
- 8 The *tsukeshoin* is a built-in writing desk set in front of a lighting window next to a *tokonoma* alcove, which was originally used by monks but later became more of noble decoration. A *tokonoma* is a vertical space welcoming seasonal calligraphy, ceramic and flower arrangement.

- 9 Hayama stopped working for Perriand in August 1969 and started a fruitful six years collaboration with Jean Prouvé. She followed then his advice in establishing her own firm in 1975 and became the first Japanese woman practicing architect in France.
- 10 The underfloor heating seems to work correctly : point made by Giulia Marino, discussion (4 April 2012) at the laboratory Technique et Sauvegarde de l'Architecture Moderne, TSAM EPFL Lausanne.
- 11 Two suites for guests are situated on the third floor. The smaller living area opens on two terraces. A slightly pitched roof crowns the Residence.
- 12 In her letter to Sakakura (30 July 1967), Perriand explained she had to allocate some part of the equipment budget to architectural elements. CPA.
- 13 Discussion with Reiko Hayama (6 February 2006) in her Paris office.

Clara Porset, a Designer for Mexican Modern Architecture

Louise Noelle Gras

1949 marks not only the middle of the 20th Century, it is an important date in the history of Mexican architecture, industrial design and integration of the arts, associated to the first housing unit of Mexico. It is thus important to review the history of that moment, to better understand the significance of the events.

It is a must to begin by focusing on Mario Pani (1911-1993),¹ a Mexican born architect that studied in the École de Beaux Arts de Paris, graduating in 1934. In the period we are focusing he designed the Unidad Habitacional Presidente Alemán, CUPA, a housing scheme where he summoned up the ideals of the European pioneers, specially the proposals of Le Corbusier but bearing in mind the local conditions.² In 1947 he was commissioned with a project for 200 small houses to be placed in a large plot of 40,000 square meters, in the south of Mexico City. He questioned the validity of low-density cities and their excessive expansion, with the belief that urban growth should be rationalized fostering a better quality of life; he decided on a different scheme with 1,080 apartments, and additional services.

This was the birth of the high rise living units, called “multifamiliares”, with an urban design that separates pedestrians and cars, the super-block, inspired particularly in the publications of Le Corbusier, whom Pani had met during his time in Paris. The fundamentals of

the project of the “Ville Contemporaine”, 1922, and the publications by the Swiss architect,³ are at the base of the CUPA, but it is important to emphasize that the Mexican project takes particularly into account the local *modus vivendi*, revealed by the acceptance of the inhabitants.⁴ The ensemble offers six twelve floors buildings, with apartments developed in two levels, and six low rise building with smaller units; the basement is occupied by commercial establishments, and the compound includes, besides the administrative offices, a clinic, a day care and kinder garden facility, a post office, a pool and large garden areas.

In addition, it is important to note the interest Mario Pani always had for the integration of the arts with architecture, proposing a mural, *La Primavera*, by José Clemente Orozco, and a series of works by Carlos Mérida for the day care center. Here the participation of Orozco is particularly dramatic, since he planned to paint on an exterior undulating concrete wall; but on September the 6th, as he started to work, he disliked the rough finishing, and decided to leave the premises; that night he died, and only his last strokes remained.⁵ Here again, it is necessary to make a reference to Le Corbusier, who stated “Architecture is the skilful, accurate, and magnificent play of masses seen in light; they call for the plastic artist.”⁶ Adding latter on: “L’architecture et les arts plastiques ne sont pas

Figure 1. Mario Pani,
Centro Urbano Presidente
Alemán, 1948-49, Mexico
City. Guillermo Zamora,
Archive of LNG.



deux choses juxtaposées; elles sont un entier solide cohérent.”⁷

It is in this light that I propose to approach the main theme, Clara Porset and her relationship with architecture, especially in her designs for the Presidente Alemán housing unit by Mario Pani.⁸ But we have to keep in mind that she also had significant work relations in other projects by Pani, as well as with reknown architects like Enrique del Moral, Enrique Yáñez and Luis Barragán.

Clara María del Carmen Magdalena Porset y Dumas was born in Matanzas, Cuba, on May 25th, 1895.⁹ She had a privileged childhood that disembogued in her attending *Manhattanville Academy* high school in New York from 1914 to 1918. Her natural restlessness and interest in matters related to art and architecture led her to attend in 1925 the School of Fine Arts of Columbia, in New York. She then decided to further her studies in Paris and between 1928 and 1931 she attended both La Sorbonne, for a course in aesthetic, and the École de Beaux Arts, for classes of architecture and art history; it is relevant to note that 1928 was the year that Mario Pani started his studies in the famous Parisian institution, allowing them to have this common architectural background. Also, Clara Porset pursued her interest in furniture design, attending the atelier of Henri Rapin¹⁰ for lessons and practical experience.

She returned to Cuba after the European journey, and started her professional work as an interior and furniture designer for houses and diverse establishments; at that time she participated in the foundation of the Cuban Institute of Architects and taught at the Escuela Técnica for women. But there was still one experience lacking in her quest for knowledge in the field of what we now call Industrial Design: the Bauhaus. She got in contact with Walter Gropius to study under his guidance, unfortunately it was 1933, the year that the school was dissolved;¹¹ luckily he recommended her to look for Josef Albers who had moved to the Black Mountain College, in North Carolina to teach his famous *vorkurs*. Porset attended the summer courses, and started a long lasting friendship with Josef Albers and his wife Anni, and benefited with the rich artistic life of the college. Her acquaintance of Hannes Meyer,¹² when she sought exile in Mexico in 1936, closed the circle of her learning, and allowed for yet another important friendship.

The recognition of her Cuban work, served as a starting point in her new destination, where she took on a series of collaborations with relevant architects of the Mexican Modern Movement, designing furniture appropriated to their projects: houses, offices and hotels. Also her long life commitment with the socialist cause, the force that initially drove her out of Cuba,



Figure 2. José Clemente Orozco on the scaffold painting *La Primavera*, with Mario Pani and the architects José Luis Cuevas and José Villagrán. Archive of LNG.



Figure 3. Clara Porset, furniture for the CUPA, table and chair related to the Modern Movement . *Arquitectura/México* 32.

made her go back in 1959 after the triumph of the revolution, to establish the first school of design in that country; although, in 1965 she came back to Mexico and had, besides her successful personal career, an important relationship with education in the School of Industrial Design of the National University.

It must be pointed out, that, alongside with some important commissions, she also tackled designs suited for the less privileged; already in 1940, she had participated, with Xavier Guerrero,¹³ in the competition organized by the MoMA, “Organic Design for Home Furnishing”, obtaining one of the four prizes with a collection of what she called “rural furniture”. It is also the case of the furniture designed especially for the small apartments of the first Mexican modern housing unit by Pani, the CUPA; here she took into account the cost of the materials as well as the size, suitability and multipurpose of the furnishings; tables, desks, chairs, beds and cupboards, achieved a perfect balance and assimilation with Pani’s architecture, thus it is possible to say that we also find here a real integration, the one that Le Corbusier called “a coherent whole”.¹⁴ In these designs we find two different

sets of basic fixtures, directed a diverse clientele, the first one related to the Modern Movement and the building itself, the second one taking into account the traditional expressions.

It is important to note that most of the time, her inspiration comes from the vernacular, apparent in the furniture specially suited for the Mexican tropical climate; these are her most recognized and celebrated works, like the ones for the houses of Mario Pani and Enrique del Moral in Acapulco.¹⁵ It is also the case of the wicker chair that obtained a prize in the Milan Triennial of 1957. One of her most renowned works is the famous “butaque”, a type of chair found in the Mexican and Caribbean rural dwellings, that Luis Barragán used in the houses he designed, that has led to a wrongful attribution to the latter.

The strength and success of the designs of Clara Porset and the quality of the results facilitate the appreciation of her work in the light of this 21st Century; her innovations within the tradition put her in the position of being one of the pioneers of Regionalism at the same time that she embodies the Modern Movement, and this not only for the elements of the production



Figure 4. Clara Porset, furniture for the CUPA, two chairs and a cupboard with vernacular inspiration. *Arquitectura/México* 32.



Figure 5. Mario Pani, his house in Acapulco, 1952. Guillermo Zamora, Archive of LNG.

of furniture, but also within the scope of total interior design.

Notes

- 1 Graciela de Garay, Mario Pani (Mexico: UNAM, 2004); and Louise Noelle, ed., Mario Pani (Mexico: UNAM, 2008).
- 2 Mario Pani, *Los Multifamiliares de Pensiones* (Mexico: Editorial Arquitectura, 1953).
- 3 Le Corbusier, *Urbanisme* (Paris, 1925), published in English as *The City of To-morrow and its Planning*; and *La Ville Radieuse* (Paris, 1935).
- 4 Graciela de Garay with the Instituto Mora realized the video "El multi es mi multi", in 1999, to commemorate the 50th anniversary of the CUPA, shows the pride and the attachment of the original inhabitants.
- 5 Alma Reed, Orozco (Mexico: FCE, 1983), 329.
- 6 Le Corbusier, *Towards a New Architecture* (New York: Dover Publications, 1986), 28.
- 7 Paul Damaz, *Art in European Architecture* (New York: Reinhold Publishing, 1956), 28.

"Architecture and plastic art are not two juxtaposed things; they are a coherent whole."

- 8 Clara Porset, "El Centro Urbano 'Miguel Alemán' y el espacio interior para vivir," *Arquitectura/México* 32 (October 1950): 117-120.
- 9 She died in México City in 1981, for further information see Oscar Salinas Flores, Clara Porset. *Una vida inquieta, una obra sin igual* (Mexico: UNAM, 2002); and Clara Porset's Design. *Creating a Modern Mexico* (Mexico: Museo Franz Mayer-UNAM, 2006).
- 10 Henri Rapin, 1873-1939, was a French painter, illustrator and interior decorator, he was very active in the renaissance of the applied arts.
- 11 Bauhaus, a conceptual model (Berlin-New York: Bauhaus Archiv-MOMA, 2009).
- 12 Hannes Mayer, the second Dean of the Bauhaus, lived in México from 1939 to 1949.
- 13 The Mexican painter Xavier Guerrero, 1896-1974, was her husband, with whom she collaborated often.
- 14 Damaz, *Art in European Architecture*.
- 15 "Hotel Pozo del Rey", "Conjunto de cinco casas", "Villas Monte Mar" and "Casa Sr. Luis R. Montes", *Arquitectura/México* 46 (June 1954).

Le Corbusier's "Immeuble Clarté" in Geneva, Switzerland: l'avenir est à créer

Restoration Work on the Structure, Facades, Technical Installations and Piping by Jacques-Louis de Chambrier, Architect EPFZ/SIA, 2007-2010

Carmen Reolon

Both "Cabanon," a house in Vevey and "Immeuble Clarté" are two Swiss buildings that most powerfully reveal many of Le Corbusier's (Charles-Édouard Jeanneret) key ideas about modern architecture.

In the end, Le Corbusier was not very satisfied with his finished Immeuble Clarté. He had been hampered in realizing his vision and concept of "immeubles villas" because of too many modifications were necessary due to the restrictions imposed by construction law or dictated by Edmond Wanner, his client and partner, for reasons of economy. Even though Immeuble Clarté was constrained by conservative concepts in town planning, by construction laws geared to traditional building methods, and by intense financial pressures, it still represents an important transition in modern architecture. Clarté displays new construction technologies and strong elements of a new esthetic, such as an innovative use of flat planes. From the perspective of today, it is important to bear in mind

that the conditions of town planning in Switzerland 80 years ago did not support key elements of Le Corbusier's vision. Such a building would ordinarily be surrounded with a green area defined by tall hedges and would have a beautiful roof garden.

Design Principles

The principles on which Le Corbusier based the Immeuble Clarté refer clearly on one hand to his concept of the "domino house" and on the other hand to the "immeubles villas" project that he never built.

As the chief author of the "Immeuble Clarté" project, Le Corbusier aimed to issue a manifesto on modern architecture that included acknowledgement of radical new ideas about apartments as well as of the evolution of construction methods and the introduction of new esthetic elements. He wanted to use the project



Figure 1. View before restauration. Jacques-Louis de Chambrier, Private Photographic Archive, 27.06.2006.

to experiment with standardized production in the creation of housing, specifically by prefabricating as much of the building materials as possible and bringing them to the site. In 1929 Le Corbusier used—for the very first time—a prefabricated dry wall and floor building system. The system was based on a metal skeleton clad with 2.5-inch thick elements made from compressed straw, was attached with wire, and then rigidified with a 1.5-inch concrete mortar.¹

History of the Building

In trying to understand the significance of Immeuble Clarté, it is critical to pay attention to

another of the great challenges Le Corbusier, Jeanneret, Wanner, and other members of the design and construction team faced. The sad fact is that Immeuble Clarté was a financial struggle and ended as a financial flop. When construction was over, Le Corbusier faced large debts, and the firm of Edmond Wanner was insolvent. Moreover, the profound financial crisis of the Great Depression prevented the sorts of wealthy people for whom the apartments were built from renting them.²

In 1969 Edmond Wanner wanted to demolish Immeuble Clarté specifically for safety reasons.

The recent history of Immeuble Clarté has also been complicated. Even though the build-



Figure 2. View after restoration. Carmen Reolon, Private Photographic Archive, 2009.

ing was scheduled for demolition in 1969, this terrible fate was avoided, and in 1975, Pierre Jeanneret niece, along with two architects bought Immeuble Clarté and made urgently needed renovations. In 1980, architects, André Gaillard and Jean-Louis Ardin, proposed a new town plan for this area—a plan that included the demolition of Immeuble Clarté. A popular petition opposing the new plan was created, and in December 1980 the City of Geneva refused the architects permission.³

On 12 November 1986 the building was put under protection as an important Swiss cultural property. The Swiss Cultural Office provided funds in order to prepare measured drawings of the façades as well as to make an inventory of the actual typology of the building. The inventory showed all modifications according to the original plans. When working with the Swiss government and architects, the Immeuble Clarté's Owners' Association found funds with which to restore the façade. Architect Jacques-

Louis de Chambrier began the work in 2007, which was completed in 2010.

Restoration or Revolution?

The restoration work was completed in the context of the building's cultural value being recognized with its inclusion on UNESCO's World Heritage List. At the time, there was considerable uncertainty about precisely which conservation measures were to be employed and thus the restoration team had to deal with many questions at each step. The Charter of Venice (1964), which addresses the conservation and restoration of important monuments, had to be interpreted with exceptional care.

To reach agreement with colleagues on the Immeuble Clarté team—including experts in architectural history, restoration, and structural engineering—the architect had to identify the properties' intrinsic qualities as well as the au-



Figure 3. Situation of the decay. Carmen Reolon, Private Photographic Archive, 2006.

thentic aspects that had survived. In relation to the built environment of the era, he had to study the relevant history of architecture, the social and cultural context of Geneva in the 1920s, the building technology used, and countless architectural and technical details. By looking closely at all these elements, the architect was searching in particular for building technologies that would be true to the spirit and “logic” of Le Corbusier’s unconventional approach.

At the same time, the architect had to include in the restoration program solutions that allowed essential technical improvements in the construction. This was particularly important in respect to sustainable development as it related to insulation, the heating system, waterproofing, security, and overall durability. All of these areas must be addressed successfully but without impinging on the iconic identity of the building in any way. To coordinate all the ac-



Figure 4. After restoration and improvements. Carmen Reolon, Private Photographic Archive, 2009.

tions necessary to achieve this critical objective, the worksite became an experimental laboratory in which the project team members never ceased to ask questions of one another.⁴

The Exceptional Importance of Color

With the new esthetic of Immeuble Clarté, Le Corbusier increased his public’s awareness not only of the importance of modern construc-

tion systems but especially of the importance of colors. In that era, residential buildings were supposed to be sober. In contrast to this, however, Le Corbusier developed sophisticated color schemes that varied according to the personal taste and choice of the owner.

The restoration conservationist had to develop creative solutions to a number of challenges related to materials, such as wallpapers and paint types. For the restoration of the interiors, as a result, the polychromes of Le Corbusier had to be reworked in Switzerland by Kt. Color Farbmanufaktur, Polychromie Le Corbusier, so that the restoration of the surfaces could be done in the original spirit. Furthermore, as the wallpaper was designed and manufactured by the firm of Salubra in Grenzach near Basel was no longer available for sale. A fiberglass-based textile with a surface structure similar to that of the wallpaper was used.

Conclusions

For the most part, the restoration work on the structure as well as on the paint on the façade did not require changes in the use of construction methods or building materials. Nonetheless, the restoration team initiated a large-scale observation process. The purpose of this process was to document every change that was occurring on the building site in order to help the team to work meticulously and to high scientific standards. Only by paying rigorous attention to every detail of the work could the building be preserved in a way true to its material, structural, and esthetic qualities—and its character and meaning be protected for future generations.

Result of the Investigations

Although Jacques-Louis de Chambrier has devoted much time and attention to the restora-

tion of this extraordinary building, he does not wish to create a new set of recommendations for further restoration activities. He believes that Le Corbusier spoke clearly and fully enough about the important design principles relevant to the building and gave the best possible assistance for interior decoration in the form of his detailed and purist color schemes.

On a closely related point, on January 29, 2008 the conservation office of Geneva produced and approved a paper. These rules will help owners and architects plan carefully and wisely for future interventions.

To help ensure Le Corbusier's legacy, Jacques-Louis de Chambrier recommends that, before planning future restoration work, architects and specialists read and consider the principles described above, including the questions raised and the answers developed during the 2007-2011 restoration project. Only by applying smart but historically appropriate strategies will this great building be preserved in ways faithful to its inherent qualities and within the context of existing typologies.

Notes

- 1 Arthur Rüegg, "La Villa Ruf 1928 -29," *Faces* 17 (1990), 46 -54.
- 2 Catherine Courtiau, "Un Atelier experimental de concepteurs," *La costruzione dell'Immeuble Clarté, La construction de l'immeuble Clarté*, *Catalogi dell' Accademia di architettura dell' Università della Svizzera italiana (CH-Mendrisio, 1999)*, 25-39.
- 3 Cathrine Courtiau, *Immeubles Clarté Genève Le Corbusier – 1931/32*, *Guides de Monuments Suisse*, (Bern: GSK, 1982), 10.
- 4 Bernard Zumthor, *Immeubles Clarté, quelques leçons d'une restauration* (2010), 1, 3.

Light on the Mystic Path: the Church in The Hague by Aldo van Eyck

Jose Fernández-Llebrez



Figure 1. Provided by Tess van Eyck Wickham from Aldo van Eyck's archive.

During much of the 1960s¹ Aldo van Eyck worked on the design and construction of one of his most important projects: the Roman Catholic church of Pastoor Van Ars in The Hague. There are many grounds on which this building can be regarded as a masterpiece of modern architecture: the subtle and natural way in which it is integrated into the urban landscape, the geometric exquisiteness of its planimetry, the harmonic proportions of the different elements making up the whole, the forceful and clear distribution of space, the inspiring austerity of the interior, the essential (brutalist) materialization of the building, and the mystical air achieved through the use of natural light. However, perhaps due to the shadow which the brilliant and very well-known Amsterdam Orphanage² casts over the rest of the buildings designed by Aldo

van Eyck, this building is – paradoxically, therefore – little known, or at least not in detail.

Conservation and Integration of the Church into the Urban Landscape

Taken forty years apart, the two exterior photographs shown here demonstrate the way in which the urban view of the church has developed: the first photograph [Fig. 1] was taken just after the building work had been completed (around 1970) and the second one [Fig. 2] shows the building's current state (February 2012). They were both taken from the same place on the road leading to the church (Aaltje Noordewierstraat) and this visual comparison shows the optimal state of conservation of the



Figure 2. Author's property.

church at this time and also the magnificent integration of the building into the surrounding urban landscape.

The enthusiasm which this building elicited from the very beginning in the people directly responsible for it (with the parish priest and the church administrator being chief among them) only partly explains the good state of conservation that the building displays. In other words, although it is true that the affection shown to the building over the years has been an important factor in this respect, no less important has been the sound architectural practice which Aldo van Eyck brought to its design and construction, and also the educational effort made by him. With regard to the latter, the comments³ made by Louis J. W. Berger (the retired parish priest of the Pastoor Van Ars church) and José Ten Bergé (the administrator of the parish) show how, besides his professional relationship with the bishopric of Rotterdam (who paid for the building), Van Eyck also took time to cultivate a good personal relationship with the people immediately responsible for the building. Aldo van Eyck held intense conversations with them, engaging them with his trademark

infectious enthusiasm, explaining the reasons behind his decisions for the building and gradually bringing them to understand the building and make it their own. Yet the architectural design chosen by Aldo van Eyck has also served to aid the efforts to conserve the building. In other words, the distinctive and robust material nature of the building —characterised by the use of concrete blocks— has proven to be a good choice, one with which to face the passage of time. Thus, the decision to use the austere and yet expressive concrete blocks for all the vertical planes of the building has linked it to the New Brutalism⁴ of the time (along with the use of other materials such as reinforced concrete, reinforced in situ and prefabricated) and has also ensured that the forty years which have gone by seem to have made little impact on it.

With regard to the integration of the building into the surrounding landscape, this has actually improved with the passing of the years, as can be seen by comparing the two photographs above. It is therefore no coincidence that when at first hands one sees the church for the first time, it feels like it has always been there. Obviously, a key factor in this is how the trees and

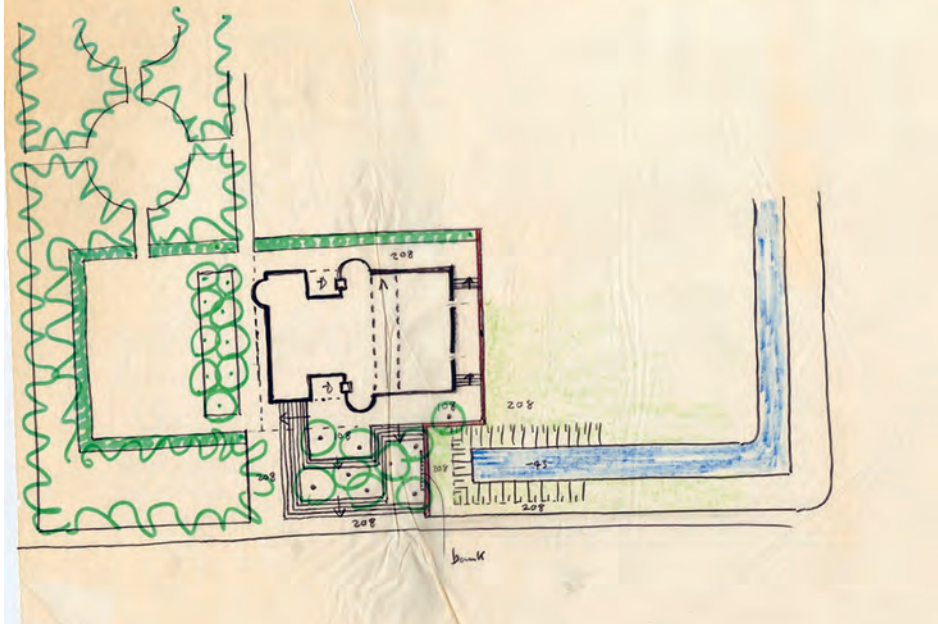


Figure 3. Provided by Tess van Eyck Wickham from Aldo van Eyck's archive.

greenery in general have colonised the location³ but, once more, credit must be given to the architect for this happy final outcome. Various features of Aldo van Eyck's design explain the seamless way in which the building fits into the urban landscape: the course of the canal as a linear boundary separating the building from the road and creating a particular planned approach to it, the contrast between the different levels of the terrain serving to highlight and dignify the building (but without going too far), or the wooded surroundings providing a natural setting which invites to the calm and meditation proper to a Catholic church.

So, this unseen sketch by Aldo van Eyck which belongs to an early version of the design shows a plan of the church in which we can see that, right from the start, the relationship with the elements of the surrounding area and the landscape were key issues for him [Fig. 3].

Reinterpreting from a Modern Perspective

Aldo van Eyck also employed several different strategies for the spatial and volumetric configu-

ration of the church building. However, bearing in mind the general theme of our congress ("the Survival of Modern"), it is especially instructive to examine his reinterpretation, from a modern perspective, of one of the most characteristic elements of the traditional structural organization of Catholic churches: the nave. Thus, after putting aside its inherent religious and cultural implications, his approach to this element came from a strictly architectural perspective. In the words of the author himself (Eyck, 1999):

Although neither Catholic nor anything else, I have over years been familiar with innumerable churches and sacred places of all sorts [...] Far from wishing to secularize (i.e. neutralize or banalize) what for others is sacred, I have tried, as an outsider, to mitigate the outworn hierarchy's irreversibility; persuading it to become hence more reversible-relative.

In traditional Catholic churches the purpose of the nave is to accommodate most of the congregation during mass, while also representing traditional values of centrality, axuality and symmetry (thereby constituting the most representative architectural space of the church). In contrast, the Pastoor Van Ars church makes a

major change in this respect. Eschewing this multiplicity of essential functions, the nave designed by Aldo van Eyck does not house a specific part of the programme, nor does it convey the conventional religious and cultural significance. In other words, although the nave keeps a (transverse) circulation to the building plan and houses a consecrated altar (but not the high altar), its true purpose is simply to become the most representative space within the project, while also providing special mystical significance through the use of natural light.

In this sense and in accordance with the recorded comments, the Via Dolorosa⁶ was a key inspiration and point of reference for Aldo van Eyck when beginning to configure this space. Therefore, it is from this historic Jerusalem Street that the idea of the 'journey' comes from, one which conditions the configuration of the Pastoor Van Ars nave (and reinforced by the low steps which can be seen in the interior of the church). At the same time, here we do see a spiritual and religious link with the Catholic tradition of the Stations of the Cross. It is as part of this context that Aldo van Eyck's sublime use of natural light becomes not only an exquisite source of mysticism for the building, but also the mechanism through which a definite reference is made to this fundamental part of the Christian tradition (the Via Dolorosa). Thus, the location of four impressive circular skylights in the roof of this volume along with the prominent presence of the two side walls (which rise above the level of the roofs of the two adjacent spaces), indeed reminds in a sensorial and conceptual way the experience of a walk down a characteristic section of the Via Dolorosa. Just as in this street in Jerusalem, where largely stone buildings flank the way, the rampant course of the Pastoor Van Ars nave is narrow and long and it is also shaped by massive walls (concrete blocks) which, in a similar way, force the natural light to flood the space from above, from on high, from the heavens [Fig. 4].



Figure 4. Author's property.

Present and Future

Partly due to the fact that the church is classed as a Gemeente Monument⁷ of the city of The Hague, those alterations which the building has undergone (mainly concerning small changes to the presbytery-house) have largely been respectful to the original construction, with plasterboard and wood being used and which can therefore be easily removed if necessary. However, barring last-minute changes, an alteration to the main vestibule is being prepared: in order to create more storage space, the bishopric (using their own staff) is planning to introduce a voluminous cylindrical element which, although it seems that it will be an item of furniture, leaves some questions unanswered⁸ and opens a debate on the issue of modifications to modern heritage buildings.

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Notes

- 1 Peter Smithson himself noted the significant level of dedication shown by Aldo van Eyck in an article he wrote on the church in 1975. Peter Smithson, "Church at The Hague by Aldo van Eyck," *Architectural Design* XLV (1975), 344-350.
- 2 Aldo van Eyck designed and built the Amsterdam Orphanage between 1955 and 1960. Francis Strauven, *Aldo van Eyck: the shape of relativity* (Amsterdam: Architectura & Natura, 1998).
- 3 These and other comments were recorded during several personal conversations which took place between May and October 2011 with those directly responsible for the maintenance of the church.
- 4 Reyner Banham published his essay "The New Brutalism" in *The Architectural Review* of December 1955. He would later expand on his theory in 1966 with one of his most celebrated books. Reyner Banham, *The New Brutalism: ethic or aesthetic?* (New York: Reinhold, cop., 1966).
- 5 The site was small, 40 x 48 metres (the footprint of the building is 26.7 x 40.82 metres), being located in a small green area of the Loosduinen district of The Hague.
- 6 The Via Dolorosa is a street in the Old City of Jerusalem. In the Christian tradition it is thought to have formed part of the route taken by Jesus Christ on the way to his crucifixion.
- 7 This status is recognised in Dutch legislation and is awarded to certain buildings which are deemed to form part of local architectural heritage.
- 8 In this respect, Tess van Eyck Wickham, the daughter of the Dutch architect and currently responsible for Aldo van Eyck's private archive, has declared that she does not fully agree with these alterations.

The Limits of Reality: Conservation and Design Strategies for a Damaged Heritage ECLAC Building 2012

Horacio Torrent
Macarena Cortés
Gisela Frick

In facing the question of where to draw the line between the architects' intention and the preservation of the constructed building; this presentation will expose the complex issues regarding conservation and design strategies for a modern heritage building. This, in the context of catastrophic situations and the institutional requirements confronting with the heritage: that is, a paradoxical relation within the limits of reality.

Modern Heritage

The building of the UN Economic Commission for Latin America and the Caribbean Headquarters –ECLAC– in Santiago, is an emblematic case of modern heritage because of its design concept and for its materialization, which reinforces the structural and formal beliefs of modern architecture. The project assumes novel conditions in spatial terms with a significant configuration.

This building was the result of an international competition held in 1960, with a Jury integrated by Dag Hammarskjöld, Wallace Harrison and Philip Johnson among others. Chilean architect Emilio Duhart led the winning team; the groundbreaking ceremony was in 1961, the construction started in 1963 and the building was inaugurated three years later, in 1966.

The layout strategy consists on a stand-alone building based on a quadrangle of 95,66 m per side, with an interior square patio of 66,38 m each side. In this yard three volumes were designed and two were actually built: a rectangular core and a helicoidal cone.

The quadrangle is a structural ring, suspended over twenty eight piers and large crowning beams, resulting in an open first floor plan that links the building with its surroundings. This open space includes the garden, the helicoidal cone volume of the two main auditoriums, circulations and the service nucleus linked to the perimeter through suspended bridges. The construction is exposed concrete, which most

notably highlights the long-span structural system. Its innovative layout in both form and structural design, has allowed it to remain in time with a particular, widely recognized architectural value.

An oval pond that builds the arrival atrium characterizes the access, and the large tile-form canopy marks the main entrance of the complex. Both interventions are unquestionably scenario for the most stunning view of this building marked by its own particular character.

Its architectural resolution has for long been a reference and considered as a paradigmatic work, synthesizing modern aspirations based on the functionality of an administrative complex while having an open plan resolution and a daring structural design, which has defied the gravity of its architectural elements.

Current Needs and Contingency

ECLAC has undertaken the recovery of the building for over a decade, restoring its architectural value and reversing some of the interventions made in the past. The continuous maintenance has been stressed by the recent administration, in which the value and enhancement of the building indeed deserves recognition.

In that sense, various actions have developed to restore the original architectural conditions of the project, such as the recovery of open spaces on the ground level through the elimination of late interventions, as also the re-distribution of the use burden in the plan. But proper action regarding the value of the building would involve the consideration and recognition of current needs for the development of ECLAC activities. On the one hand to meet program and space requirements that have changed over time; on the other, to provide the building with new international standards of safety, energy supply, and sustainability, to fit its institutional status.

The building was damaged during the earthquake in Chile on February 27th 2010. The structures of the expansions built over the original building in the decade of the eighties -located on the third floor of the central core and roof terrace- were severely damaged. The UN administration demanded that this destroyed area was to be rebuilt for institutional reasons such as: veiling of the financial assets contributed by 187 member countries, insurance policies involved, and the new programmatic and functional needs to include in the plan.

Four days later, and because of the importance of the building, DOCOMOMO Chile asked about its condition, starting a process with ECLAC authorities by calling for an activity that would allow gathering both innovative and informed project ideas on the case in a seminar format. As the Chief architects of the General Services Section¹ were well aware of the architectural value of this building they formally accepted the opportunity to rethink the intervention, and called for ideas for the needs and modifications raised in this emergency.

Responding to this contingent needs, the seminar Strategies for intervention on Modern Heritage held by DOCOMOMO Chile reflected on ways of intervention, being a platform for ideas. The singularity of the call for ideas lied in the paradoxical fact of responding to the recovery of the square meters of a largely criticized intervention -over the original roof terrace and visible from the exterior- while at the same time recognizing the characteristics and formal repertoire of the original building of 1966.

The Design Strategies

The main criteria to consider in the proposals were:

- The intervention, as it will be located on the roof of the existing building core should consider the heights of the other plastic elements,

such as the helicoidal cone and the quadrangle.

- The proposal should consider the reversibility of the intervention or the possibility to return to the original state.
- The intervention must have a clear and consistent position regarding its formal treatment towards the existing building: if either able of linking by mimesis or contrast, or offering new possibilities for spatial relationships.
- Connectivity with the rest of the building.
- Flexibility and / or versatile interior space and its relationship with the outside. Special emphasis will be recognized on those interventions addressing indoor space conditions, as their relationship with the landscape in which it is located, suggesting a strong flexible link between spaces proposed.

The eleven proposals responded in different ways to the main criteria, which can be summarized in three main points 1) Considering the permanent elements of the original project and the maximum height of the proposed volume 2) Reversibility of the intervention 3) Adequation to the existing building in terms of a clear and consistent formal repertoire. Through these criteria, the intervention would be recognizable, as well as enhancing the value of the original building.

The Projects

The eleven projects were first categorized in terms of contrast and similarity: according to the location and total occupation area over the roof terrace, its height regarding the preexistent, its materialization, and the application of a module that would eventually provide regularity and/or notable plastic elements. But it can also be seen as two main operations: to intervene the roof terrace as required but the ECLAC call; or not to intervene the roof terrace, considering the damage of the late intervention as an opportunity to restore the original project by Duhart and team.

I. Ideas and projects restoring the roof terrace to its original state (1960 - 1966)

a) Completing the past. This proposal consisted in restituting an unbuilt fragment of the original project of 1960, regarding the actual as an “incomplete plan”. This strategy radically opposed the terms of the commission by changing the location of the expansion from the roof terrace to a missing element from the original project: the “diamond”, as Duhart called it, re interpreted for present needs.

b) Hiding the intervention. Two teams relied on this strategy avoiding the problem stated by the commission through the placement of the expansion in the underground level. This option freed the roof terrace of programmatic load returning it to the original state of the Duhart project, while quoting the architect’s original intention: “For its periphery and its terraces -that crown the ensemble with the value of a fifth façade, quite visible from neighbouring hills and the airplanes from the nearby airport- the building actively participates of the surrounding geographic space and the Santiago skyline”².

II. Ideas and projects that respond to the request to intervene the roof terrace.

Of the remaining eight proposals, three strategies stand out.

c) Radical contrast. This was a strategy of building on and beyond the preexisting extension by surpassing the height of the central core of vertical circulations. This roofed terrace radically contrasted with the existing building both in its materiality and form, building a timber shell that faced the problem by hiding the original character of the terrace elements while at the same time, exalting its function.

Two diverging recommended projects by Docomomo.

d) One which analyzed the preexisting grid module used by Duhart both in facades and plans, and applied it to the proposal. Recogniz-

ing a regulating preexistence in composition terms, this project extruded the original plan of the roof terrace and distributed the program underneath it. Nevertheless, the translation of this principle was not literal: this geometric pattern was not applied in elevation, as seen in the original project.

e) The project that was finally built proposed a contrasting volume in ethereal and light materials: glass, steel cables and green walls as opposing preexisting heavy weight concrete. This strategy resulted in a certain transparency that would allow recovering views to the surrounding landscape while at the same time concealing the occupancy load of the required program.

This intervention also absorbs preexisting plastic elements of the original roof terrace (cylinder, open-air auditorium) being recognized only inside the new intervention, extruding the auditorium envelope over the volume that encloses the perimeter of the nucleus.

The Limits of Reality

The results exposed in the Seminar resulted in interesting confrontations between the eleven proposals with the existing building and two recommended projects for execution. Nevertheless, DOCOMOMO Chile insisted on looking for another location for the expansion area required in the call -so as to recover the building's original feature regarding the open roof terrace or fifth façade in Emilio Duhart's terms- but ECLAC authorities decided to carry on with the intervention over the roof terrace proposed by one of the participant teams, for the recommended projects had a careful dialogue with the existing form.

Hence this result refers to the possibility of formal autonomy of an extension over a modern heritage building. But at the same time lays the paradox of rejecting the opportunity to restore the bold fifth façade operation of the original

and instead recover the polemic eighties intervention, at least program wise

The question that lies ahead is if this new autonomous intervention harms the architectural value of the original building; the clear regulating geometry, the plastic and structural principles, and the fifth façade, fundamental to the general parti. A pragmatic solution ridden by an alleged -though unlikely- possibility of reversibility, a restitution of a late expansion that either use or rigidity obliged to maintain, indeed, within the limits of reality.

Notes

- 1 Andrea Henrichsen, Chief, General Services Section. Eduardo Lyon PhD, Chief, Architectural and Engineering Unit.
- 2 Emilio Duhart, AUCA N° 33 (Santiago, 1966), 31.

Project Carbonia: Landscape Machine From 20th Century Company Town to 21st Century Landscape

The Renewal of a Foundation City and a Modern Mining Landscape

Antonello Sanna

Introduction

The Landscape Award 2011 of the Council of Europe has been assigned to the city of Carbonia¹, for the project of protection, conservation and reuse, which has promoted and developed in the last decade on its heritage of modern urban and industrial landscapes. Carbonia thus is added to the most famous European cases, bringing the contribution of a company town that was an emblem of the modernization of the '30s; a large development project, based on the construction of an integrated industrial landscape, passed within the first twenty years of his life by a rapid growth, which made it the third city of Sardinia, in an extreme crisis that has threatened its very existence. Carbonia now seeks the reasons for a new model putting into practice a strategy of sustainable development, focusing on research (especially in the fields of renewable energy and energy efficiency) and cultural identity, based on the great icons of industrial archaeology, in a program that connects them to the rationalist foundation city².

Mandated by the new mayor in his mission statement when he first took office, Project Car-

bonia began to take shape in 2001, at the height of the new climate generated by the European Landscape Convention. The project was based on the underlying assumption that landscapes “considered outstanding as well as everyday or degraded landscapes”³ must be treated in a unitary fashion embracing the structuring principle of landscape’s territorial significance and consequently, the importance of integrating planning and sustainable management.

Carbonia is denominated città di fondazione, foundation city, constructed during the first half of the 20th century and now included in Sardinia’s Geo-mining Park. It is part of an internationally significant landscape, recognized by UNESCO in 2004 as an emblematic example within its Global Network of Geoparks. In 2006, Sardinia’s Regional Landscape Plan, in implementation of the European Landscape Convention and Italy’s national legislation on cultural and landscape heritage (the so-called Urbani Code), indicated the foundation cities of the 1930s (first of all, Carbonia) as a protected landscape heritage.

Historically shaped by mining activities, the region suffered an irreversible crisis during the

second half of the 20th century witnessing the decline of its mining-based industrial model. The community, aware of the need to reinvent its future, responded with research into, and application of, new models for sustainable development.

The Mining Landscape: Carbonia and its Foundation

The very foundation of Carbonia, as described by one of the authors of its original plan, was structurally based on the chosen site's relationship to its landscape and, of course, to its coal resources. Thus Carbonia was founded as the principal node in a vast territorial network, expression of a grand 20th century landscape project for an autarchic coal district which comprised:

- a new system of company towns (the mining villages of Cortoghiana and Bacu Abis), components within the sizeable compendium of "foundation cities" located throughout the Sulcis region - true "landscapes of innovation"

- the coalfield's mining network, starting with the "Great Serbariu Mine" - with its deep pits and steel shafts that became regional landmarks - and continuing with the modeling of the land by massive landfills that contributed to creating "new topographies" within the coal landscape

- the infrastructure system, with a network of ports functional to mining activities (S. Antioco and Porto Vesme); other infrastructure such as the power plants at S. Caterina, Serbariu and Portoscuso; new railway lines and roads; all of which imposed upon an agricultural-pastoral landscape that in just a few years time was transformed into a landscape machine for the extraction of coal.

The history of Carbonia is unique and particularly significant within the panorama of 20th century urban planning and architecture⁴.

Built in less than one year between 1937 and 1938, Carbonia was a company town planned by the State based on the interdependent relationship between mining, infrastructure and settlement. The authors of the plan, three of the major planners of the day, Gustavo Pulitzer-Finali, Cesare Valle, Ignazio Guidi (with the young Eugenio Montuori), brought different and complementary professional training and pasts to the project. The diversity of their contributions, however, merged into an important synthesis of early 20th century Italian architecture and planning. From this point of view, the city is an expression of the complex oscillations in taste of the Fascist regime between Fascist style, monumental rhetoric and desire for modernity.

Carbonia was originally modeled on the garden city type but was also based on the organic morphology of ancient cities in an attempt to promote dialogue between urban fabric and monument, between major and minor architecture. It was a structured 20th landscape, within a broader and more complex landscape/territorial system, with its minor villages (Carbonia, Bacu Abis, Cortoghiana, Portoscuso), infrastructure and places of production.

In 1937, with the discovery of large Serbariu coal deposits, the design of the new city began to take shape. Inaugurated in 1938, according to a first phase project which provided for a population of 12,000, the city was designed for rapid growth to a population of 50,000, a number the city reached during the war.

The 1937 master plan is marked by the deployment of two-storey, four-family dwellings⁵, a building type that developed according to seven different architectural solutions, representing the self-sufficient alternative to the more traditional English cottage type and a symbolic expression of the rural and preindustrial dwelling. Alongside the extensive urban fabric were some large public buildings such as the Hotel for Bachelor Workers.

The construction of the extensive city clashed, however, with the ever increasing need for new housing. Between 1938 and 1940, the city grew dense in the open spaces of the original gardens expanding around Rosmarino Hill with standardized four-family homes and new multi-family housing developments that introduced what were at the time novel forms of intensive urban forms. 1940 witnessed the expansion of the mining village of Bacu Abis, the construction of the new workers' village of Cortoghiana designed by Saverio Muratori and the Portoscuso Plan by Giuseppe Pagano, this last one an exemplary project of the new Italian urbanism at the time.

Carbonia and its villages thus take on the form of a territorial project, a landscape/machine that after the war, despite population growth and the prospects for the development of mining activities, culminated with the closure of Sardinia's coal district. The industrial crisis in Europe which led to the decommissioning of the widespread stock of factories and the emptying of the large containers that housed them also concerned the Sardinian mining industry. In the early 1970s, after a period of bare and mute survival, the island's coal mining history virtually came to an end, its heritage ignored until the birth of the new millennium.

The Historic Coal Mining Landscape. The Industrial Crisis and the Project for a New Mining Landscape

During the 1960s, the great Serbariu Mine, recognized in 1937 as the largest coalfield in Italy, went into crisis and closed. However, those 25 years were enough to significantly reshape the area's geography: new coal waste heaps, roads and railways converging on the great mine and leaving it again for cities and ports.

The 1960s crisis left behind an impressive industrial landscape, decommissioned and

stripped bare, subsequently subjected to improper and deteriorating re-use. During the years after its closure, the abandoned mine site underwent a rapid process of degradation. Some buildings were illegally occupied by the homeless or transformed into temporary warehouses. Others, especially the large ones, emptied of the machinery they housed, were stripped of building elements, such as windows, roofing, cladding, mechanical systems, and transformed into illegal dumps or places for illegal activities. The vast exterior spaces, where uses and flows (of people, vehicles, Decauville railways) had followed the functional logic typical of a specialized industrial structure, were subsequently transformed with the infestation of spontaneous vegetation and by the cutting of new trails/paths created randomly by unregulated activity.

The mine originally covered an area of 30 hectares on a flat terrain upon which 25 buildings were constructed. The entire complex was dominated by magnificent steel shafts, visible symbols of the mine and its activity. Some of the original buildings have disappeared, such as the mammoth washery dominating the old photographs of the site, while others, such as the Lampisteria, the Machine Shops/Forge complex and the Power Station, constituted the main structures involved in the recovery project.

Nowadays, project Carbonia seeks to re-interpret Carbonia's original relationship with its landscape, redefining the community's prospects based on the landscape as "a resource favourable to economic activity" as it was when it was originally planned in order to contribute to "promoting quality of life and well-being".

Carbonia, emblem of Sardinia's industrial modernization in the 1930s, passed from enjoying such rapid growth as to become the region's third largest city during the first 20 years of its life, to a crisis that undermined not only the city's original identity but also the social and cultural ties that once held the community to-

gether. It was, and is, an epochal crisis, which has progressively reduced the coal district to a context of mining archeology.

The complex project for the renewal of these “landscapes of modernity” could only begin with this provincial capital of 30,000 inhabitants, a leader in a territory deeply permeated by a strong “culture of innovation.” Since 2001, the municipality has promoted a complex program of material actions, management tools and economic and educational promotional activity seeking to create a virtuous merger of the area’s historical and industrial vocation with a more contemporary model of sustainable territorial development (founded on landscape, environment, clean energy, ancient and industrial archeology). Carbonia Landscape Machine is based on four highly integrated strategies:

- recognition of a cultural landscape: planning framework for the regeneration of the city’s Modernist urban and mining heritage through sustainable co-planning
- quality urban landscape: regenerating the city’s historic mining and urban landscape
- city of sustainability research and development: repositioning Carbonia within the world’s burgeoning green economy
- cultural center/living landscape museum/public arts program: transforming the city’s industrial heritage and urban identity into a contemporary cultural center with a variegated offer of museum-related cultural activities.

These strategies have been highly effective in rehabilitating, recovering and renewing Carbonia’s “mining landscape.” In fact, the actions undertaken within the framework of Project Carbonia have focused on Carbonia’s principal public assets:

- the great Serbariu Mine and its landscape as an industrial machine
- the garden-city/company town of Carbonia and its satellite villages with their public spaces and civic monuments.

The Reinvention of the Urban Landscape: Urban Monuments, Public Space, the Garden City’s Residential Fabric

In the 1930s urban-mining landscape, Carbonia was a garden-city that incorporated nature within the city, countering the horrifying “unnaturalness” of the mines in a sort of social and human reparation. Carbonia was also the physical image of the modernization of the traditional Mediterranean landscape of isolated farms in their enclosures (called medaus) - the typical widespread settlement form in the vast Sulcis terrain vagues - thus introducing a variation on central European theme of the isolated cottage.

As late as 2000, the ideological rejection of a totalitarian past mixed with a difficult symbolic and material legacy. What set in was a kind of micro-degradation with widespread substitutions and superfluous additions, which, however, did not have the power to subvert the garden city’s basic structure (1,500 buildings for 8,000 housing units), which had remained perfectly intact. However, these phenomenon did alter its details and corrode its edges, blurring the separation between town and mine, overshadowing the identity and strength of that landscape.

In synthesis, Project Carbonia seeks to re-discover, reveal and renew, in a contemporary light, the deep-rooted relationship between place, population and landscape, considering the invariants of its landscape as non-negotiable values in a complex, but highly integrated, landscape, promoting, above all, an important project based on research carried out by the University of Cagliari (with graduate theses, PhD dissertations, conferences and scientific publications) and by national and international research centers which cooperated actively in the activity (Do.co.mo.mo Italy, University of Rome). The results of this research form the background for the Map of the Landscape and Urban Quality areas, the key strategic document in the new City Plan.

The Urban Plan of Carbonia and the Landscape Plan of Sardinia: the Architectural, Urban and Landscape Quality Lab

Since 2003 Carbonia has put the new urban plan into effect with a Quality Charter that established the inalienable values and invariants of the project, both of which are the basis for the new contract between the community and its landscape. This project was crafted keeping the objective of recovering the company town and its mines in mind and includes a “catalogue of urban and rural landscapes” and a “rules of changes” used to define the regulations governing the renovations. When the Sardinian landscape plan became law, the company town’s entire landscape and its surrounding towns became recognised as a landscape heritage and made up the largest historical centre of the island, comprising a surface area of some 250 hectares. All of the restoration activities regarding this historical heritage were guided by the rules of a Restoration Handbook⁷.

The topic of widespread reclamation, the massive effort to give quality back on all levels and in every corner of the city under a single system of shared regulations resulted in two new lines of work. The first was an urban and architectural quality workshop: a research and management centre, set up by the city administrators together with the Architecture Department that conducts experiments regarding the application of advanced models for daily management of the city. It is the coordination centre for the activities of the restoration of the public heritage and scientifically monitors the worksites. It checks and controls the private initiatives that bring about and actually conduct the interventions in the company town, both restoration and changes or enlargements of living spaces.

It is, therefore, perfecting and implementing a complex strategy aimed at a flexible restoration policy that deals with problems directly connected to the coexistence between various cultures

and their housing tendencies and the original architecture of Carbonia’s buildings. In the context of the climate of tension that has appeared between continuity and change, the Modern Building Restoration Handbook goes far to guarantee the quality of the conservation project. It explores the history of the construction methods of autarchic rationalism, reconstructs the anatomy of the early buildings, keeping in mind both the cultural and constructive criteria, it lays down the preliminary guidelines to be followed for the difficult road ahead, which must balance the ‘philological’ recovery of the historical buildings and the restoration of overall fabric. When the latter are found to be wholly transformed, sometimes in an irreversible manner, the Lab reconstructs a system of rules and procedures to govern the changes and assure quality. It elaborates and updates regulations and prototype projects, which point the requalification efforts towards sustainable solutions that are culturally in tune with certain unbending principles of restoration; principles such as making sure the restoration intervention is evident, and the new buildings are “non-mimetics”.

Based on the Map’s contents, a restoration and urban renewal program for the city’s main public space was initiated in 2002. Piazza Roma is the symbol and driving force of Carbonia’s landscape recovery program. Reduced, over the years, to a formless space, the square was given pedestrian-only access and returned to the city in a bold project that restored its role as urban center to become the symbol of renewed social cohesion. The buildings that surround the square, the Littoria Tower and “after work center”, the church and town hall, cinema and theater were restored in the spirit of their original designs providing forms of “sustainable reuse” necessitated by new activities and urban functions. Above all, the reinvention of public space was widespread and landscape-oriented. Project Carbonia renovated and regenerated urban and regional itineraries, especially the

main squares of the miners' villages; in addition to Piazza Roma, the Piazza Venezia and Piazza S. Barbara in the satellite nuclei of Cortoghiana and Bacu Abis were restored.

Carbonia is redesigning its landscape in line with the European Convention in such a way as to integrate plan strategies and operational guidelines for their practical implementation. In 2005, the city won significant EU funding for the Quality Project "Carbonia: 20th Century City" which, in fact, integrated the recovery of the identity of the foundation city and its mining landscape with the redevelopment of the deteriorated periphery. In this way, historic "beautiful scenery" was not isolated and "show-cased" but acted as a catalyst to create new and widespread "landscape quality."

The new design of the area to the west of Carbonia was the testing ground for this methodology. The basic design element was the planning of a green belt contributing to best circumscribe the garden city. The belt also contains a strip of infrastructure elements, consistent with the structure of the original plan such as the large western boulevard upon which hinges the new intermodal station and its new square (for which the municipal design team was assisted by the Department of Architecture, with the important contribution of architect Luigi Snozzi) to redevelop the existing degraded periphery with a strong and contemporary sign inspired by 20th century metaphysical Carbonia. Presiding over these infrastructure elements are the great "civic monuments" of the rationalist city such as the two Worker Hotels rehabilitated and restored to offer the city two "cornerstones of memory" to house new social services.

The Recovery of the Mining Landscape: Adaptive Reuse of the Great Serbariu Mine for Culture, Education and Research

The Recovery Program began with this mine in 2001 and, in less than six years, completed the reconfiguration of a "new landscape of culture and sustainability."

The vast mining plain, surrounded by hills formed by mining waste and dominated by the steel mine shafts and power station with its metaphysical cooling tower, is home to two major systems located in recovered mining buildings:

The first system regards identity and culture, focusing on the immense and luminous Lampisteria (hall of lamps) - the physical location of the exchange between the city where the miners lived and the shafts into which they plunged where they received their mining lamps (thus giving its name to the building). The lampisteria was transformed into the CICC (Center for Italian Culture of Coal), a scientific and anthropological museum, home to mining culture. The mine system was reconstructed and rendered accessible with the tunnels and pits with their elevators which, along the itinerary, manifests the mine culture in its full power. In adjacent pavilions are the Provincial Library, the Historic Archives of the Mine and the City and a new convention hall, while the PAS - Museum of the Sulcis Paleoenvironment - was located in the former machine shops.

A second system regards sustainability research and development for innovation and energy efficiency upon which the city is basing new economic prospects. It is interconnected with the first action as the activity makes use of the adjoining pavilions or is even integrated with the cultural functions. This second system refers to "green" and clean use of coal, alternative energy sources such as photovoltaics, structures for applied research on energy efficiency and advanced diagnostics of buildings. The

Sotacarbo Research Center and the Laboratory for materials and energy efficiency of Sardinia Research-University of Cagliari now occupy the space, forming the nucleus of a new “cluster for clean energy and sustainability” deriving from the coal industry as an alternative to the model of social/ economic and landscape/territorial development for the third millennium. These centers now occupy the machine shops and forge pavilions with new areas covered by photovoltaic panels for the new landscapes of sustainability, substituting and integrating the hills formed by mining waste.

Architectural project was constantly compared with the fundamental references of the restoration culture⁸. In the case of substantially intact buildings, such as the same Lampisteria, or other important buildings, the conservative approach has prevailed, and these buildings are now icons of mine culture, real museums of themselves or more, as the Lampisteria, ‘museums of museums’. The great stone structures of machine shops pavilions, topped by the ruins of the trusses of reinforced concrete, was assigned the role of hosting the most invasive reuse, such as the Research Center and the Center for Higher Education. In these cases was chosen an approach that, through the invention of new roofing systems, which metaphorically evoke original structures, and the insertion of new “boxes”, light and reversible, inside heavy stone buildings of '30s, would create a tension between memory and project, thus interpreting the canons of clarity/distinctness of the new intervention and its reversibility.

New Landscapes for Public Art: the Metaphysical Rationalist City and Its Reinterpretation as a Landscape for Contemporary Art

Like all the landscapes that have undergone a crisis that has threatened their very exist-

ence, Carbonia's identity is not an ontological given that is taken for granted: there is still an unbridgeable gap between its mining history and the current post-industrial era which must be filled by new contemporary interpretation and re-signification. One of Carbonia's most extraordinary potentials - its willingness to become a city of contemporary art - was expressed in the project for Piazza Roma. The “metaphysical square of power” is now home to an important stone sculpture by Italian artist Giò Pomodoro, a marble tribute to the city entitled “Fragment of a void,” a large abstract sign overlooking a pool evoking a historical fountain that once concluded the City Hall parterre. This first experiment led to a project regarding the interaction between art and city. Aside from the piece by Pomodoro, other artists –all with ties of one sort or another to Carbonia - were called upon to install work in the city's renovated public spaces (Mauro Staccioli, Giovanni Campus, Pinuccio Sciola). The works of these artists are, first of all, signs of a new identity located in the places and spaces of the modern city in an attempt to build a new cultural landscape for the 21st century.

Living Landscape Museum: Itineraries Through the Landscapes of the Rationalist City and its Mining Areas

Carbonia is a city-museum, not only in the sense of preserving its memory, but also in a contemporary and active sense as a Cultural Laboratory of Modernity.

As protagonist of a great landscape project, the city does not enclose the interpretation of its historic memory only within museum walls. CIAM, the Open-Air museum of Modernist itineraries, part of the Carbonia's Eco-museum, is the most emblematic manifestation of this active vision of culture, which seeks to involve the entirety of inhabited space in order

to convey the depth and quality of its historic and cultural landscape through a sustainable, “zero impact” exhibit. The historic research condensed into a guide and an exhibit, communicated through agile information, mate-

rializes in itineraries with stops highlighted by Infoterminals along the route between the mine and the town providing a new cultural attraction for tourists, school groups and residents alike.

Notes

- 1 «The Carbonia project: the landscape machine is the winner of the Landscape Award 2011, considering the exhaustive and multi-scale development of the project. This exemplary achievement, which aims to regenerate a 20th century modernist, urban and mining landscape in a sustainable development perspective, fulfills all the criteria for the Landscape Award [...]. The use of its historical resources to create a new identity was, at the outset, the requalification of this urban landscape. The work on the mine was accompanied by a revival of the whole city with the restoration of public squares, roads and monuments,» Landscape Award of the Council of Europe, Final Report of the meeting of the Jury, (Evora, October 20, 2011).
- 2 Foundation city is the literal translation of “città di fondazione” and refers to the Italian new town experience especially under Mussolini.
- 3 “...the landscape is an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas...” Preamble of European Landscape Convention, Council of Europe, Florence, 20.10.2000.
- 4 Giorgio Peghin and Antonello Sanna, Carbonia. Città del Novecento (Milano: Skira, 2009).
- 5 Antonello Sanna, Laboratorio Carbonia (Cagliari: CUEC, 2004).
- 6 Giorgio Peghin and Antonello Sanna, eds., Il patrimonio urbano moderno. Esperienze e riflessioni per la città del Novecento (Torino: Allemandi, 2011).
- 7 Antonello Sanna, “La riqualificazione della città di fondazione e dei paesaggi minerari moderni”, in Il patrimonio urbano moderno. Esperienze e riflessioni per la città del Novecento, eds. Giorgio Peghin et al.
- 8 The debate about restoration of modern architecture is still intense. See Marco Dezzi Bardeschi, “Le buone ragioni (e un po’ di storia) per quest’incontro,” Quaderni di ‘Ananke, 2, (2010), 28: «*Malgrado l’affinarsi dell’ascolto, e malgrado le stesse dichiarate intenzioni, i primi interventi su quello che viene via via riconosciuto come un Patrimonio Industriale e Moderno, si inscrivono alla (condannata) pratica distruttiva del restauro e sono più di trasformazione e di rifazione che di effettiva salvaguardia/conservazione [...]. Pensiamo alla rifazione analogica (come copia) di capolavori assoluti come il Bauhaus di Gropius a Dessau, e insomma a tanti interventi fatti ‘ora per allora’, cioè interventi in cui si riproponeva l’opera com’era e dove era, in immagine, ma con la fatale perdita di tutto il resto e cioè della parlante autenticità materiale del monumento-documento... [...perché occorre...] Conservare non riprodurre il moderno».*

Modernist Residential Areas in Sweden — a Cultural Heritage Worth Preserving?

Catharina Nolin

In this paper I will discuss modernist residential areas in Sweden in relation to gender, recognition and the preservation of cultural heritage. Many modernist residential areas in Sweden were designed by women landscape architects, and one of the most successful (among both men and women) was Ulla Bodorff (1913–1982). With her office as an example, I would like to show the complexity and the importance of going deeper into the subject.

Ulla Bodorff – a Short Introduction

After studying landscape architecture at the University of Reading 1933 to 1935, Ulla Bodorff worked for a while at Stockholm's parks department, but like many other Sweden women within the field she soon chose to open an office of her own. Between 1937 and 1973 her office was among the most well renowned and prosperous in the country.¹ Already in the beginning of her career residential areas became one of her most frequent commissions, which coincided with the very expansive building period in Sweden

around the Second World War. Bodorff's office designed numerous residential areas, often including city-planning issues, in Stockholm, Uppsala, Eskilstuna etc. Although her office was one of the leading, both in numbers of projects, and in design, the common knowledge about her commissions is today very poor. Besides the residential areas, her office had hundreds of commissions for People's parks, industries, companies, institutions and private clients, which gives her a special position.

Stockholm – a Rapidly Growing Capital

Today Stockholm is growing rapidly, and there is a constant demand for new housing areas to accommodate the growing population. The Environmental and real estate division as well as municipal and commercial property companies are constantly looking for new building grounds. During the last decade, one of the most usual ways of making way for new houses has been through in-fills, i.e. building one or some houses in an already existing area,

typically in suburbs planned around the Second World War. Some of the most important sources concerning Ulla Bodorff's commissions are her own writing, accompanied by her own photographs.² Comparing these sources with present conditions give many clues to understanding her design.

Modernist residential areas were often the result of subtle design. A majority were built according to the house in park concept, i.e. the houses were situated in a setting that either imitated nature or was part of the landscape. Bodorff often included existing plants and natural rocks in her lay-outs. Today it might be difficult to see the difference between her subtle, though neglected landscape planning, and impediments or "real" nature. Neglect, ignorance and lack of money has led to impoverishments in plant choices, that trees have become too large, and that hedges and bushes have not been kept as planned, or removed. More cars and new demands on car parks, as well as a need for recycling facilities etc., has resulted in more impervious surfaces and a simplification in materials. The last decades' lack of maintenance in combination with the design ideology, make some people look upon them as areas waiting to be altered into something better, for example suitable building areas.

Landscape Architecture versus Architecture

While many Swedish apartment buildings from the 1930s, 40s and 50s have been well documented, photographed, classified etc, and today play an important role in our common cultural heritage, the opposite can be said about the areas surrounding the houses. They have seldom been in focus for studies in the history of architecture and landscape architecture. Documentations are rare, and detailed studies showing the intentions behind the design and today's

status, or even the names of the authors, are few. Some museums have documented modernist housing areas and the built environment in the suburbs, among others the Stockholm city museum.³ In this case the antiquarians and the Environmental and real estate division agreed that there was a need for a documentation to be able to make decisions from a cultural heritage perspective in combination with the above presented need for new building plots. A similar documentation has been made in Uppsala, although unpublished. In neither case has the landscape architecture been included, some initial work has been made to document parks and gardens in Stockholm.

Another way of searching information about the built environment is through the Data Base of Built Heritage administrated by the Swedish National Board of Antiquities. Searching Ulla Bodorff's work is not very successful. Although many of the suburbs involving her work are registered, her contributions are hardly mentioned. I would like to give some examples from Stockholm, mainly from the 1940s. Reimersholme is in a landscape architecture context as well as a residential area probably Bodorff's most well known, but this entry is not yet written. The area has newly been saved from more in-fills, mainly thanks to the inhabitants' protests. When it comes to Gärdet, the term "house in park" is actually used, but no one seems to have thought about that a landscape architect has contributed in giving this area a very distinct character.⁴ Although the text about Riksby in western Stockholm is informative, characterising the houses (width, height, floors, terraces etc) and noting the most important changes, Ulla Bodorff's landscape planning is not mentioned at all, although her work not only covers a big part of the area, but in many ways has a distinct character, in contrast to the houses that are quite ordinary. Her commission in the nearby Ulvsunda is not mentioned at all, although some of the original

features are still there and can easily be compared with her photographs.⁵

In Blackeberg, a suburb from around 1950 in western Stockholm, Bodorff mainly designed well-composed yards characterised by high-quality and long lasting building and plant materials. In the documentation, she and two colleagues are mentioned by names, contrasting to the thorough description of the houses, the metro, the architects, as well as some changes. It is stated that the ambition is to keep as much as possible of the houses' original details. Obviously this is not the ambition when it comes to the landscape planning, thereby signalling that this is of less importance.⁶ My last example is Mälarblick, a group of houses built around an open yard c. 1960.⁷ Now threatened by building plans in the vicinity, the interested will find that the architecture is valued as of high interest, among other things because of the view over the lake Mälar and the royal palace Drottningholm, but nothing about how this view was designed and by whom. In contrast I would like to state that it is the landscape planning that gives Mälarblick its distinct character.

Is There a Solution?

Many residential areas that ought to be a natural part of our common cultural heritage, are threatened to be destroyed by neglect, simpli-

fications, new buildings etc. Work by women landscape architects, who once belonged to the most successful, are today disappearing without being documented. Clearly gender and landscape architecture are not yet important issues when it comes to heritage values in the suburbs, and these topics are not discussed in the documentations.⁸ It is well known that the history of landscape architecture has been written from a male perspective, neglecting women both as artists and commissioners in the history of landscape architecture.⁹ The increasing building density and urban containment makes it urgent to focus both on the history and the preservation of these suburban districts.

How can we be better prepared to identify important values before it is too late? Gender must become a central issue in the cultural heritage discussion. To give women landscape architects recognition is an urgent issue. Without recognition there is less possibility to have works listed and preserved. Work by women must be compared to work by men, otherwise women landscape architects and their work will stay in the loop, always be regarded as second in rank.¹⁰ Another way is to focus more on the overall design, than on each building and their architects. At last, this opens for a possibility to rewrite the history of landscape architecture, involving gender, and making way for a more pluralistic way of understanding our Modernist cultural heritage.

Notes

- 1 When Bodorff closed her office she destroyed most of the records, drawings and photographs.
- 2 Ulla Bodorff, "Trädgårdar kring moderna hyreskvarter. Från H.S.B:s höghus på Gärdet", *Allmän svensk trädgårdstidning* (1940), 618–621, and "Från moderna hyreskvarter. Från HSB-kvarteret Förmannen i Ulvsunda", *Allmän svensk trädgårdstidning* (1940), 684–688. See also Ulla Bodorff, "The Swedish Society of Landscape Architects: Brief Statement on Professional Practice in Sweden" in *Landscape Architecture* vol. 38, n° 3 (1948), 91–95.
- 3 Siv Bernhardson, ed., *Stockholm outside the inner city: ninety-seven suburban districts* (Stockholm: Stockholm, 2003), also available at www.bebyggelseregistret.raa.se (the Data Base of Built Heritage).
- 4 Bernhardson, *Stockholm outside the inner city*, 396–397.
- 5 Bernhardson, *Stockholm outside the inner city*, 447.
- 6 Bernhardson, *Stockholm outside the inner city*, 299.
- 7 Bernhardson, *Stockholm outside the inner city*, 379.
- 8 Örjan Simonsson, *Upplandsmuseets kunskaper om könsordningen. Rapport från en extern granskning 2006*. Upplandsmuseets skriftserie nr 8 (Uppsala: Upplandsmuseet, 2009).
- 9 David C. Streetfield, "Gender and the History of Landscape Architecture, 1875–1975" in *Women Landscape Architects. Essays on History and Practice*, eds. Louise A. Mozingo and Linda Jewell (Jefferson, North Carolina and London: McFarland, 2012), 5–31.
- 10 Malin Hedlin Hayden, "Women artists versus feminist artists: definitions by ideology, rhetoric or mere habit" in *Feminisms is still our name: seven essays on feminism and curatorial practices*, eds. Malin Hedlin Hayden and Jessica Sjöholm Skrubbe (London: Cambridge Scholars, 2010).

Ciudad Satélite, Mexico

— an Urban Proposal Difficult to Sustain

Lourdes Díaz¹

Its Design and Development

Ciudad Satélite is a residential development created in 1957 to the northwest of Mexico City. A team of professionals headed by architect Mario Pani designs it, and public and private institutions are responsible for its management, infrastructure and the granting of mortgage loans for its sale.²

It falls within the Modern Movement because its urban layout includes the experiences and guidelines established for garden, satellite, and superblock cities, applied to other cities of the world.³ It is also considered part of this movement because it gathers the experiences of the urban sprawl of Mexico City and the new multifamily dwellings and developments built to respond to it. Central to the Satélite project was the study of lifestyles and ways of community living to promote social improvement through neighborhood unit.⁴ An aspiration that is intertwined with the revolutionary ideology in the then-current socio-political environment of the mid-fifties in Mexico.

It is conceived as a hypothetical “city outside the city”⁵ relatively independent from the capital city to house a maximum of 200 000 inhabitants in 800 hectares, while in Mexico City there were almost 4 million people. In order to consolidate its objectives, the superblock design is favored and reformulated. Each superblock is conceived as self-sufficient cells with homes for people with different incomes, businesses, and garden areas. With pedestrian walkways and streets for low-speed vehicular traffic. The neighbors of the superblock should not walk long distances to carry out their daily lives, let alone cross the wide avenues with median strips, intended only for cars moving at high speeds.

To a large extent, Ciudad Satélite stands out today because it still preserves the type of continuous vehicle circulation, in circuits with U turns and no traffic lights to control it.

The proposal would not have been possible without the federal highway linking the capital



Figure 1. Vehicular circuits in Ciudad Satélite. Lourdes Díaz.

to this development. This is essential not only for Satélite, but also for the urban sprawl to the northwest of Mexico City, since at the same time, other real estate developments are being built on its outskirts, but the only being intersected by it, dividing it into two, is Satélite. By 1970, there are 32 new residential developments around the area, giving way to the conurbation phenomenon with Mexico City⁶, producing the passage of hundreds of thousands of people travelling daily to the capital city. But undoubtedly, the success in sales of real estate in Satélite happens thanks to this highway.

Being an unprecedented urban design, each of the buyers are instructed in the use of super-blocks and the importance of respecting the common areas and the ones intended for services and businesses, as well as respecting the building standards of houses, which although not subjected to preset styles, have restrictions on fences, and heights to be observed. That is why the residents bear the moral responsibility

for the proper use of the development while at the same time they immerse themselves in the special, and therefore modern, characteristics of the real estate development. In 1964, a Home-owners Association is created to reinforce the above, focusing, among other things, on monitoring the implementation of the norms and protesting publicly and before any authority when they are not observed.

Which happens in the early seventies at the first signs of changes in land use, insufficient number of schools, and the lack of drinking water, surveillance, public transportation, and shops. The greatest difficulty the Association has faced is the disappearance of a responsible authority, since the management of some services is handed over to the municipality, the state and the federation, leading to the dilution of the authority responsible for the implementation of building regulations, authorization of changes in land use and more importantly, the legal status of ownership of some of the land⁷. Those



Figure 2. A street in Satélite. Lourdes Díaz.

situations even affect two key landmarks of the development.

The Torres de Satélite and Plaza Satélite Mall, Two Vital Spaces

The Torres de Satélite and Plaza Satélite Mall were conceived as an integral part of the housing development, and in the case of the latter, necessary for its proper operation.

The Torres de Satélite were designed by the German sculptor Mathias Goeritz and architect Luis Barragan, who received the Pritzker Architecture Prize in 1980. They are five triangular towers from 57 to 37 meters in height that exemplify the concept of painting, sculpture and emotional architecture. “A plastic prayer”²⁸, Goeritz would say, that indicates the southern entrance to the development, located in a traffic circle in the middle of both the highway and what once was an uninhabited landscape.

Due to its abstract nature, cement-like finishes, primary colors and monumentality, few people became aware of its plastic and artistic

proposal. Since then, however, they have recreated the imagery of modern culture in commercials, movies and Fig.s. Many Mexicans and foreigners know the Torres without linking them to the residential development they represent, being the residents, from the beginning to the present, those who have always understood them as part of their identity. They are the ones who urge the local government to undertake an official restoration, since the towers have faded paint, graffiti on their walls, signs posted on them, litter on the traffic circle, pedestrian bridges in front of them and dozens and dozens of billboards that somehow vanished them.

In the past twenty years, municipal authorities, and civil and academic organizations have joined the residents with the purpose of protecting the Torres. They have requested federal courts to declare them part of the National Artistic Heritage and to guarantee their protection from the constant threat of disappearance, since they are located in the middle of a highway that constantly needs to be expanded to traffic. Paradoxically, the more attention is paid to the Torres, the more the rest of the development is left adrift.



Figure 3. Torres de Satélite (1957-1958), sculptor Mathías Goeritz and architect Luis Barragán. Lourdes Díaz.

Plaza Satélite, on the other hand, is built in 1971, when it is already known that it will provide services to an area beyond the limits of Ciudad Satélite.

Architects Juan Sordo Madaleno and Jose A. Wiechers E. are the specialists in charge of the project, which was then the second largest shopping mall built in Mexico. Given the time elapsed between the project and the building of it, its architectural plan and its design were carefully studied, with the latter based on the traditional Mexican plaza. Its biggest attraction is the central space covered by a large dome and the stainless steel monumental sculpture under it, which abstractly represents “a center, nothing else”, by French sculptor Olivier Seguin.

All the residents welcome the building of Plaza Satélite because, besides solving the scarcity of services, it increases the economic value of property. It is so modern that authorities promote it as part of local tourism, as an expression of contemporary architecture comparable to pre-Hispanic and colonial remains.

However, what is initially beneficial, over the years becomes the opposite. Nowadays, it en-

tails a number of hard to control problems. One of them is the daily floating population that attends the mall. Another one is the number of cars that soon crowded its parking lots, which is why it is subjected to a renewal in the early nineties, losing part of its original design forever.

The biggest problem generated by the construction and subsequent enlargement of Plaza, combined with a growing population in the northwest, is the continuous change in land use in the superblocks surrounding it, which also occurs in the other smaller shopping areas of Satélite. Where there were once homes now there are shops, offices or schools. In 1990, the Satélite Merchants Association recorded 20 000 shops or business centers in the development, many of them without official permits.¹⁰

As with Las Torres most people are unaware that Plaza Satélite is an integral part of a housing development and they want to expand businesses at all costs as if it were all that matters, and without contributing to urban improvement. They pressure the authorities to obtain permits, and given the authorities disappear-



Figure 4. Plaza Satélite Mall (1971), architects Juan Sordo Madaleno and José A. Wiechers E. Lourdes Díaz.

ance in several instances, a situation that has prevailed for more than 30 years, they have been granted those permits.

Conclusion

Nowadays, the greatest risk faced by Ciudad Satélite is losing, little by little, its housing, residential character, by a commercial or mixed-use one.

Should this trend continue over the next years, it may become a large neighborhood full of restaurants, bars, offices, schools and four- or five-storied apartment buildings. Vehicular circulation in circuits will be preserved but the local character of its superblocks will be irretrievably lost and with it, whether we like it or not, the value of commercial land use that now is favored. Something similar to what happened to Mexico City historic downtown will happen, where retail spaces were encouraged instead of housing and it became an unsafe place, with a large floating working population during the day, but empty regarding daily life.

Satélite is more than its Torres and shopping mall. It is a development to be fully respected and preserved with actions such as raising awareness in the new residents who are buying property, and in those who only visit it occasionally. And where possible, supporting the cultural and social activities that the Homeowners Association keeps organizing to preserve the neighborhood unit, because without it, Satélite will fall.

Improvements to its urban planning, ramps for people with disabilities, cycle paths on its streets, and the recovery of many of its green areas have been undertaken and will continue running. But the residents themselves will not be able to restrain the most latent threat, which day after day becomes more evident. This is why we must promote heritage protection of the entire development, not only of the Torres. And it is also why we work and disseminate this type of studies that make people realize the cultural and urban-architectural originality behind Ciudad Satélite, Mexico.



Figure 5. Steel Monumental Sculpture by Oliver Seguin, in Plaza Satélite Mall. Lourdes Díaz.

Notes

- 1 Translated by Cintya V. Guzmán Camacho, English teacher at the Foreign Language Center of the Faculty of Higher Studies Acatlan, UNAM.
- 2 Gaceta del Gobierno. Órgano del Gobierno Constitucional del Estado de México, Saturday January 19th, 1957, No. 6, Volume LXXXIII.
- 3 Mario Pani, "Satélite, la ciudad fuera de la ciudad," *Arquitectura México*, 60 (December 1957), 168. Digital edition by Carlos Ríos Garza, *Raíces Digital 6*, *Arquitectura México*, 119 números, 1938-1978, (Mexico: Faculty of Architecture, UNAM, 2006).
- 4 Pani, "Satélite", 218
- 5 Pani, "Satélite", 215
- 6 Rebeca López Mora, Naucalpan ante el Bicentenario. Una mirada al pasado (Mexico: Municipality of Naucalpan, 2012), 190.
- 7 Unpublished Research by Rebeca López Mora, PhD in History, Faculty of Higher Studies Acatlan, UNAM. Ex Naucalpan's Chronicler.
- 8 Mathias Goeritz, "¿Arquitectura emocional?" *Arquitectura*, 8-9 (May-Jun 1960), 17-22, published in *El Eco de Mathias Goeritz*, ed. Leonor Cuahonte (Mexico: Institute of Aesthetic Research, UNAM, 2007), 103.
- 9 Juan Sordo Madaleno and José A. Wiechers E., "Un Centro comercial planeado para México y los Mexicanos," *Arquitectura México*, 109 (November 1974), 14. Digital edition by Graza, *Raíces Digital 6*.
- 10 "Municipio y Estado. Únicas Autoridades," *Ecos de Satélite*, July 29th, 1990, front page.

Daciano da Costa's Interior Design programme for the University of Lisbon's Rectorate Building

Reflections Concerning Preservation

Ana Mehnert Pascoal

The interior design programme of the Rectorate building of the University of Lisbon (1959-1961) was made by Daciano da Costa. It marked the beginning of the involvement of a new generation of Portuguese designers with public buildings. In this paper, I present this heritage and discuss the challenge of preservation vs. daily use of building and furniture.

Daciano da Costa and the Emergence of Modern Design in Portugal

In 20th century Portugal, the affirmation of Design occurred later than in other countries. Lacking resources and raw material, Portugal suffered from delayed industrial development, coupled with persisting *beaux-arts* academic routines and outdated teaching. Moreover, preference for historicist options and *fin-de-siècle* eclectic aesthetics prevailed despite the adoption of occasional *Art Déco* solutions. From 1933

onwards, arts were promoted and controlled by Salazar's ruling dictatorship. The state became the major, almost exclusive, commissioner, in a still poorly industrialised country. At the same time, furniture factories initiated the production of modern equipment aimed at new public buildings, in cooperation with architects influenced by European vanguards¹. Soon, however, they were detracted in favour of nationalistic and conservative values as defined by the state, seeking for an original 'Portuguese style' inspired by folklore and regionalist specificities².

During the first half of the 20th century, Design was mostly associated with graphic arts and interior decoration aimed at exhibitions and international fairs. Until the early 1960s, it was not considered an autonomous discipline and it was only included in official academic curricula as an independent course after the 1974 revolution³.

The development of Industrial Design was shaped in the late 1950s and early 1960s, follow-

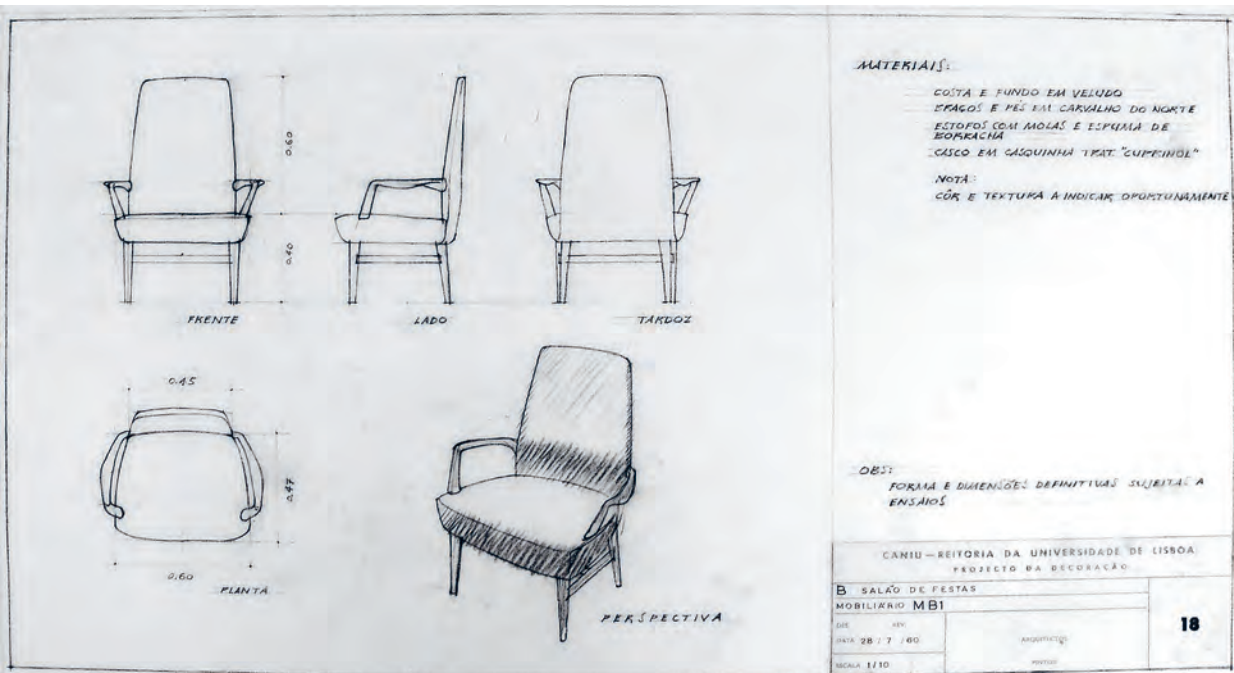


Figure 1. Study drawing: chair MB1 for the Noble Hall, scale 1/10, 28.07.1960. SIPA. DMC-DES00290 © IHRU.

ing the country's urgent industrialization need. In this period, a new architectonic consciousness was shaped – rationality-oriented, inspired by the Athens Charter and questioning government-established directives⁴. Debate increased considerably as a result of the 1st National Architecture Congress (1948). During the 1950s, Portugal opened economical relations with foreign nations, but internally the regime grew more controlling. Benefiting from a positive financial situation, industrialization contributed to an increased interest in reforming Design.

Despite industrials' lack of support⁵, a generation of young designers emerged. Daciano da Costa (1930-2005) was part of this so-called '1st generation', becoming a pioneer in Equipment Design. After graduating in Painting at the Fine Arts School of Lisbon (1960), Daciano studied with the painter and architect Frederico George. Initially, Daciano accompanied renovation works of commercial and public establishments, where strive for *Gesamtkunstwerk* is already visible.

Gradually, Daciano moved away from the visual arts and assumed social intervention as a professional commitment. In 1959, he opened his studio dedicated to interior, exhibition and industrial Design. His work had considerable importance in democratizing access to modern equipment. Allied to *Metalúrgica da Longra* since 1962, he promoted access of office furniture to a wide range of the population. In a period marked by the growth of quality of life and consumerism, Daciano created well-thought and low-cost objects for the anonymous user.

In interior design, Daciano became known for defending "design in context", patent in his remarkable works, e.g. the National Library (1965-1968), the Calouste Gulbenkian Foundation (1966-1969) or the Belém Cultural Centre (1990-1992). He understood interior design as an organic continuity of the architecture project; furnishing was conceived in function of the environment/architecture and their relationship with users.



Figure 2. Scale model of the Oval Room, also known as Small Banquets Room. Photo by Horácio Novais, ca.1960. Arquivo Fotográfico da Secretaria-Geral do Ministério da Educação. CE/ES S4.

The interior Design Program for the University of Lisbon's Rectorate Building

In 1959, the Portuguese government made its first big commission to Daciano da Costa: the new Rectorate building of the University of Lisbon, located at *Cidade Universitária*.

The building's history is intricate. The initial project, by architect Porfirio Pardal Monteiro (1897-1957), began in 1935 and it also included buildings for the Faculties of Law and Humanities. Different political reasons resulted in delays and a re-commission in 1952. The Rectorate was only inaugurated in December 1961, under the direction of Pardal Monteiro's nephew, architect António Pardal Monteiro (b.1930)⁶. Although the buildings kept part of the initial monumentality intentions desired by the regime, particularly evident in classical inspired elements like pilasters and porticos, they strived to be functional and adequate to a University. In addition, there is a clear pursuit of the *Gesamtkunstwerk*, combining architecture, integrated works of art and furniture. The Rectorate, considered more

important than the two Faculties, had a distinct architectural configuration, it employed noble materials and younger artists participated in its decoration.

Daciano da Costa brought modernity to the three government-commissioned buildings. When Marcello Caetano, then Rector, asked Daciano if he could bring his old office desk, Daciano replied that he was not designing Caetano's office, but an office for the Rector of the University. This reply shows concern for an integrated and modernity-oriented project, as well as a clear conviction that buildings and furniture outlive men.

The interior design programme included exclusive furniture aimed to furnish the so-called special rooms: the Rector's areas (comprising Office, Living Room and the Oval Room); the Senate Conference Room; the Noble Hall; the *Aula Magna*; the Great Acts Amphitheatre and Teachers' Lounge. As in later projects, Daciano developed a meticulous and integral method, working with multiple sketches and drawings⁷, scale models (often photographed) and material



Figure 3. View of the Aula Magna, Rectorate building. Photo by Horácio Novais, ca.1961. Arquivo Fotográfico da Secretaria-Geral do Ministério da Educação. CE/ES A4.



Figure 4. Chairs and small table in one of the corridors, originally designed for the waiting area near the secretary's office. A. M. Pascoal, 2012.

palettes. In the University programme, his most direct collaborators were painters Luís Ralha (1935-2008) and Rogério Ribeiro (1930-2008).

Concern for spatial definition and detail is evident. From carpet to curtains, each room was rigorously planned. In most of them, the ceilings are key elements, unifying the space and enclosing illumination, acoustic and climatic functions – e.g. the geometric-shaped mould plaster ceilings of the *Aula Magna* and the Oval Room. Wooden panels on the walls, made from mutenye and American walnut, are space definers and provide comfort, as in the Rectors Office. In addition, decoration also included two mural paintings for the Noble Hall.

The individual furniture designed by Daciano and produced by Olaio and Sousa Braga – encompassing chairs, desks, tables, sofas, as well as coffers, lamps, dustbins and doorknobs – ally noble materials and traditional techniques, confirming foreign influences. Scandinavian simple elegance can be observed in the proportioned and elegant furniture lines, as well as in the combination of velvet and leather and the use of wood. Rationalist and linear shapes de-

fine the sofas in the Rector's Office. The rose-wood table and velvet covered chairs at the Oval Room echo neoclassical spirit. Italian post-war style is evident in crystal shaped armchairs and couches with conic divergent feet⁸. As Martins noted, Daciano da Costa wished to “humanize the collective space”⁹. For the Rectorate, he developed a systematic interior programme that brings distinct objects together within an all-encompassing design concept.

Preservation Issues

The importance and coherence of this heritage is unequivocal. The Rectorate is a fully functioning building as the University of Lisbon administrative centre since 1961. Although no structural changes have been introduced, it has gradually been adapted to present day-requirements, which are distinct from a University in the early 1960s with less than 7500 students¹⁰.

Today, ca. 220 furniture items survive. Some were stored away, but many were relocated to their original spaces, thanks to the current Rec-

Figure 5. Detail of the Rector's living room reconstituting the original furniture display. Entrance to the Oval Room is on the right side of the picture. A. M. Pascoal, 2012.



tor's heritage preservation sense. Many items are degraded and several show signs of having been restored (leather substitution, cleaning, etc.), not always according to the best restoration practices. They all display natural wear and tear (material deterioration, stains, rips). Moreover, sofas, armchairs and small tables are constantly being moved between offices and circulation areas. Over the years, staff has often preferred newer and low-quality furniture. Consequently, a considerable percentage of the original furniture has been abandoned, thrown away or stored in dust-covered corridors in the basement.

The special rooms have also suffered adaptations, although they are still used according to initial purpose. For instance, the disposition of the Rector's office annexes' has been changed and divided; the original wool rug in the Oval Room has been removed. The Noble Hall, given its intense use for conferences and other events, has been filled with plastic chairs. In 2005, the *Aula Magna* was restored by Daciano da Costa's atelier – chairs and doors were restored or replaced, the wooden wall panels were varnished,

the audience carpet was removed and wooden parquet was applied¹¹.

In 2011, the University of Lisbon celebrated its first centennial jubilee. The commemoration programme included a systematic survey of the University's cultural heritage and public visits to historical sites. Moreover, the present Rector has demonstrated a remarkable commitment towards heritage preservation. In December 2011, the Rectorate building completed 50 years and the Rector reconstituted the original configuration in some rooms. However, how can we go beyond the occasional commemoration or the relative arbitrariness of a particularly sensitive Rector and reach a more sustainable preservation of a building under intense use?

Naturally, it is of the utmost important to raise awareness of the Rectorate employees to the significance of this heritage and the need to preserve its coherence *in situ*. The main challenge is the preservation of the integrity of the interior design without transforming the building into a museum. For preservation, furniture and spaces have to be accepted as comfortable and functioning. They need to be used properly,

otherwise furniture will become obsolete and not sustainable. As limited funding is an issue, other practical preservation proposals include the recovery of original furniture for use and the restoration of degraded items by Faculty of Arts' students, under supervision.

The real challenge consists in reaching long-term balance between use, daily change and conservation. According to Daciano's own understanding, even a broom can be simultaneously an

important cultural and decorative object, but it should, preferably, not lose its original function.

Acknowledgments

I am grateful to the Portuguese Foundation for Science and Technology (FCT) for my present research grant at the Museums of the University of Lisbon.

Notes

- 1 João Paulo Martins, "Os anos trinta e quarenta: objectos e produção industrial", *Cadernos de Design Anuário 2000*, no. 21-22 (2000), 55.
- 2 Rui Afonso Santos, "A cadeira contemporânea em Portugal/The contemporary chair in Portugal", in *Cadeiras Portuguesas Contemporâneas/Contemporary Portuguese Chairs*, ed. José M. Neves (Oporto: Asa, 2003), 25-29.
- 3 Until then, teaching of Design was exclusive to specialized art schools and courses, like the António Arroio School and the Artistic Training Course at the Fine Arts National Society (1965). The first private school dedicated specifically to Design was created in 1969, called IADE – *Instituto de Arte e Design* (Art and Design Institute). The first Graphic Design course was created in 1975 at the Oporto Fine Arts School.
- 4 Ana Tostões, *Os Verdes Anos na Arquitectura Portuguesa dos Anos 50*, 2nd ed. (Oporto: FAUP Publicações, 1997), 33-39.
- 5 The creation of the *Núcleo de Arte e Arquitectura Industrial* (Industrial Art and Architecture Nucleous) at the INII - Instituto Nacional de Investigação Industrial (National Institute for Industrial Investigation), only in 1965, was an important step for autonomization and establishment of Design amongst the industrials.
- 6 About this delay in the construction of Lisbon's University City see Ana Mehnert Pascoal, *A Cidade do Saber. O Património Artístico Integrado nos edifícios de Pardal Monteiro para a Cidade Universitária de Lisboa (1934-1961)* (Lisbon: University of Lisbon, 2012).
- 7 Most of the sketches and drawings for the Rectorate of the University of Lisbon are located at IHRU – *Instituto da Habitação e da Reabilitação Urbana* (Institute for Housing and Urban Rehabilitation), at Forte de Sacavém, and include ca. 120 perspectives of the rooms and single drawings of furniture.
- 8 Cf. João Paulo Martins, "O Design como detalhe da Arquitectura," in *Daciano da Costa. Designer*, ed. João Paulo Martins (Lisbon: Fundação Calouste Gulbenkian, 2001), 110-111.
- 9 João Paulo Martins, "Daciano da Costa. Designer", in Martins, *Daciano da Costa*, 80.
- 10 In 1960-61, the University of Lisbon had 7232 enrolled students, almost doubled in 1967-68 (12.152 students). Nowadays, the University holds ca. 23.000 enrolled students.
- 11 This recovery is to be understood as the *Aula Magna* is a versatile event space and is also available for rent, as succeeds with the Noble Hall and the small Conference Hall.

Furniture and Furnishing in Modern Office Buildings

Towards the Concept of Corporate Image

Caterina Franchini

International examples prove that architecture conceived as a total work of art was adopted and used to support corporate image in office buildings.

Already at the beginning of the 20th century the concept of *Gesamtkunstwerk* moved from the private sphere of domesticity to public space; as testified by Otto Wagner's design for the interiors and furniture of the newspaper *Die Zeit* (1902) and the *Österreichische Postsparkasse* (1904-1906).

Since the Twenties, thanks to the designers of department stores, the idea of *Gesamtkunstwerk* became a sales tool and this new interpretation transferred into office buildings. Furthermore, interiors became indicators of corporate identity and became inseparable from brand: for Shell House (1938-48) in The Hague Jacobus J.P. Oud used the Shell logo to create the façade decoration and the interior design.

In Italy, through a process of formal simplification and careful research of functional

solutions, few office buildings epitomized the utilitarian and anti-monumental idea that characterized the Modern Movement. Giuseppe Terragni built and furnished the well-known Casa del Fascio in Como (1928-36) and, to promote Fascism, he designed the tubular steel chair which was named Benita.

Some striking examples show how the modern interior office became a means of communication. Rebuilt in 1934 by Raymond Loewy and Lee Simpson for the Contemporary Industrial Art exhibition at the Metropolitan of New York, Loewy's own office sets the scene for the streamline that was his signature. Giò Ponti used horizontal black and white striped wooden inlays to cover the walls and furniture of the Società Ferrania Director's office (Rome, 1936) in order to evoke the photographic film the company produced.

As individuals, even companies develop their own identity through their buildings; the headquarters of Montecatini in Milan (1935-38,



Figure 2. Entrance hall with office boy's table. *La Casa bella* 32(1930): 11.

Figure 1. Secondary entrance for employees framed by light with *time clock* on one side. Photo Pedrini. *Domus* 30 (1930): 39.

by G. Ponti, A. Fornaroli and E. Soncini) was the emblem of modernity and throughout its interiors displayed the various possibilities of uses aluminium produced by the company. A “cathedral of work”, the Johnson Wax Building by Frank Lloyd Wright (Racine, Wisc., 1936-39) symbolizes through forms and materials the brilliance of wax. Thus design became the best way of advertising a company. In the Johnson Wax building, Wright organized the project around the typing pool, as he had previously done in the Larkin building (1904, Buffalo - NY, demolished in 1950)². The architect created “immersive” environments that were isolated from the outside through controlled temperature and light. He used metal furniture to achieve an impression of efficiency.

Architects considered office furniture as an opportunity to combine functional needs and a concise and expressive grammar, with the requirements of efficiency, productivity and the image of a modern company. Metal office furniture was seen by Gio Ponti as a “fixture” of public spaces³. Armando Melis, taking the ideas

of William Henry Leffingwell, considered office furniture as a “tool”⁴. In a valuable book that collected the pictures of Italian modern interior design, Guido Fiorini wrote in 1935: «The interiors of an architecture are the architecture» (trans. by the author)⁵. As in a total work of art, interior design was conceived as an indissoluble union of space and furniture: «The furniture by Figini and Pollini impose on the critics and on the public the belief that the furniture is mostly architecture [...]» (trans. by the author)⁶.

The taste for colour re-entered office design with a new perceptive function. Inlays in linoleum underlined the perfect geometries and the smooth surfaces of modernity. The new autarchic materials like *buxus* were extensively used in furniture design to replace more expensive materials⁷. The choice of materials was related to comfort, maintenance and durability. Right angles and smooth surfaces created abstract patterns of reflection of pure volumes suggesting cubic paintings.

Adriano Olivetti, Olivetti's director since 1935, took the Tayloristic approach to the organ-



Figure 3. Boardroom with *Salpa* leather floor, lamps made from Artax cubes and F.I.P.'s furniture in grey and black *buxus*. Photo Pedrini. *Domus* 30 (1930): 66.

isation of office work. He published his theory in *Tecnica ed Organizzazione*, that was the magazine he founded in 1937.

At the end of the Forties, in Italy, the typology of office-building was perfectly defined through the adoption of: functional circulation schemes, conditioning systems, appropriate lighting, clear signposting and safety equipment. "Corporate modernism" was completely established.

Among the Italian architect-designers involved in office modern design were Giuseppe (Pogatschnig) Pagano (Parenzo 1896 - Mathausen 1945)⁸ and Gino Levi Montalcini (Milano 1902 - Torino 1974)⁹ who built and furnished Palazzo Salpa, *alias* Palazzo Gualino (Torino, 1928-1930) for Riccardo Gualino's Salpa company¹⁰.

Since the time of its construction, Palazzo Salpa¹¹ is recognized as a prime example of the new rationalist architecture in Italy.

It was the first office building in Turin, and one of the first in Italy, to use a floor-type and to install a conditioning system¹². The exterior design demonstrates a planned correspondence with the functionality of interior spaces. Lamps were positioned around the openings to signal the entrance and, at evening, the whole building became a dark background with no volume where the windows changed into large lamps. Furthermore, it was the result of a total work of art where every detail was conceived to be a part of a whole.

Inside the building, the wall edges were covered with chrome profiles, which reduced wear and at the same time made the light vibrating. Every detail, from wall clocks to handles, was designed to improve work and receive clients. To provide the company image in the reception hall the names of the various offices were written in *buxus* letters on a sliding rail.



Figure 4. Veranda of the president's office. *La Casa bella* 32 (1930): 21.

The building looked like a great “body” in the service of a great industry. «Light signals, ring-tones, phones accelerate the work, organizing activities, the possibilities multiply in perfect step with the fastest machines of the big industry that feeds these offices» (trans. by the author)¹³.

Salpa leather - the autarchic material patented by Salpa - was used to line the Stigler elevators and to cover the pavement of the boardroom with the aim of strengthening the corporate image. Ahead of its time, furnishings and furniture were designed by assigning an advertising value to the material produced by the company.

In Palazzo Gualino all materials, colours, lightings, textiles, furniture and furnishings were carefully studied to realize the concept of company image that anticipated Olivetti's.

The architects designed 67 different pieces of furniture that were supposed to be the proto-

type for the new specialized production of office furniture in Fabbrica Italiana Pianoforti - F.I.P., bought by Gualino in 1927. Furniture was composed of pure volumes made shiny by the combination of different *buxus* veneers. The new material was produced by the Cartiere Giacomo Bosso and worked by F.I.P. in Turin¹⁴.

Gualino's office was at the top of the building was. In *Domus* Gigi Chessa published an enthusiastic comment on this interior design: «Isolated on the top floor, away from street noise, is the most refined and comfortable work environment [...]. But who can describe the beauty of the large window made of glass and chromed steel, and the veranda covered with shiny black?»¹⁵ (trans. by the author). In this space, the use of glass is symbolic: glass was the metaphor of moral transparency of the director and used as a medium of the corporate image.



Figure 5. F.I.P. advertisement. *Domus* 30 (1930).

The idea of reducing noise coming from the street and spreading natural light evenly through glass was later used by Pagano in the offices of the newspaper *Il Popolo d'Italia* (1934-35, Milan), where the architect furnished the room of the director Vito Mussolini, the nephew of Benito. A full conception of symbolic space was used in this work. Furthermore, the project is surprisingly close to the international style for the functionality, transparency, lightness and simplicity achieved¹⁶.

Situated in a “central historical area”, Palazzo Gualino was under legal protection because it was a public building dating back to more than 50 years (art. 10 “Codice dei beni culturali e del paesaggio”, D.L. n. 42/2004). After losing its furniture, Palazzo Gualino was then sold by the municipality in 2007, and it is now

in danger because it is soon to be reconverted into a residential building. Due to the change of function, a careful restoration of the exterior will not include the complete conservation of its interior design.

Considering on one hand that the identity of office buildings is interrelated to the corporate image that sometimes is embodied in interior design, and on the other hand, considering that the materials of the Modern Movement interiors were conceived to be renewed and replaced, not to counteract the wear of the material but in order to adapt to changing needs and fashions, the question is: are the interior design changes compatible with the architectural conservation of office buildings? How can a unique interior design be preserved when a change of its functions occurs?

Notes

- 1 See Penny Sparke, *The Modern Interior* (London: Reaction Books, 2008).
- 2 See Imma Fiorino, *Uffici. Interni arredi oggetti* (Torino: Einaudi, 2011).
- 3 Gio Ponti, "Attrezzature da lavoro". *Domus* 135 (1939), 35-53.
- 4 Armando Melis, Edifici per gli uffici. *Case d'uffici – Edifici per sedi di grandi aziende*. (Milano: Antonio Vallardi, 1947), 58.
- 5 Fillia, ed., *Gli ambienti della nuova architettura* (Torino: Unione tipografica editrice torinese, 1935), 9.
- 6 Edoardo Persico, "Una mostra a Milano," *La Casa bella* 57 (1932), 25.
- 7 Giuseppe Pagano-Pogatschnig "La tecnica ed i materiali dell'edilizia moderna," *Edilizia moderna* 5 (1932), 34-43.
- 8 Antonino Saggio, L'opera di Giuseppe Pagano tra politica e architettura. (Bari: Edizioni Dedalo, 1984); Alberto Bassi and Laura Castagno. *Giuseppe Pagano*. (Roma-Bari: Laterza, 1994).
- 9 Emanuele Levi-Montalcini and Anna Maritano, "Levi Montalcini e Torino". *Domus* 824 (2000), 113-120; Emanuele Levi-Montalcini, "Gino Levi-Montalcini. Architetture, disegni e scritti," *Atti e Rassegna tecnica della Società degli Ingegneri e degli Architetti in Torino* 2 (2003).
- 10 By the same architects is SALPA factory office building (1930, Sesto San Giovanni - Milan).
- Pietro Bottoni, "Un ufficio moderno," *La Casa bella* 29 (1930), 16-19.
- 11 Gio Ponti, "Numero dedicato al Palazzo in Torino per gli uffici del gruppo Gualino," *Domus* 30 (1930), 20.
- 12 On office buildings in Turin, see Caterina Franchini, "La modernità della tradizione. Caratteri di innovazione tecnologico-progettuale nel palazzo per uffici," *Città architettura tradizione*, ed. Maria Antonietta Crippa and Guido Montanari (Firenze: Alinea Editrice, 2006), 241-279; Caterina Franchini, "L'insediamento del terziario: rinnovamento urbano e continuità della tradizione," *L'architettura dell' "altra" modernità*, ed. Maria Grazia Turco and Marina Docci (Roma: Gangemi Editore, 2010), 204-211.
- 13 Enrico A. Griffini, "Gruppo Gualino – Torino. Palazzo per uffici," *La Casa bella* 32 (1930), 11-21.
- 14 Giuseppe Pagano Pogatsching, "Il «Buxus»," *Casabella* 73 (1934), 48-51; Emilia Garda, *Il Buxus. Storia di un materiale autarchico fra arte e tecnologia* (Bologna: Marsilio, 2000).
- 15 Gigi (Luigi) Chessa, "La nuova costruzione moderna per uffici, in Torino, sul corso Vittorio Emanuele," *Domus* 30 (1930), 22.
- 16 Giuseppe Pagano, "Tre stanze al «Popolo d'Italia»," *Casabella* 84 (1934), 24-35; "Un significativo arredamento di G. Pagano," *Domus* 92 (1935), 15-17.

Who Today Needs a Top Floor Swimming Pool?

Great Interiors of an Ugly House

Netta Böök
Miia Perkkiö

The Brondankulma commercial and office block designed by architect Keijo Petäjä (1919–1988) was – and still is – a disputed landmark building on the South Esplanade in the historical heart of Helsinki. The building, completed in 1975 and clad in white-grey granite, serves as a reminder of the demolition craze in Finland during the 1960s and 1970s and of the generally uninteresting contemporary office architecture built in the country at that time. Even the name is derived from the early 19th century Bronda House, popular with artistic circles, which was demolished to make way for the new structure.

However debatable the exterior architecture of Brondankulma might be, its interior design offers points of architectural interest – particularly the range of reception and recreation facilities. A (today non-extant) 40 metre long shooting range was built in the basement and an executive sauna section with swimming pool on the top floor, to serve the needs of the

Kansallis-Osake-Pankki bank (KOP), the building's owner.

The sauna section is now due to be demolished to make room for new facilities. The questions arising are both practical – ‘who needs the sauna and swimming pool today?’ – and restoration-ethical – ‘must the actual owner restore and maintain the sauna and the swimming pool even if nobody needs them?’ – or ‘who is responsible for preserving the heritage connoting the significances not commonly known?’

Petäjä and 1970s' Office Building

In the estimation of architect Juhani Pallasmaa (b. 1936), who entered Petäjä's architectural circle in the late 1950s, Petäjä's significance in Finnish architecture is to be found in his exceptional keenness for architectural philosophical theorizing, which was expressed in his numer-



Figure 1. Facade, 1977. Harald Raebiger/
Arkkittehtitoimisto Petäjä.

ous writings, essays and cross-scientific get-togethers.¹ His scope of thinking ranged from concrete questions in the field of construction to questions touching upon the essential nature of infinity.

An as architect, Petäjä has been described as a staunch modernist who based his architecture on the principles of Classicism and the golden section, modular grids and mathematical numeric series. He is not really famed for his architectural projects – except for the one accomplished with a senior colleague, Viljo Revell (1910–1964): Eteläranta 10 or “Industrial Palace” in Helsinki was the flagship of the Finnish Modernism of the 1950s, which even featured a sauna section as part of the Hotel Palace included in the building.

The Finnish office architecture of the 1950s–1970s was certainly based on the ideas of the Modern Movement, but as a rule in a rather monotonous and stiff manner, the leading principle

being efficiency. Also Brondankulma displays the classical features of late Modernist architecture, such as the pilotis, exposed structural system, open floor plan, and scarce but carefully designed detailing. Characteristic for the building is the predominance of the modular grid, adopted from American corporate architecture and first introduced in Finland by Alvar Aalto (1898–1976) in the Rautatalo building (1954) in Helsinki. According to Pallasmaa, Petäjä used modular grids as an elementary system of measurements, contrary to the contemporary young Finnish Constructivists of the late 1960s and early 1970s, for whom modular grids were the very idea of architecture itself.² The floor plans of Brondankulma are derived from the regular grid of load-bearing pillars and the functional layout of office spaces, which also dictate the layout of the facades.

However, during the long process of planning, public opinion eventually turned against



Figure 2. Office, 1977. Harald Raebiger/ Arkkitehtitoimisto Petäjä.

demolition of historical buildings and the destructive impact of modern architecture on the townscape was under heated discussion. Petäjä had to seek harmony with the historical ambience as far as facades went – even if it may not be obvious at first glance.

One also sees the change in the architectural climate in Finland after the years of the demolition craze. It might be that even KOP was on its guard; it had already allowed the demolition of the luxury Hotel Kämp on the North Esplanade and faced the rage of Helsinki citizens. The staunch modernist Petäjä was compelled to compromise a little over his

principles. He *tried* to make the building blend into its surroundings.

Petäjä and Vapaavuori: Office Floors and Sauna Section

As for the interior design, Petäjä cooperated with Esa Vapaavuori (b. 1932), an interior architect running his own firm. Vapaavuori was mainly in charge of the executive spaces but he also partook in the design of the office floors; among other things, he devised the module-based integrated illumination and ventilation



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Figure 4a. 1977. Harald Raebiger/ Arkkitehtitoimisto Petäjä.
Figure 4b. 2011. Netta Böök.

tension was that in the 1970s, when individualist architecture was perceived by many as elitist, KOP represented doubtful capitalism. Several walk-outs of workers had taken place and there were suspicions of sabotage whenever building faults were detected. But as far as the feedback from KOP was concerned, Vapaavuori is happy to note: “They just kept back-slapping and saying it was great!”⁴

No wonder – the outcome was both a cosy and elegant sequence of spaces, finished with elaboration and durable high-quality materials. A fluorescent-lit anteroom with green fabric-clad walls gives today’s visitor direct access back to the 1970s, down to the smallest detail. The successive space, a room with the fireplace, is clad with pine panelling with horizontal strips of heartwood and sapwood, the floor is laid with juniper parquet, and furnished with solid pieces of wood. The actual steam room represents innovative space-saving design – you actually sit on top of the fireplace. The spatial sequence culminates in the room with a pool, where the dominant theme is the modular grid: the lower ceiling consists of a Japanese-inspired grid made of pinewood, and the tiling of the pool, floor and walls has been dimensioned meticulously so as to avoid cutting the tiles. Even in its present worn-out condition, the sauna section remains splendid.⁵

To Preserve or not to Preserve

The building history survey with an evaluation for the new use and for city plan change for Brondankulma was carried out in 2011 by the authors of this paper. When beginning the research the authors obviously cherished in their minds the image of the historical Bronda⁶ frequented by artists, intellectuals, and an old man with a cigar sat at the corner table. In comparison with the old Bronda, the new Brondankulma appears massive and anonymous, even repulsive.

On closer inspection, an anonymous or even detested building often becomes not necessarily something precious but an interesting individual. One learns something about the era of its inception. The 1970s was the golden age of long dinners for the business executives, and the specifically tailored recreation facilities fit well into the picture. As we got to know the fascinating personality of Keijo Petäjä and learnt about his intentions and – this often happens to those undertaking a building survey – we ended up re-evaluating the architectural and historical values of the building.

One of us suddenly recalled having been there before, on a pleasant sauna-bathing get-together arranged by a colleague – without paying any particular attention to the interior. That has been one of the characteristics of Finnish luxury since the early years of Functionalism – by nature, such luxury is more practical than exclusive. When re-entering the sauna section as a researcher, one sees that the interior features an authentic and classy 70s aesthetic down to the smallest detail – and learns that the range of spaces was originally furnished for the executive level.

When evaluating controversial and ambivalent objects like Brondankulma, one must take into consideration the aesthetic and functional aspects of the urban structure. In a living city, the only constant is change: the buildings will be modified into new situations and converted to new uses over and over again. From the point of view of preservation principles and especially of authenticity, well-planned alterations could hardly diminish Brondankulma’s integrity and the original intentions of Keijo Petäjä, according to which the building was meant to be flexible. Actually almost any alteration of the facades and of the commercial premises at street level would do nothing but improve the architecture and help revitalize this central, yet dead corner of the historical Esplanades.



Figure 5a. 1977. Harald Raebiger/ Arkkitehtitoimisto Petäjä.



Figure 5b. 2011. Netta Böök.

Paradoxically, the facades of the building are protected by the town plan – while the interiors are not. And yet, it is the total concept together with the carefully studied interior design that makes Brondankulma interesting. In terms of the structure and floor plan, the building is extremely rational, clear and flexible, showing that Petäjä was ahead of his time: his original intention was to create a building with a structural system and a floor plan that would enable new uses for the building in the future: since KOP ceased to exist in the Finnish bank mergers of 1995, Brondankulma has been a fitting venue for any use. Except for the sauna section.

The management culture has changed since the 70s; today the “long lunches” and sauna sessions on the executive level are no longer part of modern management; the business world has turned more international, and executive saunas are no longer for men only.⁷

So, what can one do?

Undeniably, Brondankulma is part of our architectural heritage as well as a reminder of the power of banks as companies of a certain era. But the fact is it that it is unprofitable to maintain a private and infrequently used swimming pool. When it comes to re-using a sauna section there are no de-facto options. It can only function as a sauna and swimming pool; one cannot really imagine a musealized swimming pool in the very heart of the capital.⁸

Old interiors carry history, and they carry stories. Any authentic interior that has remained intact for 40 years is a true rarity in our country, and which should be given extra attention before demolition – if demolition proves to be the only reasonable option. But it seems that one of the finest executive sauna sections of (at least!) the 1970s is doomed to disappear.

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Notes

- 1 Interview with Pallasmaa, 2012.
- 2 Interview with Pallasmaa, 2012.
- 3 Interview with Vapaavuori, 2011.
- 4 Interview with Vapaavuori, 2011.
- 5 Another fine, still extant example of the sauna sections of the 1970s is in the Valio Headquarters in Helsinki (1978), designed in the Valio Planning Office by architects Matti K. Mäkinen, Kaarina Löfström and Antti Katajamäki. However, the Valio sauna section was not exclusively for the executive level only.
- 6 The building was built for merchant Nikolay Korastileff in 1823, and underwent alterations in the 1850s and 1860s. The nickname Bronda was derived from the bakery and coffee shop that Karl Magnus Brondin opened in the building in 1897 and that became particularly popular amongst artists and intellectuals. Lilius "Liiketalo Etelä-Esplanadi 20", 12–16.
- 7 Another current tendency is for wealthy companies to get rid of their originally ambitious and prestigious headquarters located in the city centre.
- 8 In Finland there is at least one private-owned musealized swimming pool, at the Särestöniemi Museum in Kittilä, Lapland, which displays the art and working environment of Reidar Särestöniemi (1925–1981), a prominent Finnish artist. The artist's gallery and studio were designed in the 1970s by architects Reima and Raili Pietilä. The impressive swimming pool is situated on the upper floor of the two-storey wooden art gallery.

Cinémas Choisis

The Selection of Cinemas Featured in *L'architecture D'aujourd'hui* Magazine, 1930-1939, and its Contribution to the Characterization of the European Cinema Architecture

Joana Gouveia Alves

*Est-ce à dire qu'une salle de cinéma n'est assimilable qu'à une épicerie ? Presque. Mais, elle est une épicerie qui se doublerait d'une salle à manger; car c'est dans la salle de cinéma que se vend et se consomme le spectacle en conserve*¹

This paper analyses the cinemas that were featured in *L'Architecture d'Aujourd'hui* from 1930 until 1939. This being one of the most influential magazines for the spread of Modern Movement ideas, its editorial line focused on the adaptation of building to function and on the distinction between European and American cinemas. Theoretical texts separated classic live theatre from cinema design since programme and features were completely different. Far from American euphoria and classic theatre sobriety, how was architecture for cinema envisaged?

In the 1930s European entrepreneurs were seduced by the scale and glamour of American cinemas, such as the Roxy, that often screened to full houses. However, due to the post First World War's economic restraints, all they could build were poor replicas which were multi-

plied throughout Europe. In *L'Architecture d'Aujourd'hui*, all picture-palaces connected with the Hollywood's fantasies, such as Egyptian or Mediterranean atmospheres, were systematically excluded from publication. And yet, the construction system of these buildings was already *avant-garde*: metal framework, prefabricated components, concrete explored to the limits of its properties. As an illustration, the Rex Cinema (Paris, 1932), which was one of the first John Eberson's (1875-1954) atmospheric cinemas in Europe, had a 35-meter-span balcony without intermediary support sustained by an iron framework and incredible concrete foundations. In an article published in 1932², photographs present the building under construction. The only photograph of Rex's interior decoration was later published, in 1933, along with Pierre Vago's (1910-2002) commentary "*Rex was the first atmospheric cinema in Paris and we hope it to be the last*"³. When we compare *L'Architecture d'Aujourd'hui* with its contemporary French magazine *La Construction Moderne*, it becomes evident that structure is highlighted while decorative apparatus is intentionally excluded.

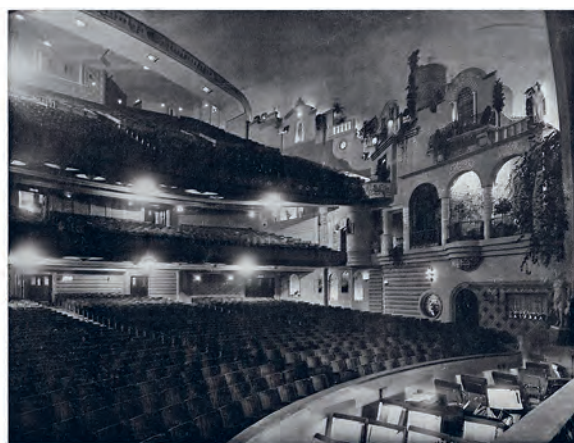


Figure 1. A. Bluysen and J. Ebersson; Rex cinema, Paris 1932. © Photos Chevojon.

Figure 2. A. Bluysen and J. Ebersson; Rex cinema, Paris 1932. © J. Samand.

The atmospheric theatre thus became a symbol of American frivolity. According to the editorial options, the only “good” American examples were Radio City Music Hall (designed by The Associated Architects - Raymond Hood, Edward Durell Stone - for the Rockefeller Center Group, New York, 1932)⁴ and the Earl Carol (designed by Keiter and Balbonay, New York, 1932)⁵, being subject of two articles published in 1933. Further examples of American Movie Palaces were published in an exceptional article by Dexter Morand⁶. In this text, a sample of American and British cinemas illustrates his brief summary of their characteristics: cost-effective, large scaled (for thousands of patrons), opulent, overloaded decoration, exuberant lettering on the facades, a tower and a seductive pay booth on the sidewalk. Restaurant, bar, children playroom, car park and further facilities were indispensable. British cinemas were despised as they were considered to be cheap versions of American picture palaces. The only article on British cinemas is a two-page compilation of British cinema plans, published in 1936, without any text⁷.

Cinema architecture has always been criticized by modernist architects and critics, on both sides of the Atlantic, for its anachronism and eclecticism. The collage of overloaded settings, inspired in different ancient styles, in successive rooms in a same building seemed absurd. Even more because “the seventh art” was considered an expression of modernity. It was not by chance that in order to launch the magazine, Pierre Chenal (Pseudonym used by Philippe Cohen, 1904 -1990) was asked to do three short films about the new architecture: *Bâtir*; *Trois Chantiers*; *L'Architecture d'Aujourd'hui*.

In Europe, architecture critics supported the development of new concepts in cinema design capable of reflecting the media’s modernity. Julien Lepage supported this idea indirectly by criticizing the American examples. “*Il n’a donc pas besoin de riches foyers et de couloirs (Gaumont). Il n’a pas besoin non plus d’un décor somptueux de la salle. Nos meilleurs cinémas (Raspail, Paris) n’offrent qu’une entrée-vestibule attrayante et une salle harmonieuse et tranquille, où tout décor est remplacé par des effets de*



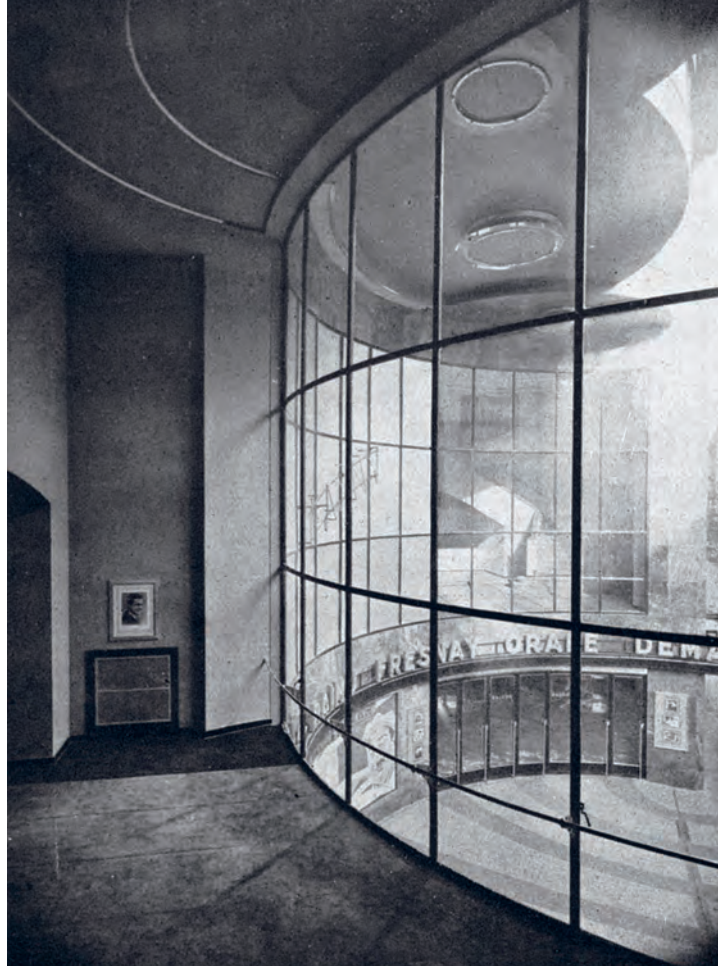
Figure 3. Pierre de Monteaut and Adrienne Gorska, Newsreel cinema le Petit Parisien Excelsior, Paris, 1930's. © Photo Cadé.

lumière."⁸ In brief, cinema architecture should follow function. This building type should dismiss all elements from theatre interior decoration such as curtains, boxes or proscenium arches that no longer made sense. All decorative elements should be thought to give prominence to the screen.

The typology that best suited this concept was the newsreel cinema. Patrons watched short films from all over the world in continuous performance. Consequently, waiting rooms were

pointless and emphasis was put on appealing features. Out of the ninety-nine cinemas that were mentioned in the magazine between 1930 and 1939, forty two were built in France, about one-fifth was newsreel cinemas and the majority was designed by French architects. Cineac (Le Journal), Le Petit-Parisien and Paris-soir, Paris-midi, are newsreel cinemas associated with popular daily newspapers. Charles Siclis (1889-1942) and José Imbert designed cinemas with clear geometrical plans and auditoria with plain

Fig.4 André Blomme,
Métropole Cinema,
Brussels, 1933.
©Willy Kessels.



walls and exotic upholstered seats. Regarding the waiting walls and entrances, they played with dynamic stairs and corridors, indirect geometric lighting effects, neon signs and lettering. Also, Pierre de Monteaut (1892-1974) and Adrienne Gorska (1899-1969) developed the most coherent chain of this kind: the CINEAC9. They published at least ten of their newsreel cinemas and theoretical texts about their characteristics and what they called publicity architecture.

Also called *night architecture*, it named buildings that had an extravagant expression at night due to the lighting effects with colourful neon signs. This could be also achieved through the glazing facades so that passers-by could be seduced by glamorous ambiances. The *Métropole* in Brussels was given much atten-

tion, not only because of its important structural work in concrete but also because of its curved glazing façade. Another example is Rudolf Fränkel's (1901-1974) *Lichtburg Cinema* (Berlin, 1929) where a cylindrical tower works as a bright-lit beacon. Undeniably, the underlying principle had a strong American influence. The chain's name in bright characters helped to identify the building with the company which was associated with distinguishing features.

The editorial line praised cinemas from central and northern Europe particularly the designs of Fränkel and Uno Ahren (1897-1977). As Germany was suffering from restrictive economic measures, theatres were designed, with a great economy of means, to reach remarkable effects with a minimum of decorative el-

ements. They were often located in existing buildings such as housing and office blocks, circuses and theatres. German cinemas were referenced as state-of-the-art buildings, especially after the publication of Zucker's book *Lichtspielhauser und tonfilmtheater* in 1931¹⁰. A book review was later published in 1932.¹¹

An important aspect focused on several articles was the surfaces' bareness. Ceilings were often decorated with indirect lighting lines directed to the screen. These lines were intended to sharpen perspective and put focus attention on the most important element: film. Absence of decoration highlighted geometry and proportion. Ceiling curves and parapets also gave away a dynamic perception of space.

L'Architecture d'Aujourd'hui had a doctrinaire approach to cinema construction. After all, cinemas were buildings devoted to a new

technology. Reels came in tins which were served through a machine to an audience of consumers. As soon as this machine became obsolete, architecture followed. Among the cinemas we analysed and were able to locate, we realized that most of the free-standing cinemas had been demolished. The *Métropole*, as many others, was converted to retail space. Usually well ventilated spaces without natural light, conversions from cinema to night club, casino or bingo are recurrent. However, most of the interior design has been destroyed. The Rex cinema is an exception to this: the big auditorium was kept with its atmospheric Mediterranean decoration, even if the services in the basement have not escaped being turned into a multiplex. Ironically, the best preserved cinemas are those now dedicated to live theatre performances.

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Notes

1. E. Mollo, P. D. Montaut and A. Gorska, "Salles de Cinéma," AA, no. 9 (1938), 69.
2. André Bluysen and John Ebersson, "Nouveau Cinéma, à Paris Boulevard Poissonnière," AA, no. 1 (1932), 39-45.
3. P. Vago, "Les Grands Cinémas Parisiens," AA, no. 7 (1933), 31-35.
4. J.P., "Music-Hall International dans la Cité Rockefeller à New York," AA, no. 7 (1933), 67.

5. Anonymous, "Le Théâtre Earl Carrol à New-York, Arch. Keiter Babolnay," AA, no. 7 (1933), 64.
6. D. Morand, "Le Cinéma en Angleterre et USA," AA, no. 7 (1933), 59-63.
7. Anonymous, "Plans comparatifs de quelques salles de cinéma en Angleterre," AA, no. 2, (1936), 46-47.
8. J. Lepage, "Tendances actuelles dans la construction des salles de spectacles," AA, no. 7 (1933), 3-5.
9. J.-J. Meusy, "CINEAC, Un concept, une architecture," Cahiers de la Cinémathèque, no. 66 (1997), 92-121.
10. P. Zucker, *Lichtspielhauser und tonfilmtheater*. (Berlin: Verlag Ernest Wasmuth A.G., 1931).
11. J. Posener, "Cinémas et cinémas sonores," AA, no. 5 (1932), 79.

From Open Plan to Open Design:

Architectural Principles in Niemeyer's Palace of Congress

Danilo Matoso Macedo

Elcio Gomes da Silva

Science has its axioms; art has its principles.

Julien Guadet

With this paper we aim to suggest, based in the scrutiny of primary archival sources¹, some architectural principles underlying the work of Brazilian architect Oscar Niemeyer as deployed in the design process of Brazil's Palace of Congress (1957-1962). Further understanding of these principles may contribute not only to clarify the important relationships between conception and construction, between large-scale decisions and constructive details, but also to help defining ways for the preservation of that important work.

As many early modern architects, Oscar Niemeyer received a *Beaux-Arts* education, at the Academia Nacional de Belas Artes in Rio de Janeiro. Carlos Eduardo Comas points out that Brazilian modern masters never *denied the conceptual and methodological grounds of the academic tradition*.² In fact, *composition, hierarchy and character* are concepts that frequently underlay the speech of Lucio Costa and Oscar Niemeyer. The ease with which such concepts can migrate from one architectural mode to an-

other may suggest that they stood above issues of form or function. Accordingly, they were not viewed only as a matter of method or style. They also affected design procedures. For Siegfried Giedion, *Brazilian architects were able to tackle the varied problems of a complex program and to come forward with a concise and simple ground plan and with clear and intelligent sections*.³

Actually, when commissioned the designs for Brasília's main monumental buildings from 1956 to 1962, Oscar Niemeyer refined these values in ways that point to a new stage in his career, told apart by a quest for *conciseness and purity*, to be attained with

compact solutions, simple and geometric: problems of hierarchy and of architectonic character; the fitness of unity and harmony amongst the buildings and, further, that these no longer [would be] expressed through their secondary elements, but rather through the structure itself, duly integrated within the original plastic conception.⁴

The Palace of Congress was an essential part of Lucio Costa's urban plan for Brasília, working also as an element separating the Esplanade



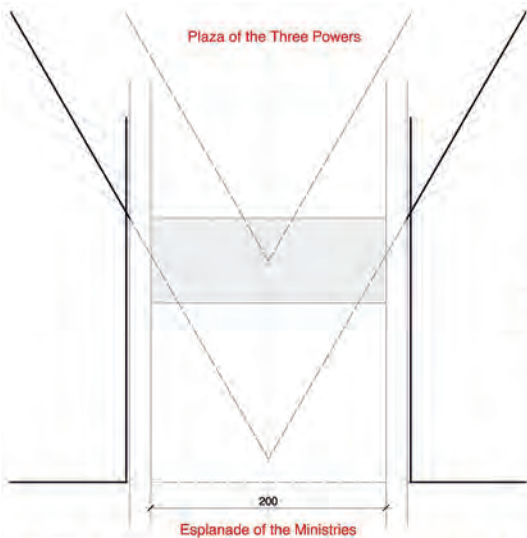
Figure 1. Palace of Congress. West view. Nelson Guimarães, 2011.

of Ministries from the triangular Three Powers Plaza, ten meters below. In Niemeyer's conception, the Assembly Rooms of the Federal Senate and of the Chamber of Deputies were contained under two reinforced concrete circular domes, in a two-storey horizontal platform that also housed the semi-public functions. Two 28-storey office towers with steel skeleton, rhomboid in plan, complemented the set. (Fig.1)

In that composition, *harmony amongst the buildings* is ensured by the proportions of regular clear-cut volumes and shapes, related symmetrically through direct equivalence or through *golden sections*. A 72m by 200m platform was placed in the upper level, of the Esplanade, over a two-storey building. Internally, the block was divided asymmetrically, which corresponds to the different functional programs of the Senate, on north, accommodating 63 congressmen; and that of the Chamber of Deputies, on south, accommodating 326 – both interconnected by two forty meter-wide entrance halls. Here, as Guadet states, *the proportions of a façade are ruled by the ones of the interior*.⁵ The

domes, corresponding to the assembly-rooms, were placed in the midpoints of the rectangles of each House. The towers, placed in the lower level of the terrain, aligned to the entrance halls, were displaced from the center axis, visually dividing the Esplanade's two hundred meter-wide central lawn in a *golden section* (0,618...). That disposition makes the larger dome central to the south void, comprehended by the horizontal platform and the towers. (Fig.2, 3)

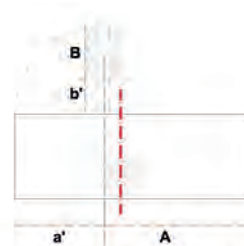
For Niemeyer, *structure* was paramount to express *unity* and *harmony* of architecture. He adopted, since his early works, freestanding pillars to represent taxis or a higher spatial order⁶, set in axes. In fact, *the axis is the key to the design, and shall be the same to the composition*.⁷ Such is the case in the Palace of Congress, where the horizontal platform is structured by a reinforced concrete grid of 10m by 15m, and where the twin- towers are structured by steel I-shaped pillars, imported from the United States, assembled in ten porticoes spanning 4,89m (or 16') from one another. Although schematically defined by architecture, the forms of the ele-



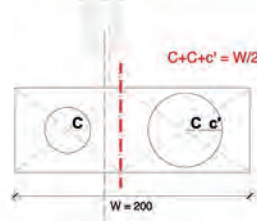
a) A 72m by 200m platform was placed in the upper level, of the Esplanade, over a two-storey building.



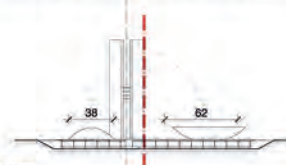
b) Internally, the block was asymmetrically divided, proportionally to the different functional programs of the Senate, and that of the Chamber of Deputies, connected by two entrance halls.



c) The towers, placed in the lower level of the terrain, aligned to the entrance halls, were displaced from the center axis, visually dividing the Esplanade's two hundred meter-wide central lawn in a *golden section*.



d) The domes, corresponding to the assembly-rooms, were placed in the midpoints of the rectangles defined by the axis of the entrance hall. That disposition makes the larger dome, central to the south void comprehended by the horizontal platform and the towers.



e) Elevation
the sum of the ratio of the domes would correspond to half the width of the platform, or 100m.

Figure 2. Composite scheme.

ments themselves were only fully designed in their final shape by structural engineer Joaquim Cardozo (1897-1978).

Cardozo defined the section of the elliptical pillars of 1,1m by 0,4m that constitute the 15m by 10m grid that supports the platform – only represented as rectangular elements in architecture.

Indeed, the final shape of many elements was not even presented in the architectural drawings; these elements were plotted in over

445 drawing sheets done by Cardozo's office. The platform itself is a V-shaped hollow slab, sustained by a complex system of both orthogonal and diagonal internal beams set to distribute the strong stresses caused by the weight of the two domes above the platform, which also demanded complementary pillars to be placed off the grid. The domes, which preside the composition, were originally conceived by the architect as paraboloids of revolution. The small one faces down in order to withstand

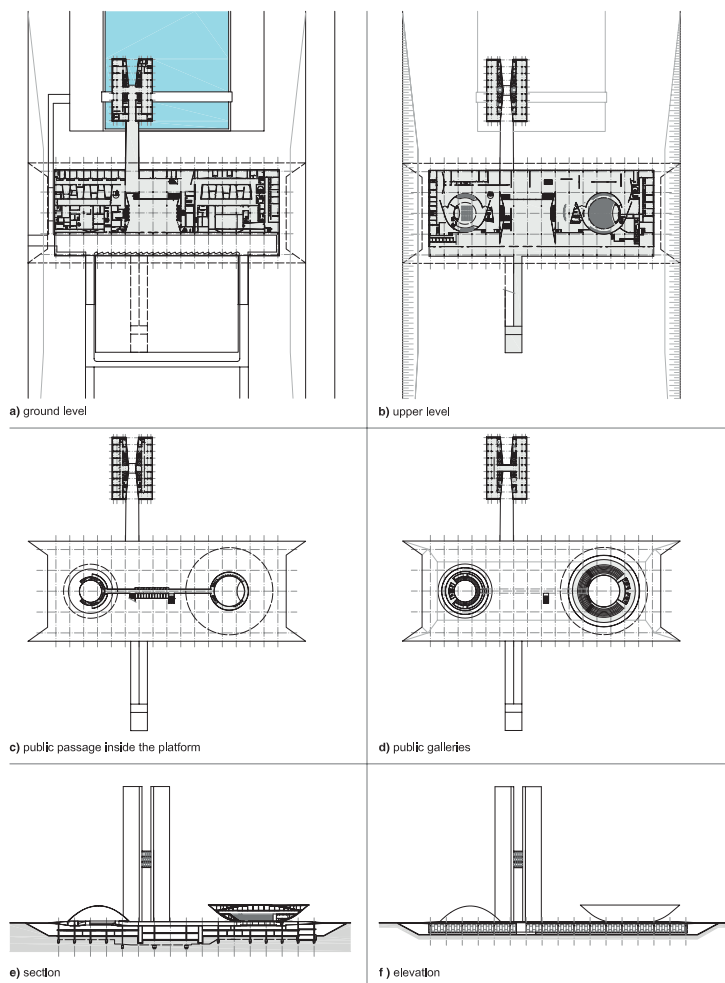


Figure3. Palace of Congress - Technical drawings.

only compression stresses. However, the large inverted 16m-cantilevered dome, designed by the architect with a flat concrete slab on top, was developed by the engineer into a composition of an ellipsoid of revolution with a tangent inverted cone. It was covered by a lowered compression secondary dome which supports, through a small-span concrete grid, both a hanging low-ceiling and a flat concrete ring above. (Fig.4)

Such a *columnar* or *tectonic* strategy, in classical terms, pays a tribute to Greek architecture – in a way that structural elements are con-

ceived as modules that command the composition. As Brazilian engineer Vicente Licínio Cardoso (1889-1931), the purpose of the Greeks was *to erect in marble compendiums of geometry*⁸, for they had no written equivalents – which would appear only in the III century a.D., with Euclid. In a way, when Joaquim Cardozo built mathematical models for dealing with the domes, he was proposing an analogous logic, as himself declared:

we are concerned no longer with a Cartesian geometry, dominated or led by alge-

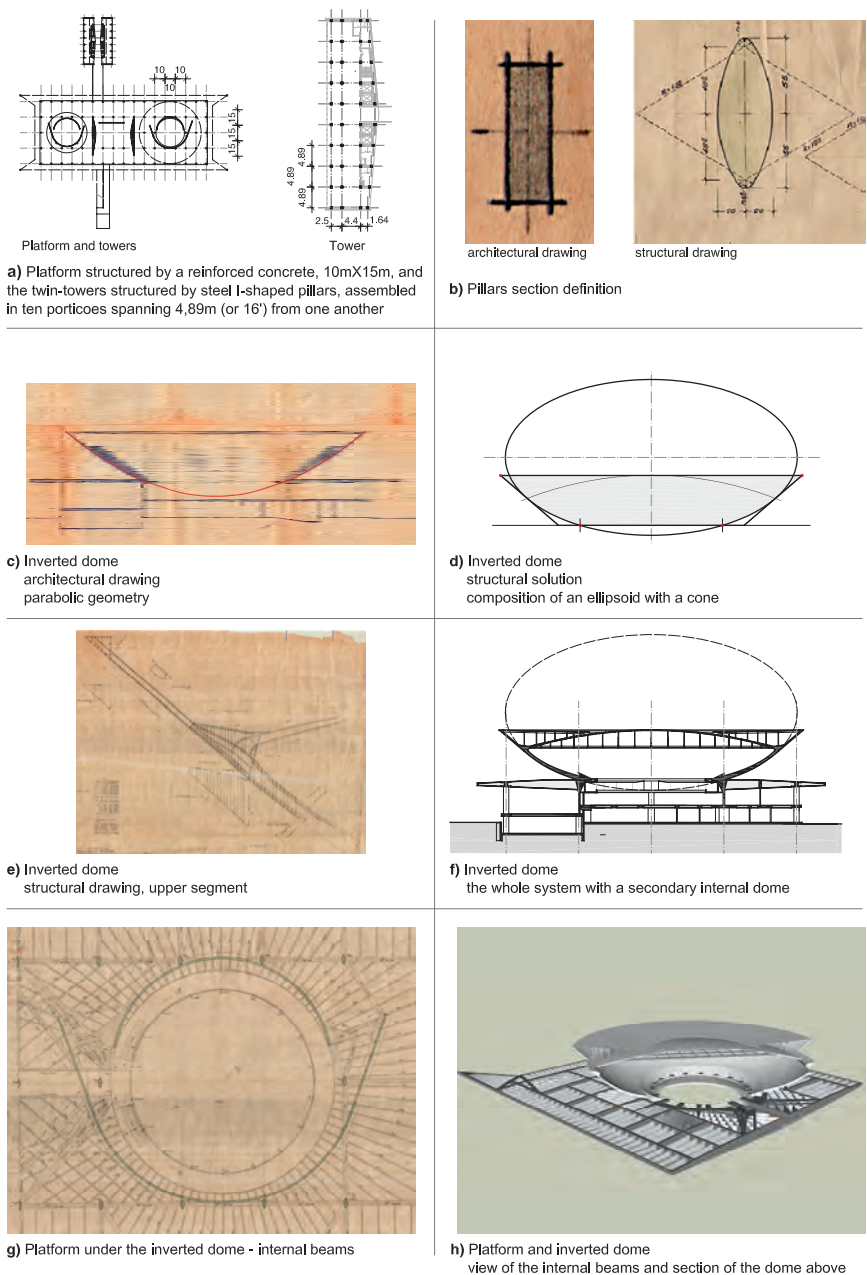


Figure 4. Structural elements. Original drawings: Technical Archive of the Chamber of Deputies.

*braic formalism, but with another, more modern, that has cast off systems borrowed from other sources and restricting its field of existence. The use of this geometric reality (...) brings us nowadays to a criterion of moldings, of the proportions and outline (...). A molding more intrinsic to the lines, surfaces and volumes that constitute architectonic space, one that is defined by the use of fields of tangency, and curvature, or contacts of a higher order between these geometric entities.(...) The question then arises: what about the solutions of equilibrium for these forms? They are to be found in experimental physics, in the optics of rheological states, and in photo-elasticity; between the polarizer and the analyzer the lines of stress and deformation will spring into evidence, particularly the isoclinics, isostatics and isochromatics, three families of curves that are the natural example of that geometrical object discovered by Veblen and which likewise belong to the field of *Geometrie der Gewebe*, geometry of fabrics, i.e. the textile geometry created by Blaschke.⁹*

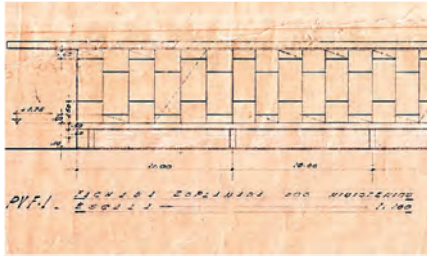
For Niemeyer, the buildings should *no longer [be] expressed through their secondary elements*. And in fact, the architectural composition strategy that left for the engineer the role of conceiving and shaping of structural elements is the same one that would rule the *secondary elements* of the building: the definition of patterns that express the structural order without directly subordinating themselves to it.

The marble cladding of the opaque east and west gables of the towers divides a storey vertically in 4 parts and horizontally in 26 parts, alternated, resulting in plates of approximately 45cm by 80cm. That alternating strategy, was further developed on the flooring of the platform and of the external ramps, in a kind of *pseudisodomum* bond¹⁰, where plates of rough white marble of several lengths and widths

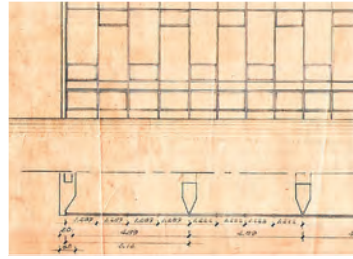
(20cm, 40cm, 50cm, 60cm) created modular rows of different dimensions, in a kind of linear mosaic that both reduces the loss of stone – due to the small dimensions of some pieces – and enhances the tolerance to chromatic variations.

On the ground floor of the horizontal building, the disposition of the internal walls was as concise as possible, in order to ensure the fitting of the barely developed programme. The upper level is an open space, modulated by the columns and with few freestanding walls, glass plans and artistic panels. The only strictly opaque elements are the two wing-shaped walls that conform the entrance hall and the curved non-intersecting shell- like walls that enclose the assembly rooms, clad with 25cm by 70cm marble – a reference to the external material. When not simply painted, most of the coating for the internal walls was made of slim vertical jacaranda boards. The internal flooring was mostly made of carpet, wooden blocks and linoleum tiles – except for the entrance halls, floored with white marble and black granite. (Fig.5)

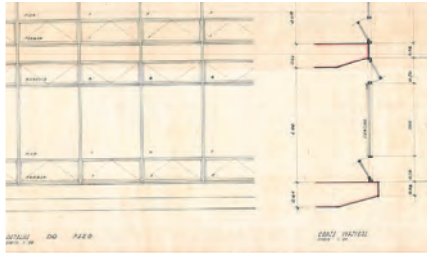
Glass-walls are always displaced from the structural longitudinal axis, avoiding modular conflicts with the pillars. However, the mullions are always aligned with the internal structural transversal axis, dividing the span in four parts on the towers (1,22m, or 4'), and in six parts on the horizontal building (1,67m). On the corners – as a modern version of the *Doric corner*¹¹– the glass-wall was extended to cover the width of the indented pillar, and the resulting span was divided again in an imperceptible variation of module (1,285m on the towers and 1,83m on the horizontal building). Another slight variation of rhythm was adopted on the structural span, divided in five parts, facing the entrance ramp on the horizontal building. As in the other two palaces of the Plaza, the glass walls of the Palace of Congress have mostly alternated transoms. That solution optically conceals dimensional differences, liberates the internal view and avoids re-



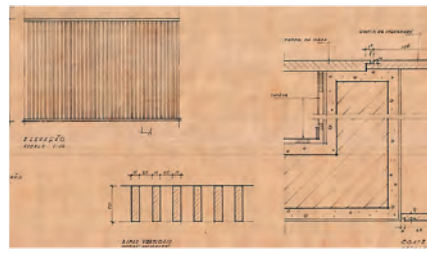
a) Glass-wall
Segment of the main building



b) Glass-wall
Segment of the twin towers



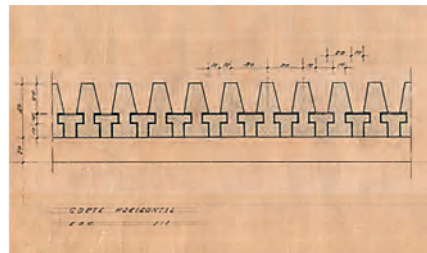
c) Glass-wall
Typical section and detail



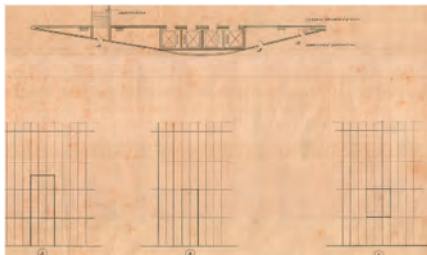
d) Jacaranda boards
First solution for the interior of the Assembly Rooms



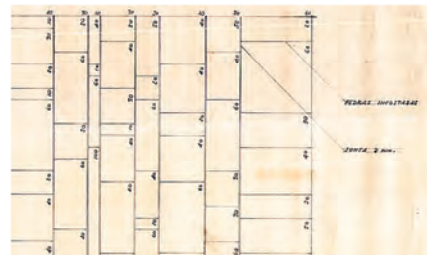
e) Jacaranda boards
Internal walls



f) Jacaranda boards
Entrance hall, lower level



g) Cladding in polished white marble
Main hall



h) Flooring in peaces of rough white marble
Platform

Figure 5. Details - Glass-walls; cladding and boarding.
Original drawings: Technical Archive of the Chamber of Deputies.

dundant components – by placing it only where it is necessary for ventilation. (Fig.5)

The architectural design is presented in only 376 drawing sheets, out of which 208 correspond to preliminary phases and versions; 101 correspond to cladding, boarding and coating details, as well as wet areas. Other 52 sheets are exclusively dedicated to glass-walls, while only 15 sheets were necessary to cope with all the walls and other architectural elements. Such concision was allowed, as here suggested, by the close relationship between the architectural and engineering teams, by the adoption in some cases of standard industrialized parts, and by an architectural language reduced to very few, relatively simple elements, where framing, clad-

ding, coating and flooring were made of small components or with optically diverging compositions that conceal imperfections.

That may suggest that Niemeyer and his team focused in designing the elements that reflected the compositional processes involved in the *order* of construction – the spacing of the structure and its dimensions –, and its expression. This was made in such a subtle way that irregularities due to the imprecision of construction or due to the passage of time do not diminish the principle of the original design. Beyond formalism or figurative classicism, the use of compositional strategies by Oscar Niemeyer in the Palace of Congress made it a conceptually vigorous building.

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Notes

- 1 The archival systematization and many of the questions here raised come from the work of Silva, "Os Palácios Originais De Brasília." The authors would like to thank Professor Sylvia Ficher, from Universidade de Brasília, for her important comments on this paper.
- 2 Comas, "Uma Certa Arquitetura Moderna Brasileira: Experiência a Reconhecer," 69.
- 3 Giedion, "Brazil and Contemporary Architecture," X.
- 4 Niemeyer, "Depoimento," 4–5.
- 5 Guadet, *Éléments Et Théorie De L'architecture*, Vol.1, 84.
- 6 See Vitruvius, *De Architectura*, I-V, 24–25 [Book I, Cap.II, §1-2].
- 7 Guadet, *Éléments Et Théorie De L'architecture*, Vol.1, 40.
- 8 Cardoso, "À Margem Das Architecturas Grega e Romana", 72.
- 9 Cardozo, "Algumas Idéias Novas Sobre Arquitetura," 6–7. For a possible relationship of such a *textile geometry* and Gottfried Semper's tectonics, as then also developed by Mies van der Rohe in North America, see: Frampton, *Studies in Tectonic Culture*, 191.
- 10 Vitruvius, *De Architectura*, I-V, 112–115 [Book II, c. VIII, §6].
- 11 For the *Doric corner* problem see: Vitruvius, *De Architectura*, 218–219 [Book IV, Cap.III, §1-2].

Lessons from the Marchiondi

Restoration and Conversion of the Marchiondi Spagliardi Reformatory, Milan, 2007-2011

Massimo Fortis

Orsina Simona Pierini

Cultural and Disciplinary Approach: Learning from the Project

The rehabilitation project, which has now reached the executive details stage, involves converting the premises of the Marchiondi Institute, designed in Milan by Vittoriano Viganò in 1954/55, originally intended for the re-education of disturbed childrens but now empty and unsafe, into a hall of residence for students at the Politecnico di Milano.

These general reflections arise not from a critical/theoretical reworking of the discipline of restoration and its methods, but rather from the specific experience of designing the rescue and conversion of a famous piece of post-war Italian architecture now sadly decayed. Disposed to shun the fanatical approach to conservation, yet genuinely respecting the work of Vittoriano Viganò, the group found itself in a rather special position. Examining the issues without ideological or narrowly specialist blinkers meant discussing every design choice step by step, taking nothing for granted: the approach was one of enlightened empiricism, based on direct experience and a thorough understanding

of the real problems, not the unthinking application of abstract protocols. Design became an act of critical interpretation combining analytic understanding with the details of the brief.

What to Do? The Basic Issues

The project to save the Marchiondi entails fundamental thinking about at least three crucial issues on which the work's survival depends. The cruxes, here as in most conversion projects, are these:

- a. the compatibility of the intended new purpose – student housing – with the nature, amount and distribution of space in the complex as designed by Viganò: in this case the “content” is mainly suitable, with a little forcing or “necessary sacrifice” here and there, especially in the future occupants' rooms;
- b. the need for large-scale structural consolidation work to make the buildings fully usable; the Marchiondi's raw material being undressed



Figure 1. External view of the Residential Block.

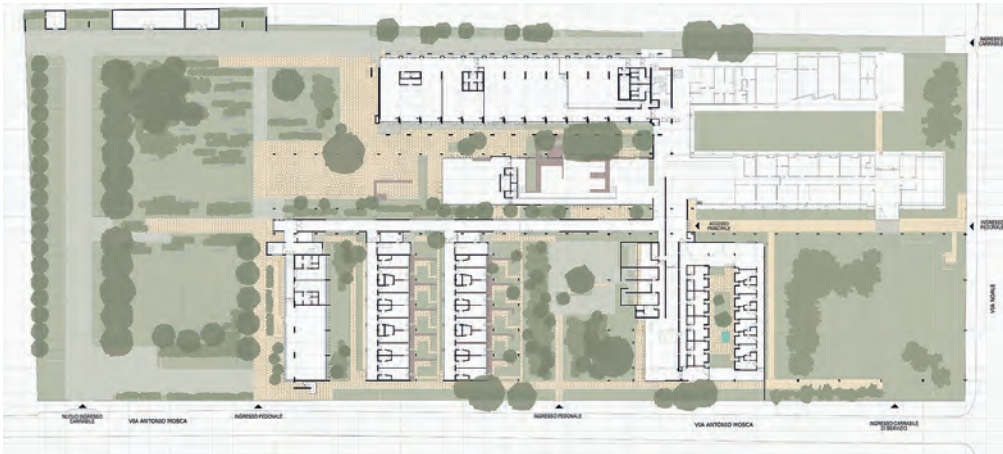


Figure 2. Project: general plan.

concrete, the technical assessment requires critical consideration of the eventual visual uniformity and durability of the measures chosen;

c. achieving desirable accommodation standards, especially in temperature and soundproofing, not least to ensure acceptable conditions for running the place: the main problem here is the performance of the – very extensive – windowed walls.

The New Use: Appropriate or Compatible?

The project is for the complex to provide accommodation for 224 undergraduate and graduate students, and space for the services expected of a university hall of residence such as studies, library, cafeteria and a small gym. Choosing a new function is a notoriously critical stage in any restoration project: the tendency to treat Modern architecture as a museum piece must not become a general rule'. On the other hand, though the compromises on regulatory issues and the upgrading demanded by the building's new use have admittedly complicated the work

of design, they also allow glimpses of a new life for the building and the real possibility of keeping it going in future, along the lines of what André Corboz advocates as *réanimation*.²

While it is possible, in purely abstract terms, to imagine a perfectly appropriate use that would exactly suit the complex, it has to be said that the university accommodation scenario is not just one that makes practical financial sense: it is comforting to know that (albeit with some sacrifice in terms of distribution) the Marchiondi will once again be used for young people, as originally planned: a *living architecture*, as opposed to ossification in some museum form – for which, moreover, no credible proposal has been made. From this point of view its conversion to student housing seems entirely appropriate, as restoring both its original nature and its *raison d'être*.

It is easy to keep the original layout of the communal living spaces designed by Viganò, and the happy relationship between inside and out on the ground floor; but bigger problems arise where the need to divide the classrooms, and other medium-sized spaces, to carve out



Figure 3.
View of the
present condi-
tion of one resi-
dential dormi-
tory.

the required number of beds, creates some points of difficulty; the Residential Block, in particular, will be converted into four-student mini-apartments, in an attempt to preserve at least their spatial articulation.

Inventorying Traces - the Building as Text and the Sources

The complexity and internal consistency of the original design, is well known and recover-

able by the project's cognitive tools, using the various documents provided by history: the buildings reveal what the architect was thinking, confirmed by clear project drawings and exhaustively portrayed in contemporary photographs.

In traditional restoration the architect has to rediscover the history of the ancient fabric; but when Modern architecture is restored the author's own account of its creation is a more immediate authority to potential continuities of form.

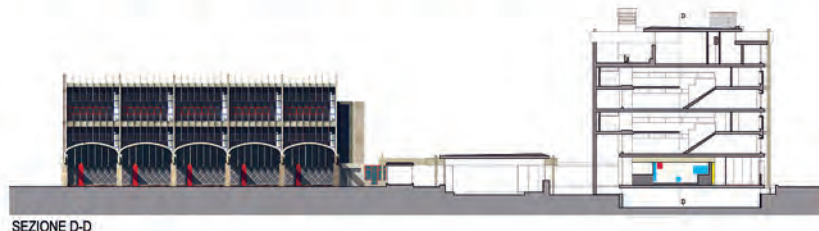


Figure 4. Project: elevations & sections.

Designing the restoration includes preparatory research before the executive project. This refers essentially to two bodies of information: the archive documents kept by Viganò's successors and in the Mendrisio Archive of Modernism³.

The survey of the present condition, accompanied by detailed plates showing restored colours and materials, has been supplemented by designing anew those components no longer present, by guesswork using the archive documents.

Taking Action:

Adapt, Protect, Maintain, Revive

After the investigatory process that moves back and forth between deeper analysis and further design work, the practical choices have settled around some main guidelines.

a. Strict maintenance of the shapes and sizes of the structural elements and all the external partitions; no volumetric changes in the outer envelope are planned, except for one column for the elevator on the blank face of the Residential Block.

b. The spaces to be used for the new student sleeping quarters must be modified, for legislative compliance and to meet today's residential standards: these alterations, though painful, are accepted deliberately, sacrificing those spaces for the sake of saving the whole complex.

c. "Soft" adaptation for the communal areas; here the aim is to protect Viganò's layout of space and style, in the conviction that he turned the sense of communal living into architecture that spoke above all in the distributional arrangements and the big spaces of the ground floor, and in their symbiosis with the design of the outdoor spaces.

d. Painstaking reconstruction, using archive documents and old photos, of unseen elements (mesh and rebars in concrete) and lost ones: this involved working out what the surface finishes and significant detailing had been.

e. Reinvention of new detailing in accordance with the formal language: the process of soaking up the architectural atmosphere helps to keep the new elements in the same basic key throughout the work, even while it introduces highlights as needed.

Conserve: the Architecture or the Matter?

The attention paid to the design and its formal unity made keeping the work's architectural value the priority, both in preserving so far as possible the spaces intended by the original creator and in ruling out the intrusion of extra elements into an already highly complex composition.

It is well known that the "Italian school" of restoration is primarily concerned with the authentic conservation of the work's physical matter and of the patina of time itself, even at the cost of superimposing extraneous reinforcements provided they do not compromise the integrity of the original fabric.

In this case a deliberate decision was made to protect architectural unity: Vittoriano Viganò's explicit relationship between structure and form/icon seems intolerant of any extraneous presence. The restoration project is keeping to his design, and aims to renew the reinforced concrete in the manner that promises best for its conservation once its static functionality, geometry, dimensions and the visual and the materials' tactile qualities have been restored.

Design, Material and Performance: the Case of the Metal Windows Frames

No less important for protecting Viganò's language architectural was the decision to be made about the windowed walls accounting for most of the facades, an area of some 4000 mq. Most of the windows are gone, and the advanced cor-

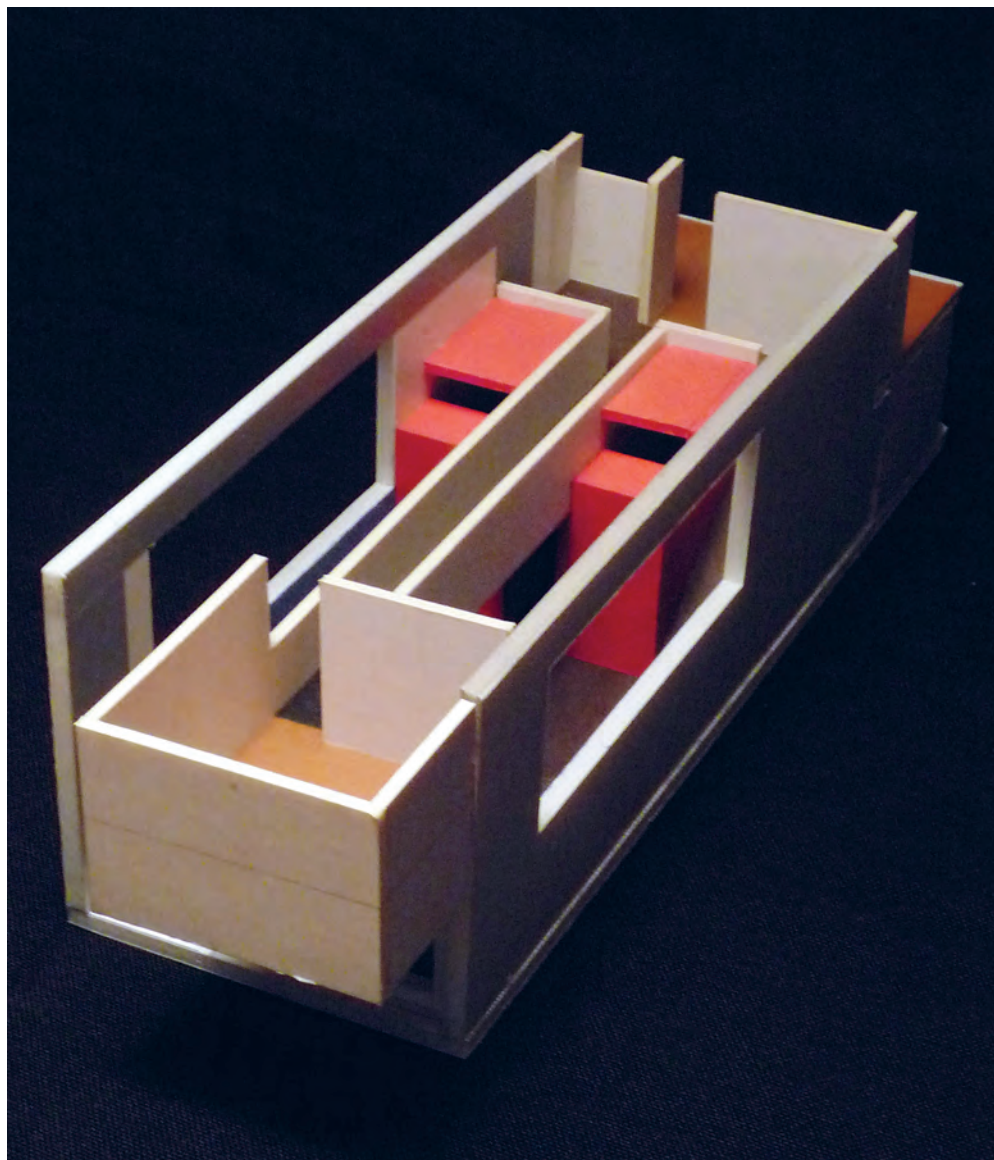


Figure 5. Project: model studies for the residential dormitory.

rosion of the rest makes it unlikely they can be rehabilitated. The restorers chose to replace virtually all the frames, keeping the frames' original arrangement and colours but using insulating profiles with standard sections and joints, modified for the occasion to resemble those already there. This will improve the building's energy performance in terms of user comfort, running costs and durability.

There Was/There Wasn't

As said above, the restoration plans include a painstaking reproduction of the ruined materials and the original finishes.

Special attention is being paid to the ceiling plasters, brightly coloured and framed by the exposed reinforced concrete beams at the sides, and to the colours of the walls and floors, using sequences of graphics and inlays designed by Viganò where possible. The positioning of conduits and visible equipment, which reiterate the lines of force as one moves through the building, has likewise been maintained.

Implications for the Present and Future: the Fragility of Modern Architecture: Palliative Care or Reconstruction?

Our experience with the Marchiondi, like many other restorations of 20th century buildings that have lost their usefulness and reached a point of extreme decay, obliges us to think hard about the meaning and social purpose of their restoration, beyond the undeniable cultural benefit of conserving the remains of an era. Apart from those cases where public or private funding has made it possible to restore buildings with scholarly accuracy mainly as museum pieces, *réanimation* generally involves introducing devices that permit their re-occupation under contemporary standards. In the case of the Marchiondi

this means more than a full energy audit; the improvement in its performance goes beyond comfort: far-sighted minimizing of consumption over time is barely even optional.

Another consideration goes beyond the much-debated opposition between near conservation and truly strengthening reconstruction. Prior to the technical and administrative aspects there is the issue of durability: it must be decided whether quantities of taxpayers' money are to be spent on tricky conservation that still will not slow the ongoing processes of decay, with the risk of having to find another stopgap for further decay in a few years' time, or to use techniques that tend more to provide solutions that will last for decades.

In a period of limited resources the use of public funds itself must be reassessed: it is not only the restoration's social utility and cultural value that must be weighed, but also the investment case: a problem in the ethics of resource allocation which brings us back to the civic responsibilities of architectural design.

Notes

- 1 Maristella Casciato, "Modern Architecture is Durable: using Change to preserve," in *The challenge of change, dealing with the Legacy of the Modern Movement. Proceedings of 10th International do.co.mo.mo Conference* (Amsterdam, IOS Press, 2008).
- 2 André Corboz, "Esquisse d'une méthodologie de la réanimation: Bâtiments anciens et fonctions actuelles," proposed in *Lotus International* 13 (1976), 68.
- 3 Franz Graf and Letizia Tedeschi, eds., *L'Istituto Marchiondi Spagliardi di Vittoriano Viganò* (Mendrisio: Mendrisio Academy Press, 2009).

Modern Design Philosophy and the Critical Theory of Restoration:

Aarno Ruusuvuori as a Restoration Architect

Kaisa Broner-Bauer

Aarno Ruusuvuori (1925–1992) was one of the most prominent architects of the 20th century in Finland. He is considered a representative of Classical Modernism which is, besides the “nature architecture” of Aalto and Pietilä, one of the two main tendencies in the history of Modern architecture in this country. Ruusuvuori produced most of his architectural designs in the post-war period, including public, industrial and residential buildings as well as a few renovation and restoration projects. He was a powerful man in our country, an exceptional personality, upright and far-sighted, who contributed to the development of Finnish architectural culture in many regards.

Born in 1925 Ruusuvuori was about one generation younger than Alvar Aalto, about the same age as Reima Pietilä, and about 15 years younger than Aulis Blomstedt, whose assistant he was in his younger years, and a colleague as a Professor of Architecture at Helsinki University of Technology in the 1960's. Like Aalto, Blomstedt and Pietilä, Ruusuvuori has left an important intellectual heritage to a generation of Finnish

architects, many of them being still fervent advocates of “pure and hard” Modernism.

Unlike Aulis Blomstedt and Reima Pietilä, Aarno Ruusuvuori was not a theorizer, though his architectural thinking was philosophically clear and well defined. Basically his impact was that of a distinguished architect-builder, active in many fields. In his architectural designs one may see a constant pursuit of a kind of absolute aesthetic ideal, resulting in an abstract architectural language of a very stripped and refined nature, based on pure geometric forms. In this regard Ruusuvuori can be considered the father of the Minimalist tendency of Modern architecture in Finland.

The most active period of Ruusuvuori's career as an architect was in the 1960's when he realized several important commissions. In the last two decades of his life Ruusuvuori did not build as much, but as the Director of the Finnish Museum of Architecture he greatly influenced the course of events on the architectural scene in Finland and contributed notably to the development of the Museum's international activities.

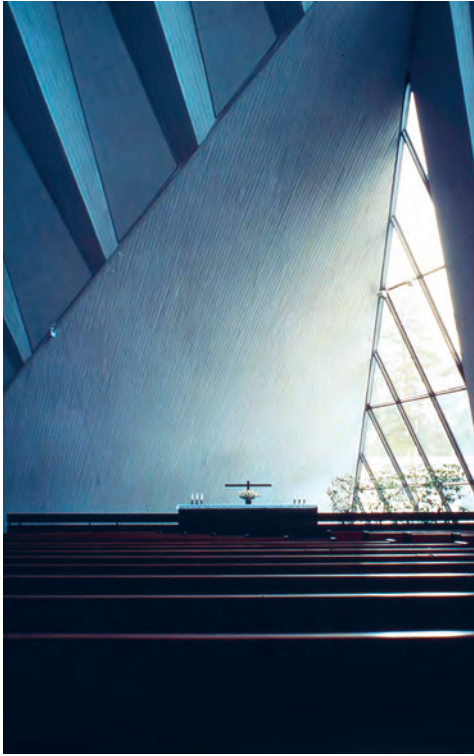


Figure 1. Hyvinkää Church, a winning competition entry of 1958 was built in 1961, and it may still be considered one of the main examples of the abstract tendency of Finnish Modernism

Ruusuvuori was an innate rationalist, a Classicist and a devotee of Modernism. One of his best-known works is Hyvinkää Church. A winning competition entry of 1958, it was built in 1961, but it may still be considered one of the main examples of the abstract tendency of Finnish Modernism. Clear structural thinking combined with a powerful ascetic poetry of architectural forms are attributes of this edifice.

Other sacral buildings designed by Ruusuvuori include the Church of Tapiola and that of Huutoniemi in Vaasa, both of them also winning competition entries. Designed in 1961, Huutoniemi Church was built in 1964. Tapiola Church for its part was designed in 1963 and completed in 1965. Imposing edifices of ascetic expression, full of spirituality, both Tapiola Church and Huutoniemi Church are claimed to be among the best illustrations of Minimal-

ist architecture in Finland and in the whole world. To give an example, the Japanese architect Tadao Ando has been visibly influenced by Ruusuvuori, whose silent church architecture he got to know, according to his own words, during his study trips to Finland in his apprenticeship years.

Besides churches Ruusuvuori has designed numerous other types of building and rehabilitation works. Many of his designs have become “classics” and are among the most representative examples of Finnish Modernism, especially in the years of the 1960’s. That is the case, for instance, of the Weilin & Göös Printing Factory (1964-67) in Tapiola. Its ingenious but simple structural solution, functional convenience and architectural elegance have become recognizable hallmarks of Ruusuvuori’s architecture in general.

Helsinki City Hall

Among Ruusuvaori's rehabilitation projects that of Helsinki City Hall (1968–1988) and its surrounding blocks in the historical and monumental centre of the Finnish capital may be considered his main work, which took him almost 30 years to complete. The commission was due to an architectural competition organized in 1960 and won by Ruusuvaori. The first stage of the renewal program was completed in 1970, and the second stage in 1988.

It must be said that this project of Ruusuvaori's aroused a lot of discussion in its time. It represents a purely Modernistic approach and may be seen as a radical and personal, though partial interpretation of the French school of Style Restoration in line with Violet le Duc on the one hand, and of the Italian critical theory of restoration as expressed in, for instance, Cesare Brandi's writings¹ and the *Venice Charter* of 1964 on the other.

In Article 9 of the *Venice Charter* it is stated that "the process of restoration (...) must stop at the point where conjecture begins, and in this case moreover any extra work which is indispensable must be distinct from the architectural composition and must bear a contemporary stamp." Article 11 for its part declares that "the valid contributions of all periods to the building of a monument must be respected, since unity of style is not the aim of a restoration."

In the rehabilitation project of Helsinki City Hall and its surrounding blocks the task of the architect included the restoration and partial reconstruction of the old City Hall. Originally a hotel designed by Engel and built in the 1840's, this large edifice was recycled into Helsinki City Hall in the 1920's, and it still is one of the most representative structures of the monumental core of the city. The historic building rested entirely on temporary structures when lower parts of it were rebuilt in 1968–70. There were new foundations made of concrete, and important

parts of its volume were completely redesigned and reconstructed in contemporary style. The streets running round the City Hall blocks are the only 18th century streets remaining in Helsinki. Most of the surrounding buildings were originally individual family houses, some of them representative bourgeois residences.

The renovation plan attempted to preserve this historical milieu. The aim of the renovation program was thus to bring to the fore the old buildings or parts of buildings of cultural, historical and architectural interest, and to give them a new function corresponding to their value and character. The historical blocks around the City Hall were renovated according to the principle of removing all later additions. The spaces that were liberated allowed the construction of some completely new buildings, notably the assembly hall of the City Council located in the centre of the City Hall block. The new parts have been built to meet modern demands.

The general approach for renewing the City Hall was very much criticized in the 1970's, mostly by younger architects belonging to the preservation movement of the period. Ruusuvaori was accused of destroying parts of the architectural heritage, though his work was very skilful and represented a consistent understanding of contemporary architecture as a contrast with the past. Because of the strong reaction against the renovation approach applied by Ruusuvaori in the project of Helsinki City Hall, it can be considered a kind of turning point in the history of preservation in Finland.

To defend Ruusuvaori, one could argue that it would have been impossible for any architect to realize the original renovation program of the 1960's without going for a radical solution. Twenty years later, in the 1980's, the program was modified, allowing a more sensitive treatment of the old houses. Several 18th century structures were then restored for municipal usage, to be utilized as meeting rooms, reception areas etc. Within the City Hall block, the Great



Figure 3. Helsinki City Hall, originally designed by C. L. Engel and built in 1833. Main entrance hall after renovation in 1970.

Hall, the Empire Room of the Council Chamber and the connecting spaces form an integrated historical interior complex rare in Finland. They have been restored by Ruusuvuori as close to the original as possible. It is true that Ruusuvuori's rehabilitation works represented a radical design ideology, but he must be credited for his unfailing sense of style, which is obvious in his skilful integration of historical and modern architecture.

W&G

The W&G printing factory (1964-67) designed by Aarno Ruusuvuori is one of the most intriguing projects of rehabilitating the 1960s architec-

ture in Finland. Among Ruusuvuori's designs, this building probably reflects most "purely" the architect's intention.² The challenges of its design included the need to create a pleasant working environment close to nature, effective and flexible use of space, the construction of a large, open printing hall able to bear a load of 2000 kg/m², the integration of technically demanding ventilation and lighting systems with the architectural design as well as modular construction in several phases.

The most impressive architectural quality of the W&G printing factory is its innovative structural solution³ combined with a simple, minimalistic form language and well thought-out details. The building materials are concrete, glass and steel. As an architectural work, Ruu-

suvuori's W&G is like an abstract poem, a pure geometric construction with no unnecessary elements.

The W&G printing factory was designed to be constructed in four phases, of which only three were actually implemented. The extension to the third-stage module (1972-74) was designed by Engineering Consultant Bertel Ekengren, and it differs, both structurally and architecturally, from Ruusuvuori's design.

After Weilin & Göös had left the Tapiola printing factory in 1997, the building ended up in the possession of the City of Espoo. The previous WG logo remains on the façade, but in print the new name of the building appears as "WeeGee".

In the year of 2000 the City of Espoo outlined a detailed "general plan" for the rehabilitation of the WeeGee building, to establish it as a "centre for the visual and material culture".⁴ The re-use and repairs realized in subsequent years have been designed by architect Timo Airas. The spaces available in the WeeGee building were allocated into several main categories including three museums, among them the highly successful Espoo Art Museum Emma opened in 2006.

The basic principle in the re-use of WeeGee has been to retain the façades as well as the image of an industrial building. This was also obligated by the sr-1 annotation in the Espoo town plan, which means that the building is of architectural value and should not be altered or repaired in ways that could detract from this value.

The design for converting the WeeGee building from a printing factory to a cultural centre was intentionally compatible with the "original guidelines" given by the City of Espoo: the old parts of the building have been restored for re-use and the necessary new elements have been constructed of the same basic materials, i.e. concrete, steel, glass and lime brick. The new details have been designed to suit the old build-

ing. Otherwise, the newest technical solutions have been applied to create an up-to-date multicultural centre.⁵

The ultimate question here concerns the protection of the architectural heritage. Is WeeGee retaining its original integrity or has it become a re-created building, a dialogue between the old and the new? There are interesting examples of such integration of new elements into an old building in Ruusuvuori's own production. One key question was whether it was possible to restore Ruusuvuori's minimalistic concrete construction elements, such as the slender columns on the first floor in such a way as to retain their original architectural dimensions. In fact, the finest features of the building have been successfully preserved. Another problem was the fire resistance classification. The interior of the building originally consisted of very large open spaces. There were few partition walls, and even the existing ones were mostly low walls of steel and glass. The solution was to use glass walls to set up new fire divisions. This has helped to maintain the overall impression of open space and the scenic view of the surrounding landscape.

*"I like to juxtapose old and new. But I avoid mental masquerades."*⁶ This was Aarno Ruusuvuori's own comment concerning the eternal dilemma of restoration and renovation. In the WeeGee building there are so many instances of juxtaposition of old and new things that the project actually is not one of mere restoration. Actual restoration can be seen in the treatment of the original concrete floor on the first floor as well as the office wing at the north-eastern end of the building. Some other room interiors and details were also preserved. For instance, one of Ruusuvuori's glass box-like toilet blocks has been retained and restored, though placed differently from the original.

According to Ruusuvuori, *"the only principle applicable to the juxtaposition of old and new elements is honesty."*⁷ These words describe Ruusuvuori's personal ethics as an architect



Figure 2. Weilin & Göös Printing Factory (1964-67) in Tapiola – today recycled and called WeeGee.

representing the tradition of “pure Modernism”. Modernists advocated the demand for an “honest” contrast between the past and the present, while postmodernism has evoked other ways of juxtaposing old and new architecture, such as analogy and pastiche. The renovation and restoration of the WeeGee building do not involve elements of pastiche, though they do involve analogous design. As a matter of fact, this requirement for analogy was already implicit in

the preplanning of the WeeGee building, which required architectural solutions and material choices to be made in the “original spirit” as well as the re-use design to be compatible with the modular thinking and the open space layout communicating with the surrounding nature, typical of the original Ruusuvuori design. In conclusion one may well say that the WeeGee renovation-restoration has come a long way to meet Aarno Ruusuvuori’s own standards.



Figure 5. The new City Council Assembly Hall received Europa Nostra price in 1989.



Figure 4. Helsinki City Hall: The historical Empire Room after restoration, 1970.

Notes

- 1 Cf. Cesare Brandi, *Teoria del Restauro* (1963).
- 2 When interviewed by Mikko Haljoki for *Yhteisvoimin* magazine, vol. 6/1978, Ruusuvuori said: "My probably purest design, the Weilin & Göös printing factory, dates back to this 'industrial period'." The industrial period in Ruusuvuori's designs is further represented by the Marimekko printing factory (1967), the prefabricated, standardized sauna (1968) and the Paragon office block (1973).
- 3 The structural design of the W&G building was done by Aarno Ruusuvuori and Bertel Ekengren, an architect and an engineer, in excellent co-operation.
- 4 "WeeGee. Kokonaissuunnitelma", 1.2.2000.
- 5 "WeeGee hankesuunnitelman tarkistus" (Specification of the WeeGee project plan), 8.5.2001.
- 6 Aarno Ruusuvuori, "I am in favour of protection, but avoid masquerades", *Uusi Suomi*, 11.1.1979.
- 7 Aarno Ruusuvuori, "Säilyttämisestä" (About preservation), *Arkkitehti* 1-2 (1967).

Open Plan The Unbearable Lightness of Cobogó

Sonia Marques
Guilah Naslavsky

The Importance of the Nunes Water Tower of Olinda in the Context of Modern Brazilian Architecture

The Olinda Water Tower is a Brazilian modernist landmark, recognized worldwide from the famous catalogue, *Brazil Builds*¹. It was one of the most emblematic works designed by Luiz Nunes (1909-1937), a former student at the Beaux Arts National School in Rio de Janeiro, where he led a strike against Lúcio Costa's dismissal and witnessed Le Corbusier's first visit to Brazil (1929)². After graduating in 1933, Nunes designed two apartment buildings in Rio, which were considered by Lúcio Costa to be precursors of that city's modernist movement. The young architect moved to Recife, probably in June 1934, hired by Governor Carlos Lima Cavalcanti, who, despite being nominated by the conservative *Estado Novo* dictatorship, intended to implement progressive policies with programs of public interest³.

As Costa saw early on, the works of Nunes, still iconic today, place him as a pioneer of modernism. The Water Tower built in 1936 was designed during the same period as was the Ministry of Education and Health (signed by Costa, Le Corbusier, Niemeyer and others), and both have a very similar compositional approach. Both buildings were photographed by G.E. Kidder Smith and published in the Museum of Modern Art's Exhibition, *Brazil Builds*⁴. Standing at the top of one of seven of Olinda's



Figure 1. Olinda Water Tower.
Brazil Builds, 1943.

hills, at the time it was erected, the Water Tower was impressive and looked like a big skyscraper, especially when compared to the horizontal environment of the Portuguese colonial site-dwellings. As the main morphological characteristics of the site remain largely intact, Olinda became a Unesco landmark colonial site known for its baroque churches. Therefore, as the image of the site is primarily linked to the past, the modernity and the daring aspect of the Water Tower is still a source of misunderstanding for preservation, as we will discuss later.

The Water Tower is an excellent example of volumetric allocation by two blocks: a vertical parallelogram that contrasts with the horizontal esplanade. The two volumes do not touch each other completely, since they are connected through a deck poured on pilotis, which ensures the lightness of the composition. The resultant imagery laying on the compositional solution of those two volumes is close to that of the Ministry of Education (MES) in Rio de Janeiro, as we can see from its first drafts to its final design. Adopted at the same period for both buildings the volumetric composition – vertical parallelogram and horizontal esplanade – would become paradigmatic in modern architecture. With some variations in scale, this is the composition adopted by Skidmore, Owings and Merrill (SOM) for the 1951 Lever House on Park Avenue, which itself would have been inspired by the MES. The duo – esplanade and vertical block – was also adopted few years later by Mies van der Rohe and Philip Johnson in the Seagram Building of New York (1954-8).

The Ministry of Education (MES; 1936-45) of Rio de Janeiro figures in all publications on modern architecture. It is known as *one of the earliest attempts at providing a fully glazed prismatic skyscraper with a protective screen of brise-soleil. (...) a demonstration of the way that a concrete skeleton could be turned into a naturally ventilated grille (...) a public affirmation of local materials and of Brazilian Modern art.*⁵ Nevertheless, taking into account dates and criteria always evoked in order to emphasize the pioneer role played by Rio de Janeiro's Ministry of Education, we could remark that Olinda Water Tower anticipated this building in many aspects, such as:

1. The balanced composition based on two contrasting blocks, the vertical and the horizontal one, the latter creating an esplanade one level under the street;
2. The type of public building that offers a public space, through the building and the

street, composed of a terrace with pillars;

3. The tectonic of concrete – skeleton and light panels – as a source of maximum expression of architectural design;

4. The search for a new monumental character based on a subtle, contrasting harmony vis-à-vis the previous environment;

5. The imagery of the modern, public skyscraper.⁶

As the great engineer and poet said:

*"I can say without exaggeration that they came to combine instinctively the perfect consciousness of the physical to the spirit, at the same time achieving the best effects of the plastic concrete." (...) "New architectural elements were all used; the cover-terrace, the pillars, the large windows, color as a modifier of space and illumination, independent structure, etc., as well as the use of special structures for pure forms of realization. It is only with concrete that this can take place, as it offers solutions that are freer and more perfect".*⁷

The Most Important Points Highlighted by the Analysis: Daring Structure and *cobogó*?

Analysts of the Olinda Water Tower generally evoke two main points: the daring structural approach based on reinforced concrete and the discrete lines of the façades built in perforated pre-casted elements: the *cobogó*.

The prominence of this element is usually considered, as it expressed the essential quality of the building. Additionally, *cobogó* is often identified as the only element that marked Modern Brazilian architecture of the northeast, particularly distinguishing structures in Pernambuco from those in the rest of the country.

Cobogó is a hollowed-out, pre-molded block in plaster cement, originally filled with plaster made-up to build walls. "Created and patented



Figure 2. Olinda Water Tower before the recent restoration. Guilah Naslavsky.

between 1929 and 1930, by engineers Amadeu Coimbra, Ernst August Boeckmann, and Antônio de Góis, it gets its name from the first syllables of their surnames. The first cobogós were used to build double walls. One year later, smoother and larger cobogós were created and used to build single walls whose calculations were performed by Antonio de Góis, then a professor at the School of Engineering⁸. Actually, the use of cobogó was due to creativity and an awareness of available materials and techniques that were shared by the team of the Board of Architecture and Urbanism (Diretoria de Arquitetura e Urbanismo), where Nunes worked.

Nunes used cobogó panels for the first time in 1934 at the “Escola dos Anormais” as a fencing element - “multicellular panels achieved with cement blocks by 0.50 x 0.50 x 0.10, thick with transversal holes by 0.05 x 0.05, at a school similar to the André Lurçat’s model in Villejuif.⁹



Figure 3. Olinda Water Tower after the recent restoration. Eduardo Pinto.

The importance of cobogó to Brazilian modern architecture is unquestionable. It is the most appropriate element to cope with tropical weather since it allows for constant natural ventilation and protection against sunlight. Low in cost, manufactured locally, and easily installed, it soon became the most prevalent perforated element used in Pernambuco’s constructions, a symbol of modernity and a perfect tropical version of the Mediterranean *brise-soleil*.

In the Olinda Water Tower the cobogó plays an even more impressive role, and its adoption can also be attributed to composition reasons. The aesthetic effect provoked by the lace curtain acts like a skin element, as described in Gottfried Semper’s theory. Joaquim Cardozo, who later became the great engineer of Niemeyer’s remarkable works, had remarked on that effect early-on, as he pointed out: “These surfaces built by cobogó were used as insulated façades; like a



Figure 4. Olinda Water Tower: *promenade architectural*; Olinda Water Tower concrete cage. Eduardo Pinto; Guilah Naslavsky.



‘Brise Soleil’, it creates capricious drawings of shade and light effects” (sic)¹⁰. Therefore, *cobogó* is a pioneer element for protecting against heat and controlling ventilation as well as an effective spatial component, as it has been characterized since the publication of *Brazil Builds*.

In a recent study, Freire¹¹ placed the *cobogó* as a pioneer of attempts at an aesthetic derived from modular systems, inspired by Frank Lloyd Wright’s textile-blocks for the Millard House, also known as “La Miniatura”. Commissioned by rare-book dealer Alice Millard, this was one of four patterned concrete block houses that Wright designed in the 1920s and which is listed on the National Register of Historic Places. However, the home was initially scorned for its use of concrete blocks, and Frank Lloyd Wright himself would write that they were “the cheap-

est (and ugliest) things in the building world.” At the same time, however, he asked, “Why not see what could be done with that gutter rat?” Wright’s successful experience was followed by others such as Jacques and Michel André’s *Institut de Zoologie* at Nancy (1933).

The Olinda Water Tower is protected by the National Historic and Artistic Heritage Institute; however, the building has still not been duly recognized as a monument by a larger audience. This is probably due to its pedestrian function, as is not connected to the requirements usually suggested by the idea of a monument. The use of *cobogó* could also exacerbate this prosaic association. Like Lloyd Wright, people think it is cheap and looks like a gutter rat! This is a crucial question for preservation, as we discuss here.

What About Aesthetics and Sense of Place?

A recent text hypothesizes that the role played by the *cobogó* was aesthetic rather than functional. In addition, it was the first text to underline the balanced sense of place the design of Nunes' Water Tower demonstrated, resulting in its brilliant and respectful insertion within the colonial environment¹²:

"For logical reasons, the Water Tower is located at the top of a hill, about 80 meters from the Sé of Olinda on the opposite sidewalk. For reasons that are not that obvious, it is literally a box, a pure prism of cantilevered concrete structured and closed with combogós (sic!) industrially manufactured in Pernambuco since 1930. The height of a five-story building, with pillars on the open ground floor originally intended for festivals, it is an imposing stele where the extensive lattice of thin side walls alternates with the front and bottom, blind and narrow. The front is almost aligned with the whitewashed mansion, which was once home of the Casa de Câmara of Olinda, then the Archbishop's Palace, and today the Museum of Sacred Art of Pernambuco, on the other edge of the Sé de Olinda's belvedere."

This is a clever analysis, especially when we consider that the activities of the Water Tower don't require the use of *cobogó* due to the climate. Instead, Nunes' *cobogós* are, above all, compositional. Would Nunes consciously understand the *cobogó* as a skin element, as an essential component like that proposed by Gottfried Semper's (1803-79) theory? It is not impossible, especially due to the erudition of his partner, Joaquim Cardozo, (again, the famous engineer of Niemeyer's buildings) who soon vaunted the aesthetic effects of the new material:

"The volume- and surface-castings that were previously settled with shutters were now created through the use of a fair and appropriate material from Pernambuco, par excellence, which maintains the same simplicity of lines of certain bars and frames: the combogó" (...) "These surface combogó work in very sunny facades as true" brise-soleil, "producing floral motifs of shadow and light, to good decorative effect (sic)"

The most innovative suggestion from Comas' analysis is that it expands the qualities of Nunes' building – limited up to then to narrow issues of technique – to the aesthetic and to the sphere of landscape. As such, it touched on a very controversial point that the debates concerning the Water Tower preservation hadn't addressed. In fact, the interventions the Water Tower has received reveal the many disagreements over and overall incomprehension of the architectural values of the Water Tower, as we will discuss after a brief description of those interventions.

Restorations and Renovations: 1970 and 2008-2010

In the 1970s, an intervention occurred in order to fight the corrosion of the building's concrete structure.

In 2008-2011, a recent renovation (L'Amour and Campello architects) added two elements: an external elevator, conceived to take visitors to the belvedere on top of the building, and internal wood slabs, placed in order to reveal Nunes's intentions for an open plan. The use of contemporary materials in the new wooden floors and elevator can easily be perceived. In contrast, as all *cobogós* were dramatically de-

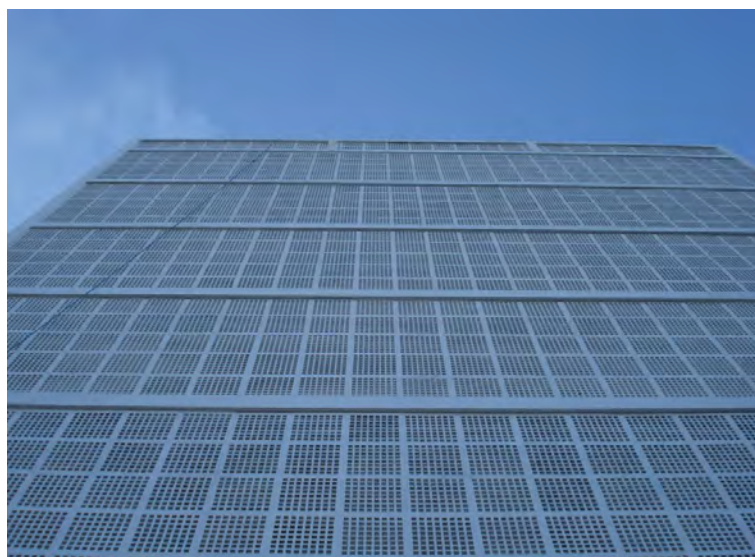


Figure 5.
Inauthentic
cobogós façade.
Eduardo Pinto.

teriorated a full restoration of the façade was made following the original concrete version. This intervention was controversial, as the replacement of the curtain wall by new *cobogós*, of the same material and design, was considered inauthentic. Following Ruskin, ruins must remain untouched, whereas more recent preservationists only admit new interventions if they are really visible as different from the preceding parts of the monument.

The first intervention attacked the very aspect of the building analysts have highlighted since 1943. The elegance and boldness of the concrete structure was partially denied by the enlargement of the *pilotis* in order to protect the concrete structure from corrosion.

In contrast, the second intervention was successful in that the placement of intermediate wooden floors - while diverging from the original design - creates spaces that allow the contemplation of the architectural promenade in the work, allowing the public the opportunity to experience and enjoy the space generated by the free plan and concrete cage, in the sense of a *promenade architecturale* as advocated by Le Corbusier.

The conception of the Water Tower did not foresee useful spaces inside the building nor on its top. However, the intervention offers to the community the occasion to enjoy the richness of the open plan lit by the enormous lace curtain of *cobogó*, like a Corbusian *fenêtre en longueur* used here on a monumental scale. Moreover, the introduction of an external elevator actually succeeds in attracting more visitors who will enjoy that remarkable belvedere.

But even if it is more attractive, the elevator is not part of the original building. Thus, the strongest points of that second intervention are the introduction of internal slabs and the opening of a void on the first floor, just as it figured in Nunes' first proposition.

Conclusion: Controversial Issues Regarding Preservation

The results of the interventions led us to an apparent paradox: the more aggressive and inauthentic the interventions are, the more successful they will be considered?

In reality, it is known that preserving mod-

ernist buildings is a harder task than preserving older ones. In Brazil, people are likely to associate landmarks values with the colonial past and the Portuguese heritage. But modernist achievements don't look that historical nor do they seem distinctive, since 70% of the built environment in Brazil is modernist, as identified Lara. So why should a modern building that apparently looks like all the rest others be preserved? The challenge is even greater when the building is placed inside a historical site like old Olinda. In the recent past, not more than two decades ago, influential intellectuals and even a Minister of Culture agreed to demolish the Water Tower of Olinda. They considered it a white elephant among colonial jewels. Furthermore, tourists who come to Olinda are curious to learn about the traditional roots of Brazil and are not easily inclined to discover modernist achievements. They would easily agree with the demolition of the tower. The sense of place Nunes demonstrated, emphasizing the perspective line from one Church (*Igreja da Misericórdia*) to another (*Igreja da Sé*) is not perceived as value by an uneducated audience.

Or, according to contemporary theories of conservation, greater weight should be given to the meaning rather than to the originality of the material¹³. Today, it is less important to maintain the original function of the building; instead, the primary goal should be for the building to have an active use in the community

According to this point of view, the recent intervention – slabs, elevator and inauthentic *cobogós*--although more successful, still lacks an appropriate use that would permit the community to enjoy the interior and, ultimately, to create meaning for the building. As such, in order to take advantage of this creative design and taking into account its exceptional location, our group developed a project to use the space resulting from this second intervention for the *Cobogó* Centre of Modern Brazilian Architecture at the Olinda Water Tower, in annex.

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Flexible, Adaptable, Extensible and Indeterminate

The Late Modern Megastructure and Conserving its Legacy in Canada

James Ashby

Constructed in the 1960s and early 1970s during a period of cultural tumult and social transformation, the megastructure has since been characterized as a modular, extensible, prototypical city structure.¹ Reyner Banham eulogized the megastructure in 1976, declaring the buildings to be “the dinosaurs of the modern movement.”² This paper introduces research examining the legacy of the megastructure movement, and focuses on the future and issues of conservation and continuity. In considering almost 40 surviving examples, one asks the question: “What is the future of the dinosaurs of the modern movement?”

While the megastructure movement was international in scope, this paper focuses on Canada, which was particularly fertile ground for the megastructure. In an environment of dynamic economic expansion and urbanization, there was an expression of national and regional identities founded on social democratic values. Of the buildings identified by Banham, nine are located in Canada. The legacy includes notable projects such as Toronto’s Scarborough College and Montreal’s Place Bonaventure, which oscillate between urban space and interior design. The Canadian megastructures exemplify various approaches to open space in the service of flexibility, adaptability and extensibility.



Figure 1. Architect E. Zeidler and the model of McMaster Health Sciences Centre. 2007.40.7.1.1 Photograph Collection, Public Relations Dept., FHS Fonds, Archives of Hamilton Health Sciences and the Faculty of Health Sciences, McMaster University.

McMaster Health Sciences Centre

Reyner Banham described this teaching hospital as “the ultimate medical megastructure.” (Figure 1) This radical experiment signaled a shift in Canada towards supporting research, teaching and patient care in an interdisciplinary



Figure 2. The urban campus of the University of Winnipeg with Centennial Hall at the right. J. Ashby.

nary, integrated manner. Designed by Eberhard Zeidler, the Centre was internationally celebrated for its flexible design that allows the physical form of the building to change and expand in response to healthcare needs.

One of the principal ideas is that of interstitial space to facilitate change. The building structure and services were based on a hierarchy of primary fixed structural components, and secondary mechanical, electrical and service components. Steel-framed towers support 21m clear-span trusses. The towers and interstitial floor spaces accommodate the less permanent services, and provide a walk-through ceiling space 2.6m in height, between the inhabited floors. Modularity extended further to include wall partitions, ceilings and cabinetwork. Light courts, views through perimeter windows, supergraphics and commissioned art contributed to the quality of the experience.

Forty years later, while the primary structural system and modular exterior cladding remain mainly intact, the anticipated fifth floor has not

been added. Rather the university chose to expand the medical facility elsewhere to avoid the inconvenience of construction at a working hospital. The service spaces of the towers and interstitial floors have successfully accommodated changes over time. However, the modular interior fixtures have been incrementally replaced in favour of contemporary building materials and assemblies. As a result, there is increased reliance on the original colour-coded supergraphics and public art to provide orientation. Finally, security requirements, not anticipated in 1971, have reduced the permeability of the building, and have undermined the “town and gown” interface.

Centennial Hall, University of Winnipeg

Reyner Banham described this urban campus building as “the rare example of a built megastructure which genuinely oversails an existing ground-level environment, as Friedman



Figure 3. The Meeting Place by Erickson/Massey Architects remains the symbolic heart of Simon Fraser University. J. Ashby.

or Isozaki proposed, while leaving it almost untouched...remarkably like a realization of Friedman's urbanisme spatiale..."³

Designed by Lewis Morse to accommodate rapid expansion of an urban university campus in the late 1960s, this mid-rise, mid-block building accommodated a library, lounges, a cafeteria, laboratories, offices and outdoor terraces. (Figure 2) In order to minimize disruption to the university, the building was constructed adjacent and over existing buildings. When completed, it was like connective tissue linking existing buildings while reflecting ideas of integration and universality in education.

The structure is comprised of a series of square steel-framed towers, some of which enclose exit stairs. The towers are connected by floor-height square-tube trusses, spanning up to 36m. Five light courts enlivened the megastructure along with bridges, skylights and mezzanines.⁴ The bronze-coloured steel cladding

conceals a porous building, characterized by light-filled interiors animated by exposed structure and mechanical ducts painted in primary colours.

Forty years later, while the university has expanded to adjacent city blocks, it has also found expansion opportunities within Centennial Hall itself. As Serena Keshavjee has observed, "in the end this very flexibility contributed to the building's devaluation, as renovations, cheap and easy to facilitate, slowly filled in glass walls, student lounges, courtyards, and the other free spaces, dramatically altering the visual impact of the interpenetrating indoor/outdoor spaces."⁵

Simon Fraser University

According to Banham, Simon Fraser University was "more frequently described a megastructure."

ture than any other North American university,” and was concerned with “extensibility and creating space for an almost classical conception of academic discourse.”⁷⁶ This new university, on Burnaby Mountain near Vancouver, was founded on the idea of universality of education. Rejecting the specialization of knowledge and the traditional separation of faculties, architects Erickson/Massey and the university’s founders favoured interdisciplinary work and a closer relationship between faculty and students.⁷

The linear academic acropolis was organized around a series of formal terraces, created by a multi-storey building bridging two hilltops. The spine of the campus remains the Central Mall, which the architects called the social crossroads of the university, around which theatres, art galleries, a bookshop, and cafeterias were grouped. Various architects designed the buildings, with direction from Erickson/Massey.⁸ One of the most powerful spaces is covered by a space frame of laminated fir, stainless steel and glass and supported by three-storey high concrete colonnades.⁹ (Figure 3) The space is characterized by its physical and visual connections to the adjacent spaces and to the mountains and sky beyond. Designed with J.B. Lindsay, a collaborator of Buckminster Fuller, the vast and luminous umbrella remains the university’s most dramatic symbol of unity.¹⁰

Simon Fraser University continues to be widely recognized for its enduring architectural excellence, perhaps in spite of considerable subsequent growth. Additional buildings have been “plugged into” the Central Mall, and the axis of the Mall has been extended in either direction to accommodate a much larger institution. These necessary expansions have somewhat overwhelmed the Erickson/Massey plan; the original orientation to the central spine has been lessened by the largely self-contained complexes marching down the terraced mountainside.¹¹

The Future of the Dinosaurs of the Modern Movement

While there is considerable diversity amongst megastructures in Canada, each place having its own specificity, the buildings also have some commonalities. These buildings demonstrate multi-disciplinary design and the integration of planning, architecture and engineering, along with industrial design and the fine arts. A government or publicly funded organization commissioned all but one. These megastructures are the monuments of an era in which civil society and social democratic values were promoted in the form of access to higher education, health care, justice, the arts and recreation. (Figure 4) Despite the fact that each building has a single owner, in each case the multiple stakeholders create considerable pressure for change. At McMaster, while the interstitial space has been a success, the other pre-determined means of providing flexibility proved to be limited. At Centennial Hall, the opportunities for expansion have been exploited in a manner that has undermined, in part, the inherent spatial qualities of the building. At Simon Fraser, in spite of the high level of integrity of the original, it is the character of the perimeter additions that diminishes, by contrast, what survives.

The conservation challenges are considerable, and some of them are not unfamiliar: lack of understanding and appreciation, non-existent or ineffective statutory protection, along with limited expertise. The principal challenge of conserving megastructures, however, would

Figure 4. The public urban gardens and terraced courtrooms at Robson Square. J. Ashby.

Figure 5. Habitat 67 as a “diagonal-in-space” according to the typology of J. Dakhinden. J. Ashby.



appear to be reconciling flexibility, adaptability and extensibility with conservation principles that value the integrity of the ensemble and that advocate minimum intervention. Regarding the evolution of megastructures, Banham observed that “megastructuralists generally and genuinely hoped such processes could take place – but within a framework created by professional architects and reflecting the monumental and aesthetic values of professional architecture.”¹²

While respecting the case-specificity of heritage conservation, there remains a need to better understand the legacy of the megastructure movement, through research and analysis. One overlooked opportunity may be Justus Dahinden’s 1972 typology of the megastruc-

ture, which included cellular agglomerates, clip-on plug-in, bridge structures and others.¹³ An examination of the various types of built megastructures today could be an important step towards understanding how best to conserve them. Using Banham’s dinosaur metaphor, it would be a matter of better understanding each of the species of dinosaur; that is, Montreal’s Habitat 67 as a “diagonal-in space”, Toronto’s Ontario Place as a “clip-on plug-in”, and Lethbridge University as a “bridge”, among the other megastructures of those types. (Figure 5) This, along with other lines of research, would aid in developing conservation strategies aimed at protecting the full richness of the values that these places hold.

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Monuments of Industry and Infrastructure as a Challenge for Re-Use

Uta Pottgiesser

Introduction

Modern building technology of the 20th century has often been a radical expression of the innovative and sophisticated use and combination of designs, materials, components and structures. Modern monuments dedicated to infrastructure and industry are interesting cases. The application of functional building concepts and constructions has to be considered being part of the programme: the buildings cover large areas to provide space for fill mass, machines, pipes or engines, trains or airplanes. They are expression of the rapid growing metropolis of the early 20th century in need of electricity, water, heat and mobility – a symbol of modern times.

Typical Industrial Monuments

Many monuments of that time are representative for the functional and architectural character of industrial buildings of that time. The mainly functional approach of the building allowed on one hand a more consequent use of modern technology and components. On the other hand the representative character of this public buildings limited the technological possibilities to what the public and the client accepted to be an expression of the existing building culture. Many of them have been de-

signed by architect-engineer-tandems showing typical and in so far can be considered forerunners of holistic building concept that were often depending on specific technical requirements with a huge impact to urban and environmental demands. As electrification was one of the driving factors for the urban development, its build expression were the power and transformer stations (e.g. transformer station in Berlin-Kreuzberg 1924-26, heating plant in Dresden 1925-26, diesel power station in Cottbus 1928). Subsequently the new urban population called for optimised transportation and supply, expressed by warehouses (e.g. Danzig Warehouse in Cologne 1908-09, Erlwein-Warehouse in Dresden 1913-14), traffic buildings (Tramway-Station in Dresden 1925-26) and later airports (e.g. Berlin-Johannisthal in Berlin 1909, München-Puchheim 1910, Berlin-Karlshorst 1917).

Two of those building types in Berlin are in discussion to be prepared for a further use in the 21st century. They are addressing their impact on the refurbishment of large open spaces and simplified industrial building skins in combination with the requirements of energy efficiency and user needs and with a strong impact to the landscape and the environment:

- Klingenberg Power Station, Berlin 1925-26,
- Tempelhof Airport, Berlin 1936-41.



Figure 1. The administration building of Kraftwerk Klingenberg (1925-26) has large vertical brick columns but shows horizontal separations at floor level with a perforated facade for the office functions. Uta Pottgiesser.



Figure 2. The typical decorative brick facade of the early 20th century is combined with an industrial glazing system of the late 19th century; envelope of a modern energy plant. Uta Pottgiesser.

Klingenberg Power Station

has been the first large power plant in Berlin built as a steel skeleton with brick bracings. The architects Walter Klingenberg and Walter Issel were using representative and known expressionist elements combining them with the formal vocabulary of “Neue Sachlichkeit”. They were collaborating with the engineer Georg Klingenberg, the brother of Walter, who was known for his innovative plant concepts within the company AEG in Germany. Next to the architecture the most impressive aspect is the environmental and social aspect that was part of the operational concept. The plant was heating the water of the open-air swimming-pool at the river Spree – the largest warm water pool of that time used by up to 10.000 people each day.

The massive multi-storey administration building is divided into typical floor levels with office functions with a perforated façade. Due to the large and height factory areas the technical parts of the power station have different facade partitions with significant vertical elements for the staircase towers. Unlike the administration building the energy plant combines a typical decorative brick facade of the early 20th century with an industrial glazing system of the late 19th century. Similar to other power stations the spatial programme consists of large turbine and machine halls in combination with switch- and pipe-areas. Vertical separations were not common or if established of reduced height due to their technical purpose.



Figure 3. The warehouses were early constructions in reinforced concrete covering large areas with floor heights of only 2,40 - 2,70 m. Uta Pottgiesser.

Tempelhof Airport

Tempelhof airport is the 10th building in Germany to be recognised as one of the most important engineering works of the 20th century. The architect Ernst Sagebiel also designed the Air Ministry in Berlin that was completed in 1935. In terms of functionality it is a milestone in the worldwide history of airports with great significance for the development of civil aviation. The size of the airport itself and of its airfield was far bigger than required for the aviation of that time. Together with the adjunct office and administration buildings the airport is a monumental urban ensemble and was the largest building of the world at that time. Open floor plans are used for the public functions of the airport and for the hangars.

Also the engineered structures of the airport are of extreme dimensions. The boarding area of the airport is heading the airfield with an overhang of 40 m built of a cantilever welded

steel construction. Even more impressive is the fact that the airfield roof was also designed to accommodate 65.000 spectators. The massive concave backbone of the boarding and the hangar areas is a combined construction of steel and reinforced concrete. The traditional architectural language with a cladding of yellow shell limestone is standing in contrast with the puristic steel skeleton heading the airfield.

Open Floor Plan and Building Envelope

Industrial buildings deal with additional challenges when using the open floor plan and flexible space design in comparison with residential buildings. The height of the spaces influences not only the spatial arrangement and design but has a crucial influence on the user's comfort in combination with the building envelope and

vice versa. Both aspects are interacting with the building services for heating, lighting and ventilation. Although using similar frame and glazing systems the both cases are dealing with different weaknesses concerning the building envelope and with influence to future concepts of re-use:

the envelope of the Klingenberg power station has only few glass openings as natural lighting was not required for the original use. The glass openings were filled with translucent glazing - often wired glazing - that was cheaper and offers additional security advantages. A separation of the interior open space would lead to a further increase of the existing disadvantages of low natural lighting. the envelope of the hangar and airfield at Tempelhof airport has large glazed areas partly over 50 % of the overall height and surface. Depending on the use they are transparent (airfield) or translucent (hangar) so that natural lighting but also thermal loads are brought into the building. In addition most of the envelope's openings are created for industrial use with airplane-sized movable doors that might not be needed for new functions. This means a poor durability and density of the envelope concerning the hydro-thermal performance, an insufficient thermal insulation of the steel-framed windows and doors, including leakage at profiles.

Options of Revitalisation

The re-use of those buildings is posing a specific challenge as a new interpretation and arrangement of the large spaces is needed - in the tradition of open plan concepts but with new flexibilities. This does not only mean to look at the interior spaces but to consider a concept for the landscape and the environment as part of the original building typology and use as well. An-

other impact to the treatment of floor plan and building envelope is the question of permanent or temporary use. Many examples of re-use of energy plants have been realised within the last two decades due to the decline of inner-city industrial production and because a modernisation of energy generation and grid is needed. Most of them are linked to cultural functions for the public and popular representation of art and culture - taking Tate Modern as a role model. Similiar solutions have been applied for the transformer station in Berlin-Kreuzberg, the power plants in Cottbus and Dresden or the well known world heritage site of the Zollverein coalmine in Essen housing different museums, exhibitions, restaurants and studios.

Klingenberg power station is still in use. The energy provider plans to modernise the power station with new biomass and heat exchange units to reach a CO₂-neutral production. Site and construction of the existing plant still fulfil actual requirements. Together with new building developments for small industries and housing the environment will be optimised.

Tempelhof Airport is now a public park that shows the potentials of large spaces for an adequate re-use - inside and outside of buildings. The dominant airport building with it's unique history, size and architecture is defining the shape. The general principle "Tempelhofer Freiheit" (Tempelhof Freedom) wants "to naturally integrate the airport building and the former runways into the park landscape". The building itself is supposed to become a "platform for future-oriented discourses and innovative products". Themed as "Stage of the New" the basement's large spaces (main hall, hangars and apron) are already used as spectacular event areas that offer space for the international creative business from fashion to lifestyle, sports to design and for new technologies. Advantage and concept is that the open plan and the space can be kept in their original size and dimension.

Figure 4. The boarding area of Tempelhof Airport (1935-41) is heading the airfield and is impressing with an overhang of 40 m built of a cantilever welded steel construction. Landesarchiv Berlin.

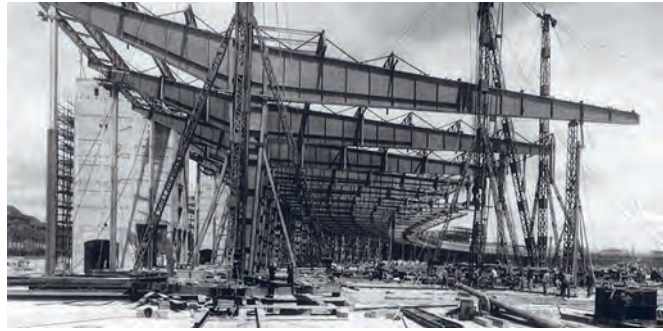


Figure 5. The massive concave backbone of the boarding and hangar areas is based on a of reinforced concrete construction clad with limestone. Landesarchiv Berlin, Thomas Platow.



Concluding Remarks

Many of modern industrial buildings have already been re-used. A challenge was and will be to combine the spatial options with constructive and energetic solutions that are taking account of today's environmental requirements. Energy- and cost-effective concepts have to be developed individually for each building to guarantee long term use and so conservation through re-use.

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Kaleidoscopes and Modern Interior Design

Inside the Home of Lina Bo Bardi

Marta Peixoto

The concept of overall design has played an important part in the architectural production of the 20th century, both in terms of scale and in the planning everything, or at least supervising it – from the structure to the furnishings, wallpaper, carpets, lighting, door handles, table cloth and even the flower arrangements. But it does not take just one single form.

Apart from the fact of the casing and contents having the same general characteristics, in some examples the strict arrangement of furniture and objects forms a grouping marked by uniformity. In others, objects and furnishings appear as constellations brought together by criteria other than similarity, whether in terms of materiality, style, proportion or origin, with little relationship to the creation of any conventional form of unity. In these cases the occupant is enveloped in a mantle of heterogeneity that can be further moderated by accumulation.

In domestic interiors there are specific variables, whether at the time of their conception

or throughout their working life. One is greater susceptibility to intervention of the client who often assumes the role of designer. Even the homes of architects themselves there may be a spouse or family member who becomes involved in the decisions. Other is time, responsible for the many natural transformations of life, working to support the transitoriness of the home interior. Lastly, the private nature of use allows possible changes in the design to remain hidden.

In this context, the house designed by Lina Bo Bardi (1914-1992) for herself and her husband, Pietro Maria, a prominent antiques dealer and cultural promoter, provides a case study that extends further than the architect's gender or nationality.

The building was completed in 1951, in São Paulo, in the Morumbi district, almost uninhabited at that time. Although the architecture of this building is quite well known and extensively commented upon, this analysis concen-



Figure 1. House photos in the 1950's. These images were assembled from scanned photos from the book *Lina Bo Bardi – Casa de Vidro – The Glass House. 1950-1951*. Lisboa: Editorial Blau, São Paulo: Instituto Lina Bo e P.M. Bardi, 1999.

trates on the interior design of the living spaces throughout its more than 60 years of existence.

In the social area, three of the four elevations - the external ones - are made of glass. The roof is a concrete slab with two gently sloping pitches, rendered and painted inside. There is no lining or anything else in the ceiling, not even lighting points: illumination comes from conical fittings set into the few walls and from several sockets in the floor, made from blue glass mosaic tiles. The glass façades - southeast, the largest, northeast and southwest - are free from the pilotis, also painted blue, which are further inside the house perimeter. The framed windowpanes reach to the floor and slide like doors, yet there is no form of balustrade. There is a white Plavinil Vynilite curtains along the perimeter also used around the garden and as a way of separating the dining room from the other areas: these rails are the only elements to interrupt the continuity of the roofing slab.

The space inside is organised into four sets: the library, the living room, fireplace and dining area, with few fixed furnishings - like the bookshelves (designed by the architect), which are leaked and placed away from the walls. In front of them, a row of empire-style chairs brings a touch of contrast. In the other hand, this big room has little in the way of loose furniture: somewhere around ten armchairs, in two different models, both designed by Lina Bardi,¹ which define two contiguous living areas. The

unity of the furniture style is also broken into dissonant groupings, such as a 16th-century cupboard supporting a group of statues or the figurative counterpoint of a statue by Ernesto de Fiori.²

In the dining room the furnishing is classical and the masonry walls are decorated with paintings by artists such as Rouault, Morandi, Severini, Sironi, de Pisis, Papazoff, Stradone, Rosai, all connected with the so-called avant-gardes of the 20th century. Another calculated shock of periods.

Lina Bardi herself said about interior design:

“Existe uma tendência, embora modesta, de eliminar da casa os objetos antigos. Aliás, no caso desta residência, a observação mais comum é que parece um “museu”. Ter sobre um móvel um vaso de Orvieto do Quatrocentos é talvez mais confortável para quem gosta do Renascimento e portanto da história, do que possuir um objeto qualquer encontrado na rua barão de Itapetininga³. Ao lado da cerâmica de Orvieto, pode-se ver outra, não de Picasso como nas casas dos petits bourgeois de regresso de Paris, mas de Melotti. Apreciar o antigo, o passado, a história, é o único índice cultural que diferencia o homem moderno dos visitantes de estádios e hipódromos.”⁴

[There is a tendency, albeit modest, to remove old objects from the house. Indeed, in



Figure 2. House photos in the 1980's. Lina Bo Bardi.

the case of this home, the most common observation is that it seems like a “museum”. To have a 15th-century Orvieto vase on a piece of furniture is perhaps more comforting for someone who likes the Renaissance, and therefore history, than owning any object found in Barão de Itapetininga street. Next to the Orvieto ceramic is another, not by Picasso, as one might find in the house of the s returning from Paris, but by Melotti. Appreciation of the old, the past and history is the only cultural indicator that distinguishes modern man from visitors to stadiums and racecourses].

Current records of the house in the 1950s consist mainly of the photographs published in the magazine *Habitat*, number 10 (1953), and in the book of Henrique Mindlin, *Modern Architecture in Brazil* (1957). Looking at those pictures, references come to mind of a *Miesian* relationship, such as the Barcelona Pavilion (1939), due to the slender pillars, the fluidity of space guaranteed by the sparse, loosely arranged furnishings, and the Tugendhat house (1930), with the theme of internal space extending outdoors through the transparent façade, which is also a feature of Mies's Farnsworth House and the Philip Johnson Glass House, both completed in the same period.

On the other hand, unlike those foreign examples, when the Brazilian glass house is ana-

lysed together with the couple's furnishings and objects it takes on a quality that distinguishes it from the stylistic purity of Mies and brings it closer to the more open *assemblages* of Le Corbusier or Lucio Costa, both of whom had an eclectic sensibility that allowed them to suggest different categories of combinations and mixtures. These are also examples that discredit those gender considerations that confine the successfulness of this operation to the architect's familiarity – and that of women in general – with domestic life. Far from being devoid of aesthetic intention, Lina Bardi is proven to be talented and successful in her intention of using interior design as a resource that brings sophistication to architecture.

When it was built the house displayed a stripped-down, balanced and restrained interior, even if somewhat diverse. But over time the gradual process of accumulation leads to another arrangement, which appears in publications almost as much as the first version, without greater reference to the decades that separate them. The images merge together: both seem to be the same glasshouse but they are not. The container seems the same, although a little worn, but the internal spaces and even the surroundings have changed considerably.

The living spaces have been transformed by a proliferation of furniture and objects multiplying through the space with no concern for arrangement into specific sets. This is reaf-



Figure 3. Lina Bardi in the 1950's.
Lina Bo Bardi.



Figure 4. Lina Bardi with her husband,
in 1980's. Lina Bo Bardi.

firmed by the floral carpets, which are not always directly related to the arrangement of the furniture and seem more like exhibition pieces. The baroque statues and renaissance *cassoni* now live side by side with popular craftworks, colonial artefacts, art nouveau vases, north-eastern clay pots, contemporary designers furniture, a velvet *bergere* and even pieces of bric-a-brac, such as an Esso Tiger's head³. As well as those objects there is also equipment like the TV, evidence of actual use of the house. The curtains are no longer made of white vinyl but of raw linen, just as the upholstery fabrics for Lina Bardi-designed chairs are no longer the same.

Outside the house, the vegetation has grown and considerably changed the view and the surrounding atmosphere. As a counterpoint, inside the house several houseplants are scattered through social area.

All these furnishings and objects, of different categories and provenance, live together: there is no synthesis, each piece retains its integrity, like objects in an exhibition. The general feeling is similar to the interiors of 19th-century collectors. Born out of a tolerance of mixtures, the interior design of the house has over time become a kind of permissive.

Even if it is based on an overall plan, the interior design is relatively easier to transform, whether through addition, change or removal,

as many examples can attest. The shell of the building itself is different: it remains constant, like a regular, stable box with a variable interior, like a kaleidoscope – that cylindrical object with pieces of coloured glass at one end that are reflected in longitudinal mirrors to produce endless combinations of images. Like a casing containing a system of elements that can take on infinite combinations.

Just as it is fundamental to recognise interior design as part of the modern project, it is also important to consider that it is essentially an open system, more susceptible to change and more affected by the action of time. Indeed, change is one of its essential characteristics, which is demonstrated throughout the use of the building, part of its natural process of maturing. In the case of this house (as often in life), getting fatter seems to be part of the aging process: more stuffing, accumulation of furniture and objects accompanied by a degree of difficulty in discarding or letting go.

Looking at the photos of Lina Bardi, she herself is much more filled out in her later years, far from the slender figure of the photographs from the 1950s. House and architect aged not just physically, but also in collection of experiences. As a result, there are two different versions of the same house. Perhaps they are projects by two different Lina Bardis as well. Which is the version that should be preserved?

It is important to understand the work of preservation as a project and, as such, each has its own specificities, variables and circumstances, without establishing a priori rules. Looking at this example, what one discovers is a kaleidoscope house (understood in its more colloquial sense,

as synonymous with a set of things that succeed each other and transform themselves over time): a work in progress. Rather than preserving one of them, it is important to register change as its essential characteristic, the fact of the house being various houses telling a life story.

Notes

- 1 *Bardi's Bowl* was designed at the time, but does not appear in the original photographs.
- 2 An Italian artist, whom Lina Bardi must have met through Gio Ponti. Like others, he was invited to show a series of models aimed at the programme of art integration originally envisaged by Le Corbusier to the Ministry. What was produced did not please Lucio Costa, however, who took overall responsibility for the programme, and judged that the works lacked the "architectural and monumental meaning the M.E.S. was interested in."
- 3 In the early decades of the 20th century Rua Barão de Itapetininga became one of the most elegant streets in the city.
- 4 Lina B. Bardi, "Residência no Morumbi," *Habitat 10* (1953): 38.
- 5 A character who became popular in the 1950s and appear in TV advertisements in the 1970s.

Active Musealisation for the Preservation of 20th Century Interiors

But for which Public?

Roberta Grignolo

According to the more radical statements of ‘modern’ architects, the design of interior spaces is closely linked to that of exteriors. This should lead to considering interiors and exteriors as indivisible when it comes to preserving 20th century architecture, but this is not always the case. Modern interior spaces are highly vulnerable: they undergo frequent transformations owing to the turnover of their occupants; furthermore they have much to do with private lifestyles and the way occupants appropriate the space around them.

The complexity of preserving modern interiors stems from practical factors—a chronic lack of funding for restoration results in priority being given to the restoration of architectural exteriors; the difficult task of ascertaining the original conditions of interiors; the issue of adapting interior space to functional and current legal safety requirements—as well as from disciplinary shortcomings: in particular a lack of criteria for the description (and selection) of modern interiors. As stated by Bruno Reichlin “the history of 20th century interior space is still an insufficiently identified object”.¹

Some 20th century interiors materialise lifestyles that are disappearing or no longer exist. Considering how frail and rare extant modern interiors are today, it would be desirable that a selection of carefully chosen “exemplars” be preserved intact (including their interiors) and transformed into “museums of themselves”, without emptying them of their original contents which provide an immediate understanding of the function of the spaces and of how they were used.

“Museum of itself” has become an accepted expression in contemporary museography; however in current disciplinary discourse there is often a negative connotation associated with “museification” or “musealisation”, especially in the case of 20th century works. The two terms are frequently used as synonyms of “mummification” and musealisation projects are associated with a reactionary approach and a lack of creativity. Nonetheless the never-ending production of new heritage objects² is an intrinsic hallmark of our era; museification is just one of many possible heritage preservation approaches and should not be demonised but rather consid-



Figure 1. Sonneveld Huis in Rotterdam, by Brinkman and Van der Vlugt (1933). Restored and transformed in a “museum of itself” by Molenaar & Van Winden, it has been open to the public as an item of the NAI collection. Roberta Grignolo.

ered as one of a slate of alternatives: an additional option in heritage preservation.

Most instances of “museified” modern architectural works are, for a variety of reasons, single-family houses.³ Considering some of these buildings can help to better understand the many positive features of preserving modern interiors by transforming them into “museums of themselves”, thereby acknowledging such interventions can’t be defined as “embalming” or “lacking creativity”.

The restoration of the Sonneveld Huis in Rotterdam, by Brinkman and Van der Vlugt (1933), is widely considered an exemplary case of musealisation. The building is not a manifesto-house, nor the demonstration of a given concept of Modernity, but rather an extraordinary testimonial to how the progressive Dutch bourgeoisie lived in the Thirties. It thus deserves to be preserved for disciplinary reasons (linked to the history of architecture) as well as for reasons related to the histories of society, of taste and of cultural sensibilities.

Following an “archaeological approach”⁴ and starting from a fair state of preservation, an enlightened strategy grasped the potential advantage of transforming the house into an exhibit that could be added to the Netherlands Architecture Institute (NAi) collection. The house was thus restored to its 1933 condition, thanks to an intervention that was meticulous enough to even preserve the electrical wiring and switches. The result is all the more praiseworthy in this case because, on the basis of preliminary research and the state of conservation of the house, the institutions involved in the project discarded the initial option of transforming the house into a museum of something else (in this case a design museum), and chose instead to restore (and, where needed, to reconstruct) the exteriors and interiors to their original state. The quality of the restoration is closely linked to the choice of the finishing materials, of the tubular metal furniture— for which a carefully balanced combination of original/copies/ present-day replicas was chosen—of the cur-



Figure 2. Dining room and living room of the Sonneveld Huis in Rotterdam after the restoration: the finishing materials, the tubular metal furniture, the curtains, the carpets, the paintings and the colour on the walls all contribute to conveying the quality of the original interiors. Roberta Grignolo.

tains, the carpets, the paintings and the colour on the wall surfaces.

The close links and consistency between exterior and interiors are an argument in favour of this type of approach, whereas transforming modern buildings into museums, as in the case of Villa Kraaijeveld (also in Rotterdam and designed by Gerrit Baas, 1938) transformed into Chabot Museum, or Mies van der Rohe's Häuser Lange and Esters (1928–30) which became the main premises of the Kunstmuseum Krefeld, despite being a means for heritage preservation, is associated with the risk of relinquishing entire layers of meaning. By transforming modern interior spaces into exhibition facilities with a logical and continuous visitor pathway, one cannot preserve the original spatial *enchaînement*—the sequence of rooms and functions and the dimension of their use—which is fundamental in anchoring the house to its period and to its social and cultural context. In cases in which interiors can be restored accurately, as in the Sonneveld Huis, the effort is well worth it, if substantial documentation about the original conditions is available. Furthermore, any comparison, on the one hand between the Son-

neveld Huis (or Le Corbusier's Villa La Roche in Paris, 1923–25, or yet again Piero Portaluppi's Villa Necchi Campiglio in Milan, 1933–35) and on the other the Villa Savoye in Poissy (1928–1931), Le Corbusier's masterpiece that was restored and left practically bare in terms of furnishings (except for some fixed furniture and a few replicas), or Gropius' Meisterhäuser in Dessau (1925–26) proves the importance of original materials, furniture and everyday objects in conveying the atmosphere and character of an era and communicating it to non-experts. The furnishings and fittings—the carpets and paintings of the Sonneveld Huis as well as the hat collection belonging to one of the Necchi sisters in the Portaluppi Villa in Milan—do not have a merely anecdotal relevance: quite the opposite, by giving space a setting in time and in a cultural context they provide an immediate understanding of the purpose and atmosphere of a room, thereby reducing the need for explanations to a minimum.

The pedagogic value of musealisation projects cannot be denied: being able to move around and especially through a building the interior of which has been skilfully restored, is

Figure 3. Villa Necchi Campiglio in Milan, by Piero Portaluppi (1933–35). After the restoration and the creation of new public facilities, the villa has been opened to the public by the Fondo Ambiente Italiano. Roberta Grignolo.



essential in grasping how rooms relate to each other, as well as the role of natural and artificial light, colours, fixed and movable furniture in defining spaces. This is an argument that has been used to give legitimacy to the increasingly frequent instances of posthumous reconstruction or construction; however, the specificity of “museums of themselves”, which singles them out from reconstructions, is the fact that they can be seen *in situ*, where they have always been. Their interiors have kept their original dimensions, proportions, light sources, and often far more as well. *In situ* one can preserve the intangible value that is intrinsic to the relationship between the physical location (the architectural space as well as its natural and cultural setting) and the objects it contains.⁵

In some instances the relevance of these intangible ties has led to the decision to preserve the historic layers and the traces of real life experience. The Erno Goldfinger House in London (1938) is a case in point: all the objects that were present in the house at the time it was listed have been preserved. The house feels so “lived in” that the visitor, accompanied by a National Trust guide, visits it “on tiptoes” as if to avoid moving anything, or for fear of disturbing

the owner who almost seems to be temporarily out of the house on an errand.

Even in cases such as these in which interventions have been restricted to a minimum, in analysing the process that has led to opening a museum-house, one notes how musealisation is far from being a passive, non-creative, mummification process. Rather, transforming a house into a museum entails a great number of more or less “invisible” interventions that precede, accompany, and follow the public opening of the building.

First of all one must bring interior spaces up to standard. All museum-houses are the outcome of intense debate between architect-restorers, heritage conservation and safety authorities. For instance, in the case of the Sonneveld Huis, restricting the number of visitors inside the house became crucial in limiting the amount of transformation work required: by curtailing entrance to the villa to twenty-five visitors at a time, the building was considered to be a private building and subject to minimal standard compliance requirements. Likewise, in the case of Villa Necchi Campiglio, discussions between the architects and the fire safety authorities led to preserving the splendid glass

entrance door to the villa with its curved and brass-surrounded panes. The door used to open inwardly and the authorities had asked to have it either open outwardly or to replace it completely with a new fire safety door. An equivalent safety alternative was presented—that the door be permanently manned when visitors were present in the house—and allowed this “show-case” entrance to be preserved in all its details.

Taking care of buildings that have been transformed into “museums of themselves” demands ongoing and exacting maintenance and management: from the “minimum intervention” level—in the Goldfinger House the cork covered steps of the helix-shaped staircase have, for the moment, been preserved but it is expected that some form of replacement or protection will become necessary—to a “managerial” approach to transformations, which seems to become necessary in the case of high visitor numbers. Frank Lloyd Wright’s Fallingwater in Bear Run (1936–37)—with its 160’000 annual visitation—is preserved as a “living” house at the request of its donor. The complex management of the property is taken over by a “housekeeper”, as the current director Lynda Waggoner ironically defines herself. Such a role entails overseeing that fresh flowers are arranged daily about the house, that the artwork is periodically moved and treated, that the worn out upholstery is replaced, that the furnishings are accurately restored, etc.

Furthermore, presenting a house to the public is all the more effective the more fittings and facilities are designed to welcome the public: material ones as well as media, which ensure that the cultural content of the architectural work is conveyed in full. Transforming a building into a museum may, in many cases, require creating an information area in a secondary space, in which an exhibition on the building’s architecture may be set up, or an introductory video about the “architectural story” may be shown to visitors. There should also be infor-

mation about how the building has come to be in its present state, what restoration work has been undertaken and how and why it has been transformed into a museum.⁶ We are all well acquainted with the frustrating experience of visiting musealised modern buildings shepherded by non-experts: on such occasions one fully realises how important such assistance can be for the non-expert visitor. This form of support enables laymen to grasp at least a part of the scholarly knowledge required to appreciate the special features of the building and the way it testifies to its historic, architectural, cultural and social past.

One should also note how the presentation of a “museum of itself” as part of a collection can make it easier to manage: it can benefit from an existing corpus of trained guides—as in the case of the Goldfinger House, run by the National Trust—it can cut down on the need to provide visitor infrastructures on-site—as in the case of the Sonneveld Huis, which is open to the public as part of the NAI collection—and it allows communication and “marketing” initiatives to be centralised—as in the case of Villa Necchi Campiglio in Milan, which has been opened to the public by the Fondo Ambiente Italiano (FAI), and also in the case of the splendid house by architect Patrick Gwynne, The Homewood (1938–39), which, had it not become part of the National Trust, would still be unknown to the general public.

Françoise Choay has defined historic heritage as “a resource intended for the enjoyment of a community whose scope has been broadened to planetary scale, a resource created by the continuing accrual of a multiplicity of objects which share the common feature of belonging to the past”.⁷ The use of the word “enjoyment” is pertinent in that it emphasises the “use” that is made of heritage, it is this use which transforms it into heritage. Hence, the transformation of some of the 20th century icons into museums of themselves, “Sleeping Beauties” as some schol-



Figure 4. The collection of hats of one of the Necchi sisters, on display inside the Villa Necchi Campiglio. The furnishings and everyday objects give each space a setting in time and in a cultural context. Roberta Grignolo.

ars have called them,⁸ is in no way a sterile but rather a fruitful transformation!

In considering modern interiors specifically, musealisation is the only way to provide broad public access to this type of cultural heritage, which otherwise remains accessible to architects and historians alone.

The last few years have clearly shown that one of the main issues in protecting 20th century heritage today is a lack of communication with the public, which still finds it hard to accept that a building of the Fifties can be a monument. This state of affairs will not change if we are unable to make use of the tools within our reach. Heritage is a key element in building specific cultural identities, however if one continues to consider musealisation as something extreme, or even negative—because of increased monument wear and tear, or because it creates an “artificial memory” (i.e.: something selected and recreated ad hoc), or because it boosts “tourist exploitation” and the creation of “theme parks”—future generations will have no knowledge of entire decades of recent history. Unquestionably, it will not be books that will create an interest in young “digital natives” for the architecture of the past century.

The great success of musealisation ventures—the Schroeder house in Utrecht by Gerrit Rietveld (1924), Fallingwater, etc.—proves that the public is strongly attracted to being able to access a world they would otherwise have never known since it no longer exists. When masterfully restored, “museums of themselves” can work as “time machines”, providing their visitors with an extraordinary opportunity for cultural enrichment. Musealisation is therefore a key approach in handing down what remains of 20th century lifestyles to future generations.

All operations on built heritage should be considered in terms of a general strategy focused on informing future generations about their history, making use of comparative analyses in which the building one intends to pre-

serve is compared to other buildings belonging to the same period and genre: this will provide a clearer understanding about whether it is worth transforming the building in question into a museum of itself or whether an alternative building should be selected. By following this approach, any modern building that is saved and transformed into a museum of itself will testify to a distinct lifestyle or specific social project that now belong to the past.

All museified modern architecture can therefore be seen as an invaluable “bait” with a potentially key role in developing and educating future “conservation advocates”—among students and children too. This requires expanding offering of didactic and cultural activities, as long as this is compatible with the state of conservation and the specific features of the architectural work.

Hence, far from being a passive operation, musealisation is one of the most effective tools— and in an increasingly virtual world it is one of the only physically tangible ones—we have to acquaint future generations with architectural interiors from the recent past.

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- 1 Bruno Reichlin, "La storia al servizio della salvaguardia dello spazio interno del XX secolo. Ma quale storia?", in *Lo spazio interno moderno come oggetto di salvaguardia / Modern Interior Space as an Object of Preservation*, eds. Roberta Grignolo, Bruno Reichlin (Mendrisio-Cinisello Balsamo: Mendrisio Academy Press-Silvana Editoriale, 2012).
- 2 Nathalie Heinrich, *La fabrique du patrimoine. De la cathédrale à la petite cuillère* (Paris: Maison des Sciences de l'Homme, 2009).
- 3 Some of the reasons single-family houses are better suited than other modern buildings to be transformed into "museums of themselves" are as follows: being a "family" asset, handed down from father to son, their state of conservation is generally good and true to their original state; their size is usually contained; they often belong to a single owner who holds decision-making powers over the future of the asset. Moreover, the private status of single-family houses has driven modern architects to use them preferentially for their experimentations: many modern homes are manifesto houses, unique works designed as *Gesamkunstwerk*, in which the interiors have been custom-designed for the space available. In these cases their transformation into "museums of themselves" is also easier to justify in the eyes of an uninitiated public.
- 4 Joris Molenaar, "Restoring Sonneveld House: a modern bourgeois villa from 1933 as if time had stood still", in Grignolo and Reichlin, *Spazio interno moderno*.
- 5 Alessandro Coppellotti, "Il museo di se stesso e la salvaguardia di un'identità", in *Casa Martelli a Firenze. Dal rilievo al museo*, ed. Alessandro Coppellotti (Firenze: Edifir, 2001), 11.
- 6 In the Sonneveld Huis the area chosen for this purpose is in the basement, in the Goldfinger House it is in the garage.
- 7 Françoise Choay, *L'allégorie du patrimoine* (Paris: Editions du Seuil, 1992), 9.
- 8 Marieke Kuipers, "Fairy Tales and Fair Practice, Considering Conservation, Image and Use", in *La reception et l'architecture du Mouvement moderne: Image, usage, héritage / The Reception of Architecture of the Modern Movement: Image, Usage, Heritage*, eds. Jean-Yves Andrieux, Fabienne Chevallier (Septième conférence Internationale de DOCOMOMO / Seventh International DOCOMOMO Conference, Paris, 16-19 September 2002, Saint-Etienne: Publications de l'Université de Saint-Etienne, 2005), 207-213.

Hidroeléctrica do Cávado

Architecture to be Reborn

Ana Raquel

Pimentel Machado Pratas



Figure 1. Vila Nova, workers neighbourhood.

Portugal was, in the first half of XX century, a country marked with a deep rurality. Sustained by the idea that the vocation of its people was the farming labour, that “*our roots dove deep into the native land*”¹, the industrialization process, the agrarian reformation and the electric power production, repeatedly demanded by engineers and industrialization ideologists, were continually postponed by Salazar’s totalitarian government.

Established in 1945, HICA – Hidroeléctrica do Cávado led the claimed technological improvement of the country. Only then accepted the urgency of industrial development and specifically hydroelectric, the exploration of Cávado-Rabagão fluvial system revealed itself

crucial once it was located near the major consumption area that was northern Portugal. In addition, this region of great pluviosity had also a topography that offered high falling elevations and large capacity dams, consenting a low cost construction in face of the amount of energy produced.

Between 1945 and 1964, HICA built four dams – Venda Nova, Salamonde, Caniçada and Alto Rabagão. Constructing these dams required a great number of workers enlarged by their families, totalizing several thousands of people. This wide population, in its majority dislocated from other regions, demanded residential settlements attempting to guarantee minimum dwelling and social conditions.



Figure 2. Vila Nova, hydroelectric power station.

Accommodations for workers occupied in the construction field were divided between temporary buildings for the company lower staff (housing, dormitories, bathhouse, refectory, shop, medical centre, stores, offices, etc) and permanent buildings for directing staff. With a permanent condition, each settlement would have houses with several standards as well as chapel, primary school, social centre and lodging-house for single directing workers². It was attempted, in one hand, to assure comfort conditions as high as possible to the hierarchic top of the company during the construction work. On the other hand, concluded the dam, these buildings would be used by the workers on charge of operating the hydroelectric enterprise.

HICA had building designers among its staff however, because of the representative and hierarchic condition of these permanent buildings, architect Januário Godinho (1910-1990) was called to cooperate with the company team, drawing the houses, the lodging-houses and the hydroelectric plants.

In the 40s, Portuguese architecture was swinging between the enthusiasm of Modern Movement and the monumentalism and regionalism promoted by current totalitarian

government in order to achieve a so called national identity. In parallel, some variants closer to Nordic empiricism or Wrightian humanism were gaining relevance, searching for knowledge in traditional architecture, in re-interpretative ways. Godinho was located at this crossing, and in his work he invokes these multiple references. For HICA, designing buildings with distinct programs and hierarchically distant, he explores different typologies and formal and conceptual structures depending on program specificities and requirements.

Industrial buildings – hydroelectric station and control buildings – evolves from eminently industrial architecture in Vila Nova, in the severity of structure assumed between glass plans and in the clearness of uncovered materials, to Alto Rabagão, a modernist building in its volumetric image but in which are overturn some of those paradigms and where material expressiveness is eloquently used.

Housing buildings result of an appropriation of traditional models, either on residential typologies, or on constructive systems and formal arrangements. In these cases, more than on architectonic formal or conceptual principles, Godinho's work lays on the search for a harmo-

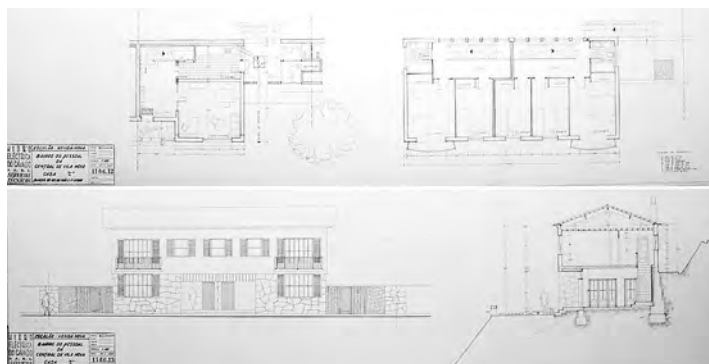


Figure 3. Vila Nova, houses for direct-ing workers - ground plan, 1st floor plan, elevation, section.



Figure 4. Salamonde, lodging-house.

nious feature comprising the whole complex, its integration with the surroundings and the communitarian arrangement that could be provided by architecture.

Echoing the rural environment where they were arising, these settlements constituted, by then, a rare example of planning being taken to the inner country, and it was happening not as a foreign formula overcoming the existing land but as an innovative moment of interpretation and sketching the territory. By the intimacy, the ambience, by the identification and the adjustment with vernacular architectonic culture, HICA settlements would in some way anticipate the work that would be made at the time of questioning modern premises and of homecoming with popular knowledge, by the decades 50 and 60. Then, unchained by Inquiry to Regional

Architecture, would take place several experiences of approach between architects and rural communities.³

In lodging-house buildings, Godinho intersects Modern with Nordic references, through a deep association with local materials and constructive systems. Besides, he comprises allusions to Frank Lloyd Wright, in its roofs gently slanted, in its windows openly horizontal dissolving exterior and interior or in the ambience and luminosity expressively conceived. Accommodating high hierarchic staff besides visiting individualities - either political or scientific, national or foreigner - these buildings were thought as the visual visage of these ventures, trustee of the eloquent image they aspired and, because of that, object of a sturdy research on formal and conceptual terms.

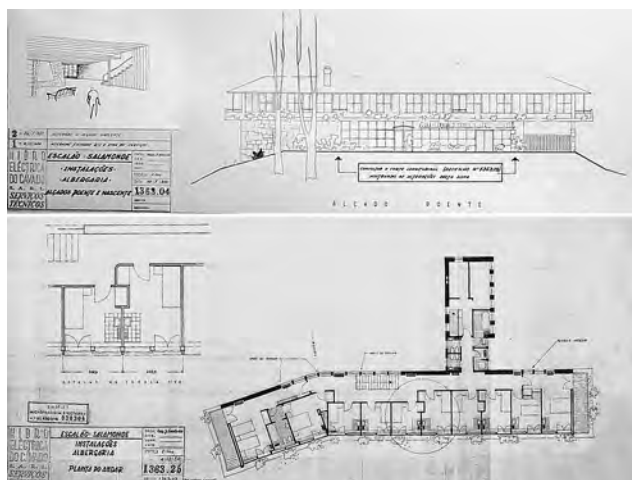


Figure 5. Salomonde, lodging-house - elevation, section.

By the time of questioning modern understanding among Portuguese architects, HICAs lodging-houses were references. Even if not having the same reflexive and analytical framing that would constitute the fundament of the ideological turnover of the Inquiry period, this architecture was coming ahead⁴. These buildings were known and observed, considered as a trial field to the ideological revolution that was to come.

“Above all, it is about understanding landscape peculiarities, vernacular construction resources, and mainly creating sheltering ambiances, spatially sundry, according to psychological intentions that were included in their program. Liberty to respond to the circumstances overcomes for the first time the formal system preconceived, composing internal ambient and its perception from the exterior rule the organization of the building instead of order themselves inside a volumetric shape intuited previously and abstractedly.”⁵

The commission was covered with complexity, constraining to work over the deeply hierarchic structure of the company which would be de-

terminant in the whole structure of settlements and buildings, performing in retired places, poor, with bad communication ways and with no services, managing requirements of architectonic quality and comfort and simultaneously demands of controlled cost. Architectonic solutions respond to that complexity. They overcome the formal concretion of the buildings and they take root in the visceral relation that they establish with the environment, topography, landscape, and also with its program, the demands of construction labour and of the community. Modern Movement is neither acclaimed nor refused; it is used, in some moments, in its formal principles or in its volumetric strategies, not signifying, however, any kind of ideological affiliation. In some way, the approach to traditional characters proceeds from a geographical imposition which was accepted and explored – it did not constitute yet, at least not in a conscientious way, the critic recovery of popular culture. Even the identification with Wright, assumed by Godinho himself – *“At present, architecture is, in its essence, Wrightian, I mean, it moves vertiginously to a form more sensitive and human, more inspired and less thoughtful, perhaps less intellectualized and abstract, yet more identified with the men who live it and with the*

land where it lays its foundations.”⁶ – does not constitute a stylistic or formal limitation. The concepts of integration, harmony, intimacy and constructive expressiveness from the American architect are adopted but they are continually interlaced with other architectonic thoughts.

“Beautiful objects that highlight themselves as notable landmarks in history of portuguese modern architecture,” in them it became understandable “the value of site, the telluric strength of Gerês mountains,(...) according to the desire of integrating design in the context of landscape, cleverly exploiting its potential with harmonic forms capable of granting rich spatial experiences through tensions, discontinuities, surprises that suggest to commotion.”⁷

Nevertheless, architectural work has a limited lifetime, just as any thought has a period of time in which it remains valid. Initially, these buildings responded to program and context, involved by the belief of hydropower as the impeller of portuguese future. Today, when technological development determines that machinery is remote controlled, not requiring large number of permanent workers associated with power plants, context was transformed and houses, accommodations and other equipment became obsolete and were abandoned.

Alexandre Alves Costa has said *“There remain some monuments scattered and classified, castles and cathedrals. There remain, still, the dam structures.”⁸* Yet, even if their patrimonial value is understood and if their importance to portuguese architectonic history is recognized, mainly, if their architectonic quality is a precious belonging concerning us all, there they are, still attesting their helplessness.

Architecture offers, however, the extraordinary possibility of rebirth in successive new lives. Today tourism is assumed as a new economic paradigm and communities are advised

to return to farming activities. Besides, architecture is increasingly revealed as a public mobilizing entity, reaching out to architects who are motivated by the experience or the study of reference works, and to casual visitors attracted by space quality. HICA neighborhoods offer themselves to any of these activities, expectant and urgent. It is necessary only to rediscover context and transform program so that this architecture can be reborn.

Retrieving Fernando Távora words, *“past (...) is deeply valuable, although is essential to regard it not in itself but in relation to ourselves.”⁹*

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Notes

- 1 Speech uttered by António de Oliveira Salazar, on 28th Maio 1966
- 2 In Caniçada, instead of the lodging-house, it was built a restaurant associated with a temporary dormitory. In Alto-Rabagão, which differed because of its major size and complexity, two buildings with different standards were sharing hierarchically the lodging function.
- 3 This approaching movement culminated in 1956, on the project presented by Portuguese committee on CIAM X. There Viana de Lima, Távora and Filgueiras, defending the

importance of rural habitat, gave notice of the identification with popular culture and architecture that was happening then in Portugal.

- 4 Ana Tostões delimits between 1948 and 1955 the production of architecture ideological and formally identified with Modern Movement, considering that, from then, it would have started the revision of these principles. Assuming this temporal boundary, it occurs that Vila Nova, Salamonde and Caniçada were previous to that moment, only Alto Rabagão would take place contemporaneously.

Ana Tostões, *Os verdes anos na arquitectura portuguesa dos anos 50* (Porto: FAUP, 1997), 204.

- 5 Tostões, *Verdes anos*", 119.
- 6 Januário Godinho, "Frank Lloyd Wright - Conferência Sindicato Nacional dos Arquitectos de Lisboa," *Arquitectura* 67 (1960): 3.
- 7 Tostões, "Verdes anos", 116.
- 8 Alves Costa, Alexandre, *Textos Datados* (Coimbra: edarq, 2007), 101.
- 9 Távora, Fernando, *O problema da casa portuguesa* (Lisboa: Manuel João Leal, 1947), 3.

Revalorization of Centennial Hall and the Exhibition Grounds in Wrocław (2007-2011):

Issues in Historic Preservation and Sustainability

Hana Cervinkova

Jerzy Ilkosz



Figure 1. Restaurant Pavillion, 1945. Museum of Architecture in Wrocław.

Introduction

In this paper, we report, analyze and reflect upon the complex process of the revalorization of Centennial Hall and the Exhibition Grounds in Wrocław – the masterpiece of European modernist architecture. At the moment of its opening in 1913, Centennial Hall, designed by the German architect Max Berg, featured the largest dome in the world and was built from a highly innovative construction material - reinforced concrete. Centennial Hall had survived

the tumultuous wartime and post-war history after the formerly German city of Breslau became Polish Wrocław and has uninterruptedly continued to serve its original purpose as a multifunctional meeting facility until this day. The building did not suffer major damages during the wartime bombing of the area (which destroyed major parts of Breslau, including Poelzig's pergola and Berg's restaurant pavilion immediately adjacent to Centennial Hall) (Fig. 1).



Figure 2. Centennial Hall, 2003. Museum of Architecture in Wrocław.

Centennial Hall was also one of the symbols of post-WWII Polish Wrocław when under its new Polish name as the People's Hall, it served national events, exhibits and celebrations. Partial renovations were carried out during this time, such as the rebuilding of the pergola and the reconstruction of the former restaurant pavilion into an administrative building. In 1997, prior to the organization of the Eucharistic Congress and the arrival of the Pope John Paul II, new auditorium seating in Centennial Hall was constructed. However, apart from these partial measures, Centennial Hall's historical structure had suffered from general neglect until 2006 (Fig. 2), when a large-scale revalorization efforts of this important modernist masterpiece were launched.

The authors of this paper took an active part in the revalorization process: between 2006-2011 Cervinkova served as an executive president of WP Hala Ludowa Sp. z o.o. – the public managing company overseeing Centennial Hall, and

Ilkosz was a key member of the Historical and Preservation Committee overseeing revitalization works. The year 2006 was the year of three key events.

1) Centennial Hall was inscribed on the UNESCO's World Heritage List in recognition of its architectural originality at the time of its construction - the size of its dome, the bold use of concrete as the construction material and the overall design of the exhibition grounds. The inscription on the UNESCO List suddenly placed Centennial Hall, until then a rather ignored structure in the provincial Polish city of Wrocław, in the international context as an important world monument deserving of protection for the good of all humanity. This act also brought about the highest standards of historical protection that would guide its revitalization efforts in the years to come. But the position on the UNESCO list was also seen by the newly appointed management as an opportunity for promotion and an argument for gaining financial

backing for the monument's preservation and revitalization.

2) The second important event of 2006 was the transfer of Centennial Hall and its management company from the Polish state to the local administration. This legal action generated new opportunities for Centennial Hall - the City administration placed Centennial Hall in the center of its marketing strategy (*Wrocław - the Meeting Place*) and made its revitalization and preservation a strategic and financial priority.

3) The third area of opportunity that emerged in 2006 was the designation of the largest in scope period of EU funding for Poland for the years 2007-2013. This was a chance to gain EU funding for Centennial Hall's revitalization and promotion.

Thus, in the year 2006, Centennial Hall found itself in a new spatial context - no longer a state-owned monument on the margins of national interests, but similarly to the period when it was constructed by the City of Breslau at the beginning of the 20th century, it once again became a centerpiece of local aspirations within larger - this time global - context.

Phases of Revitalization

The guiding principle of the new management was to revitalize Centennial Hall as the 21st century meeting place, following international standards of historical preservation. A key step in this process was the formation of the Historical and Preservation Committee which served as the consulting and monitoring body in all phases of the revitalization efforts. The Committee included historians and historical preservationists who made decision in the planning and execution of investments. The general principle adopted by the Committee in their work was the preservation of the original architects' - Max Berg's and Hans Poelzig's - design and ideas, while latter additions and modifications

(both German and Polish) were of secondary importance in their preservation efforts.

At the same time, the management of Centennial Hall successfully lobbied for financial resources, raising over 50 million Euro from EU funds, local and national governments and private sources. In order to minimize losses to the company during the investment process, it had to ensure uninterrupted operation of Centennial Hall as an event facility during most of the time, raising sale levels to ensure additional resources for Centennial Hall's functioning. This challenging process had at this goal the achievement of a self-sustainable status for this world-class monument, which would ensure its financial independence in the future.

Phase I - Centennial Hall - facade, windows and roofs

The first phase of the revitalization efforts planned and carried out between 2007-2010 was the revalorization of the facade, windows and roofs of Centennial Hall. The planning phase of this investment task lasted almost three years. Following extensive archival research and a rigorous consultation process with experts¹, a total of 600 wooden windows covering 2,500 square meters (26,900 square feet) were repaired. All windows received new ochre-colored panes, exact replicas of the original glass selected by the architect, but never realized due to a mistake made in the factory prior to the opening in 1913. The concrete of the façade was repaired and now has its original golden hue. The color, historic glazing and application methods were developed following archival research, stratigraphic analysis and extensive consultations². (Fig. 4)

Phase II - Reconstruction and expansion of the former restaurant pavilion (and the revalorization of the historical pergola and the fountain)

The second phase of the revitalization efforts



Figure 3. Centennial Hall, 2010. M. Kulczyński.

carried out between 2007-2010 included the reconstruction of the historic Terrace Restaurant Pavilion into a restaurant and congress pavilion - the Regional Center for Business Tourism. The renewed and expanded pavilion was key to Centennial Hall's revitalization, but also to its financial independence.

The renovation works on the Pavilion were preceded by detailed historic studies, which allowed experts to determine the state of the structure³. The building incurred serious damage in 1945 and only the modular system of brick structural pillars as well as the outline of the building's outer shell consisting of brick walls remained of the original building (Fig. 1). Renovation work carried out in 1948 changed the placement of the levels of the various floors, the look of the façade as well as the shape of the roof. (The Pavilion was never a reinforced concrete structure - with the exception of the foundations, staircases and the ceiling over the basement - and the brick façade was covered in plaster.)

The above-mentioned historic research served as the basis for formulating the program for an international architectural competition for the renovation and expansion of the Pavilion. The design concept selected by an

international jury in 2007 was created around the idea of returning the building to its original form from the period of the 1913 Exhibition. The building expansions were inspired by conceptual drawings by the Pavilion's architect, Max Berg, who himself had developed ideas for enlarging the building to its present size. The winning design envisioned the construction of two glass-encased wings. The minimalist design proposed by the architects was selected by the jury because it harmoniously integrated the expanded spaces with the historic substance of the original building without dominating it (Architectural Competition 2007). The design received the necessary approval of the local monument preservation office and became the basis for the subsequent building works, which were completed in October 2010⁴.

In addition, the City of Wrocław complemented the investment efforts in the area by completing the preservation works on Hans Pölzig's concrete pergola. At the same time, a new multimedia fountain was installed in the original pond, creating a new tourist attraction that has already brought millions of tourists to this area of the city for free weekend night performances of light, water and sound (Fig. 3).



Figure 4. Regional Center for Business Tourism and Wrocław Fountain, 2010. K. Smyk.

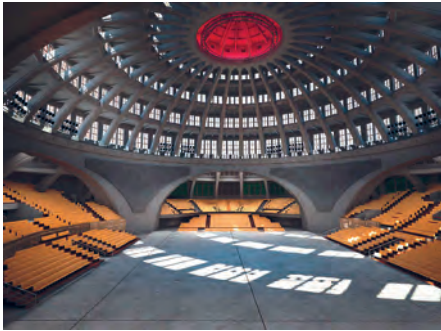


Figure 5. “Centennial Hall in Wrocław – The Center for Innovation in Architecture and Construction.” Conceptual Design for the Renovation of the Interior of the Centennial Hall in Wrocław, 2010. Chapman Taylor Architects.

Phase III - The Revalorization of the interior of Centennial Hall and the creation of the Center for Innovation in Architecture and Design

A key component of the revitalization efforts was the revalorization of the interior of Centennial Hall. These efforts drew from the original ideas and functions set out by Centennial Hall’s architect, Max Berg, and have been conceived to maintain and underscore the values that determined Centennial Hall’s inclusion on the World Heritage List of UNESCO. At the same time, the plans used the latest technologies to replace the outdated infrastructure and to ensure Centennial Hall maintains its iconic status as a multifunctional center well into the 21st century. An international architectural competition was organized in 2009, and the winning design team prepared a project whose main elements included:

In order to ensure maximum standards of historical preservation, the architects were closely supervised by members of the Historical and Preservation Committee during the entire

design process. Weekly consultation meetings were organized which made it possible for the architects to consult all details of the project and which ensured close supervision over the details of their work by historical preservationists. Centennial Hall was closed for renovation for eight months in 2011 and reopened in September 2011 with the European Congress of Culture and the meetings of the Polish Presidency in the European Union. In February 2012, an interactive museum was open in a designated section of the circular hallways of Centennial Hall that features the history of the Wrocław modern movement in architecture in design. (Fig. 5)

Management and Preservation Toward Sustainability

The management task involved in revitalizing Centennial Hall and the Exhibition Grounds in Wrocław was a complex and difficult process whose crucial phase took five years (2006-2011). Graph 1 is an attempt at systematizing the vari-



Graph 1. Management Diagram – Revitalization of the Centennial Hall and Exhibition Grounds in Wrocław 2006-2011. H. Cervinkova.

ables involved in this undertaking, whose goal was to ensure sustainable future for this modernist masterpiece and one of the most important domes in the world.

Centennial Hall and the Exhibition Grounds is a monumental architectural complex whose primary function is the broadly understood mass recreation and tourism of different kinds - cultural, business and leisure. Centennial Hall itself has traditionally been a multifunctional facility for the organization of fairs, congresses, cultural and sport events. But in addition to the main hall, the exhibition grounds have also served as open public space for recreational activities. In 2006, when the ownership of the management company was transferred to the local administration (regional and city governments), the entire complex was in a dilapidated state. Centennial Hall was beginning to lose its iconic reputation as a mass multifunctional facility and was beginning to struggle in competition with renovated and newly built modern halls in Poland. The exhibition grounds did not enjoy mass visitation because of their state of disarray and the lack of subsidiary visitor facilities and attractions. In the planning of the revitalization projects, we had to take into consideration the need to strengthen this original

function of the facility within the context of Wrocław's urban space.

In the search for suitable financing, we have reached for both public and private sources of funding. The City of Wrocław contributed close to 100 mln PLN (25 mln Euro), the Region of Lower Silesia 9 mln PLN (2,25 mln Euro), 60 mln PLN (15 mln Euro) came from European structural funds and the construction of the underground parking facility (to be completed by 2013) will be financed entirely from private sources (approximately 60 mln PLN - 15 mln Euro). The fundraising process for Centennial Hall's restoration was a difficult undertaking, which has brought to the forefront its status as a symbolic historical German/Polish monument with charged political and cultural meaning. At one point, financial support from EU sources allocated by the national government was withdrawn, and while the main battleground has been financial, "it is clear that national, political and cultural reservations lurk behind the headlines."

The investment and revitalization project was further complicated by the need to maintain Centennial Hall in operation and increase the income from renting the facility to event organizers and from organizing events. This required the reorganization of this formerly

state-owned enterprise to operate successfully on the private market. Careful spatial and time planning was necessary to ensure uninterrupted operation of the Hall while construction work was underway. Centennial Hall was fully operational throughout most of the investment process, including the revalorization of the facade and windows and the reconstruction and expansion of the restaurant pavilion. This created enormous challenges for the management who had to oversee and balance the frequently conflicting practices of construction and event organizing.

The last but not the least, all of these functional goals had to be harmonized with the prerogative of historical protection. The Historical and Preservation Committee therefore was not only consulted in all stages of the revitalization process, but its members were brought actively into the decision making. In addition to a range of written historical and preservation studies which they commissioned, they were authorized by the management to make decisions on her behalf and over-rule those choices of architects or builders that were contrary to the selected philosophy of historical protection.

Centennial Hall's future as a world-class architectural masterpiece directly depends on its economic and functional sustainability. Therefore, during revitalization, its mass public function, its cultural and historical status as a contested German/Polish monument, and high standards of historical protection had to be balanced in a delicate and challenging process.

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Notes

- 1 Tajchman et al., *Dokumentacja konserwatorska*.
- 2 Laska, "Renowacja elewacji Hali Stulecia"; Wójtowicz, *Rozpoznanie konserwatorskie*.
- 3 Grajewski and Ilkosz, *Studium historyczno-architektoniczne*; Grajewski and Ilkosz, "The Terrace Restaurant by the Centennial Hall."
- 4 Rutecka, "Center for Business Tourism."
- 5 Moorhouse, "Wrocław's Concrete Controversy."

The Alan Vaughan Richards Project — a Conservation Challenge

Ola Uduku

Hannah Le Roux

This paper describes the Alan Vaughan Richards, (AVR) Archive and Conservation Project. It seeks to highlight the unique challenges of the project, which relate to its Lagos location, and the non-Western conservation and adaptation context, within which it operates and must respond. The first section of the paper sets the context to the architect and his work and his residence. The second discusses the conservation work being undertaken and proposed, whilst the final discusses the project challenges.

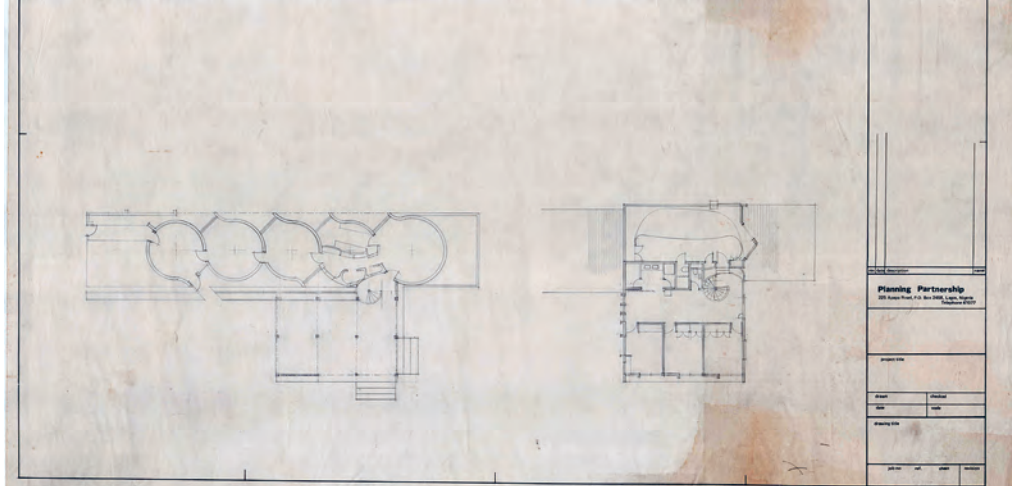
Alan Vaughan-Richards (b.1925-d.1989)¹, came to Nigeria to work for the Architects' Co-Partnership in 1955. On the ACP's withdrawal from Nigeria he established his own practice, in 1961, and in 1970 formed the Ibru Vaughan Richards Partnership with, the Nigerian architect Felix Ibru, with whom he worked for the rest of his career. He also became a Nigerian citizen. His work, particularly in the 1960's, was exceptionally experimental in its search to hybridize climatic modernism, innovative design methods, and indigenous knowledge. As a resident 'Lagosian', and aside from his architectural work, was involved in architectural education

debates, and the artistic and cultural life of Lagos, notably he was the co-author author of the publication; *Building Lagos*.²

The Site

On his arrival in Lagos, Alan Richards met and married Ayo Vaughan, (b.1928 – d.93) a member of a prominent Lagos family, the new couple becoming the Vaughan-Richards. As a wedding present, the Vaughan family gifted Alan and Ayo a piece of virgin land, close to the Lagos lagoon at Alagbon in Ikoyi Lagos. This was the site on which Alan Vaughan Richards designed the family residence, was built, re-developed and extended over a thirty-year period.

Set to one side of the plot, the cottage was set lateral to the water, facing a tree-filled landscape to the East and culminated in a screened verandah overlooking the water to the north. The design featured five interlocking circular spaces, comprising an office, two bedrooms, a wc, bath and shower area, a kitchen, and a living room area. The living room area was then



extended to have its floor plate cantilever out and overlook the lagoon.

The site plan shows the outline of the proposed future house occupying the middle of the plot, but this was never built (fig 2). Instead, in 1966, he built an extension to the cottage in the form of a timber structure above the carport, roughly 8x10m in plan, housing further bedrooms and a study.

Innovation

The cottage combines experimentation with pragmatic concerns of domestic life. Its innovative elements include the use of artwork and crafts, its climatic response, services and construction materials. The planning, on the other hand, is finely tuned to the dynamics of the

site and a growing family of four children, and a potentially large social circle. In this respect the house seems to reflect the dialogic vision of both Alan and Ayo, his wife, to frame a way of life that merged their respective identities.

The artwork includes wire screens that may be by Ayo Bello, with whom he worked earlier, as well as traditionally carved timber panels including the door set into the front door and an elaborate panel next to the stairwell. The house was also dotted with Nigerian masks and figures. The living room seating was upholstered using 'Aladire' textiles³, and a circular grass mat was used as an inset to the ceiling. Vaughan-Richards also cast a number of concrete blocks with expressive, abstract or animalistic relief mouldings, and these line the driveway and form bases for a number of concrete and steel sculptures in the garden. Along with clusters of

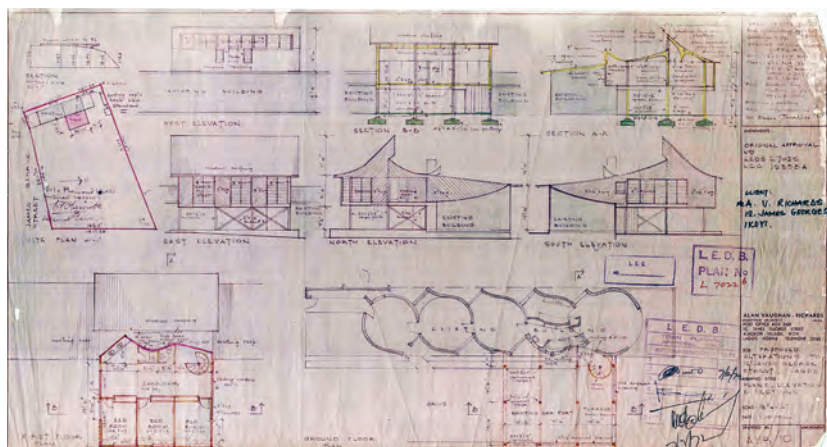


Figure 3.

earthenware pots, these elements engage with the site as a world replete with visible and spiritual life forms.

Vaughan-Richards consistently applied curvilinear geometries in the house, but set them against a grid that permitted a modular way of building, initially from blocks and roof sheeting, and then timber framing. The timber section is closer in material to traditional buildings, especially the lagoon-side houses of fishermen and lumber handlers. In the most geometrically elaborate space, the living room interior, he used timber as a veneer, along with fabric, to line the curved sitting areas, and to form niches and shelves for objects.

Climatic Design

If the artwork reflects the Vaughan-Richards' respect for Yoruba and indigenous culture, the climatic elements mediate between the physical site and a scientific insight into the mechanics of passive cooling. Using his Tropical Architecture training at the AA, Vaughan-Richards had considered the orientation of the cottage in relation to sun, breezes, trees and the lagoon, but adapted the rules to deal with his intention to leave space for a further building that, more orthodoxly, would run East-West. The ground

floor building is positioned on the North-South axis with wooden louvered windows positioned to take advantage of airflow from the Lagos Lagoon, across the room to the louvered windows on the adjacent wall⁴ (fig 3).

The ground floor building was constructed of interlocking breeze blocks, which were left natural on the outside but painted white on the inside. The large window openings, including overhead clerestory ventilation areas and the plenums built for the air conditioning have ensured the ground floor interiors are well ventilated and cool. The effective airflow across the envelope, and the overhang from the upper level, has had two purposes. Firstly it has ensured that the blockwork is effectively cooled preventing thermal heat gain and the shading from the overhang and vegetation has ensured there is little direct radiation that would also have increased heat absorption. The living room extension and upper floor is constructed on a timber frame, has timber infill panels, wooden louvered openings, and wind traps at high level.⁵

Sanitation

Similarly technical innovation was applied to the cottage's sanitation design. The system is gravity fed, and with the upper extension is all

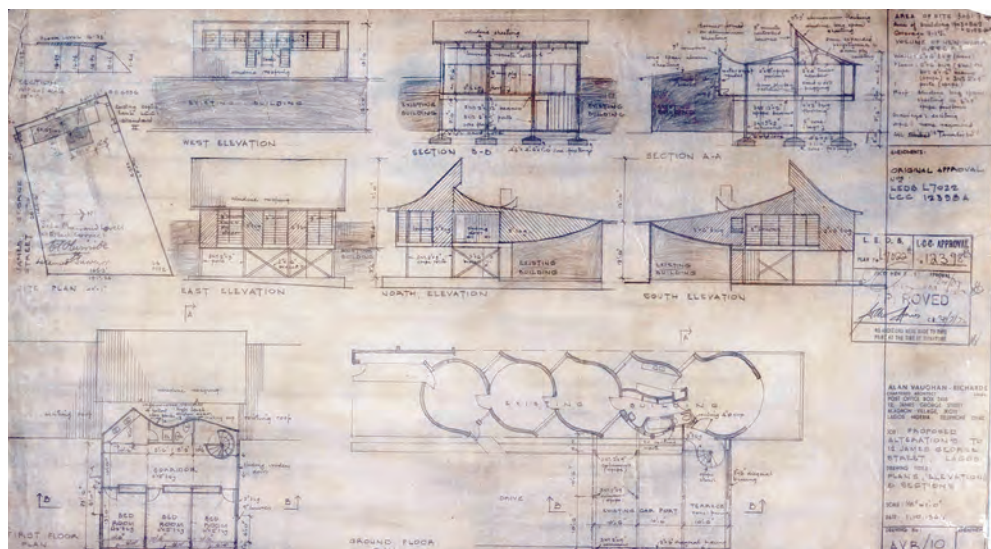


Figure 4.

located within a central unit, which was designed with carefully chosen, modern fixtures. The downstairs bath is sunken adjacent to the passage, and the upstairs shower is set deep within the building and lit through a skylight.

The Geodesic Dome

When the lagoon was lost to the 1970s Lagos State land reclamation, and a subsequent housing scheme, the cottage was further altered, orienting internally and to the east, and its social space augmented with a geodesic dome with service rooms set in the garden to the east (fig 4). The dome was one of the architectural forms marketed by the Ibru + Vaughan Richards Practice. It was planned as a covered but unenclosed outdoor space, with half-walls.⁶

Conserving the Property

Since Alan Vaughan Richards' death, in 1989, the residence has not been in continuous occu-

pation. After his death, Ayo Vaughan Richards became terminally ill and died five years later. For the next fifteen years, the property was in temporary occupation over short periods, as the four children were, and remained, resident outside of Nigeria. Ms. R. Vaughan Richards, his daughter, moved back to the property in 2005. Currently she is intensely involved in the property, living in the geodesic dome, and maintaining the main residence and the flora and fauna in the grounds.

The Vision

The proposal to shift the use of the house from a private residence to a space for cultural activities came from the Vaughan-Richards' oldest daughter. Her longer term intentions are to find an economically sustainable way of managing the property that respects the legacy of her parents. Some immediate needs include security, services and formal recognition of the property's heritage value. The erratic governance in Nigeria makes all of these elements unreliable.

With these elements in place, she envisages the site becoming an arts residency. In addition, the site and its proposed use lends itself to be used as an experimental space to design and test the application of alternative technologies. This might include designing an off-grid solution to power supply, over and above the petrol generators on site, to augment the effective passive cooling system, or developing methods for waste water treatment.

Conceptualizing the Vaughan-Richards property as a living house museum would involve reflection on the lives and work of the couple who created it in the first place. The couple were innovators in many ways: their lifestyle, its architecture, its engagement with place, and their written work on African architecture and beauty are inspirational texts today. Without due respect for the fragile content of their experimental way of thinking, and due acknowledgement of their creative rights, this memory risks being erased.

At the heart of Alan Vaughan-Richards' conversion from a colonial architect to a champion of African potentials is his affective relationship with the whole of his adopted environment in all its dimensions. His co-authorship of, *Building Lagos*, reflects this broad vision in the way that it narrates the intersection between the natural, historical and physical context of a society in transition.⁷ What would a contemporary manifestation of this attitude be? In which media do contemporary creative thinkers document and re-propose Lagos and its neighboring areas? What elements of the existing property and archive hold potential to support such experimentation?

The initial proposal (fig 5) for the property's restoration is to return the original cottage to its function as a private work-live space, to be used by the daughter as a base for managing the property as well as giving support for film-making projects. The second stage, upstairs extension, would offer two bedrooms for arts

residencies, and retain the study as a room for reference to the Vaughan-Richards archive. The parents' room could be restored to create additional sleeping space for students. An additional bathroom, possibly in the form of a raised and self-sufficient element that could be relevant to lagoon-side settlements such as Makoko, could be built by architecture students as a contribution to the city's needs.

The dome could function as a communal studio, meeting and exhibition space, with the latter function expanding into the garden as a whole. The larger space off the dome, which is currently used as a bedroom, could be returned to its function as a kitchen serving the residency and meeting functions. The servants' quarters to the east would remain in use. The landscape elements, including the trees and artworks, need to be cared for and documented. A new set of landscape elements, including functional artworks, could be developed through the residency process, within temporal and spatial limits. In restoring the property through both archival and performative work, additional knowledge of the Vaughan-Richards' innovative thinking will be unearthed and this should be brought to public attention through media-based documentation.

The Challenges

In the case of the Alan Vaughan Richards house there is the immediate challenge legal ownership, related to the land on which the AVR Residence is built. The land was gifted the Vaughan Richards family, however the legal issues related to the change or transfer of title are yet to be resolved. This has a direct effect on future investment and development opportunities related to the future restoration and transformation of the property.

The public interest and audience for contemporary architectural appreciation is also limited

in Lagos, this means that the proposed transformation of the AVR residence into a destination to visit will be of limited interest to the general public, and really focused on those with a specialist knowledge in the area. The design focus for the renovation will thus be more related to the house being a temporary residence for visiting artists and those involved in the arts. There would also be the installation of the physical AVR archive in the first floor building study, which would be visitable by appointment with Ms. Vaughan Richards.

From a design viewpoint there are particular challenges with the transformation of use of the residence. Planned as a family residence the reconfiguration of the residence to become a set of self-contained temporary residences, but to also have an accessible archive, without substantially changing the flow of the original

design, presents a challenge. Similarly, the renovation of the interiors, so that, where possible, original materials are replaced, and where not, there is a decision about what would be the most appropriate replacement for them, has proved equally challenging.

With the archiving and digitising of material for the AVR archive there has also been the need to find where best to digitize drawings and the conservation and storage requirements for a non-specialist archive in the tropics. The lack of infrastructure for archiving in Nigeria has meant much of this will be done abroad and sent back on completion to Lagos. The final project will inevitably require collaboration between African, British and other Western partners, reflecting the hybrid heritage of the property and the ultimate local-international ambition for its long-term preservation.

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Notes

- 1 Educated at London Polytechnic (Dip. Arch.1950), and at the AA (Tropical Architecture Course, 1954-55).
- 2 Akinsemoyin and Vaughan-Richards *Building Lagos* (1976) was written in connection with the World African Festival of Arts and Culture, 1977, with original line drawings by Alan Vaughan Richards and an historical commentary written with the historian Kunle Akinsemoyin. It was seminal in its presentation, format and accessibility to a wide Nigerian public. A new version has recently been re-published, without the permission of either deceased author's Estate.
- 3 A Lagos-based textile firm that still manufactures West-African themed fabrics.
- 4 Clerestory, high level ventilation was also designed to allow for increased airflow across the room, especially at night times in the dry season when temperature differentials would mean that stack effect ventilation could help cool the room. Also when air conditioners were later incorporated, a plenum was built to direct the air-conditioned air across the room for maximum effectiveness. The extended main living room area also has had its orientation rotated to take full advantage of air movement from the lagoon across the living area to the adjacent windows. On the upper floor the same attention to air movement is achieved by the timber frame construction and insertion of wooden louvered windows throughout the floor. The main landing area has clerestory operable louvers, and louvered windows at adjacent walls ensuring the space is well ventilated. Furthermore the open tread wooden staircase ensures airflow moves unrestricted across the main areas of the house.
- 5 Despite having well-shaded interiors, by both the trees and the overall building design, the daylighting with the AVR residence is good. This is due to the proportionally large window openings and also the use of clerestory lighting to windows on the ground floor and in the main living-dining area on the first floor.
- 6 The dome's carbonfibre roofing material is lightweight, has low thermal capacity, and therefore helps dissipate heat gain from the structure. With the later modifications, the airflow across the main covered area and the ancillary bedroom space remains good, due to the positioning of the windows placed at adjacent walls in the circular spaces, and the high ceilings encouraging air spread and flow across the interior spaces.
- 7 Akinsemoyin and Vaughan-Richards, *Building Lagos*.

From Sentiment to Science - DoCoMoMo Comes of Age

John Allan

It is an honour to be invited as a keynote speaker to this 12th DoCoMoMo Conference. DoCoMoMo is a family, and these bi-annual events are our family parties. In most families it would be traditional to celebrate a 21st birthday. This should have been 2011, but as we only meet every two years I want to use this opportunity to do what is traditional when someone 'comes of age', and use it as a milestone to look back at where we came from, and forward to the future.

Now it would be presumptuous of me to attempt to do this on behalf of an organisation embracing so many different countries and cultures, so I must approach it just as a practitioner in the UK and my presentation will inevitably be somewhat autobiographical. But in using some of my own case studies to identify certain themes I want to suggest a wider interpretation of the DoCoMoMo mission as it has developed from infancy to adulthood, and look forward to what might follow.

I still have the most agreeable memories of our first conference in Eindhoven 22 years ago, when the delegates from a mere handful of countries came together to share their concern over the fate of modern architectural heritage. It seemed like an historic beginning, as indeed it has proved to be, but such initiatives do not come from nowhere. It was our response to a

context of ignorance and neglect. Many of the authorities who ought to have known better were ignorant of their MoMo legacy, and many of the owners of key buildings and sites had allowed them to fall into varying states of neglect. To those of us for whom this legacy was our inspiration, the situation was unbearable. So you could say that our response to this ignorance and neglect was driven by *sentiment*.

'Sentiment', is defined in our English dictionary as 'susceptibility to tender, delicate or romantic emotion' which I think aptly describes the impulse that brought us together 22 years ago – it was a shared love of the most precious built achievements of the heroic period of modernism, that had fallen into oblivion and were at risk of being lost altogether, almost by accident.

What that moment ignited was a shared resolve to ensure that the best surviving achievements of that heroic period of the Modern Movement were firstly identified and recognised as such, then protected and conserved. Some of the success stories have been heroic in themselves – and perhaps none more so than that of the building that started it all - the Zonnestraal Sanatorium saved by DoCoMoMo's founders – Hubert-Jan Henket and Wessel de Jong.

This building, and the monumental task of rescuing it, has become a sort of metaphor

for the whole movement. Many of the national groups here may likewise have originated in a particular rescue campaign, and I dare say that every country in the DoCoMoMo family could identify one building, among all others, that represented that optimism and innocence by which we identify the early Modern Movement. In England we had the Penguin Pool at London Zoo, which I was privileged to restore in the mid-1980s and which for a time became an emblem both of English modernism in its prime, as well as of the conservation initiative represented by DoCoMoMo.

I will come back to Eindhoven at the end, because it provides such a clear milestone from which to measure the distance we have travelled since. Anyway, the Eindhoven Statement still makes persuasive reading. But that was then, and this is now. We may not need to re-write the Statement, but do we have to re-define the mission to which it is applied? I believe we do. So what has changed?

Well, I think two things have changed. One to do with DoCoMoMo itself, the other its external context. Firstly – our own position in relation to the Modern Movement legacy. This might be imagined in the form of a pyramid where the very few, most iconic, examples sit at the top, and as heritage significance diminishes, so the numbers increase. In the centre lie the largest collection of works that may not be sufficiently distinguished to list, but are certainly too numerous and valuable as property to demolish. At the base is the residue of buildings that could surely be lost without a tear being shed.

Since many of the most significant monuments have now been identified and in most cases (if not all) have been saved or at least are off the ‘critical list’, so our attention has turned to the other less rarified but more numerous elements of the legacy.

Thus the first change after 22 years, it seems to me, is the *change of focus*.

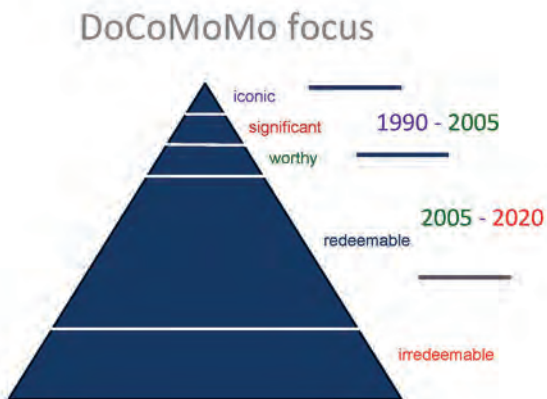


Figure 1. DoCoMoMo’s changing focus.

The second change – relating to our context – is surely the cause of environmental sustainability, which in 1990 was little more than a gleam on the horizon, but has now become the single most pressing issue to confront not only building design and construction generally, but virtually every field of endeavour in the ‘developed’ world.

It is now unthinkable to embark on any kind of design undertaking without the question of its environmental impact and sustainability being at the heart of the project. It conditions everything we do. Increasingly alarming statistics tell us that we can no longer behave as if the earth’s resources are limitless, and that we must learn how to renew the world with things that exist already. Indeed it often seems as the Green Agenda is the *only* agenda.

Now I’ve identified these shifts for DoCoMoMo as two separate things, but their implications come very close to being a single proposition. Namely that environmental and economic reasons may be more relevant than heritage sensibilities for keeping and improving the majority of modern buildings that are not ‘iconic’. Or to put it in my earlier terminology, we are finding that ‘sentiment’ by itself is either inapplicable or insufficient. We must

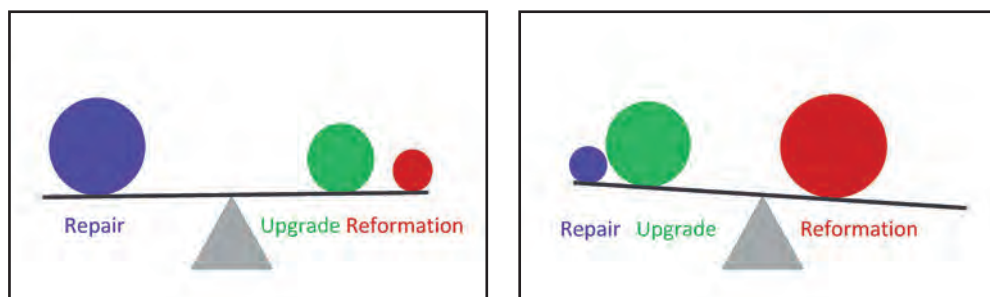


Figure 2. Balancing differing project priorities.

find *other* arguments – and these, I suggest, are likely to focus on economic and sustainability factors.

To enlarge on this, I want to say a word about heritage recognition. Whereas historic buildings usually attract instinctive public support, in the case of modern buildings - because their recognition *as heritage* is still so underdeveloped - the arguments for listing must be made by specialists – academics, architectural historians, etc. It's because of the prevailing unpopularity of modern architecture in the UK that listing has become the conservationists' main weapon against demolition. If their case is successful then at least the building has the law on its side – even if not public opinion. However, this is a game of high stakes inasmuch as, if the listing case fails - then demolition is assumed to be inevitable. This is exactly what happened with Robin Hood Gardens, Pimlico School, Broadgate, and conceivably, London's South-Bank complex, which has now been turned down for listing 4 times. By relying so much on listing as the primary defence, and therefore on trying to convince sceptics of *heritage* significance, modern conservationists have been seeking to win the most difficult type of argument for saving modern buildings in distress. This is how motivation by *sentiment* can have precisely the opposite outcome to that intended – since losing the heritage argument for listing

becomes synonymous with losing the buildings altogether.

Now I'm *not* suggesting that DoCoMoMo abandons the evangelical first article of its Eindhoven Statement – to 'bring the significance of the Modern Movement to the attention of the public'. What I *am* suggesting is that in the increasing number of cases where we are *not* dealing with 'icons' and where a heritage argument therefore becomes that much more difficult to win, that we should be exploring and promoting the many *other* possible motives for keeping a modern building and exploring *these* as arguments for working with it.

Now I want to examine this issue of motives because what has struck me from my own experience is how projects that to the architect may appear to be driven by heritage significance, are usually seen quite differently by the other participants, and that heritage may come very low on their agenda – if it's even on it at all. In almost every case there are three types of need that require a response – of which only the first could be said to be purely heritage driven. This is *repair* – the requirement to shore up or reinstate original fabric to retrieve or prolong its authenticity. But beyond this there is *upgrade* – the need to improve the technical performance of a building or replace its engineering systems that have become deficient or unserviceable. And then crucially, *re-formation* – the pressure



Figure 3. The Goldfinger and Gwynne House Museums (Both dating from 1938).

to intervene and change buildings and their sites in order to add value or accommodate new requirements.

For the purposes of this talk I hope I can use these terms generically without getting tied up in the semantics of terminology. This pattern repeats so consistently that I have come to see the architect's role as one of trying to bring these 3 factors into a valid and sustainable point of balance. However, this will differ with each project, according to the differing priorities.

The conservation lobby is interested in authenticity and 'significance', and so is biased towards preservation and repair of original fabric. Users are concerned with whether a building is good to work in or live in, and so are inclined to focus on upgrading its performance and functionality. Property owners are interested in their building as an investment and so are concerned with intervening to maximise its exchange value and return. So the three needs tend to be identified with the three key types of stakeholder, repair – conservationists; upgrade – users; re-formation – owners/ investors.

Architects must serve all of these interest groups, but depending on the project the weight given to each need can vary considerably. In the few high profile projects I've called 'iconic', conservation is supreme, with upgrade and in-

tervention being admitted only so far as is necessary to secure the key heritage objectives. On the other hand, with the great majority of modern buildings in the middle of my pyramid, it is only realistic to assume that intervention and upgrade will play the dominant role.

This is really the thesis I want to put to you – that because MoMo conservation in the majority of cases, cannot expect to operate in a supportive heritage culture, but *has* to grapple with the sciences of upgrade and adaptation, we should be developing those skills and not just relying on heritage advocacy.

Now, I don't want to be misunderstood here. I certainly do not underestimate the need for a scientific approach to conservation work *as such*, and projects like Villa Tugendhat surely provide supreme examples of this discipline. But the *point* there is surely that the science occurs *within* a conservation agenda, whereas in the cases I'm talking about it must find a place in a sceptical arena where even keeping modern buildings, and working with them, *cannot* be taken for granted.

To illustrate my thesis I will present my case studies by descending order of heritage motivation, that is, starting with heritage-led projects and progressing to those where heritage was increasingly peripheral – though still an impor-



Figure 4. Private villas - added value. Harbour Meadow, Miramonte, Frogna, Hill House.

tant ‘by-product’; in effect a step-by-step journey from sentiment to science. This I believe is the way *most* modern buildings will have to be saved if they are to survive – *not* by pleading special heritage privileges but by demonstrating how they can be made useful for the future.

If we start at the tip of the pyramid, the two house museums we’ve restored for the National Trust – Goldfinger’s house in Hampstead and Patrick Gwynne’s house near Esher – could be regarded as the most straightforward in terms of motivation – that is where *all* key parties – client, conservation authorities, users and indeed ourselves – shared the same agenda – *heritage*.

But you will also notice that by privileging heritage interest the houses themselves ceased to be houses. There are very few such cases

where MoMo buildings can be expected to survive only by becoming exhibits of themselves. We are in the rarified realms of Villas Savoye and Tugendhat, Sonneveld and Seidler.

Now we’ve undertaken many other rescue missions on modern houses, but these have all been for private owners, where invariably there have been *other* aims on the agenda – most notably the desire to add value. So while I might want to present these as conservation projects in the DoCoMoMo canon, it would be disingenuous to suggest that this was the sole or even the main objective. The economic realities dictated otherwise, and it was heritage that was an ‘extra benefit’. The challenge of these projects was to achieve the client’s required interventions without detriment to the heritage value.



Figure 5. Residential upgrades – The Isokon, Jesus College Cambridge University.

Staying with residential property, the Isokon, which you might assume was saved because of its iconic status, was really regenerated for its value to a social landlord whose agenda corresponded exactly with the local council's policy to prioritise key-worker housing. The fact that this building was listed Grade I of course meant that conservation protocols were an essential element of the project. But these were *not* the project drivers as such.

Another residential example would be the hall of residence we restored for Jesus College, Cambridge University where the underlying requirement was to make the building suitable for conference visitor use. This is a familiar challenge for British universities but here involved complete re-engineering of the service cores of this 1960s Grade II listed building. I should still like to think that this was achieved without detriment to its special architectural interest.

What we are seeing is the changing argument in moving down the pyramid toward the less iconic, more generic elements of the MoMo legacy.

A good example of the latter type must surely be Priory Green, a large and troubled early post-war housing project by Lubetkin, which we regenerated for another social housing association. Here there was *no* question of heritage driving the agenda – on the contrary the local authority who owned the estate was ready to demolish in favour of redevelopment. By-passing heritage arguments, we maintained that a more *sustainable* approach would be to retain and rehabilitate the estate. This could have been done in various ways as the buildings were not listed. Overcladding and plastic windows might have been accepted as the client was more pre-occupied with viability than how it was achieved. The heritage ambitions were simply our own. Yet eventually the local council declared the whole estate a Conservation Area.

Plymouth Civic Centre was another case of a local authority disowning its inheritance – wishing to sell the site for redevelopment and move into new offices elsewhere in the city. This fine ensemble dating from the early post-war years was opened by the Queen in 1962 and became a potent symbol of Plymouth's recovery from



Figure 6. Arguing the MoMo legacy.

the blitz. But memories fade. When the council sought to dispose of the buildings English Heritage had them listed. We were commissioned to propose rehabilitation measures and potential future uses. We found that the buildings were quite capable of upgrade and adaptive re-use, and new developers are now being invited to express an interest in taking over the site but retaining and upgrading the buildings. Here again, the issues driving the project depended entirely on economic and sustainability factors.

Much the same could be said of my final two examples from the education sector - Sheffield University Library and Haggerston School in East London – both now saved for an extended future through architectural and environmental *intervention*.

Almost all of these projects were saved by motives other than a concern for modern heritage. But in every case there has *also* been a heritage benefit in terms of enhanced authenticity. In other words the dominance of *other* motives in projects involving important modern buildings does not mean that heritage considerations can't play an important part. I believe there is a lesson in this for us in DoCoMoMo for the future, and this is what I should to consider in conclusion.

I started by describing DoCoMoMo as a family – and I suspect that what binds us together is our predisposition to embrace the Modern Movement legacy as '*heritage*' first and foremost. Outside the family however most people we deal with have no such predisposition. By



Figure 7. Major regeneration projects – Priory Green, Plymouth Civic Centre.

all means *we* can continue to revere our legacy, but I believe that we must *also* get better at understanding and exploiting *other* arguments for keeping and working with modern buildings than just heritage ones. There are plenty of these to pursue – and I suggest they are likely to focus on the environmental and economic factors that now dominate all society’s concerns.

It seems to me that the survival of most modern buildings will depend more on demonstrating the feasibility of upgrading performance, adding value and exploiting opportunities for change to serve new needs. I would like to promote this broader interpretation of conservation over the more rarified conventional model usually derived from the well-known conservation



Figure 8. Educational upgrades - Sheffield University Library, Haggerston School.

charters with their presumption of surviving authenticity and their almost exclusive preoccupation with original fabric.

In stressing the role of intervention I do *not* want to give an impression of devaluing specialist skills and knowledge in the conscientious restoration of buildings of *any* period. Far from it. Conservative repair can still be regarded as the gold standard of conservation practice – *in appropriate circumstances*. But we shouldn't forget that the modern movement, and modern architecture, was supposed to be for *everybody*, and it's my opinion that beyond the celebrated high-profile cases the greater challenge is to find ways of adapting the re-usable mass of modernism's legacy to serve the real needs of the majority.

I once described conservationists as falling into one of two categories – curators or alchemists – the former regarding heritage assets as *heirlooms*, the latter approaching them as a *resource*. It seems to me in our current climate of uncertainty, when *everything* we now do is subject to the criteria of environmental and economic sustainability, that the curatorial challenge of preserving buildings and places from the past will increasingly be overtaken by the *creative* challenge of adapting the larger MoMo legacy for a sustainable future.

One of the early criticisms of DoCoMoMo was that its conservationist stance towards modernism was intellectually – perhaps even ethically – inconsistent with a movement originally dedicated to renewal. Yet to follow *that* 'logic' would mean that we should be bound by the circumstances confronting our grandfathers when half the world lay in ruins, and argue that what justified *their* need to rebuild should remain our justification to keep on demolishing. Yet, as I said earlier, the conditions of our time have surely taught us that progress must now consist in learning how to renew the world with things that exist already. People may continue to debate the *heritage* values of the Modern Movement, but what cannot be disputed is

that its legacy represents an incalculably vast investment of human labour and embodied energy. Doubtless some of it must be cleared and replaced. To suggest otherwise would be naive. But more, much more, must survive by being *sustained*.

As this conference title – 'The *Survival* of Modern' – surely implies, we should be leading the way in demonstrating how, for example, the embodied energy in an existing modern building may make it economically more advantageous and environmentally more responsible to retain and upgrade it, regardless of whether it is listed or not. Although I'm well aware there's been progressive work in the science and calculation of embodied energy, this kind of reasoning is still woefully underdeveloped in the discourse and politics of modern conservation. And yet many of the materials we are dealing with in modern movement buildings – cement, steel, aluminium, copper, oil based products – have some of the highest embodied energy values of any building materials. We must begin to appreciate this investment in energy and material as *another* kind of heritage.

If – as the slogan has it – 'the greenest building is the one already built' – then the question I put to DoCoMoMo is whether it is willing to venture into this territory and master the science and politics of sustainability and embodied energy in the cause of keeping modern buildings? Or would we rather stay in our comfort zone, immersed in history and culture and carrying on lovingly restoring our favourite icons?

Of course we can still be MoMo evangelists, pursuing article 1 of the Eindhoven Statement, and hoping to win converts from a sceptical or indifferent audience. But my own view is that we must now engage with this larger field and draw DoCoMoMo into the wider argument about *environmental* conservation. The alternative, it seems to me, is that DoCoMoMo will increasingly become a victim of its own specialism.



Figure 9. Survival of Modern.

Those of you at Eindhoven in 1990 will remember Peter Palumbo and his philanthropic role in rescuing the Penguin Pool. He was one of DoCoMoMo-UK's original supporters. So allow me to close by quoting from his Eindhoven paper all those years ago at the beginning of this movement. He said,

'We hope that DoCoMoMo does not become backward-looking. We hope it is not just a pressure-group for conservationists. We hope that DoCoMoMo will not emerge as just a club for scholars. None of these things, we believe, would be in the best interests of the Modern Movement. He went on - 'DoCo-MoMo is about the future, if it is about anything. It has to forge a connection between

the past and the conditions which confront us today.'

Surely 'the conditions that confront us today' – that is 2012 – are even more pressing than 22 years ago when these words were spoken. I put it to you that forging this connection – two decades later - must surely entail going beyond sentiment and grappling scientifically with the larger challenges of sustainability that I have indicated. In the terms of our conference title, it seems to me that the "survival of modern", ultimately cannot be separated from *SURVIVAL* itself. DoCoMoMo has achieved many glorious things in coming of age. Now, I believe, it is this difficult but compelling task that presents our movement with its next great challenge.

La Nouvelle Maison, a Modern Gesamtkunstwerk

Jérémy Vansteenkiste

“The most recent project [La Nouvelle Maison] belongs to a civilisation which van de Velde helped to create.”

General Description

La Nouvelle Maison, the New House, is the fourth personal dwelling of architect Henry van de Velde (1863-1957). This free-standing three-storey villa was built on a slightly sloped, triangular terrain in Tervuren, a village in the green belt around Brussels. It was realised from May 1928 on by the Brussels-based construction company Sobeco.

The building volume was composed of a large oblong prism -with rounded corners- and two smaller ones. The structure of the house was based on a combination of both traditional and more innovative materials. The refined masonry of the façades was made of slender Dutch Belvédère-bricks; the carefully pointed surfaces were articulated by the metal window and door frames and different fare-faced concrete elements.

Functional transparency characterised the ground plans. The basement contained the garage and the utility facilities. The ground floor consisted of the main living areas along with the kitchen. The first floor housed the rooms for the family with appropriate facilities. The prominent features on the inside were the

spatial continuum of the living spaces on the ground floor and the convent-like dispositions of the rooms on the first floor. The interior was connected up with the garden by a large terrace along the south-west façade, overlooking the so-called family garden. The outdoor space counted two more zones: the functional garden with a vegetable plot on the opposite side of the building and a flagstone-paved courtyard in front of the entrance section. In terms of utility and techniques, the equipment of the house was up-to-date and very commodious for the time.

Van de Velde and the Modern Movement

Architectural historiography has tied van de Velde's name to three major issues: his protagonist role in the Art Nouveau movement, his schools of arts and crafts in Weimar as predecessor of the future Bauhaus and his confrontation with Muthesius concerning standardisation during the 1914 Werkbund congress. These issues represent essential episodes in his development, but do not give a full representation of

the overall architectural path that van de Velde traced throughout his life. His creative force was indeed not limited to the pre-war period. The contribution of van de Velde to the inter-war Modern Movement had less international response but deserves nevertheless equal attention. Some of his most successful projects such as La Nouvelle Maison or the Ghent University library -a major reference of Belgian Modernism-date from this epoch, his so-called Second Belgian Period (1926-1947).

Along the above-cited architectural path, van de Velde designed no less than four houses for himself and his family: Bloemenwerf (Brussels, 1895), Hohe Pappeln (Weimar, 1908), De Tent (The Hague, 1920) and La Nouvelle Maison. This series of dwellings is exemplary for the outspoken architectural development of van de Velde during his multifaceted career. This evolution was also influenced by the historical moment: the long drawn-out transition from the 19th to the 20th century. In that sense, the two houses in Belgium were key projects. Bloemenwerf -his first ever architectural project- marked his final shift from a career in painting -his actual training- to one in applied arts and architecture. La Nouvelle Maison, on the other hand, was the outcome of van de Velde's rather elaborate transition from Art Nouveau to Modernism.

Whereas he had gradually dissociated himself from "pure" Art Nouveau and evolved toward a more classically inspired austerity during his German Period (1900-1917), it was eventually his stay in the Netherlands (1920 and 1926) which proved a more important, even decisive "Bildungszeit" in regard to the coming about of his Modernist oeuvre. While having confined himself to a voluntary isolation -being the private architect of the Kröller-Müllers- van de Velde felt more and more attracted to a new body of thought. In his confrontation, as an artist of the "génération 1900", with the modernity of the post-war period, he came to the

understanding that one had to assimilate the overall conditions of the time and create buildings accordingly. So, while accommodating himself to the Zeitgeist of the 1920s, he realised that it were not the basic principles of his thinking but their architectural translation which had to be revised. The projects of his Dutch Period revealed therefore the search of a more simplified formal vocabulary, however without final outcome.

Following his wanderings through Europe, van de Velde returned in 1926 to his home country. He was installed as professor at the University of Ghent and appointed director of the newly founded Superior Institute of Decorative Arts in Brussels, the Belgian answer to the Bauhaus. Having left Belgium in 1900, though unheard in his initiatives, as one of the protagonist of the "old" generation of the Modern Movement, he returned as the "conscience" of the young generation that worshiped his ideas and person. This return also opened other perspectives: for the first time since the outbreak of the war, he resumed his architectural practice. One of the first projects was the construction of a new house for his own family. The intimate atmosphere of this design proved the ideal framework to finally translate -uninfluenced, being both architect and client- his old theories into an original, up-to-par modern building. La Nouvelle Maison became the statement of a new idiom -the built manifesto of his renewed architectural language- and sealed his participation, at the age of 65, in the post-war Modern Movement.

Continuity and Renewal

In the design of the house, the original outlines of van de Velde's thinking -drawn up in the 1890s- remained faithfully interpreted, as reflected in the 1929 essay "*Le Nouveau*". The text advocated and reframed from a contemporary

perspective van de Velde's first and foremost ideal: the redemption of the modern world from its own ugliness through the accomplishment of pure, timeless and universal beauty. Rational conception and purity of form -in other words, the perfect accordance between form and utility of a design- remained the guiding principles to complete this mission. Meanwhile, the architectural translation of the above was revised. In this respect, the 1940 article *"L'architecture d'aujourd'hui en regard de celle du passé"*, which elaborated in detail van de Velde's vision on contemporary architecture, can be used as a guideline in reading his very personal and somehow atypical modernist vocabulary.

Vision on Architecture

First of all, contemporary architecture had to be plastic and massive, like a human body of which the skin (façade) nicely envelopes the skeleton (structure) and the organs (spaces). This abstract mass, however, had to be enlivened -as in a music play- by different regulators: the play of volumes, the play of open and closed parts and so-called new plasticity. Van de Velde did not settle for a Modernist 'white cube', but designed the house as a plastic mass, which derived its force from the subtle play of elementary volumes. Closed off by slender dark painted metal frames, the openings in these volumes were reduced to simple dark voids, which gave rhythm to the light-coloured plastic mass of the house. The rather strict alignment of these openings revealed some classical traits but the overall composition of the façades was still flexible enough to be clearly un-classical. Finally, the design was also permeated by a significant fluidity, inspired by the technological progress of the 1920s: the protruding elements (cornices and balconies) and rounded corners induced a feeling of movement, like in a car or industrial machine. These large rounded corners were the

Modernist equivalent of van de Velde's dynamic Art Nouveau line. By fluently connecting two planes, they turned the block-like basic form of the house into a fluent, "new-plastic" mass. This tendency to blur sharp edges eventually ruled the whole design as it also appeared on the smaller scale. Especially on the inside, all corners and edges were subtly curved, transforming the static spaces into a dynamic continuum.

Secondly contemporary architecture had to be anchored to the ground, as if it arose from the site. La Nouvelle Maison was connected to the terrain in threefold way. The first link was visual and resulted from the manifest horizontality of the exterior. The subtle linearity of the masonry was underlined by several, stronger horizontal lines, such as the cornices and the other protruding elements. As a result, the proportions of the building were visually stretched parallel to the ground and thus more connected to it. The second link was material and based on the 'rustic' aspect of the masonry: contrary to a so-called Modernist white cube, the rough-surfaced house merged, like a vernacular building, into its rather rural surroundings. Regarding their common rationality, this use of traditional materials in modern architecture was even evident for van de Velde. The third, physical link was made by the built elements, such as the terraces, retaining walls, steps and gates, which introduced the architecture of the house into the garden, as well as the concrete base of the façades which subtly connected the plastic brick volume to the ground. The above characteristics reflected a remarkable affinity with Wright's conception of prairie architecture: "I had the idea [...] that planes parallel to the earth [...] make the buildings belong to the ground. [...] a projecting base course [...] welded the structure to the ground."² Van de Velde was surely acquainted with the work of the American, through both the 1910 Wasmuth portfolio and the 1920s issues of *Wendingen*,

but a clear answer on this eventual influence asks for a deeper research.

Finally, contemporary architecture had to be devoid of ornaments or -in other words- characterised by a so-called sovereign ornament, which emanates from the different plays of proportions and volumes. This definition evoked somehow the image of Le Corbusier's purism or Mies' elementarism but, in practice, van de Velde did not settle for abstract purity of form. His Modernism hinted at Art Nouveau: the volumes of *La Nouvelle Maison* were moulded in a plastic way -as described above- and their materiality was enlivened by the artist's hand. As the ornament per se was liquidated, the refined architectural detail became the organic complement to the forms. On the exterior, the brick masonry, the below base and the protruding elements in textured concrete articulated the plain wall surfaces. This articulation was subtly underlined by the slender, dark painted metalwork of the balcony railings and window and door frames. In line with the post-war building practice, van de Velde introduced thus industrially prefabricated products in his renewed architectural language. He even elevated them to aesthetic elements, since their sober and functional design perfectly matched with the formal reduction he was pursuing.

As to the interior, the design approached much more the nudity of the above definition. The formal-aesthetic principles of the exterior were continued inside, though more sober in their materiality. The architectural articulation of the interior appeared in refined details, such as the rounded plasterwork edges and the curved base of the bookcases, and in the volumetric composition of building elements, such as the sculpture-like staircase. However, the atmosphere of the interior spaces was basically defined by the well thought-out combination of the finishing materials and thus freed of any so-called sentimental suggestion. For instance, the walls, doors and window frames in the liv-

ing spaces and entrance hall were painted in white and off-white tones, which cohered with the natural aspect of the floor finishes (polished grey limestone, sea-grass rugs and varnished oak). The built-in furniture remained sober and functional in its design but it was aesthetically upgraded by its finishing: the varnished ivory-white paintwork of the bookcases referred to the white lacquered German furniture of van de Velde and the bright inside colours of the different wardrobes were reminiscent of the expressive colour scheme of van de Velde's house in Weimar.

Vision on Housing

Another aspect of van de Velde's thinking to find continuity, was his very specific vision on housing, as developed in the design of *Bloemenwerf*. Van de Velde namely adhered to an introverted atmosphere: he conceived his own houses as a shelter for his family, protecting them against the moral and aesthetic erosion of modern society and creating a framework in which the serene beauty of both the architecture and the interior positively influenced life. Though clearly addressing Modernism, *La Nouvelle Maison* was thus not conceived as a Corbusian 'machine à habiter'. The reality of this dwelling was the space within to be lived in: house and home at the same time. On every level, the design was impregnated by this sheltering idea.

The rural surroundings, while offering the necessary proximity to the capital, referred indeed to the authentic, unspoiled haven of the countryside, the antithesis of modern society. The garden, on the other hand, created a subtle, phased transition between the private and the public through the combination of the slightly elevated terraces around the house, as an outdoor extension of the interior, and the surrounding strip of greenery and pathways, as a buffer towards the openness of the garden.

Finally, the architecture itself, and in particular this tendency to blur, brought off a sense of shelter. On the exterior, the plastic building volume seemed to envelope the family life within its smoothly curved façades.

On the inside, the centre of the house was the living room. The access from the street to this space was cleverly organised along a kind of “promenade architecturale” which directed the gradual discovery of the house’s intimacy, through a play of spatial compression and expansion and varying natural illumination. Here, van de Velde proved to be a master in spatial composition. Contrary to the apparent individualisation of the living spaces on plan, the large openings in between the rooms, the subtle blurring of all edges and corners and the continuity of the colour scheme enhanced the organic connection between the gallery, living room, dining room and studio and turned them into the above-quoted organic continuum.

A Modern ‘Total Work of Art’

La Nouvelle Maison, as a privileged place of action and exposure, constituted the instrument by which van de Velde perceived and reordered the world around him in the light of the 1920s modernity³. All components of the design from the general structure, over the garden layout, to the minute detail reflected the same, twofold ambition: the accomplishment of serene beauty and the creation of a shelter. Moreover, the architecture was complemented by an interior landscape of fittings and furnishings: a combination of new built-in furniture, loose pre-war van de Velde-furniture (e.g. Bloemenwerf dining room, Weimar reclining chairs), avant-garde artworks (e.g. Minne, Van Rysselberghe), commercialised design fittings (e.g. door handles Kramer, lamp Henningsen), prefabricated products (e.g. Van Hamme sashes) and contemporary design furniture (e.g. armchair Dieck-

mann). This landscape was rather hybrid and covered somehow the entire timespan of the Modern Movement -from Art Nouveau to Bauhaus- but it was nevertheless well in line with the architectural-aesthetic spirit of the house. In that sense, architecture and interior merged into a ‘total work of art’, which embraced the post-war modernity and breathed avant-garde, however without ignoring its architect’s and inhabitant’s past.

Conservation

Though the Art Nouveau-ritualism of creating a ‘total work of art’ was maintained, the concept gained a certain freedom in La Nouvelle Maison. Except for the ‘tailor-made’ built-in furniture, the interior was not specifically conceived and thus not inextricably connected to the house; it was more a kind of biographical testimony to its creator. However, as different occupants followed each other after van de Velde’s departure for Switzerland in 1947 -where he spent the last 10 years of his life- the fittings’ and furnishings’ nature appeared to be short-lived. After his death, the significant pieces and objects of the interior were spread over different museums. So, instead of becoming a monographic museum ‘frozen in time’, the house preserved and continued its original dwelling function. At the same time, the architecture -or in other words, the “unfurnished Gesamtkunstwerk”- kept its intrinsic force, which proved to be of timeless quality in terms of form, space, atmosphere and functionality.

Over the past 83 years, the original building substance was rather well preserved -notwithstanding some typical deficiencies of Modernist architecture and a few intrusive, though reversible interventions- so that the heritage good retained, generally speaking, a high level of authenticity, as to the above terms. However, conservation and subsequent interventions are

at issue today. In that sense, the house was surveyed⁴ in detail in 2009 and afterwards comprehensively documented and analysed, from both art-historical and building-technical point of view⁵. The resulting master plan⁶ of conservation pointed out a series of guidelines -and adjoining proposals of intervention- in order to combine, in balanced way, the preservation and revalorisation of the original building substance -the 1929 as built condition being the frame of reference- with the maintenance of the original dwelling function within a contemporary, sustainable context. Besides the technical facets of restoration, the master plan also addresses symbolic issues; the most important being the restitution of the “unfurnished Gesamtkunstwerk”. This basically comes down to, on the one hand, the restoration of the original paintwork schemes both inside and outside and, on the other hand, the reconstruction, though as a contemporary intervention, of the lost architectural garden.

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Notes

- 1 Casteels, *Henry van de Velde*, 13.
- 2 Pfeiffer, *Frank Lloyd Wright*, 7.
- 3 Postiglione, “Architects’ houses”, 7.
- 4 Vansteenkiste, *La Nouvelle Maison*, Volume 4.
- 5 Vansteenkiste, *La Nouvelle Maison*, Volume 1, chapters 2-12.
- 6 Vansteenkiste, *La Nouvelle Maison*, Volume 1, chapters 13-14.

Arne Jacobsen in Berlin: from Lamps to Courthouses

Mara Oliveira Eskinazi



Figure 1. Jacobsen's perspective of the group of houses, showing the houses' articulation in a "C" plan and the courts.

Arne Jacobsen (1902-1971) projected for occasion of Interbau 1957, in Berlin, a group of four single-family houses that is unique in the context of his work built outside Denmark. Interbau was the first International Building Exhibition that took place after the II World War in the so called West Germany and exemplified the best that modern architecture and urbanism offered in terms of social housing. The initiative that rebuilt the Hansaviertel, an 18th century neighborhood with a central location and destroyed by the war bombings, produced a great amount of housing typologies, that ended up expressing a variety of distinct possibilities of living in a modern city.

This article examines, within the sub-theme of interior design, Jacobsen's project elaborated for Berlin in 1957, together with the furniture and fittings projected for its interior, whereas his work in the field of architecture manifests itself along with the fields of interior architecture and design. In his projects, design and

furniture details, the fixtures and finishes are a frequent presence, and are designed for each of his pieces of architecture. The parallel analysis between the architecture proposed by Jacobsen for the group of houses in Berlin and its interior architecture will provide elements to indicate how the extent of the contribution of the discipline of interior design collaborates in the analysis and understanding of his architecture and the valuation of his work as a total work of art – or Gesamtkunstwerk. Furthermore, the analysis of Jacobsen's original project, done in the light of the present situation of conservation of the group of houses, plus the interventions the houses have gone through, intends to examine alternatives for the conservation of a modern interior projected along with the building that envelops this interior.

Interbau had as an assumption to encompass in its planning an expressive typological and functional variety. And it ended up expressing an idea of the multiple and heterogeneous

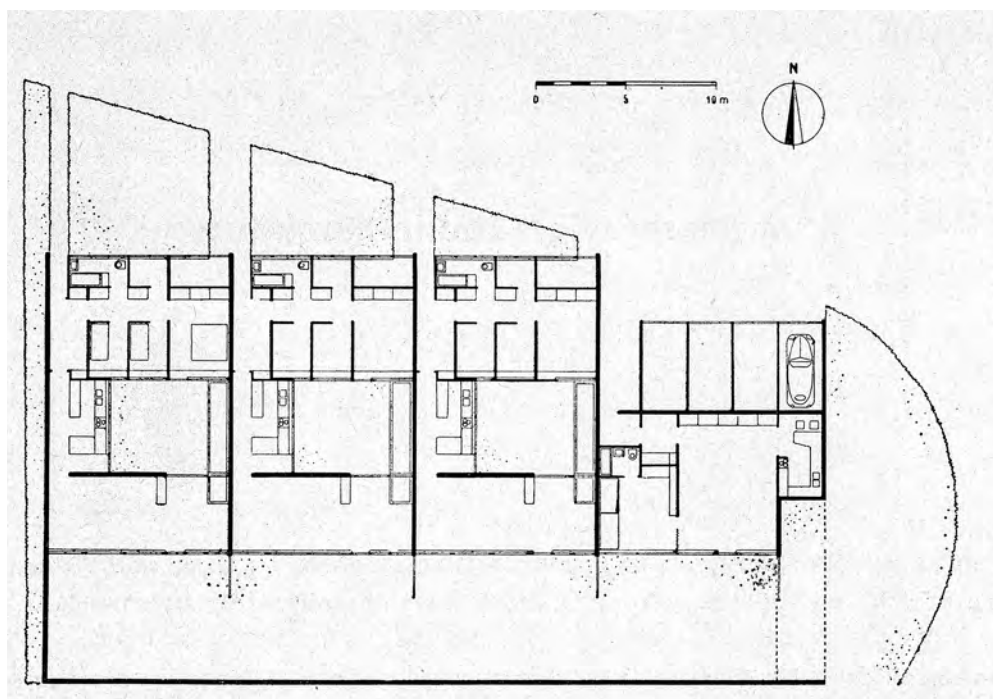


Figure 2. Plan showing the group of four houses, three of them with its own inner court, and the originally common garden on the south. The smaller house is the one on the street corner, next to the four garages.

modern city that differed from the kind of planning more radically based on the Athens Chart. Among the four distinct typologies that can be found in Hansaviertel's projects – single-family houses, towers, low and tall bars, Jacobsen's houses are located among the group of single family houses. Built along the loop configured by Händelalle, this group of houses projected by 11 different architects¹ is limited in the south by the Tiergarten, by the church and loop itself, to the west by Pierre Vago's bar, and to the north by Alvar Aalto, Fritz Jaenecke and Sten Samuelson's bars, to the east by Paul Baumgarten's building and Altonaerstrasse; Jacobsen's courthouses are located in the north part of the area, between Gerhard Weber's house and Jaenecke and Samuelson's bar.

The different groups of courthouses show a variety of types of plans, but they have a similar formal vocabulary – most of them articulate

systems of perpendicular and parallel plans with glass plans, flat roofs with impermeable slabs and courtyards or private gardens. The four Jacobsen's houses articulate those same elements in a "C" plan, resulting from a combination of two yards of different size and hierarchy – one interior, around which the house is organized, plus one exterior.

Similar organization with a "C" plan and similar internal division is found in Jacobsen's project for the group of courthouses of Carlsminde, that was not built but was possibly his main reference for the work in Berlin. Moreover, during the period of the Interbau, the courthouse typology was an object of Jacobsen's work, and was latter pursued in the Søholm III (1961) project, in Klampenborg; Søholm III, where Jacobsen has lived himself, presents a series of other analogies with his project for Berlin, either from the structural point of view, or



Figure 3. Jacobsen's drawing showing the furniture designed by him for the social area, in the south part of the house, with the living and working areas divided by a suspended curtain. On the left is the inner court and on the right the south garden.

from the relation between the living area and the annex garden, or the façade composition.

The group of four houses in Berlin is constituted of three rectangular and identical court-houses, of 10 x 16m and 127sqm each (160sqm if the yard is considered) and a smaller house of about 80sqm. The four houses are placed side by side, facing north, the private garden to the south and an internal yard to the east. The house located to the east end is the one with the smaller area and the only one that is not placed around a yard. This one, besides having the duty of arranging the street corner, is a bit displaced to the south in relation to the front part of the other three. Its smaller area is explained as an urban strategy to indicate the street corner, but also because it has close to the north façade a volume that contains the four garages.

Each of the three bigger houses is set around its own internal yard, creating a plan divided in three parts. With such division, the living and sleeping areas are separate, what favors privacy. The main access is through the north façade, facing Händelalle. In this façade are located the only openings direct to the street – the main

entrance door, indicated by means of different colors, and the access door to an external deposit; all other windows and openings face either the internal yard or to the south garden.

Already from the entrance door we can perceive Jacobsen's extreme care with the project of smaller scale objects, that goes back probably to his early experiences with furniture design. The entrance door is covered by means of a delicate small glass coverage held by metal fixtures; the access door is coated with a colored plate and has wooden boards; the number of the houses is stamped in a lamp type of glass fixture similar to the ones placed on the inner courtyards and living room. These are some examples indicating that for Jacobsen, the architecture project encompass not only the urban context and the house but also the scale of design of objects and accessories that go along.

The north part of the house has three bedrooms, all of them facing the inner court and oriented to south, and one bathroom and two deposits close to the north façade. Jacobsen designed the table and the sideboard for the two smaller bedrooms and closets in the hall. The courthouse is conceived in such a way to keep privacy for the owners, sheltering them from the public passing in the street. The placement of the bathroom and deposits close to the north façade, plus a line of closets, reinforce this idea, since it isolates the house from external interferences.

The south part of the house, the one that shelters the social area, opens to the south garden and to the inner court, was projected to be divided in two ambiances – living and working areas. The division is made by means of a mobile curtain suspended by a metal tube. The garden to the south goes along the entire length of the living area. The relationship with the exterior enlarges visually the internal area of the living, and both the inner central court and the garden to the south, because they are directly linked to the living by means of large plans of glass, can be seen as their extension.



Figure 4. View of the kitchen, with the furniture, chairs, lamps and cutlery designed by Jacobsen, and the inner court on the back.

The connection between the areas to the south and to the north is solved with the aid of a central strip, that includes the inner court to the east and a narrow strip to the west, composed by the corridor and kitchen, facing directly the inner court. The kitchen has the furniture designed by Jacobsen, including the kitchen counter, a line of cabinets parallel to the counter, dividing visually the kitchen from the hall/circulation and the dining table with chairs and a pendant lamp, all of them also projected by him. The inner court can only be reached through the kitchen and it is not only a space that articulates the north and south areas but is also the place of the house (except for the bathroom and deposit) that allows light to get into the house, even if not exclusively, as in the case of the living room. The original project shows that Jacobsen conceived a garden like a strip close to the wall to the east entering the interior of the living, bringing vegetation to the interior of the house. Just in the same way, the

row of lamps in the courtyard, also projected by Jacobsen, and along with the garden strip, reinforce the idea of continuity between interior and exterior. His interest to think the project of the external areas and the landscape ("if I get a new life, I would like to be a gardener"²²) in harmony with the architectural project, contributes to strengthen the idea of total work of art.

As for the smaller house, it does not have an inner court, and had originally only one bedroom. The access is through a corridor, located in the north façade between the garages and the neighbor house. As in the other houses, its southern façade opens to the garden. All the other facades have no openings.

In all the houses the window frames are fixed, allowing only light to get in. The ventilation is done through horizontal openings with venetian windows that can be opened, placed on all the superior parts of the frames. Similar system of windows, with fixed glasses and mobile superior venetian is found in the Jürgensen



Figure 5. Aerial view of the group of houses. On the left is the volume added to the smaller house on the corner.

house (1956), and in the unit for Søholm III. Boxes are placed below the window frames to hold the ventilation system, which were projected as furniture elements integrated to the spatial configuration and distribution of the internal areas.

However, recent interventions and reforms in some of the houses did not entirely ensure the original characteristics of the group of houses. The house number 39 was renewed between 2004 and 2006 by the architect Kirsten Schemel. The work includes the entire renewal of the furniture designed by Jacobsen and the technical fixtures (cafection and electric system), the modernization of the tiles, with the laying of a paving in shiny resin, the restoration of accessories, like lamps and the glass roof at the entrance, substitution of window frames, renewal of the gardens, and the addition of solar protection cover in the courtyard. Nevertheless, due to lack of information relative to the original project, the restoration project was guided by an idea of analogy with the elements found in room 606 of the SAS Royal Hotel and in the Søholm III houses. So the colors used in the interiors were based on the colors found in room

606, the only one that remained according to the original project. The materials and construction techniques and solutions employed were also based in Søholm III.

The house 37 is not occupied at the moment and is in a state of decay. The number 35 is well kept, almost like in the original project; however there was the addition of a wooden pergola at the south façade that ended up mischaracterizing it. And to the house number 33, the one at the corner, it was added a volume that contains three new bedrooms, altering completely the volumetry and its interior.

In spite of the modifications taken place by means of some interventions that, on the one hand, have added to the conservation of this part of the recent heritage, and on the other hand contributed to the partial loss of the project's original characteristics, the concept of total project is still a strong mark of the project. It is exactly this qualified interplay between the different scales and the ability with which Jacobsen moves between the house's project, the fixtures and accessories that are part of the interior, and the project for the garden that contribute to the valuation of his work as a total work

of art. The constant search for a strong relation between building, objects and vegetation, between architecture and nature, between interior and exterior spaces – and the way those spaces are related, with the removal of visual frontiers

–, and between smooth or transparent surfaces and surfaces with textures or colors, permeates an important part of Jacobsen's work and is what gives the Berlin houses its sophisticated spatial quality, lightness and amplitude.

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Notes

- 1 Other than Arne Jacobsen, Paul Baumgarten, Eduard Ludwig, Gerhard Weber, Alois Giefer and Hermann Mäckler, Johannes Krahn, Sergius Ruegenberg and Wolff Von Möllendorf, Sep Ruf and Günther Hönow also took part on Interbau with designs for single houses or group of houses.
- 2 Carsten Thau and Kjeld Vindum, Arne Jacobsen (Copenhagen: The Danish Architectural Press, 2002), 123.

Ernst Plischke's Views on Open Planning and Their Reception in New Zealand

Linda Tyler

Emigrating to New Zealand as a refugee from Hitler's Europe in 1939, Ernst Plischke was already heralded as an important exponent of modernism in Austria. A predilection for open planning of interiors became the hallmark of his domestic designs in New Zealand begun in 1939, and logically extends to design for the Cashmere Community Centre in Khandallah in Wellington in 1952. Despite opposition from regulatory authorities, Plischke felt that New Zealand with its legendary classless society was well-suited to implementation of the informal open plan in domestic architecture, and also could be the setting for a new style of community gathering place.

When Plischke arrived, he first worked in government service on the planning of semi-detached housing units in Orakei. Recognised immediately as adventurous, his perspectives were exhibited in the Government Court in the Centennial Exhibition at Rongotai in Wellington in 1940. Knowledge of the Le Corbusier settlement houses at Pessac, near Bordeaux (1926) and of Mies van der Rohe's steel-framed apartment house at the Weissenhof Housing Settlement in Stuttgart (1927) is apparent in the design of these twin units, which also closely resemble the semi-detached houses featured

in the Vienna Werkbundseidlung exhibition which Plischke designed in 1930. The Orakei units were designed with the same consideration for maximizing the utilization of available light and sunshine, but whereas the European precedents were constructed as manifestoes of rational continental planning and ideal organization of house interiors using an open plan, the New Zealand designs are conventional in plan with separate living, dining and bedroom areas. Plischke's superiors in the Housing Department felt that New Zealanders were not yet ready for the informal living implied by the open plan.

Due to his training in Peter Behrens' masterschool, Plischke had an enthusiasm for town planning which was cultivated by his transfer from the Housing Department to the office of the Assistant Director of Housing and Town Planner, Reg Hammond. This coincided with Plischke's publication of a booklet for the Army Education and Welfare Service which was intended to popularize theories of modern house building amongst servicemen. Illustrated with drawings of furniture, houses and urban designs, it was the basis for a series of lectures he gave as part of an Adult Education course entitled "Planning the Modern Home". In turn, this led to Plischke being commissioned to write a

book on architectural design for the Department of Internal Affairs. Entitled *Design and Living*, this publication set forth Plischke's ideas on planning as being cumulative: well-planned rooms are integral to the well-planned house, and since such houses decide the appearance of a street, it would be possible to design cities from the inside out in new countries like New Zealand.

Thwarted in his attempts to have his ideas implemented, Plischke left public service at the end of 1947. The publication of *Design and Living* gave him a profile as an interesting modern designer of importance, and clients for domestic designs followed. He had already designed two private houses while working for the Housing Department: his first commission was a house in Christchurch for the wheat scientist and fellow émigré Otto Frankel and his second wife, painter Margaret Anderson. Privacy from the road and the neighbours was one of the main aims of the plan, and indeed the house's most striking feature is that it turns its back on the street and is entirely oriented to the sun and to the Frankel's 0.3 hectare landscaped garden. It was constructed in timber with a flat roof and was originally L shaped, with the concomitant arrangement of internal spaces. A large living area, with kitchen and laundry behind, forms the lateral extension; three bedrooms, bathroom facilities and a hall, are the longitudinal grouping. Some of these rooms are dual purpose – there is no formal dining room, the table and chairs are in the living area, and the wide hall joins with the verandah to make another living space. One of the bedrooms doubles as a study, and is identified in the plan as “study-bedroom 2”. It features a bed recess, and is shaped to approximate a square with wardrobe storage space and a niche for the bed to be placed to the side. With the wardrobe doors closed and the curtains drawn across, the room becomes another living room or study. Differentiation of internal spaces according to one specific purpose was

anathema to Plischke whose modernist belief led him to a pluralistic multi-functional approach to room design.

The affinities with Frank Lloyd Wright's Usonian houses are considerable – particularly the Jacobs house in Wisconsin, the first Usonian home which had been published in *Architectural Forum* in 1938, which had been touted by Wright as the solution to the small house problem. In both the American and New Zealand designs, formal dining areas are absent and kitchens and bathrooms are kept small. Built-in furniture features to create a sense of spaciousness and order on the interior, while flat, overhanging roofs and large areas of glazing create a confluence between inside and outside, with hinged French doors enabling ease of access to the garden. The Wrightian device of a horizontal planning grid can be sensed in the Frankel house also, and Plischke wrote in the text accompanying the plan when it was published in *Design and Living* in 1947 that the straight forms of the house are continued even in the paving and the garden pool to bind the house into one unbroken unit. One difference in the planning may have been a concession to New Zealand habits: the kitchen and bathroom facilities which are adjacent to each other in the Jacobs house, and located at the core of the building, being the centre from which the living and bedroom wings originate, are separated in the Frankel house design. This results in a more traditional arrangement which aligns the kitchen with the living-dining area and puts the bathroom facilities amidst the bedrooms.

Plischke's design was not identified as an extant building when it was published in 1947. How, then, to assess its influence? Shortly after the Frankel house was completed, the Canterbury architect Paul Pascoe, published a ground plan and perspective for his Harris House in *Making New Zealand*. The constituent parts of Pascoe's L shaped plan and his use of the flat roof bear a strong resemblance to the Frankel

house. Yet Pascoe had gained first-hand experience of European modernism while in England between 1933 and 1936 when he worked for the Tecton group, so the similarity could be coincidental. To identify physical manifestations of this house's direct influence in Canterbury at this time is problematic, but with the Frankel house, Plischke unconsciously flouted convention. The house broke rules for local architecture, both literally and figuratively. It incurred bureaucratic opposition from the Christchurch City Council building inspectors because it had only small, secondary windows (belonging to the kitchen and laundry) showing to the street, thus contravening a by law. No concessions were made to the regulation size for windows onto the street, and they remain unchanged. The planning of the Frankel house can be seen as spearheading the impetus for general acceptance of the forms and values of modern movement architecture in domestic architecture in New Zealand.

As well as transforming the local approach to planning interiors in domestic design, Plischke designed a very influential hall structure during his 24 years in New Zealand. This was the Cashmere Community Centre, commissioned by the Methodist Church and built in the Wellington suburb of Khandallah in 1952. It was a large rectangular building with a flat roof – a hall placed on a basement of the same size. From the road, it was never apparent that the building was two storeyed, as the façade showed no obvious division. Symmetry dominated the elevation facing the road, but it is not uniformly planned on the interior. The main entrance is downstairs and to the right, and leads into the lobby and to the internal staircase. There is also a narrow entranceway up external stairs which reaches the upper storey hall directly and is placed on the opposite side to conform with fire regulations. The internal planning of the centre is ingenious: it was envisaged that the space could be used as a cinema, a kindergarten, a

games hall, a theatre and a reception room without diminishing the religious quality of the space. By means of careful planning, Plischke created the ideal space to fulfill each of the projected functions of a community centre. First, the kindergarten was assigned to the rear of the hall, where it was sunny in the morning and opened onto a sheltered playground. This whole area could be divided off from the rest of the hall by means of a soundproof sliding wall. Second, for the hall to be used by clubs after school in the evenings, large windows were built along the western side to capture the heat of the sun all afternoon, and to provide natural light until it set. The hall was spacious enough for gymnasium use, and its adaptation as such shows a continuation of the ideas evidenced in his domestic architecture: the belief in lots of fresh air and sunshine as essential to good physical and mental (and perhaps in this case also, spiritual) health. That children needed these qualities in a building as much as adults was obvious to Plischke and in his domestic designs he had always endeavoured to situate children's bedrooms and playrooms to maximize the beneficial warming effects of the sun.

Plischke's planning to accommodate the multiplicity of uses to which the hall could be put in no way detracted from the spiritual aspect of the building. For conventional worship, the sliding wall was to be pulled across, creating an intimate seating space wider than it was deep and curtains at the front of the hall were pulled aside to disclose the apse. The lighting was also adjusted to create a mood in keeping with peaceful worship and thoughtful reflection – the front windows, which were full length, allowed natural light to flood the apse alcove. At the time the centre was finished it was a very unusual concept to combine the actual space of a the church with other activities. The flexible interior arrangement of this building, and its resultant ability to accommodate a wide variety of activities created a new prototype for

community hall design in New Zealand. The government undertook to subsidise Community Centres as war memorials, on a pound-for-pound basis, matching the capital raised locally, and many were built throughout New Zealand in the 1950s.

Thus the abiding architectural principles which connect Plischke's planning in these two New Zealand buildings are flexibility, combined with the usual modernist themes of openness, light and continuity. In the *Community News* of 17 April 1948, Plischke wrote an article entitled "That Satisfying Atmosphere" which encaps-

ulates the importance he placed on planning: *"Cheerfulness and inviting brightness are part of the design, just as essential for its success as the layout of the plan. It is a prejudice that good taste is a matter of money. If we design our buildings right from the beginning with these ideas in view, they will be part and parcel of the plan and not a decoration, which tries afterwards to make the best of a bad job. In a good design the plan, the construction, and fittings and finish are conceived as one whole and supplement one another in achieving a feeling of restful and satisfying atmosphere..."*

Permanence and Change

the Work of Geoffrey Bawa in Sri Lanka

Rajiv Wanasundera

Geoffrey Bawa is, without doubt, Sri Lanka's greatest architect of the 20th Century. Over the course of a fifty-year career he designed a series of remarkable buildings throughout the island and within Asia. Although his work is considered by some to be regionalist, he was very much a modernist at heart. This paper will explore Bawa's legacy in Sri Lanka by looking at four buildings and examine how they have evolved over time. Four different building types have been selected, a house, an office, an academic building and a hotel.

Sri Lanka – or Ceylon as it was known prior to independence – is a small island off the southern coast of India. Despite being a fifth of the size of Finland, the country has over four times the population. It faces many of the same challenges as other developing countries: a growing population, rapid urbanization and increased competition for scarce resources such as available land. Given these circumstances the preservation of buildings, particularly those of the recent past, is not a high priority. Even when a building is recognized as being designed by someone as revered as Bawa, its survival is not always assured; and there is no guarantee that it will not be altered beyond recognition.

In 1962 Geoffrey Bawa designed a house for an artist and friend, Ena de Silva. It was the first time he was able to design for a client as

if he were designing for himself. The end result was a remarkable building that reconceptualized what a modern house in a tropical, urban environment should be. It was a radical departure from the typical colonial bungalow in the middle of a garden, which had up to that point populated Colombo's neighborhoods. Instead, Bawa designed a house that filled the extents of the tight urban site. By providing seven courtyards dispersed within the interior, he was able to create a sense of openness and transparency within the privacy of the tall boundary walls. It was recognized as one of Bawa's "most potent and beautiful designs" and was responsible for "changing perceptions of a generation of architects and ultimately of the entire urban population of Ceylon."¹

Despite being acknowledged as one of Bawa's seminal works, the Ena de Silva house was torn down in 2009. It succumbed to the pressures of rapidly rising real estate prices in Colombo. Its proximity to an expanding private hospital meant that the site was acquired and the building was demolished to provide additional parking for hospital visitors.

The St. Bridget's Montessori School that Bawa designed two years after the Ena de Silva house has not had to suffer a similar fate. More than fifty years later, it still fulfills its original function. Perhaps its continued use is a testament to



Figure 1. Site of Ena de Silva house, 2012. R. Wanasundera.



Figure 2. St. Bridget's Montessori School, Colombo. R. Wanasundera.



Figure 3. Entry court, Triton Hotel, Ahungalle. R. Wanasundera.

the simplicity and directness of Bawa's design. The two-story building is constructed almost entirely out of concrete and is shaded by a great overhanging roof. It has virtually no walls. In the words of Brian Brace Taylor who wrote the first monograph on Bawa, "the impression is that of being under a wide and splendid tree."³ Everything is scaled to the eye level of a small child. None of the walls are taller 3 feet (1 meter). The exceptions are a couple of organically shaped pods that house restrooms and storage space. The building is open to its surroundings while being protected from the sun and the rain by the roof with its 8-foot cantilever. David Robson who has written extensively on Bawa says the "structure can be visually understood by any intelligent four-year old."³

It is inevitable however, that given the continued use of the building, changes would have accumulated over time. An open play area at one end of the first floor has been enclosed as

a teacher's common room. A two-story mesh screen has been installed around the entire perimeter of the structure to provide some separation from the elements. After a snake was discovered in a classroom, small gates were installed on the first floor to secure the space. The concrete surfaces, which were left bare by Bawa, save for a few murals, have now been painted. Yet from a preservation standpoint these changes can be easily reversed, and the building is in remarkably good shape and continues to fulfill the function it was originally designed for. It is a testament to both the flexibility of Bawa's design and the enduring popularity of the Montessori system of education.

The Triton Hotel dates from a later period in Bawa's career. In the 1980s, the liberalization of Sri Lanka's economy brought about a period of sustained growth, and along with it, three significant commissions for Bawa's practice. They were: a new parliament complex for

the government, a university campus in the south of the country and a large 125-bedroom hotel on the west coast. This project, named The Triton, represented a new design direction for Bawa, a break from the tropical vernacular he was associated with and a move towards a more stripped-down modernist vocabulary. Despite a constrained site with a long, narrow beachfront exposure, Bawa was able to create a sophisticated sequence of spaces and a carefully choreographed procession through them. The entry courtyard with its reflecting pool opened up to an open lobby with a highly polished floor, which was on level with the adjacent pool, and ultimately the Indian Ocean beyond. This created a vista of shimmering reflections that left the first-time visitor unsure of where the floor ended and the water began. It has been described as a “magical sequence of vistas and spaces.”²⁴ In Bawa’s words, “if the world were only flat you would see Africa on the horizon.”²⁵

While insulated from the urban pressures found in the rapidly expanding urban areas of Sri Lanka, the Triton has had its own challenges to contend with. Changing notions of luxury have necessitated upgrades to the property to satisfy the demands of visitors and to keep abreast of current trends. This included a rebranding of the hotel, and it is now known as the Heritage Ahungalle. Bawa’s original vision of generous public spaces open to views of the ocean have been whittled away, with air-conditioned lounges replacing airy verandas. The rooms too have been given a make-over, and the simple finishes that Bawa originally specified, such as polished cement floors and white ceramic tile in the restrooms have been replaced with wood floors and marble countertops. The hotel has had to contend with natural disasters as well. It was damaged in the tsunami of 2004, when 20-foot (7-meter) waves inundated the property. While there was no significant loss of life or catastrophic damage to the building, a comprehensive restoration was needed. The



Figure 4. Courtyard, 2 Alfred House Road, Colombo. R. Wanasundera.

Triton today features different materials and finishes from the original design. But despite the aluminum clad windows which replaced the original wood pivoting windows and the new marble floors, the strength of Bawa’s design still clearly reads through. Additionally, the vegetation in the courtyards have fully matured, compensating for some of the changes.

With our last case study, we come back a full circle. Bawa’s office on Alfred House Road was originally designed as a house for a doctor in 1961. Prior to completion, the client emigrated and Bawa and his partners decided to buy the building for their use. No. 2 Alfred House Road shares many similarities with its contemporary structure nearby, the Ena de Silva house.

Like the de Silva house, this building is divided into three discrete pavilions. The first structure presents a blank wall to the street and contains the garage and staff quarters. The second pavilion, accessed off an open courtyard, was intended to house the kitchen and dining room. Another courtyard separated the family quarters in the third pavilion, and was reached by an axial walkway separated by a reflecting pool. A garden at the back provided yet more open space. Surprisingly these domestic spaces were easily converted to function as an architect's office. The utility spaces in the entry pavilion were used as originally intended. The second pavilion housed the drafting room. The ground floor living room was used by Bawa as his office. As explained by Robson, "with its courtyards, loggias and verandas, the building created a pleasant and comfortable working environment that obviated the need for air-conditioning and offered a sample of the practice's work to any prospective clients."⁶

In the 1990s Bawa downsized his office and relocated it to his nearby home. The building then took on yet another use, as it was leased by Bawa to an entrepreneur who converted it to a gallery and restaurant. Remarkably, the conversion has given a new lease of life to the complex, "while fully respecting the spirit of the old building."⁷ The central courtyard serves as the main gallery space. Bawa's office serves as the lounge and bar while a new structure in the garden serves as the dining room. The drafting room upstairs is a private event space. Despite certain incongruities – like Bawa's former desk being used for the display of desserts – the building has transitioned to its new use remarkably well.

It is perhaps due to Bawa's recognition as Sri Lanka's foremost architect that very few of his buildings have been demolished up to the

present moment. Unfortunately, the Ena de Silva house is a sad exception. And it seems likely that many of his houses could be threatened in the future, given the increasing value of land in Colombo and the rapid commercialization of once desirable residential areas. However, Bawa's office is an example of a residential structure that was able to be adapted to a new use while maintaining much of the character defining features of the original design. It could serve as a template for the adaptive reuse of other residential buildings by him for compatible commercial uses.

The outlook for the academic buildings Bawa designed is brighter. The three classroom buildings he built for schools in Colombo are all still in use and are essentially intact despite minor accretions and changes made over time. This is in part due to the flexibility of the spaces that Bawa designed, which have proven remarkably adaptable to changing demands.

Perhaps the greatest challenge in preserving the integrity of Bawa's vision lies in his hotel projects. While these properties occupy a special niche, and are marketed as Bawa designs to attract a discerning clientele, evolving notions of luxury creates a tension between preserving the designer's vision while catering to the demands of today's clients. As can be seen at The Triton, this is not always successful. However, the essence of Bawa's design intent can still be clearly seen, even if the finishes and details have been altered.

Bawa himself was surprisingly unsentimental about the preservation of buildings. To him buildings were "things to be used and reused and to be removed or replaced when necessary."⁸ He would be pleased that almost a decade after his death, a majority of his projects continue to remain in everyday use.



Figure 5. Street façade, No. 2 Alfred House Road, Colombo

Notes

- 1 David Robson, *Geoffrey Bawa: the complete works* (London: Thames & Hudson, 2002), 75.
- 2 Brian Brace Taylor. *Geoffrey Bawa* (Singapore: Concept Media, 1986), 82.
- 3 Brian Brace Taylor. *Geoffrey Bawa*, 82.
- 4 David Robson, *Geoffrey Bawa: the complete works*, 164.
- 5 David Robson, *Geoffrey Bawa: the complete works*, 164.
- 6 David Robson, *Geoffrey Bawa: the complete works*, 84.
- 7 David Robson, *Beyond Bawa: modern masterworks of monsoon Asia* (London: Thames & Hudson, 2007), 188.
- 8 David Robson, *Geoffrey Bawa: the complete works*, 263.

Drawings, Ideas and the Modern Project

Guillermo Jullian de la Fuente's Representational World

Maximiano Atria

Many revolutions in the development of architecture sprang out from changes in the way people –and architects– saw the world, and all of them found expression in the changing techniques of representation. The invention of perspective, for instance, brought with it not only different ways of drawing the surrounding space, but of thinking about it too. If we think of representational methods as ways of translating ideas to drawings and then to buildings, a close link appears between how we represent and what architects can imagine. Even more, a close relationship appears between what can be drawn and what can be designed, as if representational tools were closely related to architects' capacity of thinking and creating.

Probably one of the strongest revolutions in architecture occurred in the first decades of the twentieth century, when a new view on the world at large promoted an interest in finding new forms for this new architecture. Modernity challenged not only the everyday life of millions, but became –in the words of Marshall Berman¹– a new experience that forced

every human activity to revise its methods and change its previous vision.

Modern architects searched tirelessly looking for sources of inspiration to create new forms that would answer to the new requirements in a world that was changing at a fast pace, and representational methodologies were an expression of this change. But this search didn't come together with a radical change in representational methods –as perspective had been for Renaissance architects– but used representation to enforce new ways of communicating and designing architecture.

Once the struggle for a new architecture was secured, it would be the task of a second –or even third– generation of modern architects to explore new representational tools, probably much more personal in scope and less compressed by the tightness of the dogmatic first years of the heroic period of modern architecture.

Josep Maria Montaner has already written about the work of Lina Bo Bardi² in respect to her position as an architect that knew how to assume a position in that direction: a modern



Figure 1. Rabat. Archivo de Originales Sergio Larraín García-Moreno. Facultad de Arquitectura, Diseño y Estudios Urbanos. Pontificia Universidad Católica de Chile.

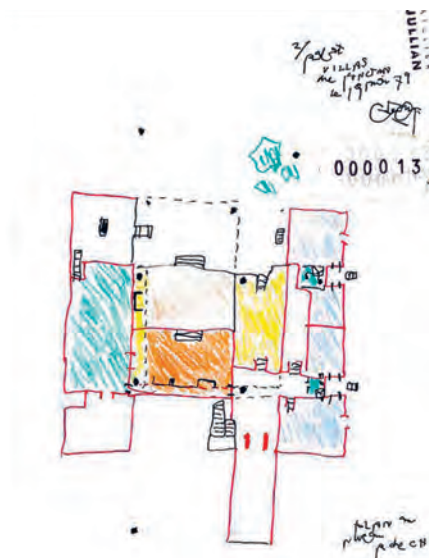


Figure 2. Rabat. Archivo de Originales SLGM. FADEU. Pontificia Universidad Católica de Chile.

architect and designer, free from the norms of modern thought and open to new forms, new programs, and a new sensibility, able to provoke a close encounter between modernity and tradition.

The work of Chilean architect Guillermo Jullian de la Fuente meets some of these same characteristics. He was born in 1931 in Valparaíso, the son of an architect and he received his formal education in the famous Valparaíso School,³ but he thought his real education would come by confronting architecture face-to-face. After finishing his studies, he travelled to Europe and spent one year visiting Le Corbusier's works, taking some distance before arriving in Paris to knock on the door of Le Corbusier's atelier at 35 rue de Sèvres to ask for work. He would stay there as a close collaborator of Le Corbusier from 1959 to 1965, being in charge of key projects of those late years, like the Carpenter Center in Boston, the Olivetti Laboratories in Milan, or the Strasbourg Convention Center. Once Le Corbusier died in 1965, he opened Atelier Jullian where he continued work on two

unfinished projects: the Venice Hospital and the French Embassy in Brasilia.

Jullian's involvement with Team X⁴ and his critical position towards the rigidity of certain expressions of modern architecture in the sixties gave him a privileged position as one of the finest representatives of the third generation of modern architects and puts him together with a plethora of designers that would renovate modern architecture from within, seeking a closer relationship between inhabitant and building, or between man and urban context.

Jullian recognized that the informal teaching he received at Valparaíso made it easier for him to relate to Le Corbusier and explained why he became so close with him in spite of their evident differences. After his Corbusian experience, at 34 years old, he felt that he had to seek a personal path, and he always looked beyond the traditional designing techniques, incorporating playful methodologies in his projects: the use of collage and the free-hand line allowed him to create a universe of images that would be his signature.

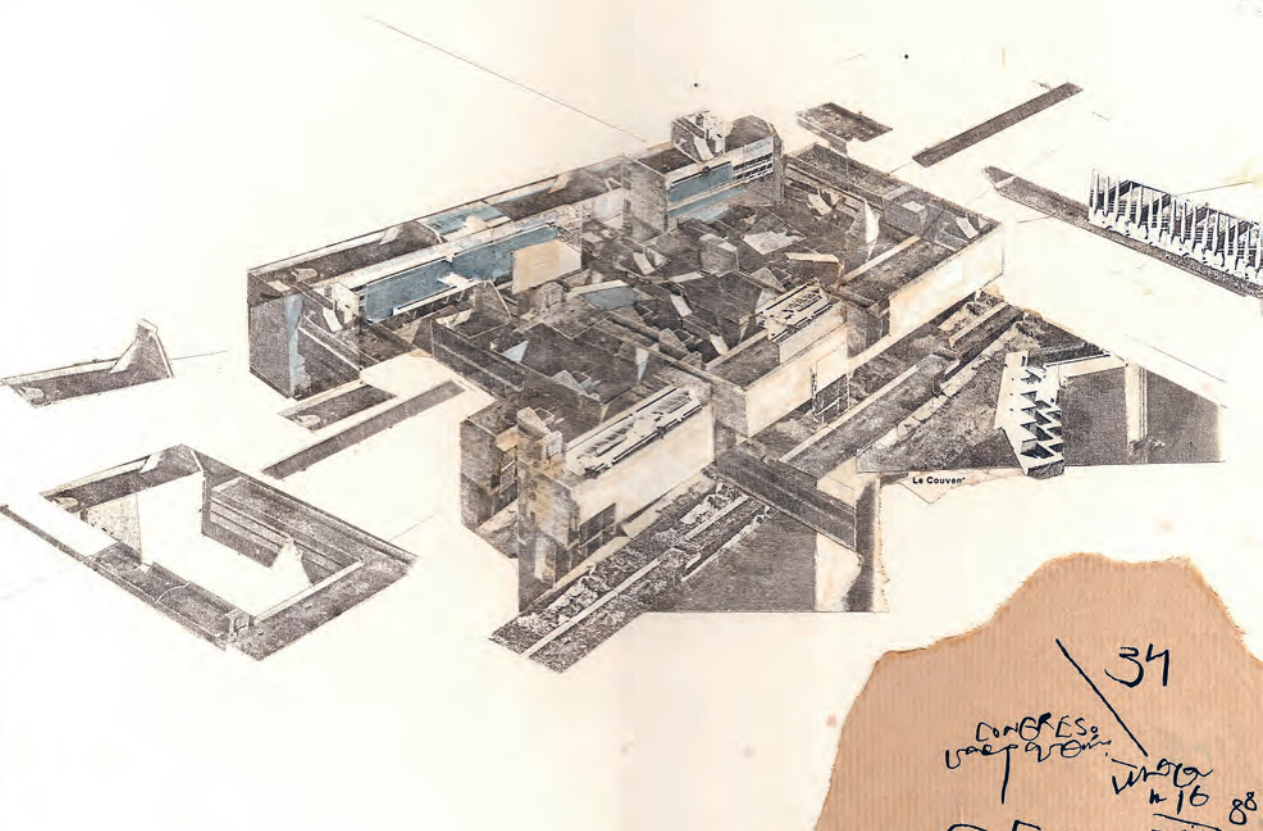


Figure 3. Valparaíso. Archivo de Originales SLGM. FADEU. Pontificia Universidad Católica de Chile.

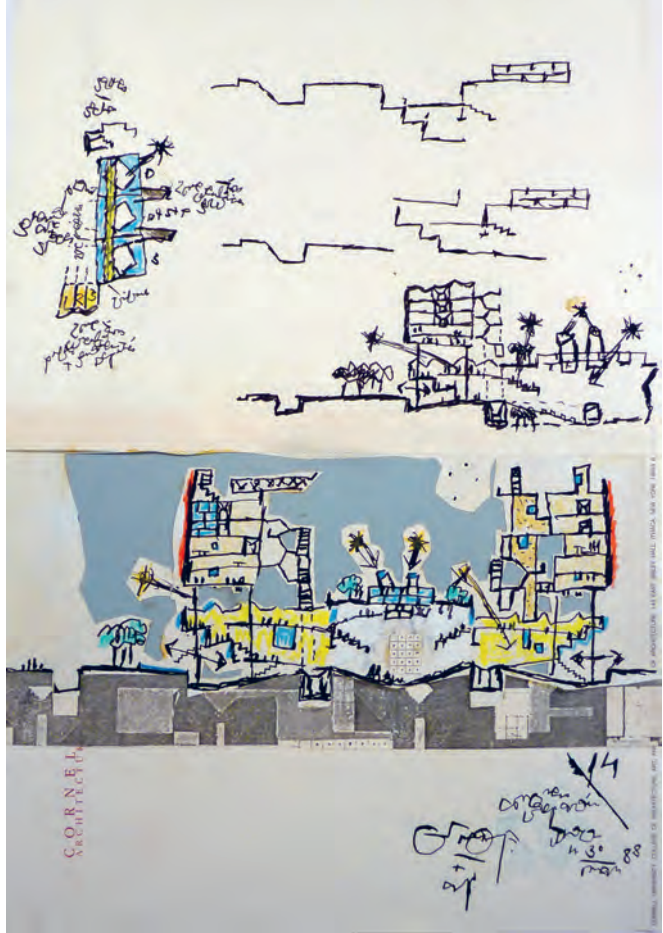
Two works are presented here as examples of how a way of representing architecture tells about the way of creating it, and the relationship between drawing and building: the French embassy at Rabat, 1978-1984, and the competition entry for the National Congress of Chile in Valparaíso, 1988.⁵

Both projects were born out of the complex period of the seventies and early eighties in which Jullian secured his transition from being the collaborator of Le Corbusier towards establishing himself as an independent architect. He transformed what he learned at rue de Sèvres into an elaborated representational system characterized by geometric grids, standardized colors, and a lightness that contrasts with the rigorous results seen in his finished projects: clean and severe orders and white volumes sprinkled with carefully placed colored ele-

ments, always carrying a precise meaning, be it as typological classifications or as modifiers of the architectural experience.

The embassy in Rabat is composed of two ensembles: the chancellery and the ambassador's house. It started as a competition where, as told by Jullian himself,⁶ he avoided any a priori relationship to the cultural references that the Moroccan context could provide. His first proposal was stripped of any contextual element, relying on order, organization, and abstraction. It was only after he was shortlisted that he travelled to Morocco to observe the local architecture. Then the "white canvas" that was his initial project started to undergo a series of interventions that related to local specificities that interested him: colors, shadows, heat control, or interior-exterior relationships. All this was explored through drawings that kept changing over and

Figure 4. Valparaíso.
 Archivo de Originales
 SLGM. FADEU.
 Pontificia Universidad
 Católica de Chile.



over again the appearance of the building. The process of arriving at the final design was preceded by an obsessive period spent exploring the geometric relationship between public and private sections of the ambassador's house, the relationship between interior spaces and the patios that helped controlling excessive heat, the coloring of ceilings and window sills, and the entry of light from multiple sources.

As in any architectural project, the process of design is composed of multiple choices made at every step of decision. It starts in a single concept, opens infinite options, and finally it closes into one single, final product.

In Valparaíso, his birthplace and a permanent reference during his career, Jullian entered another competition, the one called to design the new congress building, in what would be showcase of architectural ideas where almost

the whole Chilean architectural scene participated. Jullian wanted the building to be a part of the urban structure, so he defined a maximum height according to the surrounding buildings, created an interior space where public life –representing democracy– could be held and worked the geometry of the complex according to the angle of views and perspectives from the streets around the site.

All these interests are best seen in the working drawings. Multiple sets show the care with which each element was drawn and redrawn over and over again, in different techniques, producing a set of plans and collages that explain, in themselves, much more than what the final drawings do. What is more evident is the search, through drawings and cut-and-paste techniques, for relationships between the parts of the building, the character of the open

spaces below the upper floors, and the geometry of volumes, inclined surfaces, staircases, office blocks, and so on. Many of the particularities of the city of Valparaíso –the city of stairs, as is locally called- appear as defining elements of this search and as repetitive motifs in the drawings.

This material shows the intrinsic value that they have as objects, and how big a distance they keep with the set of plans actually delivered for the competition. In Jullian's pictorial world, architecture is in the process, not in the product, not even in the built object. How modern can be this vision, and how closely related to the process of design, is assumed by Jullian as an attitude learned at Le Corbusier's side, by making each project a part of a bigger life-spanning design. He often made reference to a system of work inside the atelier by which the whole catalogue of Le Corbusier was available as a raw material, a system he called "the Pandora box". In a way, even if he tried to establish his own identity after Le Corbusier's death, this system kept appearing in his work, becoming a link in the long chain of modern thought, much as in the master-apprentice structure of knowledge.

Rabat and Valparaíso show clearly Jullian's position as a playful designer, a condition already identified by Rodrigo Pérez de Arce when he wrote on the value of play in Jullian's work.⁷ In that light, what's most interesting is not the final plans and models, forcibly stripped of

personal details as the competitions anonymity rules demanded, but the complexity of the process to arrive at a project full of images of the context, a complex geometrical justification of angles and structure according to the urban setting, and a search -one that would characterize his work throughout his life- of a sort of genealogy related to previous buildings, by using parts in composing the plans.

Dealing, in the case of Valparaíso, with a public building representing democracy, Jullian uses other historical examples of open and public spaces, even from his own catalogue: the La Tourette monastery, the Palais Royal in Paris, Harvard Yard in Boston and, surprisingly, the Rabat embassy itself.

I had the opportunity of working with Jullian in one of his last projects, a house on the Chilean seaside, and the process was –after twenty years- the same. The first plans and sections were composed of severed parts of drawings from previous projects -here, the Jaoul houses by Le Corbusier and a house designed by Jullian for his brother in Chile, and never built- making it a further element of that permanent concatenation of parenting relationships, a system that one day could be reconstructed as a continuous project, as if Jullian had been all his life designing one single grand building, made of pieces taken from his past, looking for the total work of architecture.

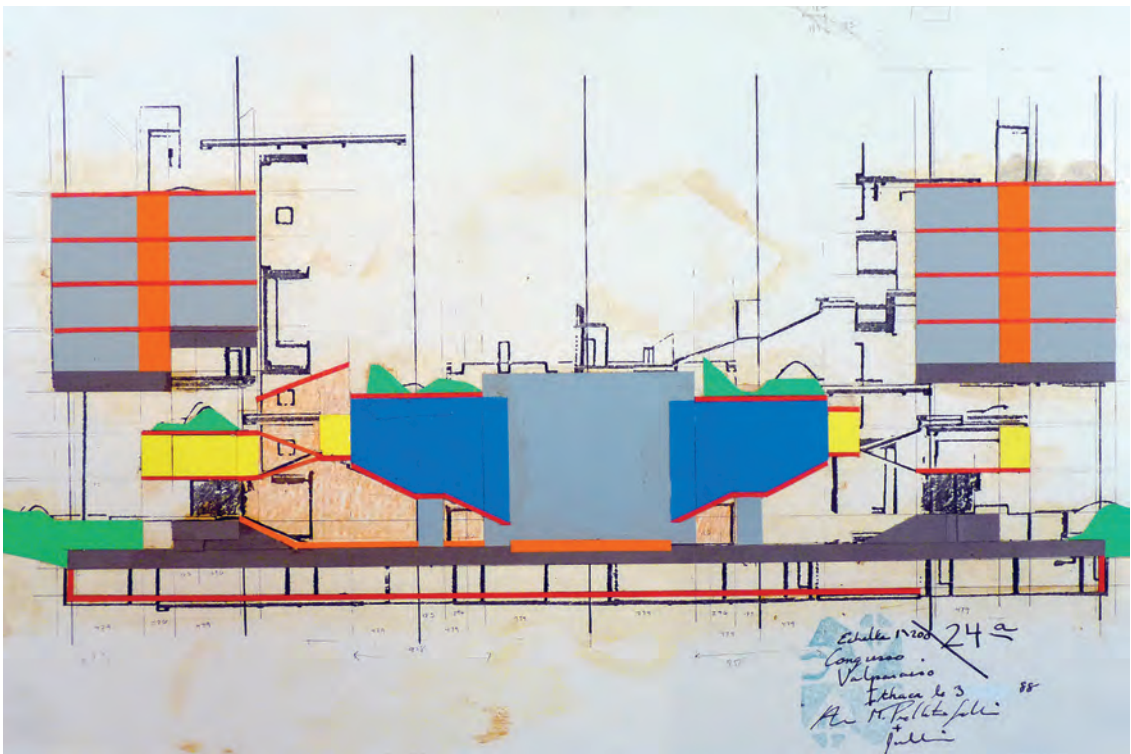


Figure 5. Valparaíso. Archivo de Originales SLGM. FADEU. Pontificia Universidad Católica de Chile.

Notes

- 1 Marshall Berman, *All that is solid melts into air: the experience of modernity* (New York: Penguin, 1988).
- 2 Josep María Montaner, *La modernidad superada. Ensayos sobre arquitectura contemporánea* (Barcelona: Gustavo Gili, 2000).
- 3 The Valparaíso School is the School of Architecture of the Catholic University of Valparaíso, whose teaching system included a poetic view of architecture, and an understanding of the role of the architect as a person closely located in his/her geographic and temporal situation. See Anne Pendleton-Jullian, *The Road that is not a Road* (Cambridge, Mass.: MIT Press, 1996).
- 4 Jullian was invited at the Royaumont meeting in 1962, while still working with Le Corbusier, after which he wrote an article in the magazine *Carré Bleu*. Later he would participate in several meetings until Team X's dissolution.
- 5 The project of the Chilean Congress building at Valparaíso was designed together with Anne Pendleton-Jullian, at their office in Ithaca, NY.
- 6 Interview with the author, June 2006.
- 7 Rodrigo Pérez de Arce, *Jullian: Obra abierta* (Santiago: ARQ, 2000).

Saving the Modern Without Rhetoric

Benedetto Di Cristina
Vincenzo Riso

“From Coffee Cup to Plan”, a most successful slogan of the modern, combined William Morris’ idea that “...architecture...represents the whole of modifications and alterations carried out on the earth’s surface with the exception of the pure desert”, with the early XX century faith that industrial mass-production and enlightened planning could easily face all problems. At that time this concept appeared promising true, particularly for places like the newly born Soviet Union, where everything was to be rebuilt from ground.

But, in the second half of the century, that sentence was unduly interpreted in the sense that professional architects were entitled to design everything, just because they inherited the prestige conquered by modern architectural language between the two wars. A fatally wrong assumption that could easily be confuted, as it actually happened, since we were, and still are, surrounded by vernacular objects, whose functional value is above doubt, that haven’t been designed at all (Rudofsky’s Architecture without architects), and also by ordinary machine-produced, well-working, anonymous industrial objects that don’t need “architectural” stamp

(Venturi’s industrial vernacular). The path from that false assumption, that discredited modern ideals, to the present degraded situation, where the notion of architecture, far from stretching “from coffee cup to plan”, is shrinking to a limited number of autonomous “monuments”, designed by world famous stars, was easier than we could think.

Actually we could imagine that, in post-fordist time, cultural capitalism, controlling the space of production and levelling the contents of cultural industry, would widen the distance between architectural modernism and the everyday: borrow its language for corporate buildings, trendy museums, and wealthy homes. But we could hardly expect that, within the same process, modern heritage would be absorbed into the art historians’ domain, to become the endless field of a practice of literal conservation of the whole architecture of XX century. At this stage “from coffee cup to plan” could really revert to a program of soulless restoration and raise the same doubts and objections expressed by critics like Leonardo Benevolo¹ and Martin Pawley² when they first visited some heroic relics of the modernity, like Bauhaus and villa Savoy.

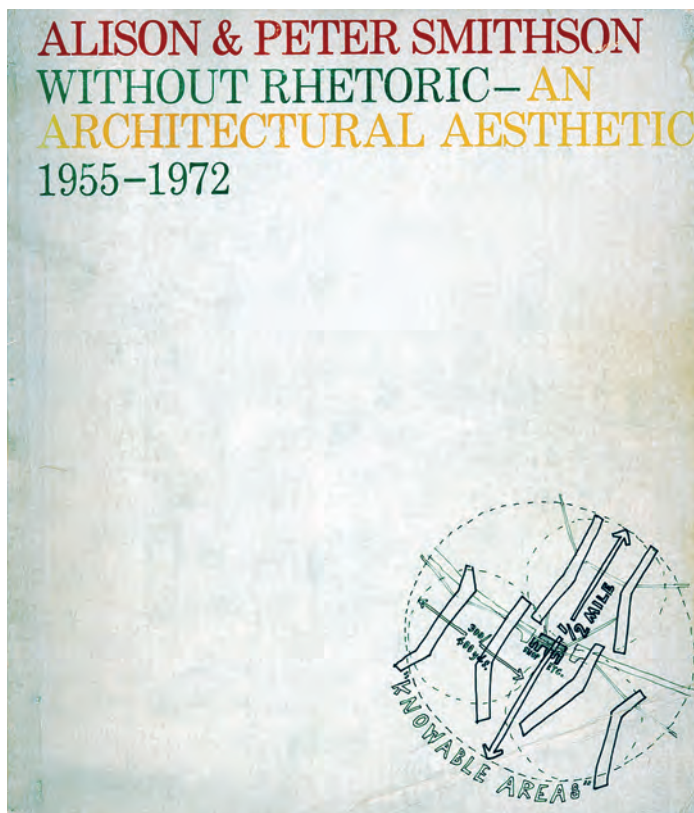


Figure 1.
Front cover of
A. & P. Smithson book
Without Rhetoric.

Nobody would now deny that saving (and even rebuilding) icons of the modernity has greatly contributed to remind us of its ideals, but we mustn't forget, as stated by Anatole Kopp in 1988,³ that those buildings belong to a time when Modern "*was a cause and was not a style*". Pressed by the tragic events that shaped the first half of XX century, architects of the interwar period had reached such a dramatic consciousness. Today, only if it is wholly intended to establish the possible outlines for a world after the present one, can the salvation of the Modern acquire significance, as a tradition and as a vision. Will we be able to perform this task in front of the present environmental crisis? Perhaps only in this way can the conservation of modern buildings and artefacts continue its mission without betraying the original ideals. "*With-*

out Rhetoric", title of A&P Smithson essay⁴ of 1973 in which they presented their personal and original research into the roots of modernity, a permanent dialog with the "masters" to support their own everyday architectural practice, could contribute to show the right way to define a proper attitude toward effective conservation of modern heritage.

If we see rhetoric, in our field, as literal application of a language because of its (former) prestige, then the option "*without rhetoric*" could embody our effort to reduce the importance of language as a separate phenomenon in itself: in this perspective the conservation of the Modern should first attempt to abandon the idea of philological restitution as an absolute myth.

Anyway, beyond the motto title, the Smithsons worked out their pamphlet as a docu-



Figure 2. Front cover of A. Kopp book
*Quand le MODERNE n'était pas un style
mais une cause.*

mented reflection on the material and concrete nature of the Modern Project trying to explain its works in terms of space, function and construction.

At book opening they in fact declare: «We write to make ourselves see what we have got in the inescapable present . . . to give another interpretation of the same ruins . . . to show a glimpse of another aesthetic»⁵ Further on they quote Mies van Der Rohe: « . . . we ask a rose only that it be a rose; we ask of a potato only that it be a potato. Philosophically speaking, only then do they exist» and «Architecture begins when two bricks are put carefully together».⁶

It's a full definition of the modern identity what they try to outline in several spots of the essay. Starting with a new use of materials: «it finds its closest affinities not in a past architectural style, but in a peasant dwelling forms, which have style and are stylish but were never modish: a poetry without rhetoric. We see architecture as a direct statement of a way of life and in the past ordinary, prosaic life has been most succinctly economically tersely expressed in the peasant farms and the impedimenta of Mediterranean rural life that Le Corbusier had made respectable».⁷

And continuing with the crucial question of the ever growing presence of the mechanical installations: «We should like to be aware how such a thing works, but not necessarily to see it work, for in our view the invention of the formal means, whereby, without display or rhetoric, we sense only the essential presence of the mechanisms supporting and servicing our buildings, it's the very hearth of the present day architecture. To make our mechanism (and remember our mechanism include our cars, delivery vehicles, railways, underground railways, monorails and so on) speak with our spaces is our central problem. (. . .) When our standards were set for us by the Church or Kings, later by Mairie and Banks those were the times for buildings which announced power with a loud voice. Now when

many forces influence us, the time for rhetoric of any kind in individual buildings has passed».⁸

So openly confident they were in the unlimited development of modern democracy and mass culture that the future they worked for couldn't be more different from our present. We need to rethink their ideas in a wider and proper way: not enclosed in the operational saving of the modern, but also explaining its utmost purposes. «Things need to be ordinary and heroic at the same time»⁹ could be taken as their clearest message about the specific concern that modern architect shifted upon the everyday life up to its plain domestic sense.

No doubt that today architects, as most of their clients, have long dismissed such concerns, opening the way to the ruinous present condition of housing, public leisure facilities, schools and any kind of social services that embodied a progressive view of society. But, on the other hand, this is just the reason of our inherent difficulty to conceive a true, non-rhetorical, recovery of modern built heritage without a deep reconsideration of the everyday aesthetics.

That design has to struggle for an adequate answer to a well-positioned problem (aiming at full integration of function and aesthetics) was also Le Corbusier's deep conviction.¹⁰ That is the critical point and that is why the salvation of the Modern («From Coffee Cup to Plan») cannot be intended and dealt as an autonomous cluster of technical problems, related with the material conservation of a piece of work, the authenticity of its parts and its functional adaptation: all important aspects that must be solved only in the perspective of such Modern design attitude.

Beyond the unsolved contradictions of Modernity, especially when intended as a theoretical achievement (in which architecture has sometimes proved to be able to participate), emerges the vital assumption of the importance of the process: the way to get a result is as much important as the result in itself. But in our super-modern times any kind of distance between

ends and means reappears again as a largely accepted practice; and this different cultural condition might give reason of the difficulties we are now confronted with in the salvation of the Modern.

Almost twenty-five years ago, in the initially mentioned essay, Anatole Kopp had warned against the incoming adaptation of Modern architecture to the ancient rhetorical practices.¹¹

That process, along the historical conditions of the Nineties and the first decade of second Millennium, went so far to resume -to a level never reached before- the megalomaniac and exhibitionist forms of contemporary architecture.

As early as in 1962 Peter Smithson had written about some of the buildings of the heroic period, that “*they have a purity and a faith that we find almost too hard to bear*”.¹² No surprise then that the cynical and acquiescent atmosphere of the last decades has become the largest obstacle to reach a coherent approach to the Modern legacy.

But, due to the ever growing economic and environmental crisis, it is equally evident that such careless condition is not going to last; and a more careful attitude towards the world -if hopefully achieved- will also determine more propitious (i.e. pertinent) conditions for saving the Modern.

Notes

- 1 See Leonardo Benevolo, *Storia dell'Architettura Moderna* (Bari: Laterza, 1975), 459-463.
- 2 See Martin Pawley, *Terminal Architecture* (London: Reaktion, 1998), 98 and 214.
- 3 Anatole Kopp, *Quand le MODERNE n'était pas un style mais une cause* (Paris: Ecole nationale supérieure des Beaux-Arts), 1988.
- 4 Alison and Peter Smithson, *WITHOUT RHETORIC – An Architectural Aesthetic 1955-1962* (London: Latimer New Dimensions), 1973.
- 5 Smithson, *WITHOUT RHETORIC*, 1.
- 6 Smithson, *WITHOUT RHETORIC*, 21.

- 7 Smithson, *WITHOUT RHETORIC*, 6.
- 8 Smithson, *WITHOUT RHETORIC*, 4.
- 9 Smithson, *WITHOUT RHETORIC*, 93.
- 10 See Le Corbusier, *Towards a new Architecture* [translation of 1928 printing of *Vers une architecture*, Editions Crés, Paris, 1923] (London: Architectural Press), 2007, 93-98.
- 11 See Kopp, *Quand le MODERNE n'était pas un style*, 320-322.
- 12 Peter Smithson “Duiker and the Zonnestraal”, *Forum*, vol. XVI (1962), 1.

Housing Stock Restoration

Integral and Temporal Scenario Approach

Maja Lorbek

Building Stock and Preservation

Preservation discourse and practices deal predominantly with single buildings and small ensembles. The application of monument protection is still fundamentally “object” centred. [Hassler, Kohler: 2011].

In the course of the ongoing research project *Re_Co_Re* (Resource Conserving Renovation)¹ we are developing an integrated approach to sustainable renovation of historical building stocks which is based on knowledge about historical, technical, social and cultural understanding of this specific building stock. Specific housing building stock in Austria, the social housing of *Red Vienna* is being examined a case study, with the objective to accumulate knowledge on the building stock and define different long term scenarios. This particular building stock was built between 1918 and 1934, and consists of both council housing (*Gemeindebau*) as well as settlements (*Siedlungen*).

Council houses of red Vienna have the following, interdependent elements: small dwelling units, based on the principle of sufficiency and complementary communal facilities. The council building are spread almost evenly in all Viennese districts. Due to explicit economic calculation, the buildings were located next to existing material infrastructures and in the vi-

cinity of public transport. We hypothesize that these specific features (small dwellings, communal facilities and proximity to existing material infrastructures) all contribute to sustainable, long term use of the building stock.

Standard and regulations upgrading in existing buildings stock

Standard requirements, norms and regulations are developed for new buildings. We can observe a general heightening of the requirements for energy efficiency and safety. Eventually, these higher standards also become applicable, at least to a certain degree, for older building stock, even for stock under monumental protection. Standard enhancement for fire safety, seismic resistance and bearing capacity in general have considerable impact on the value and use of existing buildings.

Risk and security issues are important factors for future use and value of existing building stock. All standard upgrades for existing buildings must therefore consider the impacts carefully. Which risks are acceptable, which measures are commensurate? Another issue with standard upgrade is often conflicting na-

ture of different measures and the fact that financial means are limited. It is therefore essential that refurbishment/restoration does not rely heavily on single measures or define one main focus, but instead try the strategy of integration of different focal points.

Housing Stock as a Knowledge Base

While of various data on building stocks is available, there no consistent method of interpreting this data and there are no standard procedures to connect the findings with refurbishment design.

The buildings, their archives and the people, who live in them, however, are filled with facts and stories. Buildings stock is part of a complex field of materials, spaces, behaviour and use, as well as planning procedures, regulations and standards. This field changes gradually over time.

By looking carefully and documenting the material evidence and by searching in archives, the technological history of the building can be put together. It is possible to trace the initial architectural concept and all renovation measures. It is also possible to look at lifestyles and domestic arrangements of the inhabitants by using ethnographic or anthropological methods.

While historic information the number of dwellings, inhabitants and joint facilities is readily available, there is no data on the current state of the stock. Originally, there were 61.175 dwellings in 348 apartment houses. The municipal agency (social landlord *Wiener Wohnen*), which manages the apartment council houses has no accumulated information on the stock as a whole, as data documented in SAP is assigned to single buildings. Only recent refurbishment measures are documented. There is lack on information on how the number of dwelling units has changed over time due to demolition (which

is rare), merging of units, and new units in converted attics space.

Records on tenant interventions (new windows, ensuite bathrooms, etc.) are missing. There are even less facts available on the current use of communal facilities, social infrastructures and local businesses. Some of the original amenities, such as communal baths and large laundry facilities are no longer necessary. Yet there was no targeted re-programming, all conversions and re-use activities occurred randomly. There is also no initiative to re-establish local businesses.

Preliminary Results

Research confirmed the initial hypothesis, in which we stated that the historic architectural conception of this specific type of housing is indeed sustainable according to today's criteria. The resilience of the original stock is surprisingly high. Typical small housing units (standardized floor area at first 38 m² to 48 m² and during later stages between 38 m², 58 m² and 75 m²) were initially designed for families. Due to increased standards and requisites on one hand, and the rise of one person households (in Vienna, 47 % of all households) on the other, this reserve of small dwelling units is essential for the entire social housing stock precisely because it encourages sufficient use of resources in housing and also corresponds with current needs. However, the original architectural concept is based on both features: small dwellings, and additional, communal facilities within the superblock within the neighbourhood / urban district. Local amenities, common facilities and social infrastructures were essential to the original idea.

Furthermore, the principle of facility sharing in the initial design was not limited to superblocks. The amenities and infrastructures such as communal baths, local shops, kinder-

gartens and libraries were intended for the neighbourhood.

Options and Temporal Dimension of Planning

Buildings are long lasting commodities, yet evaluation of mid- and long term effects of renovation is not part of the planning process. Ian Ellingham and William Fawcett² introduced the notion of options into whole life-costing, this principle is important in refurbishment planning as well. When some of the possible measures are not executed, this is mostly due to limited financial resources and not chosen knowingly. Option evaluation is a very good way to deal with unknown future use. Working with options in refurbishment means that some of the possible measures will be intentionally postponed to insure possible developments. Ellingham and Fawcett list of options includes the option to develop, the option to expand, the option to switch use, the option to reconfigure, the option to refurbish: all of these are as possible future solutions. Contrary to the option approach, conventional refurbishment models do not include temporal alternatives and developments.

The described models and procedures in traditional methods do not address fundamental problems in housing, which we are to solve in the future.

Next to demographic change, crucial processes currently affecting existing housing stock are some of the following:

- partially reversed process of function outsourcing
- decentralisation of social and material infrastructures
- standard upgrade.

Effective and successful restoration must consider re-programming of the facilities, under the premise of flexible, adaptable use. We

propose the use of scenario-based approach in order to enable change.

Scenario-based Planning Approach to Restoration

The information from research on building stock can then be used to define long term integral and life cycle oriented redesign scenarios: The objective is to preserve long term value of building stock. The emphasis therefore lies in the notion of sufficiency and the principle of open options for future use. While scenario approach is well known in urban planning this is not true for restoration. The strategic nature and partially open outcome of scenario allows development of different options and we can also consider different time scales and the temporal dimensions of different solutions.

Scenario-based planning, introduced by economics and already adopted in spatial planning is a possible solution which can ensure long term value and adaptive use.

Thinking in scenarios depends on the following approach:

1. there are several possible developments on what is going to happen in the future.
2. complex, elaborate images must be used to describe possible future since society, technology and (corporate) environment are becoming more and more complex and dynamic. [Gausemeier, Fink, Schlake: 1996]

The introduction of temporal dimension as one further, yet important parameter to which must be taken into account when designing restoration strategies, we are obliged to deal with change, uncertainties, risks and contingencies. Scenario-based planning is an instrument, which can take into consideration these factors, both time, as well as uncertainty.

In Vienna, we can also observe a large gap between strategic planning at the scale of the city and the actual processes of implementation.

It is therefore important to include the stage of scenario transfer, both into visions, such as strategic planning but also into instruments as well as actors, who shape the field.

Preliminary Results

Research confirmed the initial hypothesis, in which we stated that the historic architectural conception of this specific type of housing is indeed sustainable according to today's criteria. The resilience of the original stock is surprisingly high. Typical small housing units (standardized floor area at first 38 m² to 48 m² and during later stages between 38 m², 58 m² and 75 m²) were initially designed for families. Due to increased standards and requisites on one hand, and the rise of one person households (in Vienna, 47 % of all households) on the other, this reserve of small dwelling units is essential for the entire social housing stock precisely because it encourages sufficient use of resources in housing and also corresponds with current needs.

The objective of the proposed integral scenario approach is to combine information on material, spatial and temporal potentials of the building stock, gather knowledge on use and behaviour and critically evaluate new requirements. The next step will be to define at least four integral scenarios for restoration and re-programming. One further essential procedure is to identify sustainable features of the original architectural concept and to preserve these specific qualities.

One of the key objectives behind the scenario based redesign is to identify, evaluate and then preserve and/or re-enable these stock specific features.

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- Ellingham, I. and W. Fawcett. *New Generation Whole-Life Costing. Property and construction decision-making under uncertainty*. London and New York: Taylor and Francis, 2006.

Notes

- 1 The main objective of Re_Co_Re research project (Energy efficient, resource conserving and differentiated renovation of historic European building stocks), funded by Eracobuild, is to objectify and deepen the knowledge base on the building stocks and further to develop applicable tools and strategic measures for their sustainable modernization based on the imperative top reserve resources of the built environment. Research partners from Switzerland (ETH Zürich), Sweden (Chalmers, Gothenburg) and Austria (UT Vienna) are working on building stocks of different age classes with the objective to develop different mid- and long term scenarios for restoration, based on the principle of preserving material and cultural resources.
- 2 I. Ellingham and W. Fawcett, *New Generation Whole-Life Costing. Property and construction decision-making under uncertainty* (London and New York: Taylor and Francis, 2006).

Preserving Perfect Plans

Percy Everett's Polygonal Classroom Designs for Victorian Schools (1947-1952)

Philip Goad

In 1946, Percy Everett, Chief Architect of the Victorian Public Works Department produced concept plans for hexagonal classrooms. He argued for the advantages of such shapes on the basis of excellent visual and auditory access to the teacher and the optimization of natural daylight. The result was a series of schools built across Victoria, Australia between 1947 and 1952: each with hexagonal classrooms, each an attempt to realize an ideal learning environment with the perfect plan.

This paper considers the history of these schools, their international context, and the measures taken to identify and in some cases, preserve the innovative characteristics of Everett's classroom spaces. The fate of Everett's hexagonal classrooms is questioned from two standpoints. First, from an educational perspective, have they survived shifts in educational pedagogy since the late 1940s and do they continue to offer the flexibility and environmental suitability that corresponds to their original in-

tention? Second, have these classrooms retained vestiges of their original fabric that continue to render these spaces historically and architecturally significant? In short, are they still 'perfect plans'?

In 1934, Percy Everett (1888-1967) was appointed Chief Architect of the Public Works Department (PWD) of Victoria, Australia. He immediately began to transform the department's output and insisted that he approve and sign every drawing. Instead of polite stylistic eclecticism, his office produced resolutely Moderne and often Modernist designs across a range of building types. In the field of educational architecture, his mission was aided by the recent construction of Seabrook & Fildes' Durdok-inspired MacRobertson Girls High School, South Melbourne (1933-4), a gift from chocolate entrepreneur Sir Macpherson Robertson to celebrate Melbourne's centenary (1834). Over the next twenty years, Everett changed the face of educational buildings at every level, moderniz-

ing primary, secondary and tertiary education buildings with a language that took advantage of Victoria's strong brick building tradition, increasing natural daylighting and ventilation, and upgrading older schools with overtly 'modern' additions. Technical schools like Essendon (1938), Oakleigh (1946) and Caulfield (1950) were executed in a streamlined, Dutch-inspired idiom, chosen for the practical disciplines. For the university and certain 'better' high schools like Camberwell (1941), Everett developed a cream brick, modernized Collegiate Gothic style, also employed on the Chemistry (1938) and Natural Philosophy buildings (1938-41) at the University of Melbourne.

After World War II, Everett examined ways to improve lighting levels in classroom design. In smaller primary schools at Upwey (1945), Timboon (1948) and in a classroom addition at Lorne (1947), he combined block-like massing reminiscent of the 1920s work of Walter Burley Griffin and Marion Mahony with a raised clerestory. While pedagogically, classroom layout had not changed, access to daylight was much greater, from two sides and partially on a third. However in terms of large scale application, the use of this rectangular classroom type was limited because of its ideal nature as an individual room rather than as a conjoined sequence. Thus its application appeared only on very small schools or minor additions.

In 1945 Everett undertook an overseas study tour to the United States. On his return in 1946 he produced concept plans for hexagonal classrooms, arguing for these shapes on the panoptic strategy of visual and auditory access to the teacher, the optimization of natural daylight through window walls and clerestories, and use of the hexagon as a natural gathering shape for learning: the prototype for a "classroom planned around the pupils".¹ He also suggested the addition of "Queensland type" blinds fitted externally on vertical rods to achieve appropriate solar control.² This was a search for a mod-

ern classroom space that was flexible and environmentally rational, borrowing much from the health-giving plans of patient rooms in tuberculosis sanatoria. At the same time, Everett had designed the zigzagging plan of the FVG Scholes Block (1947) at the Fairfield Infectious Diseases Hospital and published articles on hospital wards planned on hexagonal lines.³

The reduced floor area available with the hexagon plan meant savings in construction and materials. It was after all, immediately post World War II and, for government, a time of enforced austerity. Everett's justifying diagrams showed a class size of 50 pupils, much more than the desired maximum of 30 and reflective of "the sombre truth that in Victoria, despite the steady improvement in the staffing position, large classrooms must be filled to their capacity".⁴ The dire postwar shortage of housing was matched by a similar shortage of schools.

Everett proposed at least twenty schools employing hexagonal classrooms to be built across Victoria between 1947 and 1952. However, only eight have been positively identified as being constructed, the most notable examples being 'Solway' at Ashburton (1948-50), described in 1952 as "one of the world's most modern primary schools", Moorabbin West (1948), North Balwyn (1947-50) and Newlands in North Coburg (1951), all in suburban Melbourne, and Red Hill Consolidated School (1947) on the Mornington Peninsula.

Details of Everett's overseas trip in 1945 are not known. But it is clear that his experiments (said in 1949 to be of American origin⁶) pre-date polygonal classroom examples like Emil Schmidlin's Stockton School annex, East Orange, New Jersey, USA (1951) and the celebrated postwar schools of German architect Hans Scharoun. Important precedents may have been Kaj Gottlob's open-air Svagbørns School, Copenhagen, Denmark (1937)⁷ and Wright and Gardner-Medwin's advocacy of 'elbow access, diagonal' planning in *The Design of Nursery*

and Elementary Schools (1938), and perhaps the isolated classroom volumes of the famous Crow Island School, Winnetka, Ill., USA (1939). However it is clear that Everett's design emerged from his own experiments, in many respects it was a local hybrid borne of local practice and involvement across a range of building types where sun, ventilation and circulation were key design drivers.

Fast forward, sixty years to 2012, and only four of these innovative schools survive: 'Solway'; North Balwyn; Newlands and Red Hill. Only one of the schools – Newlands – has been heritage listed nationally though Solway has been identified in local planning studies. But listing and recognition has been the least of worries in terms of heritage. In the light of the so-called 'Building the Education Revolution' (BER) program instituted by the Australian Commonwealth Government in 2008-10 as a means of injecting economic stimulus into a fragile construction industry during the global financial crisis, a vast range of school building, alteration and addition took place, in some cases compromising the historic significance of not just whole school campuses but also individually significant 20th century spaces of education. Remarkably, all four schools survived the BER. For example, the ten-classroom Newlands Primary School (1951-2), built to serve a low-income Housing Commission of Victoria estate had suffered neglect for thirty years, declining enrolments and threats of closure. In 1953, its enrolment was 543, in 2008 it was 93. Community action and the injection of Commonwealth funds however meant that the building was saved and upgraded. Thankfully, years of neglect had meant that the two-tone brickwork and clerestory windows had survived and no substantial additions had been made. Architects Gray Puksand oversaw minor roof

repairs, glazing replacement and internal works such as joinery, painting and wiring. The hexagonal classrooms were retained. The only major change was that large square sliding doors with glazed infills were inserted between each classroom (also revealing that there once had been an opening there) and adjoining the corridor, and in some cases, external doors were cut into the existing window wall. Each classroom had become even more flexible and the corridor now doubles as learning retreat and circulation space. Everett's perfect plans had been adapted without compromise for today's contemporary pedagogical needs of small informal group teaching.

There is some historical irony behind this example of modest refurbishment and the retention in 2011 of all hexagonal classrooms in the other four schools. In 1952, the pressure on the Education Department to provide more schools more quickly was so great that Everett was forced to rationalize his spatial ideal. He developed the highly efficient LTC (Light Timber Construction) classroom prototype (1952), a cheaper, and more expedient spatial and constructional classroom form. It superseded the hexagonal model virtually overnight. Conventional rectangular classrooms with clerestory windows on either side of a low-ceilinged corridor became the preferred type. Placed together they formed an extrusion that could be constructed in almost limitless linear blocks. Over the next 15 years, more than 700 primary, secondary and technical schools were built in Victoria using the LTC. Sixty years later, it is these blocks, successful at the time in satisfying demand, which are being demolished as outmoded, inflexible spaces of education. Percy's perfect polygonal plans, by contrast, have been resilient to pedagogical change. They have also become heritage.

Notes

- 1 "An Unusual Victorian School", *Building and Engineering IV* (April 1951), 18-19.
- 2 File [Heidelberg-Hexagonal Classrooms], No. VPRS 10516/P000, Victorian Public Records Office.
- 3 P. Everett, "A Room with a View for Everybody: An Improved Ward Unit on Hexagonal Lines," *The Modern Hospital* 70: 1 (January 1948), 51-53; "Un Projet Australien: Deux chambres particulières dans la même salle d'hôpital," *Techniques Hospitalières* 47/48 (Aout/Septembre 1949), 33-34.
- 4 G.A. Osborne, Chief Inspector of Primary Schools, Annual Report, Department of Public Instruction, Victoria, 1947-8, 11.
- 5 Cairns Post (Queensland), January 28, 1952, 4.
- 6 "No frills in schools here, but", *The Courier Mail* (Brisbane), September 2, 1949, 3.
- 7 "Denmark: Educational Group Includes 'Open-Air' School", *Architectural Record* 85: 6 (June 1939), 44-8.

Mid-Century Arenas

Matthew Hayes

Peter Meijer

Kristen Minor

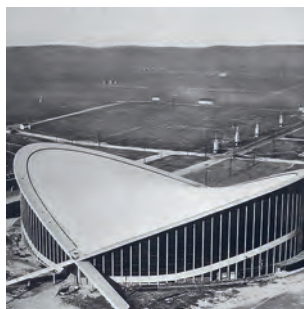
In communities around the world, mid-century multipurpose indoor arenas represent significant elements of the twentieth-century built environment. Unfortunately, these unique architectural, engineering and civic monuments often suffer from a lack of positive public support and professional understanding.

The emerging interdisciplinary field of Arena Studies focuses on the dwindling global supply of modernist multipurpose arenas—an overlooked subject spanning the fields of historic preservation, architecture, architectural history, engineering, preservation technology, industrial archeology, urban studies, city and regional planning, landscape planning and environmental history. After World War II, arena builders began to utilize a variety of new technologies and modern building materials to enclose large-scale urban, suburban and rural arenas. Innovative technologies (such as retractable roofs, glass curtain walls and clear-span timber domes) were combined with cutting-edge craftsmanship to create a revolutionary new aesthetic of form-altering functionalism. As an emerging field of study, the topic of historic arenas currently suffers from a dearth of scholarly research, resulting in typological confusion. General and pervasive misidentification and misclassification has greatly hindered the efforts of conservationists to rehabilitate, restore and repurpose these undervalued community resources. The

effort to rescue and repurpose these endangered structures will require creative new approaches to planning- and preservation-related issues while encouraging exciting collaborative opportunities.

In a 1991 issue of the Association of Preservation Technology (APT) Bulletin, guest editor Mike Jackson explained that “basic building typologies have not even been developed for many recent structures and complexes,” and predicted the difficulties preservationists will undoubtedly face in their future attempts to restore structures made from modern building materials, many of which were “manufactured using technically sophisticated, large-scale industrial processes, which are no longer economically feasible to duplicate using the original materials and methods.” Two decades later, Jackson’s prescient observations hold particularly true for the rapidly diminishing numbers of modernist multipurpose indoor arenas.

The terms “arena,” “stadium,” and “domed stadium” must be disambiguated. More than a matter of mere semantics, the interchangeable use of incorrect taxonomies serves to impede the work of preservationists and educators by perpetuating a cycle of casual misidentification and misclassification. On an international level, the lack of standardized terminology is exacerbated by the presence of types and subtypes not found in North America. Such inconsistencies



Figures 1 and 2.
J S Dorton Arena,
Raleigh,
North Carolina.

not only compromise the historical context of these already overlooked and misunderstood building types, but often puts heritage professionals in the awkward position of attempting to document and defend structures that appear to be the afterthoughts of haphazard classification at best, or apathetic architectural postscripts at worst.

A baseline typological assessment would aptly define an arena as an enclosed facility built to showcase sports traditionally played indoors, such as basketball and ice hockey. The maximum seating capacity of a traditional roofed arena will rarely exceed 25,000. Meanwhile, stadia are open-air facilities constructed for sporting events traditionally played outdoors, such as baseball, soccer, and American football. The world's largest roofless stadia (Rungrado May Day Stadium, Pyongyang, North Korea) can accommodate 150,000 spectators. After World War II, a variety of new technologies and modern building materials allowed domed stadia to accommodate outdoor sports under massive roofs, reaching seating capacities of over 70,000 (Louisiana Superdome, New Orleans, Louisiana; Houston Astrodome, Houston, Texas). Most domed stadia are covered by cable-stiffened pneumatic roofs or tensegrity domes.

When viewed holistically, however, mid-century indoor arenas prove to be remarkably durable commodities. As physical signifiers of a community's collective identity, modernist arenas have begun to acquire the patina of age

and respectability. As tangible repositories of civic pride, mid-century arenas have the power to elicit positive connotations based on nostalgic and emotional memories. While the continued presence of these structures is critical to the success of meaningful attempts at interpretation, pervasive lack of public and private awareness has greatly hindered the efforts of preservationists and conservationists to communicate the social and cultural importance of these undervalued community resources.

Seemingly "hiding in plain sight," these invisible giants often expire unnoticed—the unlamented victims of erroneous perceptions of functional obsolescence. As unrecognized cultural landscapes and significant community assets capable of conveying the richness of an area's unique sense of place and identity, modern historic arenas not only embody a shared national heritage, but frequently serve as the backdrops of memorable moments in the lives of diverse citizens, regardless of race, ethnicity or socio-economic status.

Case Study - Memorial Coliseum

When completed in 1960, Memorial Coliseum was a technological feat of engineering and operation unrivaled by any other large civic structure in the Pacific Northwest, and a fully-articulated example of International-Style Modernism. The building is the only large-scale



Figures 3 and 4.
Memorial Coliseum, Portland, Oregon.

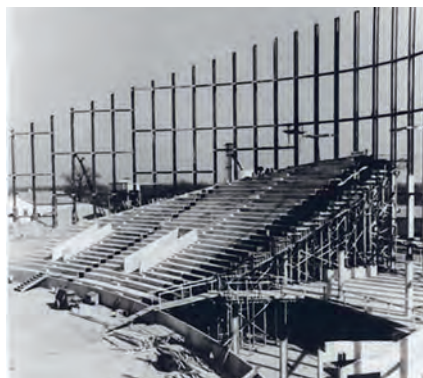
public glass-walled structure of its time in the Pacific Northwest retaining its original design, materials, and workmanship. Its setting is still highly urban and occupies the original relationship to nearby geographic features such as the Willamette River. Designed by Skidmore, Owings and Merrill, Memorial Coliseum is unique among large-scale public structures providing an accessible and distinctive spatial experience of the International Style of modern architecture. No other stadium or recreational facility in the region used curtain wall technology to hang such large expanses of the glass walls from the overall structure.

Memorial Coliseum shares design characteristics with other mid-century North American arenas including a large fixed seating “bowl”, exterior glass walls creating transparency between interior events and the exterior urban environment, an innovative structural system, and large scale use of “new” modern materials. These characteristics imbued the modern arena with unique and distinctive stylistic nuances resulting in immediate acceptance by the general public. So admired by the public as embodiment of modern civic architecture, North American arenas were given personalities expressed by unique nicknames: the “Glass Palace” or “Tea Cup in a Box” (Memorial Coliseum), the “Cow Palace” (Dorton Arena), the “Eighth Wonder of the World” (Astrodome). And the shared design characteristics, particularly innovated structural systems allowing for large open spans, pro-

vided the ability to entertain flexibility of use for sports, entertainment, and community events resulting in long-term financial success.

Specifically, Memorial Coliseum is a flat-roofed square “box,” measuring 80 to 100 feet in height. Its weight is supported by four cruciform-shaped, 70-foot high reinforced concrete columns, 240 feet apart in one direction and 270 feet in the other. Four massive cantilevered steel trusses rest on the columns, crossing at the columns, and tapering as they extend outward from the columns to form a 360-foot square. At the points where the columns support the steel roof trusses are “steel hemispheres,” the first ever used in this type of construction. These half-round bearing points enable the entire structure to move under force, such as strong winds or earth movements. The wind forces on the great glass walls are received by 85-foot vertical laminated wood mullions on the interior of the walls.

The abstract qualities of the International Style served to express grandeur and dignity in large-scale commemorative buildings such as public arenas. Far from aggrandizing the power of a private corporation, the buildings provide a public face for shared aspirations in recreation and culture. Though the surroundings of Memorial Coliseum and other arenas have been altered, the relationship to site, especially the most visible elevations facing natural geographic formations or central city cores, have not been altered by the increased density of



Figures 5 and 6. Seating Bowls, Portland and Raleigh.

infrastructure, transportation, and large scale building. Individually, each North American arena is an incredibly unique structure boasting of such elements as “the largest continuous curtain in the United States” in order to black out 80,000 square feet of window area (Memorial Coliseum), the “world’s first cable supported roof system” (J S Dorton Arena), the “nation’s first mega convention center” (Cobo Arena), and the “world’s first domed stadium” (Astrodome); collectively these characteristics define the means by which these structures should be conserved. These buildings’ advanced engineering allows them to provide a spatial experience unlike that in any other recreational venue. And like Memorial Coliseum, the architectural qualities provide the buildings with enduring historic value.

Reinvigorating Purpose

Mid-Century design, technology, and material were ideally suited to create flexible-use spaces assuring financially viable arenas. When first opened, many arenas hosted year-round public events like trade shows, exhibitions, concerts, circuses, and sporting events ranging from professional to amateur high school events. The use

of innovated materials such as plywood, Lucite, and artificial grass (i.e. Astro turf) created an attraction and highlight to visitor experience. The innovated approach and use to fixed seating defined crowd management strategies for the next 20 years. However, the incorporation of modern materials in support of public accommodations is viewed as lacking adaptability to social and community evolution. The inability of arenas to adapt concrete seating areas, concessionaire, restrooms, and team facilities has been the primary rationale for demolishing the structures. As social, economic, and political conditions improve, the human anatomy has changed to become taller, heavier, and less tolerant of personal deprivations. Arena seating has become wider with greater spacing resulting in less seating capacity at a time when attendance at sporting events have become more popular. (Memorial Coliseum was designed to accommodate 8,000 people for a new professional basketball expansion team. The same professional basketball team now attracts an average of 20,000 spectators.) Sport franchises have become accustomed to luxury facilities accommodating not only the team but also family members, journalists, and visiting dignitaries. The pristine minimalist functionality of the International Style does not lend itself readily to expansion and accom-

modification of interior support spaces without major additions; often viewed as a controversial decision. To no lesser degree, building maintenance, changes in energy consumptions, and a desire to conform to sustainable business practices has also plagued public arenas. The innovative structural components were designed to support the weight of single pane glass curtain walls and will not accommodate insulated glass units without major modification, often affecting the very same structural systems that make the mid-century arena so unique.

Although many of North America's arenas were built to accommodate public events, many have evolved into single team, single event structures. The political desires of the community and the receptivity of the team owner and manager are hugely influential on the ultimate fate of public arenas. Many arenas were constructed with complicated financing and management agreements providing the private sports organization authority over reuse, urban planning, and demolition options. Many of the mid-century arenas across North America have already been demolished or drastically altered to fit the needs of a single sport. These single-purpose sports arenas can require even greater alterations should a new use be considered, such as housing, office, or entertainment. Early arenas are, however, valuable and sustainable structures in now-established urban landscapes and are perceived as "belonging" to the public. These buildings offer unique and profitable opportunities for long-term future success. Their successful conservation requires an understanding of their adaptability in material composition, plan, and function. The architectural qualities combined with the urban settings of these mid-century arenas provide enduring historic value.

Key conservation ethics focus on original planning concepts incorporating "flexible-use" in order to maximize arena events. Large volumetric spaces combined with "flat floor" settings were originally intended to be flexible,

multiple configured areas and arena planning envisioned long-term success derived from multiple venues ranging from stage events to court events to surface events like ice competitions and hockey. Communities that maintain and adapt their mid-century arenas have recognized and focused on management of the venue and not focused primarily on accommodation of single sporting events. Distilling the essence of the modern arena to defining attributes characteristic of the genre like structural systems, transparency, seating area, event level, flexibility, and innovative materials, begins to develop the framework for reuse options. When public arenas remain primarily dedicated to the wide variety community needs, there is a perceived value placed on the structure and financial reinvestment into the community. In order to successfully reinvigorate, rehabilitate and repurpose these undervalued community resources, it is incumbent upon everyone to broaden their specialized professional viewpoints by developing creative new strategies and tactical partnerships with a diverse range of community leaders, citizens groups, concerned individuals and other local stakeholders.

Mid-Century arenas offer unique insights into to past views of modernity, yet continue to be underappreciated and widely misunderstood in the context of modern architecture. As important icons of urban form, midcentury multipurpose indoor arenas should be utilized to engender deeper understandings of their effect on the built environment, and the opportunities they offer in the creation of future planning and transportation initiatives. From a sports perspective, the public should be informed about the difference between economic and physical obsolescence. Sports economics may deem an arena obsolete after fifteen or twenty years, but in reality, most mid-century arenas can be sustainably rehabilitated to accommodate a variety of new uses while providing a sense of historical continuity.

Bridge Buildings:

Modern Architecture and Environment

Hugo Segawa

The *bridge building* is a non-canonical building type, singular for the 20th century architecture. The Ponte Vecchio (14th century) in Florence could be an antecedent of the typology: a habitable structure over the Arno River. Yet, more than a pathway flanked by constructions to span obstacles, the modern *bridge building* is a self-contained construct conceived as an entire entity for human use and to live within, with intense relation to landscape, to topography. There is a deliberate design intention to collate architectural object and environment. This bold attitude is part of the Modern Movement experiencing the challenge of inserting man-made artifacts facing the Nature.

Bridges were perceived by a modern-activist theoretician like Sigfried Giedion (1888-1968) as a constituting reference to modern art. In his essay "Construction and Aesthetics" published in the Constructivist manifesto of 1937, *Circle: International Survey of Constructive Art*,¹ he discussed the logics and the expression of the new structural principles of reinforced concrete bridges by Robert Maillart (1872-1940).

The prior *bridge building* type among the speculative icons of modern architecture and urban planning is by Le Corbusier (1887-1965) with his sketches for the cities of São Paulo and Rio de Janeiro, publicized for the first time in the book *Précisions* dated 1930. For São Paulo, he devised two right-angled straight *autostrades* (expressways) crossing over the centre of the city, a rapid connection to the suburbs as a response to the scattered urban structure. The architect related his scheme to the Roman aqueducts of Segovia and the Pont du Gard, in southern France. They were proposed as reinforced concrete viaducts with the under-deck occupied by offices, nearby downtown, and housing on the outskirts.² The Rio de Janeiro proposal [fig. 1] was more spectacular and enduring in the 20th century architectural imagery: an elongated meandering 100-meters-tall (328 ft) elevated *autostrade* with habitable floors under the roadbed, running through the spectacular landscape between the sea and the promontories.³ The peak inspiration from his flight-on-a-plane South American experience came in Rio's sketches. Le Corbusier's admira-



Figure 1. Le Corbusier proposal for Rio de Janeiro, 1929. Sketch reproduced from *Précisions*.

tion on landscape made him enthusiastically upgrade his preview scheme to São Paulo to an original attitude (distinctive to his former proposals) to- wards a new relation between Nature and Man:

Then, at Rio de Janeiro, a city radiant in its universally proclaimed beauty that seems to defy all human participation, a violent desire comes to you, crazy perhaps, to try a human enterprise here too, the desire to play a match for two, a match of the “affirmation of mankind” against or with the “presence of nature.”⁴[...]

The whole began to speak, on the water, on earth, in the air; it spoke of architecture. This discourse was a poem of human geometry and of immense natural fantasy. The eye saw something, two things: nature and the product of the work of men. The city announced itself by the only line that can harmonize with the vehement caprice of the mountains: the horizontal.⁵



Figure 2. Amancio Williams, House over Stream, Mar del Plata, 1943-45. Archive of the author.

This could have been one key-statement to the *bridge building* makers, even if they have never read this Le Corbusier’s passage.

While the large-scale propositions fit perfectly to such adventurous schemes, *bridge buildings* cannot be expected only as megastructures. *The Casa sobre el Arroyo* (House over Stream, 1943-45) [fig. 2], designed and built in Mar del Plata, Argentina, by Amancio Williams (1913-1989), and Californian Craig Ellwood and Associates’ the Weekend House (1964), and the Bridge House (1968) were exploratory small-scale man-made insertions in natural landscapes.

*The Casa sobre el Arroyo*⁶ is a masterpiece of the Argentinean modern architecture. It is an elegant regular exposed concrete parallelogram that looks as nestled on an arched lamina straddling the stream. Amancio Williams conceived it as a three-dimensional structure concerning structural efficiency. Situated in a beautiful grove, the house is the connection for the both sides of the land divided by the flowing water. As the architect states, it is “over its main feature, where Nature reaches its major lyricism. There, by counterpoint, the human work is placed.”⁷

The Weekend House, by Craig Ellwood (1922-1992) and Gerald Horn (b. 1934) was a living space abridged within large Pratt trusses. An



Figure 3. Craig Ellwood, James Tyler, Art Center College of Design, Pasadena, 1970-76. Hugo Segawa.



Figure 4. Oswaldo Bratke, Municipal Spa, Águas de Lindóia, 1952-59. Hugo Segawa.

experiment “originally developed as one solution to the scarcity and high cost of beach front land in southern California,” a building stretching across “a canyon in the simplest, purest way – the structure is a roofed bridge spanning 60 feet [18,29m] – leaving the land contours and natural watershed undisturbed,” according to Esther McCoy.⁸ The Bridge House, by Ellwood and James Tyler, was another theoretical proposition (inspired in Mies van der Rohe’s Farnsworth House), a “steel-truss system spanning over a mountain stream. Barebone and white, this pure structure is sheathed in glass, which contrast sharply with the forest surroundings,” as described McCoy.⁹ She quoted Ellwood: “buildings are artifacts and should therefore appear to be what they are. If order and logic are in a building, the building will inevitably complement nature.”¹⁰ Craig Ellwood was a controversial Los Angeles-based figure usually distinguished as a Mies van der Rohe follower.¹¹

Two bridge building centerpieces

Ellwood and Associates ventured some housing proposition within bridge-like structures.¹² Their final and major outgrowth following this building type speculation is The Art Center College of Design in Pasadena¹³ (1970-76, Northeast

Los Angeles) [fig. 3]. The edifice is a 263m by 44m (864ft by 144ft) structure: a long, one and two-story slim and sleek glass and dark steel-trussed framework floating over a broad ravine of Upper Arroyo Seco. It holds classrooms, studios, offices, workshops, services, library and gallery as a one single and compacted campus.

While Ellwood appeared as the front man of the architecture office, the chief designer responsible for the Art Center College of Design was James Tyler. In an interview probably made late 1990s, he commented:

I tried to get as much nature into the building as possible. That might sound like a contradiction, considering our buildings are kind of mechanical, high industry type structures. But Art Center was really a nature building. It spanned across a canyon and blended into the site so well, the community could see that it was not going to obliterate the mountain like a housing development would. It was dark, not a foreground building, but a background building. For the most part, I would say Frank Gehry is a foreground architect and I am probably more a background architect. I think mainly because the buildings recede and have very simple shapes, in which I try to involve nature.¹⁴

n Aguas de Lindóia, a spa town in Brazil (at State of São Paulo, about 180 km/111 miles from the capital), the Municipal Spa¹⁵ [fig. 4] was designed by Oswaldo Bratke (1907-1997) and built 1952-1959. It is a balneotherapy centre situated within a valley, source of medicinal clay and mineral spring. The mud-bath facilities are in a patio-type building embedded in the hollow part of the terrain. One side of the patio is the featuring building of the resort, a 90m by 14m (295ft by 46ft) concrete beam structure. It is a two-deck bridge, geometrical patterned with yellow and white ceramics/tile opaque surfaces, the upper floor for the spa facilities and underneath an open public linear concourse connecting two sides of the surrounding hills, used for hiking, sun-bathing and enjoyment of the landscape around. By spanning the valley, the Municipal Spa is an accomplished pedestrian passageway between distinct parts of the town. The former stream through the valley was canalized and all the low stretch of land was transformed into a public pool park and Roberto Burle Marx (1909-1994) designed gardens. As the building is supported over a colonnade in its central section in the pilotis concept, there is a transversal flowing of activities at the pools floor that refers to the Le Corbusier's proposals for the São Paulo and Rio de Janeiro *bridge buildings* concerning ground land use for sports and parks. The Águas de Lindóia Municipal Spa became a local landmark and a postcard to the resort town.

Bridge buildings are unconventional and non-doctrinaire manifests of modern architecture that matured throughout 20th century dealing with the relation between architecture and Nature. Nurtured by the progress of building techniques, the idea of new technologies as starting points to the development of new architectures – one of the key-concepts of the Modern Movement. They are a peculiar understanding of the way to introduce a piece of architecture and man-made artifacts in the environment with impacting results. Architecture,

Nature, Technology, are parts of the current rhetoric of High Tech trends and sustainability discourses. This paper is an opening for the study of such issues.

Notes

- 1 Sigfried Giedion, "Construction and Aesthetics," in *Circle, International Survey of Constructive Art*, ed. J. L. Martin, Ben Nicholson and Naum Gabo (London: Faber and Faber, 1937), 220-236. Later published in Sigfried Giedion, *Space, Time and Architecture: the Growth of a New Tradition*, 5th ed. rev. and enl. (Cambridge, MA, Harvard University Press, 2002), 450- 476.
- 2 Le Corbusier, *Précisions sur un état présent de l'architecture et de l'urbanisme* (Paris: Éditions G. Crès et Cie, 1930), 239-242.
- 3 Le Corbusier, *Précisions*, 242-245. Analyses and further developments in Yannis Tsiomis, ed., *Le Corbusier Rio de Janeiro 1929-1936* (Rio de Janeiro: Centro de Arquitetura e Urbanismo do Rio de Janeiro, 1988). In Portuguese and French.
- 4 Le Corbusier, *Precisions: On the Present State of Architecture and City Planning* (Cambridge, MA: The MIT Press, 1991): 236.
- 5 Le Corbusier, *Precisions*, 245.
- 6 Amancio Williams (Buenos Aires: Archivo Amancio Williams, 1990), 31-36.
- 7 Amancio Williams, 31.
- 8 Esther McCoy, *Craig Ellwood architecture* (Venezia: Alfieri, 1968), 98. See also: Alfonso Pérez Méndez, *Craig Ellwood: con el espíritu de la época* (Barcelona: Gustavo Gili, 2002), 192-200 for more recent data. A prototype of this house was built in San Luis Obispo as students' activity of the School of Architecture of California State Polytechnic College in 1967-1968, California.
- 9 Esther McCoy, *Craig Ellwood architecture*,

140. See also: Pérez Méndez, Craig Ellwood: con el espíritu de la época, 248-250 for more recent data.
- 10 Esther McCoy, Craig Ellwood architecture, 140.
- 11 See Pérez Méndez, *Craig Ellwood: con el espíritu de la época*, 126-225; Thomas S. Hines, *Architecture of the Sun: Los Angeles Modernism 1900-1970* (New York: Rizzoli, 2010), 544-555.
- 12 See Alfonso Pérez Méndez, *Craig Ellwood: con el espíritu de la época*.
- 13 Meredith L. Clausen, "L'Art Center di Pasadena e lo strano caso di 'Craig Ellwood'" (The Pasadena Art Center and the Curious Case of "Craig Ellwood"), *Casabella*, no. 664 (February 1999): 64-81; Pérez Méndez, Craig Ellwood: con el espíritu de la época, 271-286.
- 14 Jennifer Minasian, "The LA 12 revisited: interview with James Tyler," *Volume 5*, accessed April 8, 2012, http://www.volume5.com/tyler/html/architect_james_tyler_intervie.html.
- 15 Hugo Segawa and Guilherme Mazza Dourado, *Oswaldo Arthur Bratke* (São Paulo: Pro-Editores, 1997), 201-207.

The Finnish Cooperative Wholesale Society as a Promoter of Modernistic Architecture in the 1930's Finland

Jussi M. Telaaranta

Introduction

In the 1901 Finland got the first Act on Cooperative Societies and very quickly cooperatives – stores, banks and agricultural co-ops – were widespread all over country and almost every municipality. The cooperative stores established in the 1904 Finnish Cooperative Wholesale Society (SOK) for a need for cooperation and as an answer to coordinate joint purchase, advice and develops own industry production.

The SOK established own building department in the 1920. The aim of building department was to plan the SOK's own industry and office buildings, but relative fast it began to plan also buildings for member societies – stores, warehouse etc. The most rushed construction time for the SOK's building office was the 1930's. At that time the SOK and it's member societies constructs hundreds of new stores and warehouses and also industrial construction was remarkable.¹

The SOK's building department adopted a new international style as an enterprise official architectural language. The SOK's member societies constructed their stores mainly of bricks and rendered those with white colour. The SOK's buildings came very recognizable. People talked about white and cooperative functional-

ism. Commonly used dismissive term was also (architect) Erkki Huttunen's toolboxes, which means that not always "ordinary people" appreciated those flat-roofed undecorated buildings².

RESEARCH PROBLEM and methods

This study aims to answer the following research questions:

- In which ways the SOK's modern architecture were presented in the company's own publications as well as in the other organizations publications?
- How the SOK's architects and managers tried persuade their audience?
- Why the SOK's building department wanted so strongly to promote modernistic architecture?

A rhetorical analyse has used as a method in this study. A rhetorical analyse is more as a frame of reference than a strict method. Definition of rhetoric varies much, but maybe the best definition came from a Greek philosopher Aristotle (384–322 BCE). He state over 2360 years ago "rhetoric may be defined as the faculty of observing in any given case the available means of persuasion"³.



Figure 1. The Ruokolahti's Cooperative Society's main building, designed by V. Aulanko 1935. Original caption: *Compare the Ruokolahti's new grand house [on the left] in the old days. The old main store looks idyllic, but the new gorgeous respond to demand of our time.*⁸ The building is demolished in the 1980's away of the Cooperative society's parking lot.

Architects in the SOK's building department

Valde Aulanko (1883 - 1955) was a first SOK's building department director from the foundation of the department up to the 1939. Aulanko planned inter alia the Ruokolahti cooperative society's main store (picture 1). Erkki Huttunen (1901 - 1956) came to the SOK's building department as a sketch artist in the 1928, and he held this position as far as 1939, until he was promoted to the building department director.⁴ Many works that has been planned by Huttunen have been signed together with Aulanko, but is commonly known that Huttunen responded mainly of designing work in the SOK's building department in the 1930's⁵. Huttunen planned inter alia the Cooperative Aitta's main store (picture 2), which worked as a model for later retail store buildings.

Architects as the promoters of new architecture

The SOK's architects did not just resigned oneself to buildings. They wanted to promote new architecture to their potentially customers and public. Both Aulanko and Huttunen wrote amongst other things to the Finnish architecture magazine (Arkkitiehti) and the SOK's own magazines.

Evidently new modernistic style had a resistance in cooperative societies. It can be verified from articles, which wrote building department manager Aulanko. He held a lecture at the meeting of Manageress Advisory Board in the early 1935. He told that the building department has received mostly resistance, when they have introduced plans where new buildings have constructed with modernistic style. However, Aulanko told furthermore that once new

modernistic buildings are completed have they received also confession.⁶

If the SOK's member societies resisted so strongly new modernistic architecture, arises the question why the SOK wanted so opinionated to design buildings with modernistic style. Aulanko states that cooperative societies must follow the requirements of time. In his point of view especially in rural areas were quite commonly that cooperative societies used all kinds of inexperienced construction drawers. Aulanko wanted also prevent uneconomic building.⁷

Erkki Huttunen as a promoter

Aulanko writes fairly pragmatically of modernistic architecture. Instead Huttunen became more enthusiastic and he was even poetic. Actually, he wrote a long article to the Finnish culture magazine *Nuori Voima*. [»Youthful Strength»] where many persons were interested of modernistic culture.

In the following writing sample Huttunen is dealing with rural issues:

*[...]The functionalism's bright, noble forms fit on anything. [...]And what comes to peace of rural life, which the functionalism is often supposedly feared to disturbing, it should be clear that what could fit better there - and just to anywhere - than the functionalism, whose calm and smooth surfaces and shadows of trees leafs is free to cavort with a open-hearted and natural essence and that is just what nature have created for.*⁹

Professionalism and corporate image

It wasn't just architects who promote new modernistic style. Also managers in the SOK wrote on behalf of new architecture. For example the SOK's member society's executive director J.



Figure 2. The Cooperative Aitta's main building, designed by E. Huttunen 1933. Original caption: *The Cooperative Aitta's pure stylish new building in Sauvo.*¹⁰ The building is remained and protected, but the purpose of use in the future is unclear.

Mikkonen saw cooperative society with a building, a garden, a store decor and arrangements as the business card¹¹.

He also denied to questionable the SOK's architects plans:

*[L]eave the design to the professional men - to the SOK's architects - and trust in their ability. Let us not unnecessarily block their suggestions, even if they would be in our point of view substantial changes, improvements and conveniences to the previous ones. Let us take into account that they're the professionals and more up to date on these matters than we do - and would be better if they could be ahead of our time.*¹²

Discussion

It is irony of history that in the 1930's modernistic buildings replaced (demolished) many old stores and once again from the 1960's new, even more simplistic, buildings became to replace old modernistic buildings. Actually the rhetoric of our time isn't so different than in the 1930's. It is common that modernistic buildings from the 1930's are demolished, because they are seen as old and they don't fulfil demand of our time.

Cooperative societies in the 1930s were pioneers in adopting modernistic architecture. Today, the same kind of ambition is difficult to perceive. This may partly affect by the lacking own building department, which the SOK closed down in the 1981¹³. Regardless of the closure of the department and the present rareness of the modernistic buildings, the 1930's modernistic cooperative stores are a significant part of the Finnish enterprise architectures heritage and the cooperative societies should be proud of their past commitment to developing the Finnish architecture.

Conclusion

From the forgoing texts were samples of the SOK's architects and the manager writings as for new modernistic architecture. They referred to the economy, rationalism and professionalism. They even denied to opposite to the building departments planning. It was also a question of authority. Of course there were many practical reasons to renew cooperative stores. Trading was growing and people demanded more variety of products. Cooperative societies needed new buildings, but many of their members weren't interest in modernistic style. It is difficult to estimate how persuasive the writings really were in cooperative societies point of view, but nonetheless, in the 1930's almost all new cooperative stores were planned according to the modernistic style and cooperative stores got very recognizable appearance.

Notes

- 1 Teppo Jokinen, *Erkki Huttunen liikelaitosten ja yhteisöjen arkkitehtina 1928-1939* (Jyväskylä: Jyväskylän yliopisto, 1992), 22.
- 2 Jokinen, *Erkki Huttunen*, 22.
- 3 Aristotle, *Rhetoric*, trans. W. Rhys Roberts ja W. D. Ross (Cosimo Classics, 2010).
- 4 Jokinen, *Erkki Huttunen*, 22.
- 5 Raija-Liisa Heinonen, *Funkcionalismin läpimurto Suomessa* (Suomen rakennustaiteen museo, 1986), 273-276.
- 6 Valde Aulanko, "Osuuskauppojen rakennustoiminnasta," *Osuuskauppalehti* (1935), 71-76.
- 7 Valde Aulanko, "Osuuskauppoja," *Arkkitehti* (1936), 93-94.

- 8 "Osuuskauppoja." *Osuuskauppalehti* 26 (1936), 584-589.
- 9 Erkki Huttunen, "Funkcionalismi," *Nuori Voima* 1 (1936), 12-15.
- 10 "Osuuskauppoja", 584-589.
- 11 J. Mikkonen, "Hallintoneuvostojen puheenjohtajain neuvottelukunnassa pidetty esitelmä," *Osuuskauppalehti* (1934), 509.
- 12 Mikkonen, "Esitelmä", 509.
- 13 Lisa Brunnström, *Det svenska Folkhemmet, Kooperativa Förbundets arkitektkontor* (Arkitektur förlag AB, 2004), 33.

By the Water's Edge

Modern Seaside Pools as Examples of "Good Living" Environments

Christine Phillips

Hannah Lewi

Swimming in the Modern Living Environment

'A truly new spirit can only exist in a new body. Instinctively, modern man knows that ... The body will emerge naked in the sun, washed, muscled, supple.'

Le Corbusier, *L'Esprit Nouveau*

This paper explores the making of modern living environments as a core ambition of modern design through an examination of waterside open-air swimming pools or 'lidos' in Britain and Australia. We see the nineteenth century interest in utopianism and Darwinism as thoroughly permeating the twentieth century's pursuit of what has been characterised as the 'Good Life'.¹ A wave of pool building in the pre-World War II decades coincided with a radical re-shaping of communal and urban life as 'New Living' for the 'New Man'. Iconic waterside pools are here briefly considered as 'modern living environments' of the past and present, through examination of their original design and construction, followed by consideration of their fate. We see these pools as potent exemplars of the aims for the modern 'Good Life' through three traits:

First, the outdoor pool was a product of Modernism's desire to control and tame the natural environment as a potential site of play. And this ambition to regulate, control and render safe seaside or riverside bodies of water and natural topography was keenly evident in pools built on the water's edge at the dynamic and challenging interface between land and water. Pools were typically achieved through local government initiatives to connect sea and river locations to the town or city, and to carve out enjoyable safe-havens where swimmers could seek refuge while immersed in the natural elements.

Second, the outdoor pool created a modern engineered environment through innovations in materials, construction, technology and servicing, which were often celebrated as Modernist design attributes, more so than overt modern styling. Although some early waterside pools were consciously modern in design – whether streamlined and functional or more organic – many retrospectively looked to a language of stripped-bare classicism or popular Art Deco.² Their program, construction and styling represent what Alan Powers has aptly termed; 'a form of accidental Modernism, deriving from an engineer's approach to structure and materials' combined with a sense of 'unpretentious elegance'.³

Third, the outdoor pool constructed a place where the Modern Body could be enhanced and reshaped through public recreation, leisure and fitness programs, in line with Modern architecture's aspirations to facilitate fitness, hygiene and re-birth. By the early twentieth century architecture and planning came to be considered as a means of coercively encouraging activities in healthier outdoor open-air environments that served to slowly improve everyday life and enhance the healthy body.⁴ And in turn the body of 'the New Man' was virile, fit, unencumbered and responsive, thus becoming the subject, muse and program for modern architects and planners. Through egalitarian ideals of governance and planning it was promised that the ordinary collective body, not just the elite or avant-garde, would come to enjoy recreation time and space in the sun.

A Wave of Pool Building in Britain and Australia

The open-air swimming pool began to flourish in Britain during the 1920s and '30s when over 300 open-air pools or lidos were constructed. Similarly in Australia – home of the 'Australian mermaid' and Hollywood star Annette Kellerman – hundreds of modern sea and habourside pools were constructed during this period, particularly along the east coast. British lidos were often cited as a source of inspiration. These British waterside pools reflected the three traits, as identified above in the pursuit of the modern good living environment through the control of coastal landscapes; the creation of engineered and technological environments; and the shifting attitudes towards fitness and a less class and gender denominated body.

Two exemplary pools of the pre-World War II decades are the Tinside Lido in Plymouth and the Scarborough Bathing Pool. These were also influential for Australian pool-building of the



Figure 1.
View of North
Sydney Pool,
1956. National
Archives of
Australia.

same period.⁵ Scarborough in North Yorkshire was a spa town which sought revival in the early twentieth century through plans for a grand outdoor pool, realized after 1912 with the extension of the existing sea wall at the base of the cliffs adjacent to the town. The swimming and sunbathing complex was certainly seen as a mechanism for the town's beautification, modernization and improvement. Despite its classical dressing, the pool was heralded as an achievement of Modernism in terms of its servicing and hygienic facilities. And in 1933-34, it was further developed with sturdier cliff terracing and a daringly high reinforced concrete diving platform.

The Tinside Pool in Plymouth, completed in 1935, was also constructed on the edge of a natural cliff and followed in a long tradition of bathing on the Plymouth coast. Like Scarborough, the shape of the protected pool inscribed a distinctive semicircular sea enclosure. The entrance buildings, colonnade and changing rooms were modest flat-roofed and streamlined stage-sets. As Janet Smith has suggested, it was 'the pool itself... that grabbed all the attention, and the views looking out to sea which provided much of its allure.'⁶ The projecting jetties and terraces gave access to and from the cliff-face, sculpted a place for promenading, and were bastions for protection and shelter. This extensive reshaping of the natural edge to the sea defined the pool as a civic development, and an engineered and landscaped environment thus defining the pool as an interface between the natural and the urban. The pool was further ce-

mented as an important work of infrastructure in the reconstruction plan for Plymouth, ‘A City of Tomorrow’, executed by Patrick Abercrombie in the wake of bombing raids during World War II, in which the pool complex was maintained as a prominent place healing in the damaged city – again re-stitching the rebuilt city to the seafront.⁷ Scarborough, Tinside, Plymouth, Blackpool and many other British seaside lidos of the period are exemplars of the coming together of modern architecture and mass leisure and tourism that reshaped everyday living with a touch of “glamour”.

In Australia, outdoor pool construction was also widespread during the 1920s and ‘30s when government programs assisted in strengthening an already “sun and sports” enthusiastic nation.⁸ Suburban pools became important community hubs, and ocean pools re-connected people with nature to provide good living environments. The North Sydney Pool, designed by Rudder & Grout (1936), was to become one of the most iconic waterside pools in Australia, not only because of its spectacular harbour location under the shadow of the Sydney Harbour Bridge, but also because of its use in the Empire Games competitions of 1938 and 1958. Prior to the 1930s, people typically swam in the harbour beaches with little enhancement or protection. However as safety became a concern because of pollution and the frequency of shark attacks and drownings more defined facilities were seen as a growing necessity. With its ‘peculiar odour and irritation’, it took some time to convince the public that chlorinated and artificially enclosed water was a viable and safer option. Although once completed in 1936, one councillor enthusiastically remarked of the North Sydney Pool development: “No dead fish or decayed seagull floats into this pool.”⁹

The pool was described at the time as of ‘Stripped Classical Functionalist’ style: ‘a classical building on which the columns, entablature and pediments have been peeled off’.¹⁰ Perim-

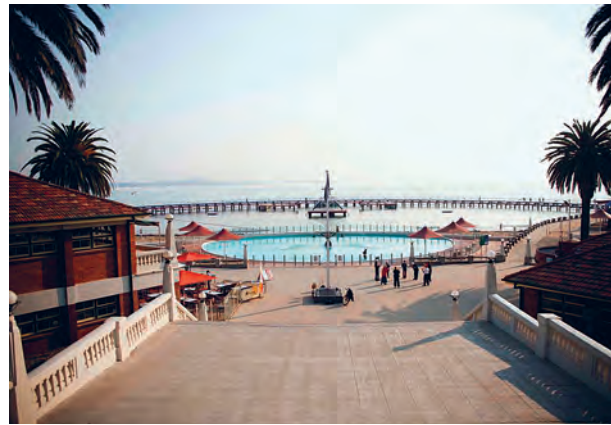


Figure 2. View of Eastern Beach Swimming Pool Geelong after partial restoration in 2008.

eter walls and entrance are formed by arcaded polychromatic brickwork, with whimsical glass and plaster ornamentation of water-life motifs. One extraordinary addition was the “beautification” of the underground passageway entrance as an artificial grotto with overhanging rocks and trees made of concrete and real tree-ferns, fishponds and amber-coloured lights creating a sunset effect: nature was thus modified in the picturesque tradition.

However in a lengthy review in *Building Journal* of 1936 scant attention is given to the pool’s appearance and decoration. Whereas lengthy descriptions are devoted to the more hidden aspects of the servicing and water technology, as it was in these innovations that the Modern really resided. As Adrian Forty has noted, many metaphors of Modernism have emanated from scientific terminology and have been transposed into architectural discourse, including terms like circulation, flow, dynamism and so on, and this language is very evident in descriptions of the engineered environment of the swimming pool.¹¹ For instance, in North Sydney the circulation of people, water, electricity and waste is painstakingly documented. And

the “systems” of circulation are seen as ‘flexible and interchangeable’ - other symptoms of Modernity. The analogy of the building as a body of vital circulation was enthusiastically applied to the swimming pool. And the modern pool also constituted a mechanism of hygiene in new more sophisticated ways than the public baths of the nineteenth century. Swimmers at North Sydney were processed through a series of turnstiles, gates and changing rooms. A ‘compulsory shower race’ took the form of a narrow passageway with automated jets of water sprayed from the ceiling, while walking through a shallow foot-bath of sterilised re-circulated water, and featured an ‘ingenious towel shelf of terrazzo’.¹²

Located on the Corio Bay foreshore in Geelong, Victoria, Australia, the Eastern Beach Reserve and Children’s pool is another significant interwar example that illustrates a desire to provide a good living environment for its local and tourist communities through the preservation and re-development of the landscape. The project was constructed as part of a major coastal redevelopment and design competition for a beautification scheme to provide safe swimming and recreational areas, and was awarded to Melbourne architect and engineer Henry Hare in 1926.¹³ Construction began in 1928 and provided much needed work at the time. While Hare’s competition design was not fully realised, the completed scheme was impressive and included a foreshore landscape located in a natural amphitheatre with bluestone retaining walls, grassy slopes and playground.¹⁴ A circular concrete children’s pool, a semi-circular promenade timber sea bathing enclosure, and sweeping sea wall finished with a series of lamp stands and rotundas exemplifies the Art Deco design of Eastern Beach and owes much to the Sea Baths of Scarborough. By the mid-1930s, Eastern Beach became a popular tourist destination and featured as a panoramic image in a Victorian Railways postcard promoting Geelong as ‘The City with A Holiday Charm.’

The Fate of the Seaside Pools, Past and Present

Despite their early popularity and firm footing in Modernity, the seaside pools and lidos of Britain and Australia have experienced a less than secure history, with countless number being left to decay. The story of pools like Scarborough, Tinside, Penzance, Geelong and North Sydney reflect the fate of lidos and pools in Britain and Australia, all experiencing a serious decline in popularity at some point from the 1960s onwards which precipitated a decline in condition and upkeep. By the 1980s and ‘90s city councils responded with the gradual withdrawal of support, thus slowly ending the seaside pool’s functionality as a viable public resource.

In the case of Scarborough Pool, by the 1980s it began to resemble an ancient ruined amphitheater rather than a site of modern fitness. And despite further campaigns to reopen it, the pool was closed in 1989 and ultimately filled in as a grassed terrace in 2003.¹⁵ The story of the Tinside Lido has been a much happier one, with the pool and changing rooms granted Grade II heritage listing in 1998 by English Heritage, and an impressive 3.4 million pound restoration project completed in 2003.¹⁶ Compounding the normal challenges of severe weathering of concrete in any seaside pool was the steep cliff-side setting that hampered access. While the exterior and main pool could not be radically altered, the interiors were completely redesigned to fulfill accessibility, privacy and servicing requirements. The main concrete basin for the pool was totally rebuilt with a reinforced concrete basin anchored to the rockbed below, new underwater lighting was installed in the tradition of the lightshow attractions of former days, and the small women’s pool was replaced by a sunbathing terrace. Smith, deservedly describes Tinside today as ‘a jewel whose lustre shines out far beyond the shores of Plymouth.’¹⁷

Geelong's Eastern Beach Reserve and Children's pool is one of the few surviving integrated bathing and recreational landscaping facilities that remain in Australia. Until the 1990s, the state of the reserve and pool was in great disrepair but thanks to significant funding extensive conservation and refurbishments have successfully restored it to its former beauty as part of Geelong's Waterfront Precinct Rejuvenation. These works were extensive and included complete reconstruction of the sea walls, dive tower, children's pool, signature Art Deco fixtures, the original fountain along with extensive replanting and landscaping.

Unfortunately the great outcomes of both Tinside Pool and Geelong are exceptions and the demise of seaside pools is still of great concern. Recently, however, there has been a renewed interest in the waterside pool type, with the construction of new and notable well-published examples like the floating Badeschiff pool in the River Spree in Berlin (Wilk, Lorenz & AMP, 2009),¹⁸ and the Copenhagen Harbour Bath (PLOT, 2003).¹⁹ These contemporary examples have been inspired by the pools of the early twentieth century yet create a fresh outlook on how the type can be reinvigorated for current, social, environmental and recreational trends by offering new interpretations in tempering nature for leisure. These new and restored schemes thus successfully re-connect the public with water landscapes and demonstrate new interpretations in architecture's augmentation of the 'Good Life'. Through their success, they highlight the urgency and viability of restoring others that remain neglected.

Notes

- 1 John R. Gold, *The Experience of Modernism* (London: E&F N Spon, 1997), 20-35.
- 2 Alan Powers, *The Modern Movement In Britain* (London: Merrell, 2005), 16.

- 3 Powers, *The Modern Movement*, 162.
- 4 Beatriz Colomina, "The Medical Body in Modern Architecture," *Daidalos* 64 (1997), 61.
- 5 The documentation, conservation and heritage of the British lidos has been very well covered by the English Heritage publication by Janet Smith, *Liquid Assets: The Lidos and open air swimming pools of Britain* (London: English Heritage, 2005).
- 6 Smith, *Liquid Assets*, 109.
- 7 Avanti Architects, *Plymouth Civic Centre Feasibility Study* (London, 2011).
- 8 Hannah Lewi, "More Than Just a Hole in the Ground," in *Celebration: XXII Annual Conference of the Society of Architectural Historians, Australia and New Zealand* (Napier: SAHANZ, 2005), 205.
- 9 Exhibition Catalogue: "The Wonder Pool, 1936-1996" (Sydney: North Sydney Council, 1996), 14.
- 10 "North Sydney Olympic Pool," *Building Journal*, May 12, 1936, 31-36.
- 11 Adrian Forty, *Words and Buildings: a vocabulary of Modern Architecture* (London: Thames & Hudson, 2000), 27.
- 12 "North Sydney Olympic Pool", 34.
- 13 David Rowe, "Eastern Beach, Geelong's Aquatic Playground: Its History, Its Context & Its Conservation," in *Watermarks: Water's Heritage* (Australia ICOMOS & National Trusts of Australia, 2010), 4.
- 14 Rowe, "Eastern Beach Reserve", 21.
- 15 For a full description of Scarborough Pool see Smith, *Liquid Assets*, 58-61.
- 16 See English Heritage Listing <http://list.english-heritage.org.uk/>
- 17 Smith, *Liquid Assets*, 110.
- 18 Other notable examples include White Arkitekter's Kastrup Sea Bath (2005) in Denmark, the Next ENTERprise's the Lido di Caladro (2006) in Northern Italy and Lippmann Associates' Andrew Boy Charlton pool in Sydney, Australia.
- 19

The Agip Service Station as a Symbol for the Italian Economic Miracle

Dorothea Deschermeier

"Agip is the public face of an Italian Economic Miracle..."¹

These were the opening words of an article on Agip patrol stations published in the British magazine *The Architectural Review* in May 1962.

Compromised by a fascist past and scarred by economic failures, in the postwar period of Second World War the state-owned company transformed itself into the epitome of modernity and efficiency.

This transition was the result of the efforts of Enrico Mattei – first Agip vice-chairman then president of the new founded state-owned ENI group of which Agip had become part – to overhaul the company's image.²

The Rebirth of Agip in the Postwar Period

After the war Agip's distribution network in Italy was weak, consisting mainly of an insufficient number of isolated points of sale, which were actually merely pumps along the roadside. Mattei reacted to the desolate situation by performing a thorough overhaul of both the distribution network and the corporate image, deciding that the company should symbolize its chairman's dreams of an Italy able to conquer a place among the great industrialized nations and

that it should express modernity and efficiency. Public opinion of the group was formed largely through Agip, the most visible of ENI's companies and the only one to have direct contact with the Italian people, making it fundamental for the image of the entire state monopoly. The large investments in the commercial side of the business that followed this decision allowed the introduction of several elements that still characterize the corporate branding today.

In 1952 a new logo was introduced, the six-legged black dog on yellow ground, the winner of a public competition announced on the April issue of *Domus*.³

In June of the same year Mattei informed his colleagues about the introduction of new architecture for the road network. Mario Bacciocchi, a Milanese architect, was commissioned by Mattei to design a typical petrol service station.⁴

The brief introduction preceding the presentation of the typical service station design states: "Agip's programme for the extension of the road distribution network features the construction of numerous petrol service stations along the most important roads [...]. Consequently Agip has pre-arranged the design of several standardized types of systems, etc., which combine efficiency and rationality with daring concepts and elegant lines



Figure 1. Mario Bacciocchi, Agip service station, Barletta, 50s. © Archivio Eni, Rome.

[...]. However, they are all characterized by the same pleasing style that distinguishes them, even at a distance, from the service stations of other distribution companies.³

The most distinctive element of Bacciocchi's service station is its overhanging roof. It was made from a single piece of cast reinforced concrete, starting from the rear wall that acts as a counterweight, and it has a short overhang at the back. The roof extends to form a canopy that soars upwards and outwards, before ending in a downward fold. The dynamic form of the eye-catching roof makes the building immediately recognizable, thus becoming a sort of "architectural trademark". The design features 13 variations of the same model, ranging from the

most basic – the canopy alone – through various sizes (small, medium and large). The larger the size, the more services are offered. Strictly car-related services, such as oil change, washing and repairs, are flanked by telephones, toilets, a tobacconist, a cafeteria and the "RistorAgip". The largest service stations even include a house for the manager.

The building is clad with narrow light-brown, undulating tiles. An illuminated box with the name "Agip" is displayed on the small overhang at the back, while "Supercortemaggiore" is emblazoned across the downward edge of the canopy.⁶

For mountainous areas the architect designed several special variations able to "fit in with the surroundings, without spoiling their

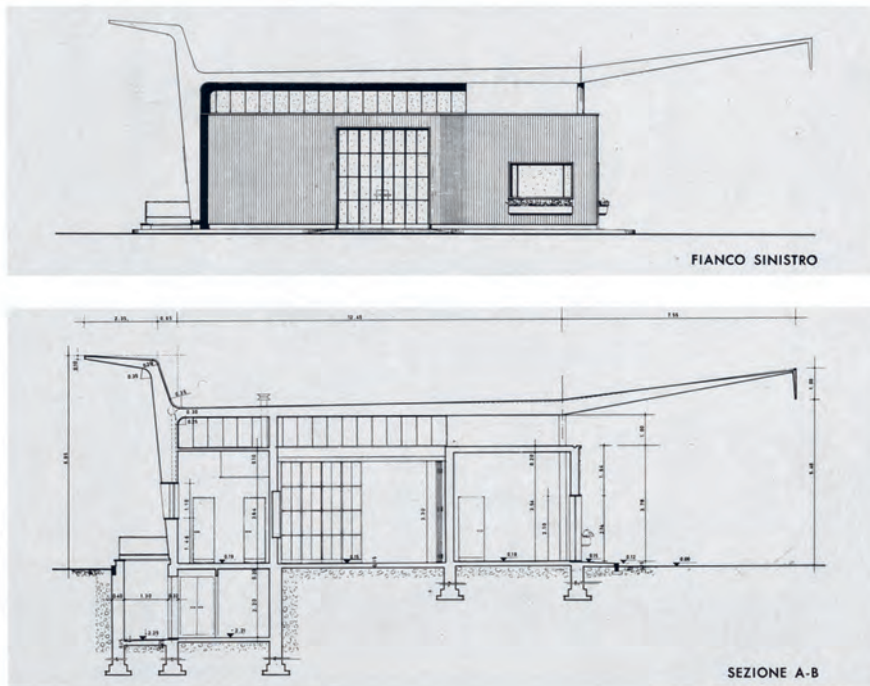


Figure 2. Two designs for a medium-size service station, elevation and section, 50s.
© Archivio Arch. Giordano Bacciocchi.

distinctive features [...] to preserve their scenic beauty”, using pitched roofs and wood and stone as cladding.

Following Agip’s incorporation into ENI in 1953, teams of engineers flanked their construction of gas pipelines, industrial plants and settlements with the creation of an extensive network of service stations based on Bacciocchi’s prototype, modifying it according to the site and the terrain. The result was twin stations with two roofs extending over both sides for location in the centre of a square, as in Piazzale Medaglie d’Oro in Naples for example, or large flagship buildings with two stories, such as that in Moncalieri.

Up to 400 stations were built each year, giving a certain weight to the claim made in 1956 by ENI’s house organ, *Il Gatto Selvatico*, that

the Agip service stations “with their unmistakable architectural style have become an integral part of the Italian landscape”⁷

The Concept of Standardization

Of course, Agip was neither the first nor the last oil company to focus on standardization during those years. In Europe the first steps towards the standardization of the architecture of service stations date from before the Second World War. The common denominator of all the proposals was the quest for a solution for the overhanging roof, the characteristic element of this building type. In 1927–28 Hans Poelzig designed three variations of a steel service station complete with petrol pump



Figure 3. Mario Bacciocchi, Agip service station, Cortemaggiore, 50s.
© Archivio Eni, Rome.

for Reichspritkraft, which, however, was never produced. In 1937 Arne Jacobsen made a prototype for Texaco, which has recently been listed and restored. After the Second World War the theme of standardization returned and became widespread. In 1953 Esso Netherlands commissioned Willem Marinus Dudok to design a prototype. His steel service station with a Plexiglas roof was built well over 100 times. In France Jean Prouvé used his hallmark poetical engineering skills to design a prototype for Socony France that could be dismantled and reassembled in just two days, with the aim of allowing the structure to adapt to continual changes in traffic flow. In Germany, from 1956 onwards, Purfina built its standardized service station designed by Walter Hämer in a functional style and featuring a modular construction system allowing easy extension. The big oil companies' own design teams also drew up standardized projects, such as the Caltex service station, developed during the mid-1950s and characterized

by a prestressed concrete canopy rising from the ground and curving forward in a single sweeping movement. Indeed, numerous projects were promoted by the various oil companies with the aim of introducing a typical service station, both with the aid of external architects and designed by internal teams.

The Agip Service Station of the Economic Boom

Despite their common characteristics, a comparison of Bacciocchi's design with those developed by other oil companies reveals a difference in the systematic provision of facilities offered to the customer: telephones, toilets, tobacconists, cafes and so on.

In order to improve this service to its customers, the company drew up a set of strict rules for the management of its service stations. ENI decided to establish a training school for



Figure 4. Mario Bacciocchi, Two-storeyed Agip service station, Moncalieri, 50s.
© Archivio Eni, Rome.

service station managers at Metanopoli. The training material was printed in many languages, from English to Amharic, for managers who came to Metanopoli from the far-off countries in which Agip operates. A sense of belonging to a “big family” was fostered and customer care was boosted by distributing a magazine with the eloquent title *Buon Lavoro, Amici!*, which informed service station managers about corporate events and technical issues, offering advice for good customer relations and the floral decoration of the premises.

Agip’s winning card was represented by its many services, far more than those of its competitors, which it needed to be able to compete in the race for clients with the foreign oil companies that dominated the Italian market. The extent to which this conceptual and design dif-

ference was perceived abroad is clear from this opinion expressed in an article published in *The Architectural Review* in 1962: “Entering a highly competitive field later than its rivals, Agip has established itself by offering a better service than the other companies, better in the double sense of being more comprehensive and better presented.”⁸

Providing services contributed to triggering a transformation of the symbolic value of the service station that is also expressed semantically in the transition from “refueling station” to “service station”, i.e. from a useful place to one of pleasure based on consumption, thus becoming an authentic symbol of the economic boom. Agip not only embodied this commercial concept perfectly, but was also one of the first oil companies in Europe to do so. The develop-



Figure 5 Mario Bacciocchi, Service station in Bra, Reproduction of a pencil drawing, hand coloured, 1954. © Archivio Arch. Giordano Bacciocchi.

ment of typical service stations under Mattei represents the most fascinating chapter in the history of Agip service stations, precisely for its pro-active power.

However, it was not only on the company history that this decade left a permanent mark. Outside Italy too, the launch of Agip's standardized service station aroused the interest of international trade magazines in Germany (*Die Deutsche Bauzeitung*, 1957) and Britain (*Architect & Building News*, 1956; *The Architectural Review*, 1962), which published articles on the latest news from Italy in the field of road architecture, while the French magazine *Techniques & Architecture* even dedicated the cover of its 1954 spring issue to Bacciocchi's service station.⁹

Architectural Symbols Worthy of Protection

The age of the Bacciocchi service stations proved to be fairly short lived. Their early end was decreed by a major problem: the canopy, al-

beit dynamic and highly distinctive, could not be extended. With increasing mobility and the introduction of self-service areas, a horizontal roof structure supported by round pillars became a necessity to span across the continuously growing dimensions of the forecourt. Bacciocchi's service stations were built until the late 1950s. Since 1959 the design had been reworked by the in-house engineers and the Agip service stations had been undergoing a series of new layouts.

Nonetheless, due to the frenetic building activity of ENI throughout the whole country within the first decade of the standardized Agip service stations, Bacciocchi's small architecture pieces can still be found all over Italy, mostly on country roads or in rural areas that have not fallen victim to massive building projects. In some cases the original canopies were cut off and substituted by new horizontal roofs with rounded edges, clad with black and yellow back-lit casing; in other cases the new canopies are simply placed in front of the former ones,

hiding but not interfering with the original structure. Often the original cladding with the brown tiles is still in place.

However, the chance of survival of these small transport facilities increases significantly with the celebrity of their author's name, as shown in the case of the above-named Texaco station of Arne Jacobsen or the Aquila station (1953) in Trieste restored in 2008 by the city in

order to honour one of the architects and "son" of Trieste, Ernesto Rogers of the studio Belgiojoso Peressutti e Rogers.

As for the first models of standardised Agip service stations, it is uncertain how long they will survive, since they can't feature a famous authorship and have not yet been recognized as symbols of the Italian economic miracle, though being monuments worthy of protection.¹⁰

Notes

- 1 P.R.B., "The Face of the Miracle," *The Architectural Review* 131 (May 1962), 359-361, 359
- 2 Cfr. Dorothea Deschermeier, *Impero Eni. L'architettura aziendale e l'urbanistica di Enrico Mattei* (Bologna: Damiani 2009).
- 3 *Domus* 269, April 1952, n.p.
- 4 At the time the architect was also working on the design of Metanopoli, on the outskirts of Milan, Eni's administrative and management headquarters, with adjoining residential quarters and facilities for employees.
- 5 Mario Bacciocchi, "Agip. Progetti tipo degli impianti stradali in Italia," undated (1952), Archivio arch. Giordano Bacciocchi (Milan).
- 6 In 1949, after three years of unsuccessful drilling – earning Mattei much criticism and the nickname of "the oilman with no oil" – Agip's technical division is finally successful, discovering the Cortemaggiore oilfield. The name of the fuel that the company sells, "Supercortemaggiore", is derived from this site and is supposed to lead the consumer to believe that the petrol really does come from

the Po Valley, and is thus the "the powerful Italian petrol" promised by contemporary advertising. However, the production of the Cortemaggiore oil wells was actually far too low to meet a significant percentage of national demand and the black gold continued to be imported.

- 7 M. Parella, "Stazioni di servizio: crocevia della vita moderna," *Il Gatto Selvatico*, vol. 2, n. 6 (1956), 12.
- 8 P.R.B., "The Face of the Miracle", 359 et seq.
- 9 G.H., "Neubauten der Agip in ganz Italien," *Die Deutsche Bauzeitung* 4 (1957), 142-145; W.E. Tatton Brown, "AGIP Service Stations," *Architect & Building News*, August 9, 1956, 204-209; P.R.B., "The Face of the Miracle," *The Architectural Review* 131 (May 1962), 359-361; P.R.B., "Stations-service AGIP," *Techniques & Architecture* 3-4 (1954), 108 and cover.
- 10 The issue of the preservation of service stations has been tackled recently in Susanna Caccia, *Architettura in movimento. Architecture in motion* (Pisa: ETS, 2009).

The Modern Movement into the Wild:

Julio Vilamajó's Villa Serrana, Uruguay, 1946-1947

Cláudia Costa Cabral



Figure 1. Julio Vilamajó, Ventorrillo de la Buena Vista, Villa Serrana, Uruguay, 1947. Archive IHA – Instituto de Historia de la Arquitectura, Universidad de la República, Uruguay.

“That was a happy age, before the days of architects, before the days of builders.” With those words from Seneca, Rudofsky introduced what he called “a natural history of architecture”. Written in 1977, *The Prodigious Builders: notes towards a natural history of architecture with special regard to those species that are traditionally neglected or downright ignored* resumed the argument of Rudofsky’s earlier book, *Architecture Without Architects*, but was also symptomatic of a new environmental consciousness rising in the seventies. Though reconciliation between man and nature had always been a pivotal issue to modern architecture, the sev-

enties’ new environmental focus would eventually challenge modern planning culture. The archetypes of the primitive hut, the tree dwelling or the bird’s nest, which Rudofsky regains, can be certainly brought to mind with respect to the buildings architect Julio Vilamajó (1894-1948) raised with stone, brick, wood and straw in the Uruguayan countryside in 1946, Ventorrillo de la Buena Vista and Mesón de las Cañas (figs. 1-2). They were supposed to be the first built section of a complete development plan for a small leisure town named Villa Serrana, located in a natural, untouched landscape area 145 km distant from Montevideo. Vilamajó was

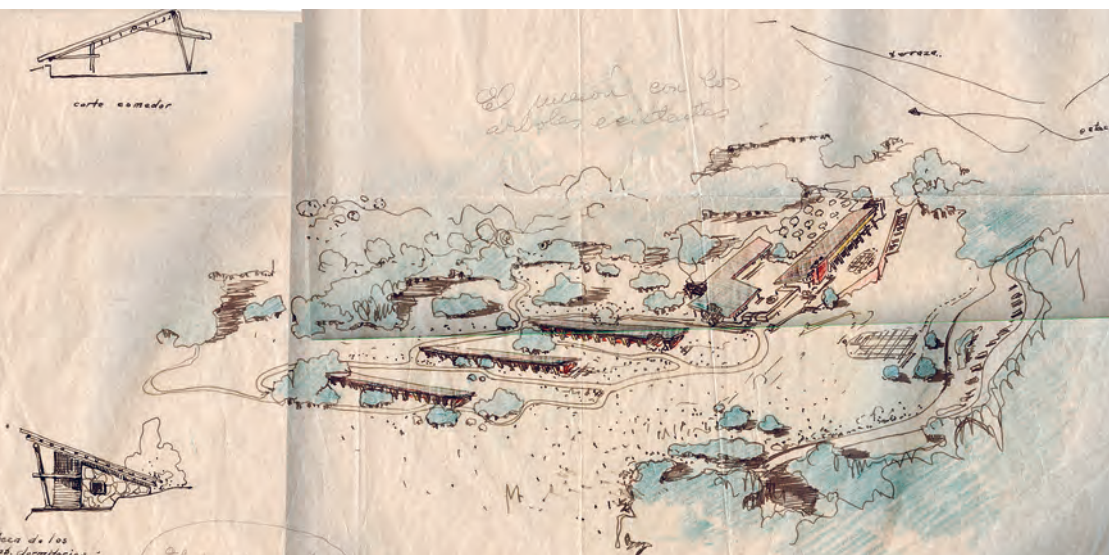


Figure 2. Julio Vilamajó, Meson de las Cañas, Villa Serrana, Uruguay, 1946. Archive IHA.

in charge of the village's master plan since 1945. A pioneer figure concerning the development of modern architecture in South America, he had been the author of the Faculty of Engineering in Montevideo (1936), and he would be among the ten architects invited as consultants to the United Nations Buildings in 1947, alongside Le Corbusier and Oscar Niemeyer.

The works of Vilamajó in Villa Serrana might be considered as Rudofsky's renegade species. In a sense, they are. Outside Uruguayan academic circles, if not ignored, they are probably lesser known than they deserve to be. But just in a sense. This paper sustains a position that precisely contradicts the naturalization of compositional strategies, which is usually associated to architectural and landscape designs that use vernacular forms or local construction techniques. Villa Serrana is generally appraised for its alleged vernacular connotations, and for Vilamajó's respect towards regional identities and natural conditions. Nevertheless, it does not explain the full extent of Vilamajó's proposal, and perhaps obliterates

its paradigmatic condition to a contemporary perspective.

Despite different local circumstances, small leisure villages surrounded by nature have been a regular and universal phenomena. Although many incorporated the nostalgia of an original natural state unspoiled by progress and civilization, they would be unthinkable without the urbanized metropolis of which they are the reverse side. Villa Serrana was a modern enterprise, enabled by the wealthy economic conditions of the postwar years in Uruguay, with the popularization of the automobile and the emergence of an affluent society that could afford a second house on the beach or spend money on leisure time activities. Created by a private corporation (Villa Serrana S.A.) in 1945, it was planned as an inland tourist destination, alternative to the coastal tradition of Uruguayan vacation localities. In this way, Vilamajó's task could be considered symmetrical to the one Catalan architect Antonio Bonet had accepted in Portozuelo, with the urbanization of Punta Ballena and the construction of La Solana del Mar.



Figure 3. Folder, Villa Serrana S.A., 1950. Archive IHA.

Grassy plains and low hills characterize the Uruguayan countryside, which lacks great mountains. Villa Serrana's location, among the hills formed by Sierra del Penitente and Sierra del Carapé, was a choice by Vilamajó. Assisted by a team of architects and engineers, Vilamajó undertook a complete survey of the physical and natural structure of the region.¹ He gathered technical information about topography, water sources, plant diversity, mineral and agricultural resources, besides an extensive photographic documentation of the landscape. Such a preliminary survey ensured him a full geographic control of the landscape, which would constitute the basis for both adaptive and transforming strategies of design. Paths were traced in order to adhere to the topographic structure of the place, as well as the location of residential zones, dispersed in seven neighborhoods around the major valley, named Los Romerillos, Las Vistas, La Leona Baja, La Leona Alta, El Prado, Colmenar de Abajo and Las Cuestas. Vilamajó thought the land division should not be of great magnitude, since wild nature should be preserved, and proposed to limit the constructed surface of lots to 14% of the area. Additionally, he de-

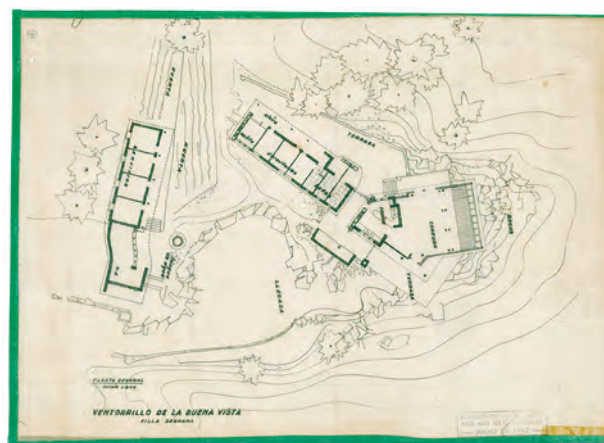


Figure 4. Ventorrillo de la Buena Vista, plan, 1947. Archive IHA.

tailed general ordinances that covered a full range of issues, from land uses, water sources, waste manage and plants to materials and inclination of roofs, which were intended to establish environmentally compatible patterns for urban development. Villa Serrana also aimed at a certain degree of self-sufficiency. Agricultural areas would be considered, besides public facilities and amenities. Two big hotels were located in the plan, although never developed.

Vilamajó's deeply geographical understanding of place in relation to program was not so conservative as it may appear today. Landscape design foresaw artificial groves at the top of the hills, while the construction of two separate dams created an artificial lake as a major feature of the plan, at the center of the composition. He was aware of the necessity of not just preserve, but maybe improve the scenic local qualities of the area, in order to support both private housing and public recreation programs. In that sense, Vilamajó seems to be connected to a tradition in modern country planning that follows from Geddes to Abercrombie, an author he actually refers on his notes.² Vilamajó explicitly mentioned Abercrombie's ideas on the



Figure 5. Julio Vilamajó, Ventorrillo de la Buena Vista, Villa Serrana, Uruguay, 1947. Archive IHA.

problem of disfigurement of the countryside in a draft for Villa Serrana's general ordinances, but affinities go further.³ Abercrombie's vision of country planning as an instrument of both preservation and development, meant to cope with economical demands and rural enjoyment, as well as the way in which he valued the aesthetic aspects of nature, seems to be quite close to the design perspective Vilamajó adopted in Villa Serrana.

The Ventorrillo de la Buena Vista consisted of a restaurant and two wings of rooms placed on the hillside, facing the lake. Despite being a small group of buildings, they played an important role in the landscape design and architectural characterization of Villa Serrana. The buildings are approached from their back, at the upper level of the site (fig. 1). Vilamajó articulated a sequence of descendant paths and terraces leading to the main piece of the group, which is the dining hall. As the visitor approaches the site, he is presented to retaining walls of natural rocks, and low buildings with masonry façades and straw roofs, executed with autochthonous materials and local techniques. The volume of the dining hall stands out with its amazing roof, a combined pattern of the Uruguayan *quincho*, a still current technique that comes from Quechua indigenous constructive traditions. But when the visitor finally enters the dining hall

he is confronted with a quite different spatial experience. Inside the restaurant, an unsuspected panoramic modern space is enabled by the wood structure that sustains the roof and a cantilevered deck, disclosing a spectacular 180 degrees view of the horizon. If the primitive connotation of the exterior sides of the building contributes to merge it with the wild nature, its structural configuration produces the transparency of the modern space, ensuring visual continuity between interior and exterior and converting landscape into scenography.

Although the access level is conformed according to the site's existing lines, the exterior terraces facing the lake were designed as geometrical components, as square lined platforms emerging from the sinuous contour of the hill. Abercrombie would have called that sort of landscape scale reconstruction "the regularizing hand of man".⁴ For Vilamajó, it was certainly not the natural and almost inevitable consequence of some local conditions, but a highly informed and professional search on the artistic possibilities of the primitive, as a conversation between "the wild and the humanized nature".⁵

While Rudofsky was collecting anonymous architectures, Joseph Rykwert was investigating the idea of the primitive in architectural history. Even though revealing distinct points of view, from Laugier's primitive hut to Semper's

Caribbean sheds, that study disclosed some recurrent ideas.⁶ A long lasting position is the one defended by Adolf Loos in his essay “Architecture”, when he describes a visit to a lakeside mountain village and praises the peasant house that does not seem man made, but the product of god’s workshop, like mountains and trees.⁷ As Rykwert pointed out, Loos’ argument presupposes the idea of a hidden wisdom that is sealed to the civilized and only accessible to the primitive. This argument echoed through Rudofsky’s pages, and came out in those lines of criticism that condemned modern architecture for not being enough subservient to the genius loci, which sometimes reflected a rejection of modernity in general. That was never the position assumed by Vilamajó in Villa Serrana. Closer to Abercrombie than to Loos, Vilamajó’s objective was not so much to pursue the untouched landscape, but to determine in what extent that landscape could be touched and still preserved as countryside.

Since economic crisis detained its growth in the fifties, Villa Serrana has been waiting like a sleeping village. Wild nature was somehow preserved by that oblivion, but Vilamajó’s buildings were neglected for years, even though the Ventorrillo was declared national historical monument in 1979. Meanwhile, Vilamajó’s ideas on an environmentally compatible development represent yet a valuable proposition facing contemporary requirements of sustainability and economic issues. In 2008, public policies stimulated a process of rehabilitation. A competition of ideas for the architectural recuperation and commercial exploitation of the Ventorrillo was launched, and won by Uruguayan architects Luis Zino and Marcelo Viola, who proposed resuming the original restaurant use and update the two adjacent wings as an inn. Works were successfully concluded in 2011.⁸ Despite some changes on the buildings to recuperate not just its physical integrity but economic viability, the intervention kept perfectly in line with Vi-

lamajó’s general principles. Villa Serrana was never meant to be a static open-air museum of the wild nature, but a place to live. The remaining question is whether the whole perspective of Vilamajó’s plan, in its lesser visible aspects, will be taking into account if Villa Serrana at some point retakes its growth.

Notes

- 1 Miguel Bellini, Jorge Bonino, Nelly Grandal de Scheps, Jose Scheps, architects; Juan Bernasconi, Walter Hill, Arturo Silva Mestre, Ciro Sap-riza Vera, engineers.
- 2 Julio Vilamajó, “Ordenanzas generales de uso,” manuscript, Archives IHA (Instituto de Historia de la Arquitectura, Universidad de la República, Montevideo, Uruguay).
- 3 Patrick Abercrombie, *Town and Country Planning* (London: Oxford University Press, 1933).
- 4 Abercrombie, *Town and Country Planning*, 179.
- 5 Julio Vilamajó, “Proyecto de Ordenanzas Generales,” Archives IHA (Instituto de Historia de la Arquitectura, Universidad de la República, Montevideo, Uruguay).
- 6 Joseph Rykwert, *On Adam’s House in Paradise: The Idea of the Primitive Hut in Architectural History* (Cambridge: MIT Press, 1981).
- 7 Adolf Loos, “Architecture” (1910), translated in *The Architecture of Adolf Loos*, ed. Wilfried Wang (London: Arts Council, 1985), 104-109.
- 8 Marcelo Viola and Luis Andrés Zino, “Criterios proyectuales y metodología de intervención en el Ventorrillo de la Buena Vista” (paper presented at the CAH20thC – Conferencia Científica Internacional sobre los Criterios de Intervención en el Patrimonio Arquitectónico del Siglo XX, Madrid, June 14-16 2011).

Conservation and Modern Architecture Reserves:

The Alexander Demetriou Building Case, Nicosia, Cyprus

Aimilios Michael
V. Ierides

Introduction

Post-war architectural history in Cyprus was dramatically influenced by the important political events that took place and disturbed its evolution. During the years that followed the 2nd World War many important and interesting architectural projects, which were characterised by astonishing clarity and concept, were constructed. Most of these modern buildings belong to the period of the first years of Cypriot independence (1960-1974), are characterised by their clear, modern spirit and impress by their consistent effort for an aesthetic result of high quality.¹ It was during this period, that the most important works of architect Neoptolemos Michealides were realised.²

Neoptolemos Michaelides following the principles and the structural forms of the Modern Movement tried to produce a contemporary architecture, which was based and inspired by the particularities of the local space and climate.³ In his built works, he achieved a harmonious combination of an environmentally sensitive and climatically rational design combined with

the creation of architecture of high aesthetic quality.⁴ Among his most important projects is the Alexandros Demetriou Building, which was designed in 1957, completed in 1959 and published in 1966⁵. In 2004, after a period of decline and abandonment, the building was declared under preservation as a monument of modern architecture and during the years 2006 to 2008, the study for its restoration was initialised and completed. The restoration work is expected to be completed by the end of 2009.

The methodology of the restoration work was based on a detailed analysis of the building's functional, morphological, constructional, and bioclimatic aspects. This analysis was imperative due to the importance of the building not only for the contemporary architectural heritage, but also for the local society, and was combined with extensive conversations with its owners and the local authorities. The bioclimatic design approach, which forms the object of the present paper, includes the analysis of the present state and the proposal both qualitatively and quantitatively, with the use of software⁶, and in relation to the climate of Nicosia.

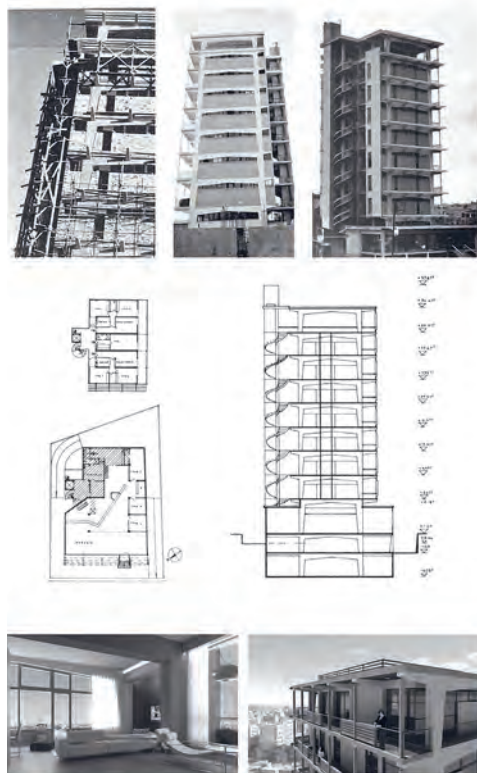


Figure 1: General aspects of the Alexandros Demetriou Building from *J. Architektoniki* 55 (1966).

a mixed-use building, which comprised office spaces, show-rooms and apartments, but today, most of the spaces function as office spaces, due to the building's location within the urban fabric. The building has a rectangular plan, with its main axis running from SE to NW. As a result, its main facade has a western orientation with a deviation of 35 degrees towards the north. Its total height is 34.50 metres, and for this reason the building constitutes one of the most important efforts of the period to design a high-rise building (Figure 1.)

Interior Space Design

The ground floor is raised from the ground and includes a large show room. The main entrance to the building is placed on its northern side in order to preserve the continuity of the glazed surface of the show room. The vertical movement towards the upper storeys is achieved through a circular staircase and a lift, while the horizontal on each level through a northern corridor, which provides access to the separate apartments. Each of the seven storeys consists of two 2-bedroom apartments and a studio. On the 8th floor, there is a covered terrace with an unobstructed, 360-degrees-wide view. At the semi-basement a second store and a parking space are placed, while the basement houses secondary spaces.

The quantitative analysis mainly involved the shading and insolation of selected openings on different orientations with the use of the Ecotect v.5.5 software and a preliminary daylighting analysis with the combined use of the Ecotect v.5.5⁷ and the Radiance⁸ software. For this reason, three-dimensional models of the typical floor before and after the restoration were constructed and analysed.

Initial Architectural Concept

General Data

The Alexandros Demetriou Building is situated on Stasinou-Salaminas Avenue, outside the walls of the old city of Nicosia, very close to the Gate of Famagusta. It was initially designed as

Open and Semi-Open Spaces

Due to the full exploitation of the plot's building potential, the open spaces have restricted size, and the presence of vegetation is limited to the sidewalk. Nevertheless, the placement of the building at the centre of the plot and the smaller plan size of the upper storeys compared

to that of the ground floor do not give the impression of a compact building volume. On each storey, there are ample semi-open spaces, which are placed on the southern side. The covered flat roof is also a common-use open space. The combination of open spaces with the extensive glazed surfaces provides generous views of the surrounding cityscape and landscape.

Construction

The construction of the building is a reinforced concrete structure, with visible frames on the two narrow facades (NW and SE). (Figure 1) All in all, there are six frames, without intermediate columns, a fact that allowed the creation of a continuous space on the ground floor and the semi-basement in the initial design, and would allow possible, future redesign proposals. The building is an example of total consistency between architecture and engineering, with the varying profile of the beams following and expressing the moment diagrams. The external walls are constructed with double bricks and plaster ($U\text{-value} = 1.52 \text{ W/m}^2\text{.K}$) and are placed at a recession from the supporting reinforced concrete structure ($U\text{-value} = 2.82 \text{ W/m}^2\text{.K}$) in order to project the structural essence of the building. The windows are metal-framed with single glazing ($U\text{-value} = 6.00 \text{ W/m}^2\text{.K}$, approximately). The circular external staircase is pre-fabricated, similar to the entrance staircase, which leads to the raised ground-floor show room.

Bioclimatic Principles of the Initial Design

The design of the Alexandros Demetriou building incorporates simple passive heating and cooling strategies, namely exploitation of direct solar gains, shading and natural ventilation, as well as daylighting features. The above features are architecturally integrated into the design and contribute to the improvement of the bioclimatic behaviour of the building, espe-

cially during the under-heated and over-heated period of the year.

The spaces with the highest heating requirements are placed towards the south, whereas secondary and other spaces are placed towards the north, in order to function as buffer spaces. The plan design of the apartment storeys allows the creation of southern openings in all the spaces, with a resulting surface of 18.8 sq.m. per storey, which is equal to the 30.5% of the surface of the southern walls. Instead of compact partition walls, internal partitions made of wooden and glass panels are used, ensuring that the rays of the southern sun can reach deep into the living spaces.

All the southern and western openings have external means of shading for the summer period. The southern openings are shaded by means of horizontal overhangs of adequate depth. The western facade has permanent shading devices made of terrazzo (Figure 2). Furthermore, most of the openings have additional sun protection with the use of moveable, exterior wooden rolling shutters. All the above-mentioned shading devices contribute not only to the shading, but also to the reduction of glare in the interior spaces. At the ground floor level, the show room's western facade is shaded with evergreen trees.

For the cooling period, the design of the apartment plans and the construction of the openings and the interior partitions allow the efficient cross-ventilation of all the living spaces.

The introduction and the distribution of daylighting in the apartments are regulated by the plan design, as well as by the various means of shading, and result in improved daylighting conditions throughout the year (Figure 3).

Finally, it is noted that the initial design did not include active heating or cooling systems, apart from electrical boilers, which provided domestic hot water (DHW) boilers for each apartment. In time, split-type air-conditioning units were installed in many spaces of the provided building.

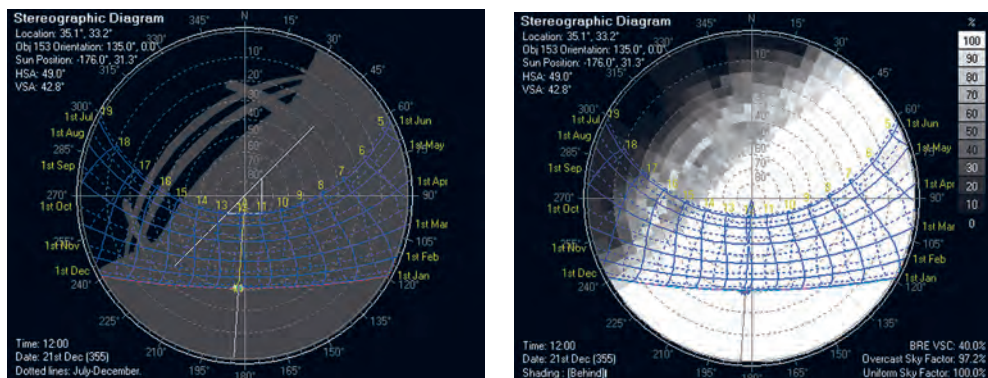


Figure 2: Shading mask and overshadowing for main facade (NW) opening.

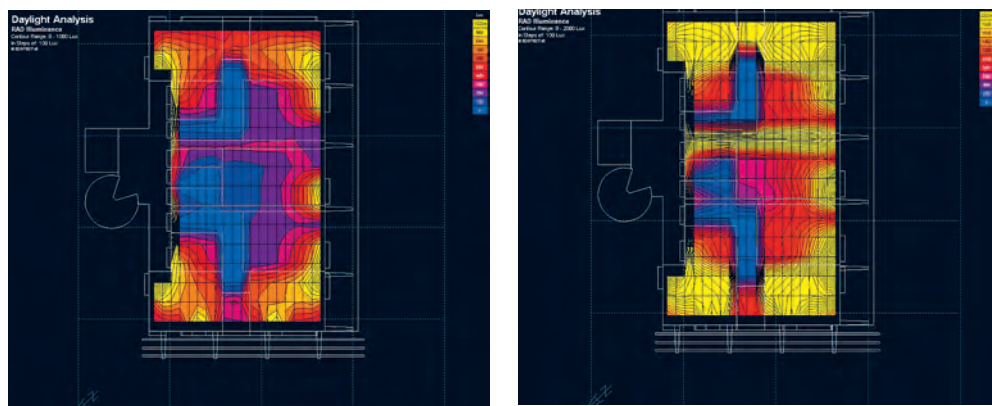


Figure 3: Daylighting analysis of the initial design of the typical floor on December 21st, 12:00 with overcast sky conditions and on June 21st, 12:00 with clear sky conditions.

Architectural Restoration Proposal

The proposal seeks to redesign the building without altering its original character and accurate outline. For this reason, the design is strictly bounded to the existing structural grid. The plan is re-organised based on the conceptual view and the bioclimatic approach of the original design. In all seven storeys, the initial use -housing- is restored, but altered, unifying

the three separate apartments (the 2 apartments and the studio) in one. Another housing unit is added in the place of the covered terrace of the 8th floor, a feature that was included in the initial design but was never realised. Its façade is kept at a distance from the structural elements, aiming at the preservation of the initially “empty” eighth floor concept. The ground floor shop is restored to its initial design. An entertainment space is proposed for the semi-basement,

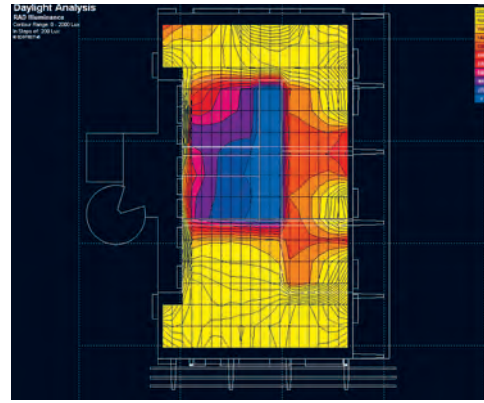
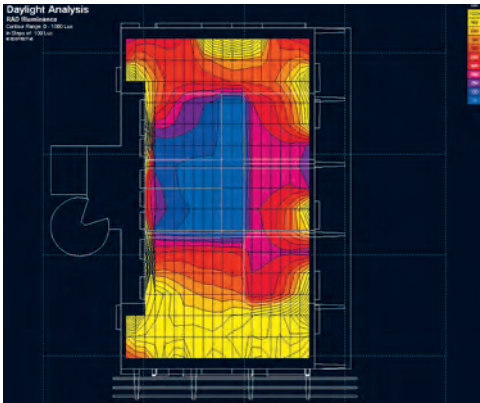


Figure 4: Daylighting analysis of the redesign proposal for the typical floor on December 21st, 12:00 with overcast sky conditions and on June 21st, 12:00 with clear sky conditions.

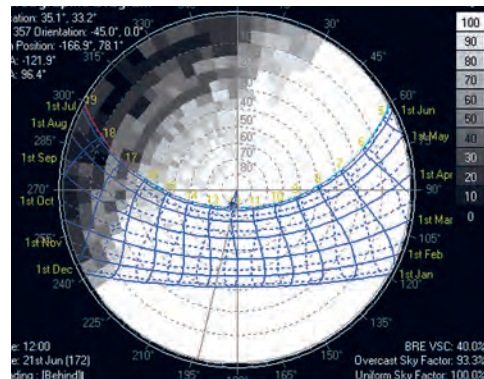
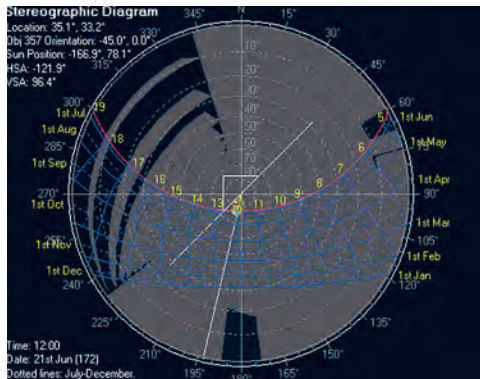


Figure 5: Shading mask and overshadowing for main facade (NW) opening with external, horizontal venetian louvers (10 cm wide at 10 cm intervals)

in order to function as a recreation of the inhabitants and the visitors of the building, and to enforce the commercial character of the wider area.

The facades of the building are carefully redesigned and receive the minimum interventions: the openings of the western and the eastern façade are increased based on the initial module of the openings. In this way, the new openings are integrated to the existing ones, but at the same time can be discerned from them.

Bioclimatic Principles of the Restoration Proposal

The above-mentioned analysis denotes the special care of the architect for the integration of passive heating and cooling strategies to the design of the building in order to improve thermal and visual comfort conditions and produce a locally and climatically adapted, rational, contemporary architecture. Consequently, despite the drastic redesign of the apartment spaces, the

basic principles of the initial design concerning the orientation of the spaces are preserved, with the main living spaces placed on the southern side and the secondary spaces on the northern in order to function as buffer spaces.

The improvement of the thermal behaviour of the building shell comprises the increase in the thermal insulation of the wall elements and the openings. Thermal insulation (8-cm thick rock wool) is placed on the interior side of the exterior walls, with a final layer of gypsum boards. This solution was judged preferable mainly because it provides adequate insulation (U -value = $0.33 \text{ W/m}^2\text{K}$ for walls and $0.37 \text{ W/m}^2\text{K}$, for reinforced concrete elements), without affecting the morphology of the building, even though it isolates the thermal mass of the construction elements. The existing windows are replaced with new *thermal-break aluminium window frames with low-e* glazing (U -value = $2.41 \text{ W/m}^2\text{K}$). Furthermore, parts of the glazing are not operable in order to reduce infiltration thermal losses.

The efficient cross-ventilation of the building spaces is ensured with the opening of selected parts of the glazed surfaces and carefully placed openings on external walls and interior partitions.

The shading of the openings is achieved with exterior thermal-insulating aluminium louvers, which provide adequate shading, while ensuring visual comfort and pleasant views. Interior fabric rolls provide additional daylighting control. Visual comfort is also linked to the pleasant views. For this reason, planting areas are created in appropriate spaces of the building. Furthermore, the flat roof of the ground floor show-room is planted in order to function as the open space of the 1st floor apartment. The summer microclimatic conditions are further enhanced with the creation of a shallow pond, which provides evaporative cooling.

The control of heating and cooling is achieved through technologically advanced sys-

tems (chillers / heat pumps, fan-coil units and hydronic under floor heating). The only active solar system that is integrated to the building is solar collectors for the production of DHW. Photovoltaic panels are not proposed due to the restricted rooftop area.

Conclusion

In the Alexandros Demetriou Building, the bioclimatic principles in the design of Neoptolemos Michaelides drastically define the synthetic and morphological result of his work and contribute to the improvement of thermal comfort conditions. It is also interesting to note that the building was designed and constructed at a period, when the term bioclimatic architecture in its present meaning was not yet clarified.⁹ Today, the need to design and redesign buildings in close relationship to the climate and the environment has become imperative. Consequently, the restoration proposal had no other alternative than to respect and enhance the bioclimatic features of the initial design. The passive heating (southern orientation) and cooling (various shading devices, efficient cross ventilation) systems are preserved and enforced, the thermal insulation of the building envelope is enhanced, vegetation and water elements are added in order to improve the microclimate. At the same time appropriate active heating and cooling systems are installed in order to ensure increased thermal comfort during the climatically extreme periods of the year.

From the presented case-study, general guidelines concerning the conservation and the redesign of buildings of the Modern Movement and the International Style based on the principles of bioclimatic architecture can be drawn. The proposed interventions may vary depending on the initial building's design and significance. As most of these buildings were constructed with little or no thermal insulation, the first,

and most important step would be the improvement of the thermal behaviour of the building shell, which includes the adding of adequate thermal insulation to the compact elements (walls, supporting structure and roof cover) and the replacement of the windows with new, thermally insulating ones (double or triple glazing, low-e, etc.). These interventions that can be implemented without altering façade design significantly, when the insulation is placed on the walls' interior side and the design of the new

window frames follows the initial design. More drastic interventions, which cannot always be applied and should agree with the initial façade design, include the improvement of shading (overheated period of the year) and daylighting conditions (throughout the year) with the use of external and internal shading devices. Finally, active solar systems (e.g. solar collectors, photovoltaics) can also be applied provided that they are architecturally integrated to the building shell or appropriately "hidden".

Notes

- 1 Special issue on Cypriot architecture, *J. Architektoniki* 55 (1966), 65-66; *J. Architektones & Michanikoi* 28 (1993); *J. Architekton* 23 (1993).
- 2 *J. Architektoniki* 55; *J. Architekton* 23; A. Michael, *Architect Neoptolemos Michaelides, the bioclimatic dimension in his work* (Athens, National Technical University of Athens, 2003).
- 3 Michael, *Architect Neoptolemos Michaelides*; M. Economides, *The relationship between modern and traditional in the work of the architect Neoptolemos Michaelides* (London, 1992); N. Michaelides, *Earth architecture. Cypriot folk art* (Nicosia: Pierides Foundation, 1993); A. Michael and A. Papanikolaou, *Neoptolemos Michaelides, with thought and dream* (Athens: National Technical University of Athens, 2002); S. Amourgis, *Critical Regionalism*. Pomona, California: College of Environmental Design, California State Polytechnic University, 1991).
- 4 Michael, *Architect Neoptolemos Michaelides*; Michaelides, *Earth architecture*; Michael and Papanikolaou, *Neoptolemos Michaelides*.
- 5 *J. Architektoniki* 55.
- 6 Ecotect Tool software, v5.5, Square One Research PTY Ltd., Dr. A. Marsh, <http://www.squ1.com>; Radiance software, v1.02, Lawrence Berkeley National Laboratory, <http://radsite.lbl.gov/deskrad>.
- 7 Ecotect Tool software.
- 8 Radiance software.
- 9 Michael, *Architect Neoptolemos Michaelides*.

The White Heat of Conservation

Adam Sharr
Stephen Thornton



Figure 1. The model made for the Whitehall plan showing the existing condition (left), similar to that which remains today, and the proposed design (right). Whitehall curves gently east-west into Parliament Square, which is slightly left of centre. To the south of the square is the Palace of Westminster, commonly known as the Houses of Parliament, and to its west is Westminster Abbey. The River Thames is at the bottom of the model and St. James' Park is top right. HMSO.

While architects and scholars are now exercised by the conservation of modern architecture, few modern architects were similarly exercised by conservation. This paper investigates the attitude to conservation apparent in one highly symbolic, but un-built, project from 1960s London. It was a project to demolish and rebuild the historic nineteenth century *palazzi* of Whitehall – the so-called ‘Government Centre’ of Britain – and replace them with a megastructure comprising stepped-section slab blocks (Martin and Buchanan, 1965), a project dubbed as ‘ziggurats for bureaucrats’. This megastructure would

span the roads into Parliament Square and re-frame the Houses of Parliament and Westminster Abbey (Figure 1). The architect of the proposal was Leslie Martin, now best known as designer of the Royal Festival Hall (completed in 1951), as Cambridge Professor of Architecture (from 1956-1972) and as a competition juror who selected Stirling and Gowan for the Leicester Engineering Building and Jorn Utzon for the Sydney Opera House project².

While Martin’s Whitehall project is now largely forgotten, it provides a fascinating insight into the particular values of a particular

time. The design was submitted to Harold Wilson's Labour administration in 1965, to a party which had, two years earlier, pledged to remake Britain in the 'white heat' of a scientific revolution. On one hand, the Whitehall plan can be read as an attempt to burnish the pride of a British state impoverished by the Second World War and divested of empire. On the other, presented to an administration elected on the promise of re-forging socialism in terms of a scientific revolution, it can also be read as forward-looking and utopian, intent on demonstrating the value of technology as an instrument of popular salvation. From today's perspective, when the idea of demolishing grand palaces like George Gilbert Scott's Foreign Office – a proposal at the centre of the project – would seem ludicrous, the plan's eager anticipation of a new future makes it an object of fascination.

Leslie Martin's Whitehall Plan

The Whitehall plan was described by different authors in a Victorian Society anniversary book published in 2010 as a 'megalomaniac conception' and a 'draconian plan'³. While this is the most common interpretation today, the plan was seen rather differently in 1965⁴. The architecture of the Foreign Office and other Whitehall buildings then stood for a past age; one which recalled a rigid nineteenth century social hierarchy – of patrician gentry, white-collar functionaries, blue-collar trades and domestic service – at a time when the new political rhetoric of 'white heat' favoured the idea of the meritocratic, scientific professional.

Martin's Whitehall report began with the problems of Parliament Square – then, as now, 'prejudiced by traffic'. His associate leading the project was Lionel March who, as a Cambridge student, had transferred from Mathematics to Architecture at the same time as Christopher Alexander and had recently returned to Britain

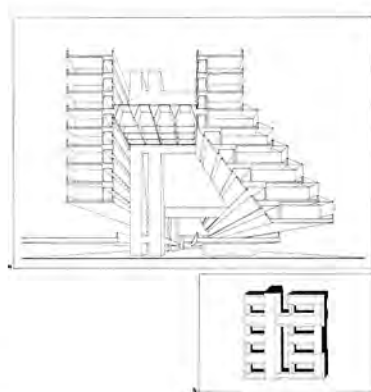


Figure 2. Section through the north-south galleries of the Whitehall megastructure, showing offices either side of a top-lit central arcade. HMSO.

from a PhD at the Harvard/MIT Joint Center for Urban Studies. Under Martin's supervision, March developed a scientific approach to the Whitehall design. Drawing from Fresnel's diagram of squares – which subsequently became the emblem for a new approach to research at Cambridge's Centre for Land Use and Built Form Studies⁵ – March evaluated different building forms on a generic site to test the ideal form for government offices. On this basis, the report challenged the conventional modernist orthodoxy of towers set in parkland, proposing instead a stepped section of eleven stories spreading across the site, accommodating open-plan offices at high level around a series of arcades (Figure 2). A graph was produced comparing site area, plot ratio, efficiency of floor area and clerical density in order to find the ideal plan and section form to be applied (Figure 3).

Its form having been determined scientifically, seven phases were proposed for the im-

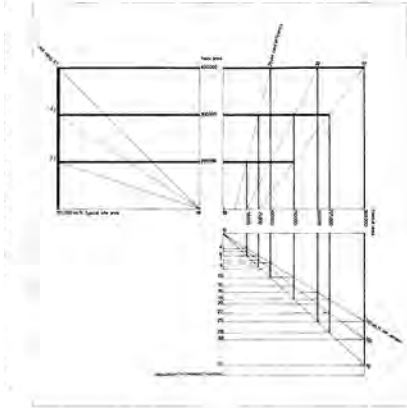


Figure 3. Graph from which the ideal form of the project was derived. HMSO.

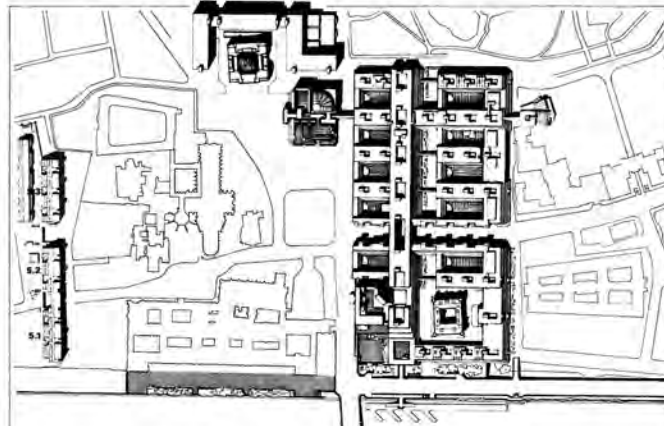


Figure 4. Drawing showing the seven phases of the project complete. The megastructure spans Whitehall. Norman Shaw's Scotland Yard is seen locked into it below Whitehall; Lanchester and Rickards' Methodist Central Hall is enclosed by a block to the top and Inigo Jones' Banqueting House is shown right-centre. HMSO.

plementation of the Whitehall plan. The first would make a new parliamentary building and shopping centre over Westminster Underground station (similar to that eventually designed by architect Michael Hopkins and completed in 1998) which would provide 'decant capacity' for government office workers. The second would demolish most of Scotland Yard, filling the block between Whitehall and the Thames with 396,000 sq. ft. of offices. The third would demolish Gilbert Scott's Foreign Office and replace it with 462,000 sq. ft. of offices with underground car parking and a setback on Downing Street opposite the Prime Minister's house at No. 10. The fourth would add 522,000 sq. ft. of offices on the site of the neo-classical Great George Street building, completed in Portland stone in 1914, establishing east-west arcades across the site. The fifth phase would put road traffic in a new tunnel in the Thames, pedestrianising Parliament Square

and completing a new riverfront. The sixth phase would demolish a series of buildings including the Middlesex Guildhall – a nineteenth century neo-Gothic structure which was converted in 2005 to become the new home for Britain's Supreme Court – to enclose the north side of Parliament Square and add a so-called 'major building of national or international significance'. The seventh and final phase would enclose the west side of the new 'parliamentary precinct' with a hall of residence for parliamentarians, similar to that called-for by the British press in the wake of the 2009 expenses scandal (Figure 4).

As this short outline suggests, the plan was by no means modest in scale, scope or conception. It envisaged clearing and rebuilding six blocks of Central London – part of which is now a World Heritage Site – including various eighteenth and nineteenth century buildings now listed in the UK at Grade 1.

Conservation Values Apparent in the Plan

This is not to say that Leslie Martin's Whitehall plan pursued a wholly tabula rasa approach to historic buildings. Inigo Jones' famous Banqueting House, commonly assumed to have launched English Palladian architecture, was to be retained and its neighbour, the Georgian Gwydwr House, was to be removed in order to emphasise it. Richard Norman Shaw's Arts-and-Crafts headquarters for the Metropolitan Police at Scotland Yard was also to be retained. Stripped of its later extensions (including that by Shaw) in order to emphasise its four-square perfection as an object, it was to be locked into a courtyard of the megastructure. Also to be retained, on the north side of Parliament Square, was Westminster Central Hall, a place of Methodist worship completed to designs by Lanchester and Rickards in 1911 with a French baroque inflection to its Arts-and-Crafts details. Strikingly, these historic buildings to be preserved were described by the report 'the invariants of any plan'.

Martin's Whitehall designs, then, demonstrate a curiously selective view of history. When asked recently, in an interview with us, why certain buildings were to be saved amidst the demolition, Lionel March replied simply 'because we liked them'. We suspect, however, that this is not the whole story. Antony Vidler has suggested that post-war modern architects used history in three ways:

*'first, to demonstrate the fundamental antiquity of the old way of building; then, to tell the story of the prehistory of modernism as it emerged out of the old; and finally, with the help of abstract ideas of form and space, to be redrawn as a continuing process of invention and a repertory of formal and spatial moves.'*⁶

Martin and March's scientific conception of design can be located in Vidler's third approach

to architectural history: they sought ideal diagrammatic archetypes which would be useful for the future, similar to the approach of J.N.L. Durand in the eighteenth century. But the architects of the Whitehall plan were also sympathetic to the second approach: the recasting of architectural history to make modernism its logical consequence. Nikolaus Pevsner's *The Pioneers of Modern Design*, included by Martin on the first year reading list for student architects in Cambridge, tells the story clearly; indicating a lineage from the Ancient classical temples to Palladio's villas, to the beginnings of functional expression in *Jugendstil* and *Art Nouveau*, to the proto-modernists of the Arts-and-Crafts movement and finally to the mainstream production of modern architecture⁷. In this light, Martin and March's preferences in the Whitehall plan can be appreciated as fulfilling the story of Pevsner's Modern Pioneers.

There is another curiosity in the conservation values at work. Jones' Banqueting House, Norman Shaw's Scotland Yard and Lanchester and Rickard's Methodist Central Hall were all to be isolated in space, stripped of their adjacent structures. They were to be presented as objects for contemplation. This is, perhaps, a fulfilment of the art-historical idea of architectural history. This approach serves to idealise the art object, imagined as a thing-unto-itself, presented for discussion in photographs in books and journals with its surroundings cropped-out. Like framed photographs, Martin and March proposed isolating historic buildings to present them as exemplars for future contemplation by art historians. They were imagined as objects of scientific curiosity, made available for study like a specimen in a test tube.

Intriguingly, the conservation values apparent in Martin's plan did not chime harmoniously with those of the government led by the herald of 'white heat', Harold Wilson. Paradoxically, the previous Conservative governments of Harold Macmillan (1956-1963) and Alec Doug-

las-Home (1963-64) were conspicuous for their lack support for many conservation projects, of which the ‘murder’ of the Doric arch at Euston station was the most celebrated example. As John Delafons has explained (1997), it was only with the election of a Labour government in 1964 that a coherent conservation policy was initiated in the UK. At the centre of this development were the Minister of Housing and Local Government (MHLG), Richard Crossman, and his junior minister with responsibility for historic buildings, Lord (Wayland) Kennet. Crossman initiated a change in his department’s previously dismissive attitude to conservation, noting that his long-serving most senior official at the MHLG tended to regard ‘preservationalism’, as ‘a word of abuse’, whereas Crossman himself favoured, ‘a new and sensible relationship between planning and preservation’⁸. Furthermore Kennet had a long standing interest in the history of architecture and urban design, and was heavily influenced by the French *zone protégée* system. Thus, and in awkward contrast to the sentiments expressed in Martin’s plan, Crossman and Kennet sought to push the idea that ‘it was not only single buildings which could have architectural or historic interest, but also groups of buildings, streets, quarters of towns, whole towns’⁹. This clash of conservation philosophies between architect and government was one of a number of factors which prevented Martin’s scheme – which had been commissioned by the previous Conservative administration – from being realised.

Modern Conservation Values at Work

Conservation values commonly applied to both pre-modern and modern buildings – those of ICOMOS’s Venice Charter charter for example¹⁰ – derive from the values of William Morris’ *Manifesto for the Society for the Protection of Ancient Buildings*; from a particular late nine-

teenth- and early twentieth-century mindset. They promote the idea of the *Gesamtkunstwerk*, the building as a total work of art, appreciating history as a series of archaeological layers made visible in architectural artefacts, seeing those artefacts as part of their urban or landscape settings. Thus, contemporary conservation experts consider historic buildings holistically as artefacts in contexts, curated to make the past apparent as a sequence of layers.

This is in contrast to the values of the Martin plan, where historic buildings were instead imagined as ideal objects, complete in their formal perfection, to be isolated for the contemplation of future generations. No multiple histories were to be visible through the expression of historical layers; there was instead one history: that of modernism. Thus, the Whitehall plan – and the distinctive conservation values at work in it – raises an important question about the idea of conserving the modern. Specifically: why do we employ the same set of values for conserving modern buildings that we employ for conserving pre-modern buildings?

Many of the early protagonists of modern architecture saw it as a decisive break with the past. Martin, for example, understood modernism as replacing the old idea of the architect as an aesthetic connoisseur with a new idea of the architect as a research scientist. The new architecture, for him, was scientific and technical in orientation. It was not just about absorbing the *image* of technology – drawing from cars and ocean liners – but also about absorbing its *methods* and *procedures* in the scientific pursuit of ideal building types¹¹. If Leslie Martin’s Whitehall plan can be taken as an example, then at least some modern architects seem to have thought about conservation differently. Historic buildings were imagined as ideal geometric building forms presented to future generations as objects for studying modernism and its origins. Does this mean, then, that the contemporary conservation of

modern architecture should be thought about differently? If we conserve pre-modern architecture according to pre-modern values, then

should we learn instead to conserve modern architecture, as Martin did, according to modern values?

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Notes

1 Rice, "Ziggurats for Bureaucrats."

2 Carolin and Dannatt, *Architecture, Education and Research*.

3 Hill et. al., *Victorians Revalued*.

4 Sandbrook, *White Heat*.

5 Martin and March, *Urban Space and Structures*.

6 Vidler, *Histories of the Immediate Present*.

7 Pevsner, *Pioneers of Modern Design*.

8 Crossman, *The Diaries of a Cabinet Minister*.

9 Kennet, *Preservation*.

10 ICOMOS, *The Venice Charter*.

11 Martin, "From 'An Architect's Approach to Architecture'".

Cataguases: Dilemmas of the Preservation of Modern Heritage in Brazil

Cecília Rodrigues dos Santos

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Cataguases is an urban community in the State of Minas Gerais, Southeast Brazil. In December 1995, the IPHAN – Instituto do Patrimônio Histórico e Artístico Nacional –, a preservation agency devoted to preserving cultural heritage, decided to enlist a nearly 60-block-polygon in downtown area, given its significance for national culture. The interest was mainly caused by the large concentration of buildings designed by the major architects from Brazilian Modernist Movement in the 1940s.

This urban community history shows us a city as any other from the countryside of Brazil, both in terms of predictability and in its design contradictions, or in its development. Similarly to most of these cities, its history begins with the banishment and religious instruction of native Indians from the banks of a river and the building of a small church for the patron saint. As for the urban layout, it was defined in 1828 by colonel Marlière, designated by the emperor to civilize the native Indians. In the late 19th century, the arrival of the Leopoldina Railroad increased the development of Cataguases; besides the richness from coffee production and all the new stuff brought by the railroad, squares and gardens are remodeled, streets are paved, bridg-

es and roads are built and a eclectic renewed of the architecture. In 1905 the first factory and power plant of the city are established, setting off the textile industrial cycle, a synonym for progress and prosperity, one of the main factors to provide a “modern environment” for the city.

In the twenties this small city served as arena for two very significant cultural events, responsible for inserting the city in Brazil’s map of the modernism: the Humberto Mauro’s movie-pictures and the *Revista Verde*, a literary magazine. On the other hand, the “ordinary” side of the city is emphasized along with its almost banality as urban environment, the “small-mindedness”. With the end of the *Revista Verde*, in 1929, the intellectuals who integrated the movement VERDE got scattered. Francisco Peixoto, poet and member of the family which ran the weaving plant, the main industrial development focus of the city, headed to Rio de Janeiro. About 10 years later, Peixoto came back to Cataguases and “imports” architectural projects and works of art of national and international *avant-gardes* from the capital, Rio de Janeiro, also creating a positive atmosphere to the local modern expressions. Beyond the general initia-

tives of social and civilizing character, this time the avant-garde movement in the town will have its main expression in art and architecture fields and, unlike the literary and the movie movements, it will not be conducted by local architects and artists.

In 1943, Francisco Peixoto commissions a design for his new residence in Cataguases to the then young architect Oscar Niemeyer¹. Three years later he requests the architect to design the Cataguases High School. From then on, architects like Carlos Leão, Francisco Bolonha, Aldary Toledo, the Roberto Brothers, Gilberto Lemos, Luzimar Cerqueira de Goes Telles, Flávio Almada; landscape architects such as Burle Marx, Carlos Percy and Bolonha himself; the furniture designer Joaquim Tenreiro; artists such as Anísio Medeiros, Portinari, Di Cavalcanti, Djanira, Iberê Camargo, Vicente do Rego Monteiro, Cícero Dias, Emeric Marcier, Jan Zach, and Bruno Giorgi will enrich the city with very significant buildings and gardens, pictures and sculptures, furniture and objects, most of them still in use nowadays.

Still in 1943, Edgar Guimarães do Valle finishes the design for the new St Rita church (completed only in 1968) which was meant to replace the neogothic building demolished before its 40 year-old anniversary, and Oscar Niemeyer delivers the hospital design. Two years later Francisco Peixoto and Marques Rebelo, the writer, discussed the replacement of the eclectic Recreio Theater, arena for avant-garde manifestations in the 1920s. This replacement took place with the opening of the Edgard cine-theater, in 1953, a modern building designed by Carlos Leão e Aldary Toledo. The concentration of economic and political power in the group which includes Peixoto family, committed to the avant-garde ideas and the modernist movement, put together in that moment the conditions to transform the physical space of the city. *“One clearly notices the intention of transforming the city according to a process,*

which from the beginning includes large symbolic buildings, as the church and the theater. Hence, a characteristic of new architecture movement was revealed through the linking of architectonic remodeling to the symbolic network of a political model”².

However, if some of the most important buildings are symbolically rebuilt upon the recent ruins of their predecessors, in most of the town the modernist movement language transforms the existing façades, while new designs with a modernist concept start to occupy vacant lots with private houses, commercial buildings, workers social housing, schools, and hospitals. The erudite modern architecture language is decoded by the people of Cataguases in their ordinary buildings, creating a modernist-like vocabulary, almost defining a ‘modern vernacular’ local architecture, that characterizes the city until today. Notwithstanding Marques Rebelo’s concerns with urbanization, and despite the existence of a urban design for the city probably prepared by Aldary Toledo, modern buildings continued to be placed in the old urban layout - no renewal urban plan had been implanted in the city. The current Rui Barbosa Square, for example, is renewed under the modernist drawing plan of Luzimar Cerqueira de Goes Telles - and it even gets a modern bandstand designed by Francisco Bolonha - but respecting the limits and its 17th century urban design.

Cataguases, is a small and unsophisticated city in the twenties that became the stage of an important avant-garde literary and movie movement. Moreover, later went through this “real modernist transformation” through the architecture. From the preservation perspective, it is important to highlight the fact that Cataguases did not deny or exclude the different witnesses from its formation process, and the official preservation plan of such ensemble poses some interesting and even polemic questions. It was not the intention of Instituto do Patrimônio Histórico e Artístico Nacional -

IPHAN³ to deny or exclude the variety of other manifestations that were already present in the city and still subsides along with its “modernist” features, and give testimony of its regular development process, similar to those other small cities spread in the inland Brazilian territory. Cataguases did not ever pass through a “*tabula rasa*” -process, neither it is a brand-new town which is the result of a coherent and thorough modernist design like Brasília. Its preservation does not aim to isolate or purify its “modernist face”, but to consider each and every other contribution to the city’s history and identity.

For sure, the more erudite and valuable modernist pieces of Cataguases have to undergo some necessary renovations to ensure their preservation. But it is necessary to keep in mind that they are true manifestations of the Art Synthesis dream come true, integrating landscape design, urban furniture, works of art, buildings and their urban context as a plural and heterogeneous historic environment that goes beyond its modernist moment. By drawing a protection polygon which comprises 16 individually-mentioned buildings (11 of them representing the Modernist Movement Architecture), and by resisting to the most evident temptation to protect isolated works made by currently renowned artists, the Cataguases listing process consider the properties within the city’s history and context and not within the context of the authors’ works.

The “modernist city”, which had to wait 20 years after the avant-garde movements appearance to be carried out, has been built upon the original 19th century urban site, paved with cobblestones and shaded by oitis, a generous crowned-tree. More than just allowing, it provided the tangible coexistence of different epochs, the harmonic transformation and conservation of the simple rows of houses and buildings which had built its “ordinary Brazilian city’s history”. However, given that listing should rely on a physical support and show the diversity of

the city components as well, and quoting the major works of art and architecture which had collaborated to build this environment, the listing of Cataguases caused a discussion about the traditional criteria of preservation of Historical Centers in Brasil. That is the point that distinguishes Cataguases in its listing study from the other preserved cities, and changes the protection criteria: the modern as part of the historical process. To make clear why Cataguases is far from being the “Ouro Preto of modern times”⁴, one has to come back to the reasoning which served as basis for its protection:

(...) Yet, it is obvious the difficulty to translate the real dimension of the cultural processes which took place in the city when selecting an asset of properties to be listed in the Official Listing Book. Sure enough, the works of modern architecture, their furniture and artistic asset still work as real evidences and reveal the cultural movement that give the city its notoriety. However they are insufficient to testify the complexity, the vastness and even the contradictions of the modernist initiatives in Cataguases: being the listing restricted to the most representative architecture works, there is no way to reduce the modern movement meaning and sense attained in the city. There is even the danger that these works might be understood as significant references in the production of notorious architects, authors of their personal designs, and who have been quite focused on Brazilian modern architecture historiography, keeping the works apart from the peculiar conditions in which they have been produced in Cataguases, and from their antecedents. Even apprehended in the urban physiognomy extent, such works do not configure an articulated and homogeneous set. On the contrary, they are scattered all around the city and mixed with the manifestations of older periods, sometimes

being disturbed by the presence of more recent constructions, without any special character, disorienting the attempts to identify a comprising area and to treat the issue in its urban dimension. (...) The best way to promote Cataguases' cultural heritage acknowledgment and protection is to consider it as a constituent part of the urban center; the absence of a unity emphasizes one of its main modernist movement features, that is, its incomplete character.

Hence, conceptual and methodologically, there was an advance in approaching the issue of modern movement architecture in the context of Cataguases and its protection, defining a new “historic center concept”, in the words of Antonio Luiz Dias de Andrade, that is, an “area of cultural interest” or “a place for modernity”, in

Italo Campofiorito's words. The Protection Plan originality caused at the time to be only possible to anticipate hypothesis and suggestions for the following government term: the systematic inventory of properties inside the referred polygon and the constitution of a deliberative City Council formed by representatives from local, State and Federal organizations to decide upon the interventions in the safeguarded polygon. These proposals were never implemented by the City Hall, neither by the IPHAN.

Anyway, even today, it is difficult to foresee the destiny of Cataguases. As all the cities in Brazil, Cataguases is the superposition of its succeeding modernity moments and the interiorization of continuing and contradictory innovating foreign cycles. It makes Cataguases not only the most usual Brazilian city but, at the same time, the most especially modern one.

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Notes

- 1 At that very moment, the Ministério da Educação e Saúde at Rio de Janeiro – currently named Gustavo Capanema Palace – was completed in Rio de Janeiro and the Governor of Minas Gerais, Juscelino Kubitschek, future president of Brazil and responsible for the construction of Brasília, commissioned a design for the Pampulha Complex at Lagoa da Pampulha (Pampulha Lake) in Belo Horizonte to the same architect
- 2 Selma Melo Miranda. "Arquitetura Moderna em Cataguases," in *Revista Oculum* 7/8, abril 1996, São Paulo, 25.
- 3 IPHAN - the Institute of National Historical and Artistic Heritage, a preservation agency devoted to preserving cultural heritage in Brazil.
- 4 Ouro Preto, in Minas Gerais, is a colonial city, the gold cycle main city in the 18th century; it is among the most important historic sites in Brazil, having been declared World Heritage Site by UNESCO.
- 5 Reasoning which served as basis for protection of Cataguases by Antonio Luiz Dias de Andrade. In *Processo de Tombamento (Listing Process) - Cataguases / MG*. Ministério da Cultura / Instituto do Patrimônio Histórico e Artístico Nacional - IPHAN, 13ª Coordenadoria Regional / Belo Horizonte, MG, 1994, 47-55.

Image and Identity

The Experimental Housing of Schorlemerallee, Hans and Wassili Luckhardt, Alfons Anker, Berlin, 1925-30

Rafael Guridi
Cristina Tartas

Modern Housing Heritage

In debates about Modern building's restoration it is a common issue the implicit paradox that supposes to preserve works created on an experimental basis and designed for a limited period of time. The problem acquires special features in the case of Modern Housing which, we shall remember, was one of the Modern Movement's main focuses. Contrary to other typologies, Housing results quite problematic to accommodate non-residential programs.

In most scholar studies on Modern Housing Heritage, the samples are frequently chosen from canonical works; iconic houses emptied from every programmatic content and turned in self-Museums in order to preserve its original image, discussions on their restoration always dealing on technical, historical and methodological aspects. We should point out, however, that these samples represent a minimum percentage of all the built Housing Heritage, which fulfilled and still fulfills its only possible function: to be inhabited by people.¹

Modern housing, more than other programs, worked out as a research field for technical & formal solutions, to be later transferred to dif-

ferent scales and typologies. Many building solutions lacked previous experience, producing faults or deficiencies that later interventions tended to correct, in order to preserve its original appearance.² But, what if these building techniques are precisely at the core of the building conception? There is a dilemma between the opposite poles of adulterating a construction to preserve an image, or being as faithful as possible to the building's structural and technical principles on which certain architectures are based.

This lecture presents a very special case, closely related to research on building techniques:

Versuchssiedlung of Schorlemerallee, Berlin

Wassili and Hans Luckhardt were always interested in building technology and its relation with built form. The *Versuchssiedlung* (experimental Housing Estate of Schorlemerallee), Berlin-Dahlem, 1924-1930 designed and built by the brothers Luckhardt with Alfons Anker,

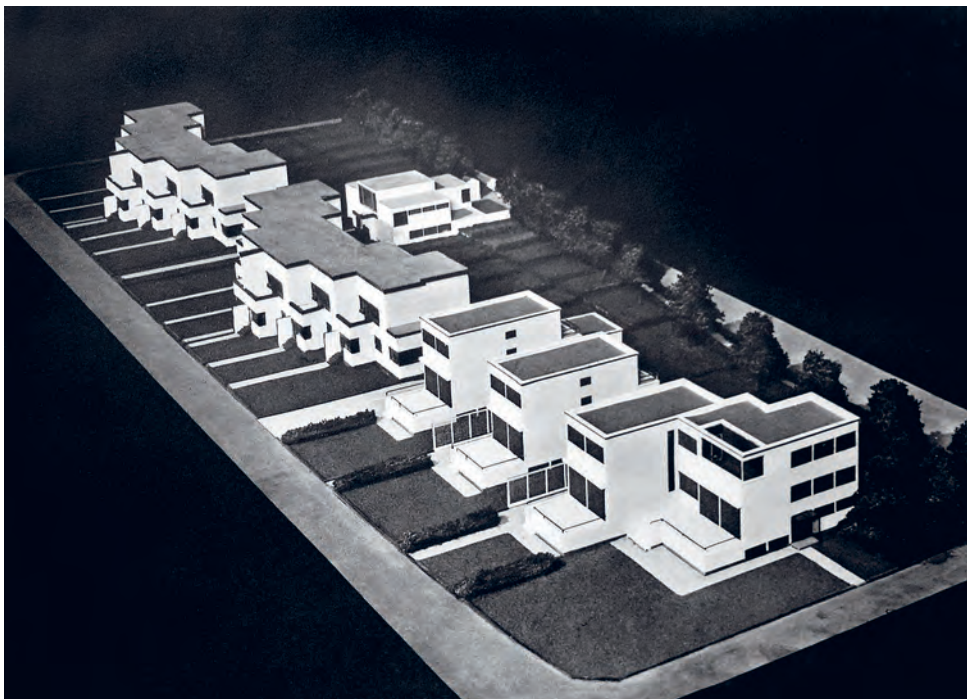


Figure 1. Stage 1 (Brick wall) & 1B (Atelier), Model.

developed a research on different building techniques, their possibilities, requirements and limitations. The Estate fulfilled in a relatively small site a full research of building technologies which allowed a comparative analysis. Two main features characterize the Schorlemerallee Estate:

Its property development:

unlike most of Berlin's contemporary settlements, developed by the local authorities or cooperative societies, the *Schorlemerallee Versuchssiedlung* is undertaken and financed by the architects themselves, risking their own resources, a very exceptional commitment among modern architects. Its completion took several stages, each one helping to finance the next one.

Its research character:

each stage works out a different building technology, a pursuit to explore possibilities and

limitations of each system, its impact on budget and influence on built form.

The Research Estate of Schorlemerallee develops three stages, each one based on a different building Technology. Each one produces a research on methodology, timeframes and costs. A special project is built between stage 1 and 2: the architects' own atelier, where research achieves a singular importance and will determine further stages, so we have named it Stage 1B.

The main features of each stage are as follows:

Stage 1: *Mauerwerkbauten* (brickwork walls) (Schorlemerallee n° 13 a 17 y 19 a 23), 1924-26. First stage is developed in a traditional load-bearing brickwork wall structure. Two series of six row houses, each house setback from the previous one thus drawing a zigzag sequence somehow reminiscent of the authors' expressionist background.



Figure 2.
Stage 1. Brick wall
houses, 1930 & 2010.
Akademie der Künste;
authors.

Stage 1B: *Ateliergebäude* (Office building), Schorlemerallee n.17b (1925-27). The architect's own office. First conceived as a brickwork box, shortly changed into a steel skeleton frame structure in a search for a lighter, wider and freer spatiality, which later would lead to stage 2.

Stage 2: *Stahlskelettbauten* (Steel frame buildings), Schorlemerallee 7, 9 and 11, Spilstrasse n. 5, 1927-29. Initially designed as three detached houses, later one of the houses was changed in two semidetached houses. According to Martin Wörner, the first houses in Berlin whose structure was entirely made on steel frame.³

Stage 3: *Betonbauten, Luxfenster* (Concrete buildings, AKA glass block buildings), Schorlemerallee n. 12 to 12c, 1929 -30. A series of four

row houses. Last stage continues the search for a clear open space now testing the use of concrete: all its structure leans in the side concrete walls and the central staircase, thus freeing its inner space of any pillar and allowing uninterrupted windows –*Fenêtres en longueur*– in both facades. The nickname “Luxfenster” stands for the outside glass-block walls between the houses. Metal framework, windows and doors are painted in red, blue, yellow over the white facades, a usual colour-code from Neoplasticism.

Evolution, Destruction, Reconstruction

Initially, the estate achieves certain success among intellectuals and artists, as the well known film director Fritz Lang and the actress



Figure 3. Stage 1B. Atelier, 1930. Akademie der Künste.

Theodora Harbou, who settled in one of the steel-frame houses (corner of Spilstrasse nº 5), and for which the architects produced certain furniture design.

However, the estate's destiny is unfailingly linked to that of the whole nation: due to the 1930's crisis some houses have difficulties in its completion: the two semidetached houses were not finished until 1930, and the other two remained in structure until 1935. Later, war and post-war had devastating consequences on most of the houses; although no one house was directly hit by any bomb, after the war most part of fragile elements like glass, windows, railings or doors were disappeared or seriously

damaged, and therefore replaced by recycled ones, of diverse materials and sizes, mostly dragged from wreckage. Original brickwork of facades was altered to fit the new dimensions. The harshness of the Berlin post-war years tends to give priority to emergency solutions, without any other consideration than its availability. Furthermore, the lack of dwellings in Berlin tends to concentrate several families in single family houses, thus altering inner partitions.

The big German economic success of late 50's and 60's and the improvement of living conditions in German society bring certain new light: The owners' living standard has substantially



Figure 4.
Stage 2. Steel-
frame houses
1930 & 2010.
Akademie der
Künste; authors.

been increased, and a certain will for recuperation appears, with diverse results.

In 1990, the *Versuchssiedlung* of *Schorlemerallee* is listed as *Denkmal*, protected monument. At this moment, the status of each of the stages is quite different:

Stage 1: *Mauerwerkbauten* (brickwork walls). There has not been a whole common project, aside from the recovery of brickwork and white plaster rendered walls, probably under the guidelines of the *Denkmalfachbehörde* (Local Authority for Heritage); Window frames, doors, railings and other elements tend to the same colour (dark brown), but they differ significantly in design, shape and materials. In the back facade, alterations and additions are more frequent.

However, the building's characteristics, which lay mainly on the expressive brickwork and the zigzag movement, make possible to achieve a unitary perception, instead of alterations.

Stage 1B: *Ateliergebäude*. The architect's own office was the only non residential piece of the whole project. In the post-war years was converted into a house, splitting in two the original double-height main space and thus losing its spatial quality and continuity. Later restorations approach the project to the original, only in its outer appearance,

Stage 2: *Stahlskelettbauten*. Their lighter construction made them much more fragile, and

Figure 5:
Stage 3. Concrete
houses 1930 &
2010. Akademie der
Kunste; authors.



thereby these are the houses who have suffered more alterations: volume changes with new additions, aggressive new elements (canopies, metal shutters), change of window frames and doors and presence of a commercial premise with its signs. Inner partitions also have suffered many alterations. Up to the date, the efforts made by the Heritage Technical authorities to lead a common restoration project have been fruitless.

Stage 3: *Betonbauten, Luxfenster*. Strongly altered after WW-II. Because of luck or chance, more than any other reason, the owners joined in a common restoration project, under the direction of the architect Karin Kupsch-Jindra and the assistance of the Heritage Local Authority. Concrete side walls and brick-façade walls were restored; new windows, frames, rail-

ings and doors were made as an exact replica of the originals, based on existing documentation from the architects and the few remains available. Block-glass walls, completely disappeared at the time, were also reintroduced according with the original technical plans. Finally, colour was set up based on the architects' specifications and some old watercolours.

Nowadays, most of the estate's owners belong to the upper-middle class. Many of them have studied in universities and are conscious and proud of the special value of the site they live in. Houses, which were planned for full standard families of the 30's (4 to 6 members average), are mostly inhabited by old couples or very young ones, with no more than 1 or 2 children. So the rate of square m2/person has increased, and thus approaching the houses to a more contem-

porary standard. Nevertheless, we shall point out a feeling of distrust and suspicion from many owners towards the Heritage Authority, which was seen as a constraint in their freedom to arrange their own homes.

Conclusions

1. Program: Most of Modern Housing Heritage is still in use, housing the very and only possible program: dwelling. And so it must be. Musealisation is an exception.

2. Flexibility: Modern houses are, in most cases, flexible enough to allow new uses and requirements, especially with the remaining surface due to the decrease of the average family members per home in our societies

3. Replacement: In Modern Heritage we should not be too strict with the replacement of lost elements. Original materials and techniques are still in use today, even improved. Reproduction is a viable option when enough original documentation is available.

4. Authenticity: As is set in the Nara Chart, Authenticity must be a main target in any restoration, but as individual target in every project, which must set its own priorities based on objective values.

5. Users: Practically no debate deals with the users. But in a lived and living heritage like Modern Housing, complicity and cooperation with the actual residents is essential to achieve success, as the different results in Schorlemerlee have shown. Incentives and encouragement politics must be sought, to avoid the inhabitants seeing the heritage values as a burden, instead of a unique and extraordinary opportunity.

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Notes

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Domesticated Modernism

The Usage of Construction Materials in Estonian Modernism in the 1920-1930s

Maris Suits

A modern approach to architecture reached Estonia, a small country on the border of Europe, at the end of the 1920s and was only partially adopted. This paper examines Estonian modernism in the 1920s and 1930s through the lens of construction materials, pointing out the most frequent construction materials and discussing how material usage fits into the modernist approach.

The Role of Construction Materials in Modern Architecture

When preserving traditional architecture, the original materials and the authenticity of the building have often been considered equal. In modern architecture, the role of construction materials is much less clear. Modern construction material has often been produced industrially and therefore does not involve “the touch of the old masters”. Therefore the authenticity

of modern architecture could stand mostly on architectural design, not on original materials.¹

On the other hand, the construction material is more likely to reflect some kind of conscious ideology in modern architecture than in traditional buildings. As the architect had an opportunity to choose among different materials – the traditional and the modern ones – the usage of construction material is not accidental but becomes a part of the architectural intention.

There are several principles in modern ideology concerning construction material. One of the most fundamental ideas is the concept of inseparability of form and material. Therefore, as the material dictates the construction, the appearance of the building depends on the material. The modernist ideology preaches the truth of material, condemning imitation of other materials and favouring exposed constructions.

Another essential modern principle is rationality. In order to maximise economic re-



Figure 1. Palitser's villa in Nurme Street 47, Tallinn (1932, by architect F. Wendach). Modern outlook hides low-tech construction. Maris Suits.

sources, the construction should be simple and inexpensive. This is best achieved by reducing manual work in the construction process, using industrialised construction methods and pre-fabricated details instead.

Construction Materials in Estonian Modernism in the 1920-1930s

The fact that modern ideas were only partially adopted is obvious when analysing the usage of construction materials. The first houses where modern materials and modern architecture are intertwined to an integral unity and where construction material has been proudly exposed were found in Estonia only at the end of the 1930s. Good examples are the grandstand of Kadrioru Stadium and the beach cafe in Pärnu. In both cases the architectural form is derived

from the technical potential of reinforced concrete – the grandstand is covered with a cantilevered roof of 12.9 meters and the beach cafe has a fashionable mushroom-shaped balcony. The concrete surfaces with a formwork pattern have also been left honestly exposed in both buildings.

However, in the majority of Estonian modern buildings of this era, the material has been insignificant or used in a manner which is contradictory to modern ideas. Two main approaches to modern material principles could be distinguished in Estonian modernism of the 1920-1930s:

- masking**, where the usage of construction material is completely outdated;

- merging**, where modern ideas are applied to some degree and with local variations.

These two approaches are examined more closely as follows.

Masking

The role models for these buildings were the modern masterpieces of Central Europe, but only the modern appearance is been copied, bypassing the technological aspects. The construction methods and materials are traditional; they do not have any association with the architectural design and, even worse, they are imitating the modern materials. So the modernity here is just a mask hiding a traditional core.

A good example of this kind approach is a representative functionalist villa in Tallinn, Nurme Street 47 (Fig. 1). At first glance it looks entirely modern. A flat roof, a composition of clear cubic shapes and the large windows uniting the interior and exterior follow the canons of modern architecture. The architectural form seems to be derived from the opportunities provided by reinforced concrete, but in fact the walls are made of timber planks and only a thin layer of plaster creates the impression of a stone building. The architectural design and the constructed structure contradict each other significantly – while the former represents the progressive ideas of the era, the latter, being low-tech and flammable, is out-of-date. The choices of materials and construction methods are random, definitely lack any ideological depth, and therefore the construction material here should not be considered as a part of the architectural intention.

Merging

In the other, more interesting approach, local building traditions and international modernism are merged into a quaint integrity. The construction materials and methods are still traditional and workmanship-intensive but the construction material is left honestly exposed according to modern ideas. Wood, calcium silicate brick and limestone are the most common materials seen in Estonian modernism of this era (Fig. 2, 3, 4).



Figure 2. Wooden functionalism.
Dwelling in Tondi Street 3, Tallinn
(1934, by K. Meyer). Oliver Orro.

Extensive usage of wood has its roots in local building tradition. Even in the 1930s, wood was by far the most common construction material; e.g., in 1933 almost 90% of dwellings constructed in Estonian cities were still made of timber.² Wooden structures were cheap and fast to construct, the know-how was widespread and it was easy to find skilled workers, especially compared to building with modern materials. Structurally, the functionalist wooden houses did not bring any crucial change to Estonian wooden architecture.

Limestone has been a traditional building material in northern Estonia for centuries. From the 1930s there are number of buildings (mostly designed by the architect Herbert Johanson) where a functionalist composition has been realised in rusticated limestone, creating a surprising and controversial combination of form and material. Limestone processing is very time-consuming manual work, which is far from the idea of utilising technological progress in architecture. It is ambiguous whether this combination should be seen as a local variation on functionalism³ or just a return to more traditional architecture reflecting the construction ideology of Hitler's Germany.⁴



Figure 3. Limestone functionalism. Fire Dttation in Raua Street, Tallinn (1939, by H. Johanson). Maris Suits.

While Estonian architecture historians speak about “limestone functionalism” and “wood functionalism”, the third major material, calcium silicate brick, has received less attention. Due to its over-exploitation after World War II, for Estonians it is a symbol of the greyness and monotony of the Soviet era. Its meaning in the 1920-1930s was completely different though. As the use of concrete in walls of dwellings in those days was rare in Estonia, the calcium silicate brick was considered to be the local modern material. The whitish bricks provided a fresh and modern alternative, differing from traditional timber, stone or clay brick houses. Although calcium silicate bricks have been manufactured in Estonia since 1911,⁵ initially they were used as a lower-cost substitute for clay bricks in constructions under plaster and were not left exposed. The discovery and acceptance of calcium silicate bricks’ aesthetics on their own was closely related to the spread of modernism. In addition to adopting the mate-

rial honesty principle, the bright surfaces of calcium silicate brick walls just fit in well with the image of modern architecture.

Exposed calcium silicate brick was used in modern dwellings, as well as public buildings and utilitarian architecture. In the latter, the reasons for using the white bricks were mostly pragmatic – it was a cheap but inflammable material, and leaving the walls without plaster enabled not only saving on construction expenses, but also minimised the need for later maintenance. As the only factory producing calcium silicate bricks was situated next to a railway and railway transport was the most economical, the use of calcium silicate bricks was especially economical close to railway connections. There are fine examples of functionalist calcium silicate brick buildings among the railway stations themselves (e.g., Lihula, Kaarli). In Tootsi Peat Industry, the calcium silicate brick creates the identity of the whole spatial environment, unifying the plant and its workers’ settlement nearby.



Figure 4. Calcium silicate brick in functionalism. Bruno Kadak's (the director of calcium silicate brick factory) villa in Rulli Street 4, Tallinn (1933, by E. Sacharias). Maris Suits.

For representative villas, using exposed calcium silicate brick was not just a pragmatic decision, but held a clear declaration of the owners' progressive minds. Although compared to the ideal of industrially constructed houses, the massive walls made of 27x13x7cm units seem totally outdated; in the local context an inflammable brick construction with a different appearance was radical enough to be modern.

The loose adoption of modernism in the construction materials and methods speaks a lot about adopting the modern paradigm in general. While the modern architecture was above all meant to be a lifestyle, a reflection of new progressive ideas, in Estonia it tended to remain just what it was not intended to be – simply a style.

Notes

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- 5 A. Hermlin and V. Vende, *75 aastat silikaat-telliste tootmisest Eestis : ülevaade tootmiskondise "Silikaat" tegevusest* (Tallinn: Valgus, 1985), 11.

Old Ditch — New Water

Mikko Heikkinen

The title refers to the lecture given by an American artist James Turrell at the symposium *Permanence in Architecture* organized by Virginia Tech in 1998. In architecture and in all arts the new is eroding the old earth and slowly reforming the tradition.

“Survival of Modern” could be seen as an effort to use our built “modern” environment in a sustainable way. Our challenge is not only make the iconic masterpieces of the Modern Masters to survive but even more what to do with the vast mass of contemporary buildings not found in the architectural guide books.

Five different cases – five different strategies to make modern to survive:

Recycling

The developers and investors are speaking about “tired properties”, buildings which don’t meet any more the changing demands of location, technical services or image: offices from 70’ies,

empty industrial premises too close to the city centers, old warehouses where the harbor or railway has moved away. Are these structures doomed to be demolished?

The University of Art and Design (now a part of Aalto University) is located in the old industrial premises of Arabia Ceramics in the historic section of Helsinki, where the city was founded in 1550. The area has a long tradition in industrial design manufacture. With ceramic production moving into modern technologies, vacant parts of the old factory buildings were available for new uses.

The Mediacenter is partly incorporated into renovated manufacturing structures old Arabia factories designed by architect Erik Lindroos in 1946. The extensive building complex projected can be seen as a small town, which is organized hierarchically into squares and boulevards, back alleys and service areas. Technically more sophisticated operations like film and television studios, a black-box theater, and an auditorium were located in a new addition outside the old



Figure 1.

structures. The renovation of the old manufacturing structure retains its original roughness and authenticity.

The project included rearranging the main entrance of the university as well. A glazed gallery connects the new entry across the block to the main square of the Arabianranta residential suburb. The gallery is used for exhibiting student projects and it also serves as a lobby for a 400 seat auditorium and an experimental theater.



Figure 2. Mediacenter LUME for the Helsinki University of Art and Design, Helsinki 2000.

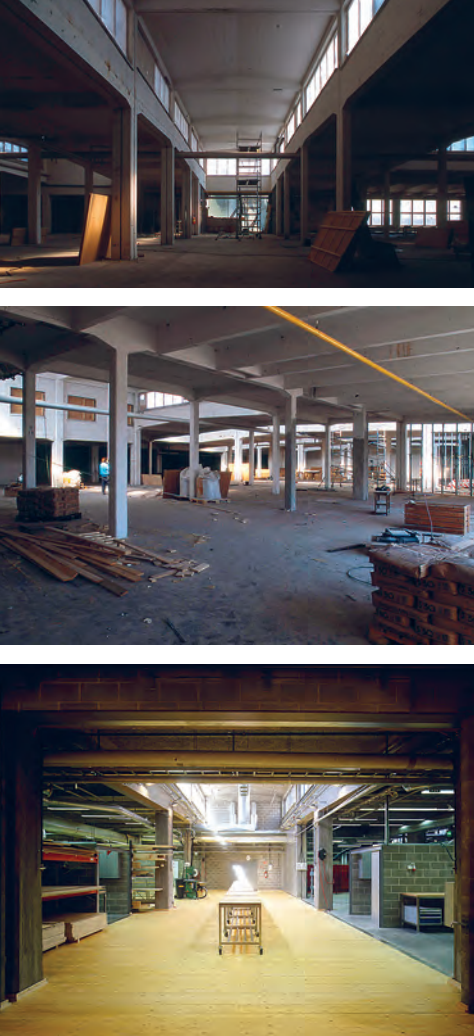


Figure 3.

Preserving and Restoring the Historical Milieu

The most inspiring experiences of architecture are made not by single objects but milieus of harmony and consistency of style, material or function. Industrial block close to the center of Helsinki by cooperative firm Elanto was built from 1920'ies on in several stages consisting of a bakery, a dairy, offices and warehouses. Most buildings were designed by architect Vainö Vähäkallio. The main target for the city planners and Helsinki City Museum controlling the process was not to restore the individual buildings but to save a unique fragment of Helsinki seafront.

Our project included the renovation of a former vegetable warehouse and the construction of a new office block linked to the old building. The users were the Senate Properties and the Headquarters for National Research and Development Centre for Welfare and Health (STAKES).

The design solution aims to unify the red brick façade towards the sea - the characteristic feature of the early industrial Helsinki seascape. The modern office concepts emphasizing transparency compromise with the old industrial milieu.



Figure 4. STAKES and Senate Properties office buildings, Helsinki 2002.



Figure 5.

The massive brick walls, the concrete silos and the dense grid of mushroom pillars of the former warehouse create a unique frame for the architecture of the offices. The original monumental and austere character of the warehouse has been preserved. The enlargement of the old narrow windows is camouflaged by brick colored copper grilles in such a way that the characteristics of the facade stay essentially the same. The old courtyard wall is dismantled with a new glass façade to provide light into the deep building frame. The silos are used for functions that don't need openings

for natural light. The railway tunnel crossing the volume is preserved and used as a part of the entrance.

The street and courtyard facades of the new building are laid in brick in situ. The window openings of the office rooms are connected to the rhythm of those of the warehouse by similar copper grilles. The walls of the new building follow the height of the eaves of the warehouse. The uppermost floors of the new building are clad in copper and recessed from the street front to maintain a continuous eaves line.



Figure 6. Redevelopment Study of the Guards Hospital Block, Helsinki 2006.

Figure 7.



Creating a Historical and Functional Collage

The history of the city creates dissonances, surprising juxtapositions and unplanned layers making in the end – at its best – urban adventures. The eaves lines don't have to always match. The Guards Hospital Block in the middle of today's Helsinki is a good example of this. The block consists of buildings constructed in different periods during the last 200 years. The result is a rich palette of architecture of various styles, authors, materials and functions. Though the entity could not be more heterogeneous, the buildings close a harmonious oasis in the midst of the city fuss.

Our project was to research new uses for the old buildings and to study the parking arrangements and to test possibilities for additional constructions. Two wooden storages in the western corner of the block, which did not have any specific architectural or historical value, were proposed to be moved from the site. A new residential volume was outlined to match

in height the surrounding cityscape and to give functional mix to the site.

Preserving a Historical Fragment

When the Port of Helsinki moved to its present location in Vuosaari the seafront of the city started to dramatically change and large areas were released to new functions, mainly for housing. Jätkäsaari peninsula, accessed before only by harbor traffic, is now a vast construction site and will be a new suburb for 16 000 people in the middle of the town. But not all the past will be swept away. A row of old terminals and warehouses will be preserved and renovated for new uses as fragments of the history and to give to the young neighborhood temporal depth.



Figure 8. Emergency Service Center Jätkäsaari, Helsinki 2011

Previously, when a ship sailed into harbour, men would rush into the Huutokonttori to apply for work in unloading the cargo. With the advent of cargo containers, the need for manual labor in the harbor lessened noticeably, and the use of Huutokonttori was discontinued. The older part of the Huutokonttori was designed in 1937 by city architect Gunnar Taucher. The annex was finished in 1958. It was designed by architects A. Hytönen and R.-V. Luukkonen.

The new life for Huutokonttori was chosen to be a local Rescue Station and a Information Center for the Jätkäsaari city planning and housing projects. Zoning regulations prevented to alter the building in a such way which could “reduce its architectural, historical or urban value or change its architectural character.” The new functions obliged to make major changes

in the interior, but the main stair, where the stevedores queued the job of the day, was restored to its original state as well as the gym in the attic floor and the large spaces in the 30’ies part of the building were dismantled from the later additions and material layers.

On the exterior much of the fenestration had to be redesigned, but colors and scale in the details was preserved. The elevations are new, but look like the old ones, perhaps even better...

Contradiction

The battle of Tali-Ihantala was the largest battle ever fought in the history of the Nordic countries and it was decisive for the final military and political arrangements for Finland in the end of WW2. An architectural competition was

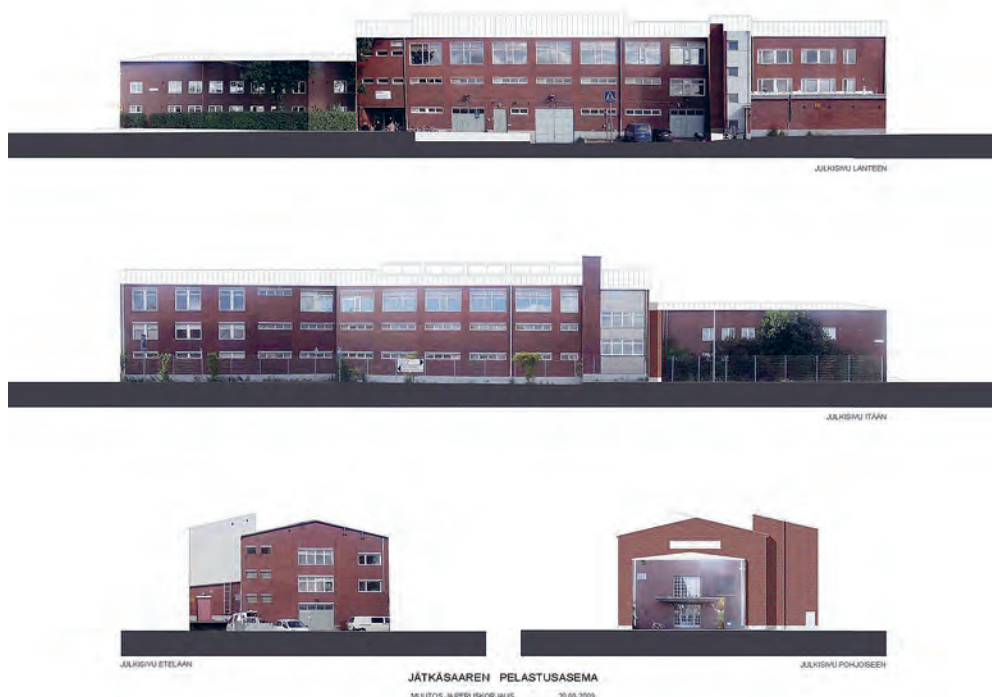


Figure 9.



Figure 10. Tali-Ihantala Center, Lappeenranta 2009.

launched in 2009 to design an entrance pavilion and a multimedia theater to exhibit this historical momentum. The location for the project was between two army barracks in the 18th century fortress of Lappeenranta close to the present Russian border.

Our entry was to make a clear contradiction towards the architectural vocabulary of the

18th century fortress and its historical buildings made during the following centuries within its walls. A rusted, tilted box coated with corten steel was sinking into the ground like a huge sarcophagus or demolished military bunker. The surface of steel plates were engraved and laser-cut exposing the strategic military maps used during this battle.

Can We Afford to Save the Heritage of Affordable Housing?

Karina Van Herck
Leen Meganck¹

Aligning the Renovation Program of Social Housing with Heritage Values²

One of the great achievements of the modern movement is the concept and realisation of affordable housing. From the garden-cities in the 1920s, via the high rise blocks in the post-war period, to interventions re-evaluating the city fabric from the 1970s on, affordable housing has often been the playground for architects and planners to experiment with new building materials, techniques, architectural forms and concepts of living.

The Flemish government, supported by the European Union, aims to renovate all affordable housing to meet with new standards of energy efficiency. According to the Energy Renovation Program, by 2020 all buildings in Flanders, new and old, must be provided with double glazing, roof isolation and energy efficient heating systems. The outcome of a survey held in 2010, amongst the local social housing companies, learned that 48% of the social housing stock in Flanders does not meet these standards. The first insulation regulations were imposed in the early 80s and 1985 clearly functions as a pivot

point, with most of the social housing built before needing thorough renovation.³ As the current trend is to reduce heat loss by adding a new building envelope with outside insulation this will drastically alter the appearance of the older social housing.

This demand for environmental sustainability comes on top of an already ongoing renovation campaign. The Flemish Housing Code (1997) not only defines the upgrading of the built environment as one of the core tasks of the social housing companies - recently leading to some valuable reconversion projects - but also sets legal minimum standards for dwelling comfort. As such the Flemish Social Housing Company⁴, which groups over 100 “recognised” local housing companies, decided to develop a strategic renovation programme based on an integral vision of their housing stock and a substantiated multi-year plan. In order to align this renovation programme with heritage values the Flemish Social Housing Company in 2011 asked the Flanders Heritage Agency to carry out a systematic screening of the heritage value of their housing stock built before 1985. Like the Flemish Social Housing Company, Flanders Heritage is an agency of the Flemish authorities in



Figure 1. Unitas District (Antwerp, architect Edouard Van Steenberghe, 1924-1932).
OE – O. Pauwels.

Belgium. Its task is to survey and protect valuable buildings, landscapes and archaeological sites. Furthermore, it supports the management of immovable heritage and carries out policy-oriented research.

The goal of this joint initiative is a strategic pro-active inventory resulting in a policy-oriented evaluation of the social housing stock and ultimately in the protection of the most interesting and representative examples of affordable housing in Flanders. This assignment however raises a lot of methodological questions, first of all because of the quantity of projects involved; i.e. over 6000 social housing groups, representing c. 130,000 social rental dwellings in Flanders. Moreover, ranging from as early as 1900 up to 1984, they represent a variety of historical periods and building types (apartment complexes, peripheral districts, conversions of old structures etc.). Screening such an amount and diversity of housing groups with only 2 re-

searchers in the time involved (4-5 years) can only be done by using an efficient methodology. It will also be very important to clearly define the criteria for selecting neighbourhoods and buildings as heritage. For those projects which will be designated as heritage, the specific values will need be spelled out as accurately as possible in order to guide further renovation or restoration interventions. Is the overall lay-out important or the general building type? Should renovation be aware of details such as colour schemes or woodwork in windows and doors? How important is it to keep floor-plans intact?

Protecting the Heritage of Affordable Housing

For protecting heritage the Flanders Heritage Agency has two legal instruments. Part of Belgian law since the 1930s, the first, and most



Figure 2. Dwelling Unit Kiel (Antwerp, architect Renaat Braem, 1949-1958).
OE - Kris Vandevorst.

stringent, of these is the listing of buildings or ensembles as “monuments” or “heritage ensembles” (“stads-en dorpsgezichten”). Listed buildings are subject to several restrictions but – on the other hand – may also be eligible for public grants for maintenance and restoration works. The second ‘tool’ dates from 2009 and is very specific for Flanders. Buildings and ensembles that figure on the scientific *Inventory of built heritage in Flanders*, can periodically be added to the “Legal Inventory” (“Vastgestelde Inventaris”). This gives 4 legal consequences to these buildings: 1) demolition becomes more difficult (although still possible), 2) a change of destination that conflicts with the legal destination of the area becomes easier, 3) exceptions on energy efficiency standards are possible, and 4) - in the case of affordable housing – the housing societies are not obliged to demolish and build anew if the renovation of the existing buildings costs more than 80% of a new building.

The final result of the screening will be a selection of housing projects to be added to the *Inventory of built heritage in Flanders*, and later on to the scientific Inventory that is derived from it. As this is an on-line database the results, including descriptions and evaluations, will be easily available for everyone involved, as well as for the general public⁵. Subsequently a very stringent selection will be made of housing projects whose heritage value is deemed to be high enough, that they deserve to be listed and well-preserved as monuments.

The heritage value of an object, both for listing and for adding to the *Inventory of built heritage in Flanders*, is determined by 6 values, embedded in the legislation: the historic value (which incorporates the art – or architectural historic value), the artistic value (work of great sculptor, beautiful craftsmanship in the interior), the industrial-archaeological value, the folkloric value (the building plays an important



Figure 3. Ter Doenaert (Kortrijk, architect Groep Planning, 1966-1983). Intercommunale Leiedal.

role in public memory, oral history etc.), the scientific value (e.g. use of a new type of concrete structure) and the socio-cultural value. In addition, the buildings and ensembles are weighted by the following criteria: rareness, integrity (the degree to which the property retains its physical and historical characteristics), authenticity, representativeness, value as an ensemble and value in a larger context. The heritage value of an object is always an evaluation of several criteria and values, against the larger body of the inventory or survey.

With regards to social housing, currently only four houses in a well-known, pre-war garden district are listed as monuments, and only a few pre-war garden districts are listed in their totality as “heritage ensembles”. None of the post-war housing is listed as either a monument

or as a “heritage ensemble”. Whereas the Legal Inventory includes most of the important pre-war districts, post-war social housing is largely absent. The first results of our screening indicate that, whereas at the moment about 7% of the social housing built before 1985 figures in the Legal Inventory, we will probably end up with 20 to 25%.

The Specificity of Social Housing in Flanders and Changing Perspectives on Heritage

Some general methodological issues have already been mentioned however the specific nature of social housing in Flanders also raises very specific questions and calls for a broaden-

ing of the usually applied heritage perspectives. In most European countries the history of social housing is intensively intertwined with the rise (and fall) of modern architecture and urbanism on a large scale as part of a central economic and spatial planning. However in Belgium, the situation has been slightly different⁶. Already in the nineteenth century the Belgian Government opted for a liberal approach to “the question of housing” encouraging foremost private property and private initiative. Furthermore it encouraged the establishment of small local social housing companies, charging them with the task of building rental houses and houses for immediate sale to the less well-off. Since 1919 these local building companies have been facilitated and controlled by national or regional overarching institutes - today, for Flanders, this is the Flemish Social Housing Company.

These basic premises of the Belgian housing policy also lay at the core of the development of the Welfare State in the post-war period. Owning to the extremely successful Law De Taeye (1948), that provided families with premiums and state guaranteed loans, the private detached house became the widespread symbol of “welfare”. As a socialist counterpart, the Law Brunfaut (1949) regulated the financing of social housing and the (semi)public infrastructure of grouped housing. Together with the overall housing policy the production of social housing was based mainly on a decentralised small-scale approach, with a focus on single family houses as well. Large scale modernist districts or high rise buildings were never really adopted. In addition to this, spatial planning as a comprehensive practise only really came into being during the seventies.

As a result of this overall housing policy the total number of social rental houses in Flanders is rather limited. Whereas in the Netherlands for instance the number of houses currently owned by housing co-operations adds up to almost 60% of the total housing stock, in Flan-

ders this is roughly 5%.⁷ This number, however, doesn’t represent the total picture. In Flanders (Belgium) social housing companies were also involved in the overall policy of gaining one’s “own house”. Due to the possible combination of the financial benefits of both the laws De Taeye and Brunfaut, in the post-war period social housing companies developed intense activity at the level of building for immediate sale. This was not only the case for the companies of the so-called “Small-Landownership” that were focused solely on immediate sale and on providing cheap loans (those are not included in our research). At times the “rental companies” built up to 50% of their housing for immediate sale as well. Moreover, even now social tenants have, under certain conditions, the opportunity to buy the house they rent. All together this means that, over the years, probably more than 50% of the housing stock initially built by rental housing companies has become private property, often leaving just a few rental dwellings in neighbourhoods originally comprising hundreds of houses. Initially this means that we are in fact dealing with a lot more houses to screen than the numbers indicate - and with the difficulty of localising and outlining the neighbourhoods to be studied. Secondly this means we are confronted with sites with a complex ownership-statute, often with the “privatised” houses already altered in radical ways.

As mentioned above another effect of the decentralised housing policy is that modernist complexes or neighbourhoods with a comprehensive urbanised scheme only make up a limited part of the housing heritage. Nevertheless Flanders has some remarkable (modernist) realisations. In the pre-war period a series of internally acknowledged garden districts emerged, such as “Small Russia” (“Klein Rusland”, architect Huib Hoste) or the Unitas District (Deurne, architect Edouard Van Steenberghe). Following the Law Brunfaut (1949) some prestigious high rise districts were realised gaining interna-



Figure 4. Neighbourhood Gijmelberg (Aarschot, architect Leo Verbist, 1973-1977). VMSW.

tional attention. The districts built by Renaat Braem, such as the “Dwelling Unit” at the Kiel in Antwerp or Sint-Maartensdal in Leuven are, in particular, milestones in the history of modern architecture and urbanism in Belgium. The 1970s, in their turn, gave rise to some outstanding projects such as the structuralist low rise neighbourhood Den Elst in Herent (architect Paul Felix), or “reconstruction of the historical city” projects such as the Vleeshuis in Antwerp (architect R. Groothaert).

Most of the post-war social housing however is based on standardised peripheral housing schemes, with small rows of houses or semi-detached houses. The 1950s witnessed the growth of middle scale neighbourhoods at the edges of cities and communities, adopting modernity in overall lay-out and floor plans and equipment, but not in architectural outlook. Since the middle of the 1960s, and with an absolute peak in the middle of the 1970s, rather large peripheral

neighbourhoods were built, often by local pre-fab construction companies. These distinguish themselves from the surrounding environment by a certain uniformity (mostly based on two or three dwelling types) and often large open spaces (financed by the Law Brunfaut). As such social housing companies contributed in a specific way to the creation of Flanders’ post-war “middle landscape”. As approximately 85% of the social housing groups that are included in our research were built after the Second World War, and more than 50% between 1970 and 1984, we are confronted with developing frames of reference for this “young” heritage. Whereas recently the heritage value of the modernist housing estates of the 1950s and the 1960s has been broadly accepted and the 1970s’ are gaining attention as “critical period”⁸ - at an international level and in inner circles at least - the value of this kind of environments is not immediately evident.

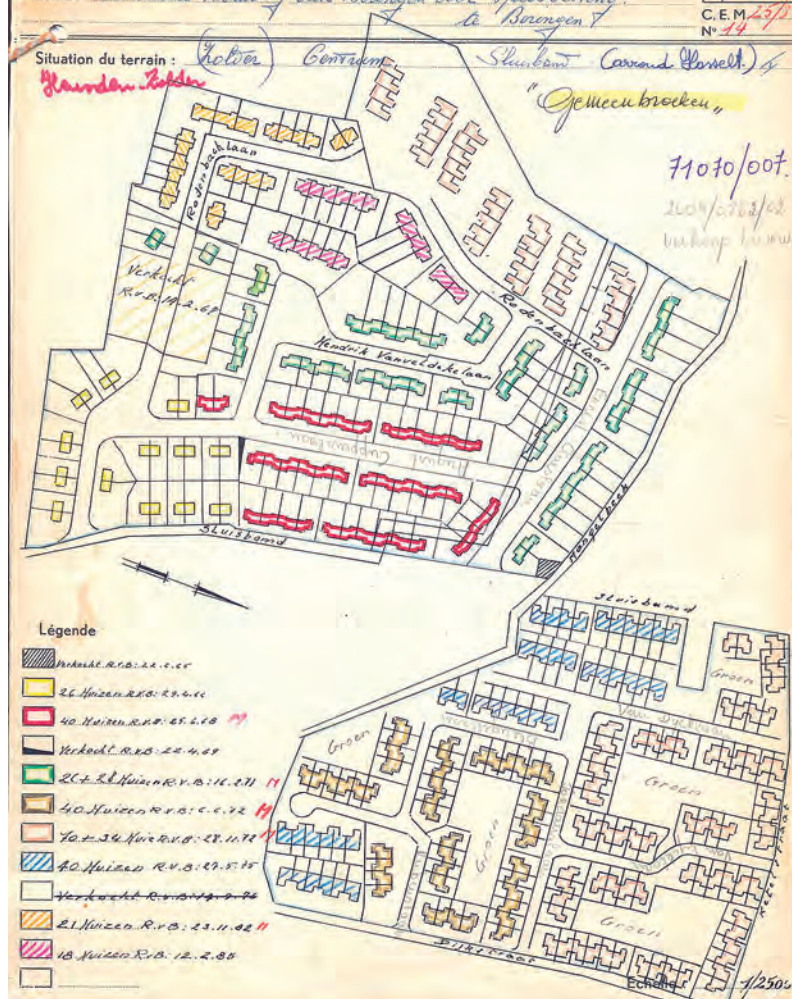


Figure 5. Typical peripheral housing scheme (Sluisbamd, Zolder). VMSW.

With the inventory of social housing in Flanders however we would like to address not only the architectural or urbanistic outstanding projects, but also those more conventionally built environments that are perhaps more representative of the history of housing in Flanders. This is in line with changing perspectives on heritage strategies in most European countries. To start with, in most countries, the focus is broadened from the architecturally distinct to the heritage of the culture of daily life, and of the working and middle classes. In particular there is a growing interest in the post-war period and in the heritage of social housing, often incorporating this into an overall story about the development and visions of the welfare society in the 20th century. As e.g. the Danish

Heritage Agency states - referring to the recent designation of the suburb of Hvidovre as “local cultural heritage district” - this means in fact “shaking the concept of the modern suburb as an area without any significant or interesting cultural heritage”. Secondly, with this inventory we will increase the understanding and appreciation of the historic environment from one based primarily on architectural characteristics to a more holistic viewpoint for instance including the pattern of roads and open spaces (that are often inseparable from the houses and that might be as valuable or sometimes even more as the houses itself). Special attention will be paid to the presence of original greenery, and to the presence of “small heritage” - such as communal facilities, chapels, benches - that form a

substantial element in the identity and original character of neighbourhoods.

Inventorising and Evaluating More Than 6000 Housing Groups: Main Outlines of a Strategic Approach

The abovementioned points of interest make the development of an evaluation on different scales necessary, ranging from the morphology of the overall layout or fabric, over the implantation of built structures, over dwelling units, to architectural details. We will also have to compare housing groups belonging to the same typology and time frame. At the same time however we have to develop a strategic approach taking into account the overall renovation planning of the social housing companies.

In order to align this planning in an early stage with the heritage policy the first phase of the research (October 2011- October 2012) consists of a so-called “quick scan” based on desk-based research. The first step in this phase is to locate and document all housing groups - with an implantation plan, aerial photographs, street views, etc. The final result of this phase will be an indicative list of housing groups that might possess heritage value (to be checked later on site). As this “quick scan” is based on a first visual impression and, as such, on tangible architectural and urbanistic characteristics, in this phase the focus lies on identifying the “excellent” projects. For defining the value of more conventional environments depends often on more “invisible” characteristics. In accordance with a priority code social housing companies will be invited to ask for further advice if they intend to start a renovation.

The second phase of the project aims at drawing up a definite list of housing groups that will be added to the Legal Inventory. On the basis of literature, archives and consultation with partners and experts (the housing companies,

heritage consultants, architectural historians, etc.) we will take into account the more “invisible values” such as historical or folkloric importance, the possible presence of innovative floor plans, etc. This will result in a list of housing groups to be visited. These visits, in situ, will allow for a close reading of spatial structures, and for taking into account the actual condition, authenticity, contextual value, etc. The final evaluation and selection will be made on the basis of an “evaluation matrix” based on the different scale levels, values and criteria. In order to evaluate the historical importance and the representative nature of social housing in Flanders we intend to draw up a historical typology. As such the result will be a carefully weighted selection of outstanding and representative social housing projects. In the third and last phase of the research, the selected projects are provided with a historical description and characterisation, and with a policy-oriented evaluation spelling out the specific valuable elements.

At Stake: Can We Afford to Save the Heritage of Social Housing?

By defining, as clearly as possible, the specific heritage value of the selected sites and buildings, we want to provide a solid basis for further discussion and for the development of adequate strategies for protection eg. making the link with instruments of spatial planning. For each listed housing group in a further stage it will be necessary to define – with all involved actors - more exactly how the heritage values, contemporary living standards, and energy sufficiency can be aligned and what is feasible on a financial level. As the Flemish Social Housing Company points out local companies are often proud of the presence of “heritage” in their housing stock (some of them even providing architectural tours). On the other hand they are the ones that have to deal with the financial implications. Moreover, some-

times heritage value turns out to be irreconcilable with contemporary standards of living or contradicts the necessary structural improvement of a complex eg. in the case of experimental concrete structures. Heritage value might also come into conflict with the financial interests of renters, eg. reflecting itself in higher bills for heating. What is often overlooked in this discussion however is the fact that heritage value, habitability, sustainability and financial feasibility are not necessarily as incompatible as often thought. Recent research has, for instance, stressed that listing housing estates as heritage might have a positive impact on the image of the estate and as such contribute to social inclusion and habitability.¹⁰ International examples such as the listing and renovation of the Park Hill estate in Sheffield also show that listing estates as heritage might also help to attract resources to aid regeneration¹¹. As such this project will be the start of an intense discussion that has to be held between the heritage sector and the affordable housing sector, and that in turn forms part of a larger societal debate: can we afford to save the heritage of social housing - not only in financial terms but also in environmental and social terms?

Notes

- 1 With special thanks to Phil Carlisle - English Heritage - for the revision of this text.
- 2 In October 2011 the Flemish Heritage Agency started a systematic research of the heritage value of social housing in Flanders. This research is carried out by Annick Tansens and Karina Van Herck, and is coordinated by Leen Meganck. See: <http://www.vioe.be/projecten/onderzoek-naar-de-erfgoedwaarden-van-sociale-woningbouw-in-vlaanderen>
- 3 Vlaamse Maatschappij voor Sociaal Wonen, *Patrimoniumenquête: Energetische doorlichting van het sociale woningenbestand* (Brussels: 2010).
- 4 <http://www.vmsw.be>
- 5 <https://inventaris.onroerenderfgoed.be>
- 6 On the history of social housing in Belgium (Flanders) see: Bruno De Meulder et al. "Over de plaats van volkswoningbouw in de Vlaamse ruimte," in *Huiszoeking* (Brussel: Ministerie van de Vlaamse Gemeenschap, 1999), 10-86; Karina Van Herck, ed., *Wonen in Welvaart: woningbouw en wooncultuur in Vlaanderen 1948-1973*, (Rotterdam: 010, 2006); Karina Van Herck, "Architectuur of revolutie': Sociale woningbouw in Vlaanderen", in *Sociaal wonen vandaag : een tijdsbeeld van sociaal wonen in Vlaanderen anno 2011*, ed. Sien Winters, (Mechelen: Kluwer, 2011), 39 – 66.
- 7 Sien Winters, "Sociaal wonen in Vlaanderen, 7 – 24.
- 8 Martien De Vletter, *The Critical Seventies: Architecture and Urban Planning in the Netherlands 1968-1982* (Amsterdam: Sun, 2004).
- 9 Danish Heritage Agency, "Changing perspectives on heritage strategies," last modified May 5, 2008, http://www.european-heritage.net/sdx/herein/national_heritage/voir.xsp?id=4.2.3_DK_en; John Pendlebury et al., "Social Housing as Cultural Landscape: a Case Study of Byker, Newcastle upon Tyne" (Paper presented at the Forum UNESCO University and Heritage 10th International Seminar "Cultural Landscapes in the 21st Century", Newcastle-upon-Tyne, UK, April 11-16, 2005).
- 10 M. Vermandere and Terenja Van Dijk, "Ik woon in een monument: Een kritische reconstructie van een project rond volkshuisvesting in Deurne", in *Cultureel Jaarboek 2001*, (Antwerpen: Stad Antwerpen, 2001), 129-145.
- 11 Mil De Kooning et al., *1000 chambres avec vue / 1000 Kamers met uitzicht*, (Brussels: Centre International pour la Ville, l'Architecture et le Paysage, 2012) ; "Park Hill Conservation Project, Sheffield", accessed June 18, 2012, <http://www.english-heritage.org.uk/caring/conservation-projects/park-hill/>

Traditional Building Cultures, Landscape and Sustainability

Maria Teresa Feraboli

The aim of this study is to demonstrate that the interest in a sustainable development of the architecture is indeed a consequence of the current global crisis, but it is also anticipated by the latent attention of the designers of the 20th century to the traditional building culture and its balanced relationship with the natural environment.

In the last century, architects have often been interested in the traditional rural building, regardless of their nationality and different shapes that rural buildings assume depending on the geographic area. From Adolf Loos to Giuseppe Pagano, from Gio Ponti to Alvar Aalto, from Hassan Fathy to Bernard Rudofsky, two interwoven currents of thought have developed: the first connecting rural building with the value of anonymous model, born for need and evolved thanks to the spontaneous selection of the most suitable building techniques; the second emphasizing the relationship with the natural landscape in which this architecture is framed without fractures.

Ignoring momentarily the intent underlying the individual thinking, the low cost, the use of local materials and labor, and the correct compliance with climatic conditions, emerge

as fundamental characters of the rural architecture. And this has to do with the characters we recognize today as proper of the sustainable project and that are used as starting point by the architects working in the developing countries: from Diébédou F. Kéré in Burkina Faso to Anna Heringer in Bangladesh. In these countries, in fact, the rural building tradition still has an active value, whereas in the West it assumes a conceptual meaning mediated by the evolution of the economy and the building technology, heritage of the Modern in continuous development. Therefore in developed countries, in addition to the energy saving criteria, the sustainable design should focus also on the correct relationship with the landscape, built and natural, which rural building seemed to create spontaneously.

As early as in 1910 Loos, in clear disagreement with the architecture of the Viennese Secession, started his essay *Architektur* describing a kind of idyllic correspondence between rural architecture and the surrounding environment: *"Can I take you on the banks of a mountain river? [...]. The mountains and the clouds are reflected in the lake, and so the houses, courtyards and chapels. It seems they are there as if they were not*

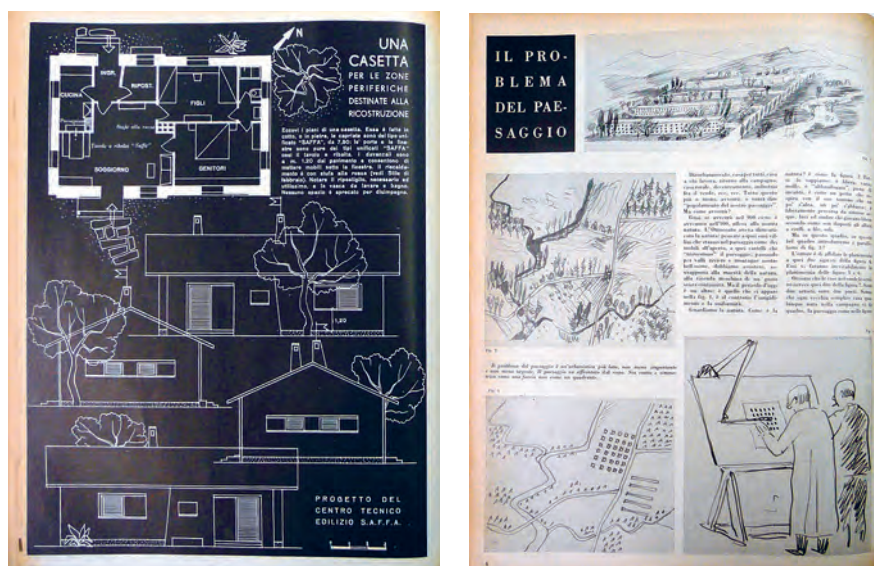


Figure 1. Two pages from the magazine *Stile*. “A little home for the reconstruction suburban areas” and “The landscape problem”. April 1944; August 1944.

created by man. As if they had come out of God’s workshop, like mountains and trees, clouds and blue sky”.

A landscape where is the architect to create dissonance with his academic superstructure: better, therefore, rely on the instinct of the farmer who, thanks to an innate rationality, the use of local material and craftsmen, makes buildings which are consistent with their function and the context. The rural housing, therefore, also embodies the constant dialectic of the relationship between town and country and often takes the meaning of calming “corrective” when the architectural language seems to be reduced to pure styling or when severe losses are experimented due to traumatic events. Ideally, in fact, rural building are perceived as immutable collective heritage of images and information that reflects the identity of a population and fits perfectly into the landscape. An example is the reconstruction process of the Italian territories of Trentino and Veneto at the end of the first world war: on the one hand the ravages of the war, on

the other the attempt to overcome the tiredness of a return eclecticism, push the younger designers to turn to the countryside. Thus the generation of Ernesto A. Griffini, Giovanni Muzio, Gio Ponti in Milano, Ettore Sottsass e Wenter Marini in Trentino, even Marcello Piacentini in Roma, initially addresses – with different outcomes and approaches – the re-reading of vernacular building, as if to find an identity for the new Italian architecture. In Italy, moreover, in those years, the legislation for the protection of natural beauties was being formed and it is evident that the relationship between landscape and rural building is interpreted as a positive element to be recovered. A relationship – that between landscape and the built – that Ponti will re-examine in the magazine “*Stile*”, during the second world war, thinking to the future reconstruction. The period after the war is, in fact, intended to lead to an intense building activity, rounding off the distinction between town and country. And the architect is convinced that the logical starting point for a renewed civilization,

is precisely the countryside, where many have fled. He therefore suggests a series of projects for small rural and semirural houses where he also introduces pre-fabricated building elements. They are small houses built in brick, or stone, or cast concrete, designed according to the vision of an Italian landscape inherited from history, that the architect encourages to change with modern sensitivity. Ponti is, in fact, persuaded that "If we want to cover Italy with houses, we must not spoil the landscape".

Also Aalto, in 1941, thought about the post-war: his famous essay *Architettura in Carelia*, besides specifying the organicist peculiarity of its rationalism, establishes an immediate relationship with the current situation and suggests directions for the future. The designer, in fact, underlines that the use of one material and flexibility of the traditional Karelian buildings, due to the isolation of the region, represents a response to the shortage of building materials Finland will have to face during the reconstruction. And he invites to read in the villages of Karelia "a happy intuition for the exploitation of the area topography, for the study of visual angles and enhancing all the other possible area characteristics. And all with a natural instinct".

The rationality of rural houses anticipated by Loos is confirmed by Giuseppe Pagano with the exhibition *Architettura rurale italiana*, edited with Daniel in 1936, for the Triennale of Milano. The overview of buildings ranging from alpine farms to fishermen houses sees as common denominator the absence of an author and being a working tool, essential in the volumes distribution, suited to local climatic conditions, rational use of materials that "camouflage naively" with the region building techniques. Such buildings represent "a book of building honesty, full of lessons" that, according to Pagano, confirms the principles of the rational standard and places its origin in the Mediterranean basin. Besides they are updated with the changing of conditions, ie with the evolution of the agricultural sector,

read in the sense of production more than of landscape.² The rural building is then bearer of timeless values but, at the same time, capable of innovation, its possibilities changing from context to context.

Le Corbusier himself, with his house de Mandrot (1929-1931), built between the cultivated hills near Toulon, started using traditional materials and building techniques, while retaining the modern freedom of interior space. The designer seems to have sensed that glass box of Centrosoyuz in Moscow (1928), thermally regulated by plants, is not always a fair and workable solution. To the point that in 1942 he suggests the use of local stone and sometimes bricks for Cherrchell farm in Algeria, underlining that "this plan satisfies the most modern taste in living requirements and is in fundamental unity with the landscape".³

In the 1940s' the Egyptian architect Hassan Fathy, believing that the rationalist criteria turn into an unsustainable imposition in the rural areas of his country, begins the recovery of the local building techniques, such as dried mud bricks and the Nubian vault, trying to optimize its results. The designer so reintroduces a heritage of knowledge already known to the population, suited to the climate and economy and resulting in spaces in compliance with the social organization that perpetuate the site identity. Unlike what happened in the countries of the west Mediterranean, the tradition, however, the architecture of the country tradition does not assert the principle of the standard, but opens the way for different design options.

However, the issue of the rural architecture, tied to construction along the Mediterranean coast, makes a comeback in 1964, thanks to a second photographic exhibition, entitled *Architecture without Architects* and edited by the architect Bernard Rudofsky at the MoMA in New York. The exhibition is made while in the US the culture begins to think on the damage caused by the indiscriminate growth of urbanization to

the detriment of rural areas. And it highlights how the anonymous rural building of the Mediterranean is a kind of alternative, seamlessly integrated into the landscape, to a progress we begin to perceive as out of control.

We can, therefore, conclude that the rural building tradition remains an essential reference for the design facing the crisis of resources and the aseptic outcomes of globalized architecture. The Western culture should, in other words, reconsider the relationship with the environment and not only in terms of energy saving, considering as target the note published by Le Corbusier sideline the project for Chercell in the complete work : “In building in a modern way, we have discovered a harmony between the countryside, the climate and the tradition”.

Notes

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- 2 Giuseppe Pagano, “Case rurali,” *Casabella* 86 (1935): 9-15.
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Aesthetic and Energetic Performances of Sustainable Envelopes

Chiara Cicero

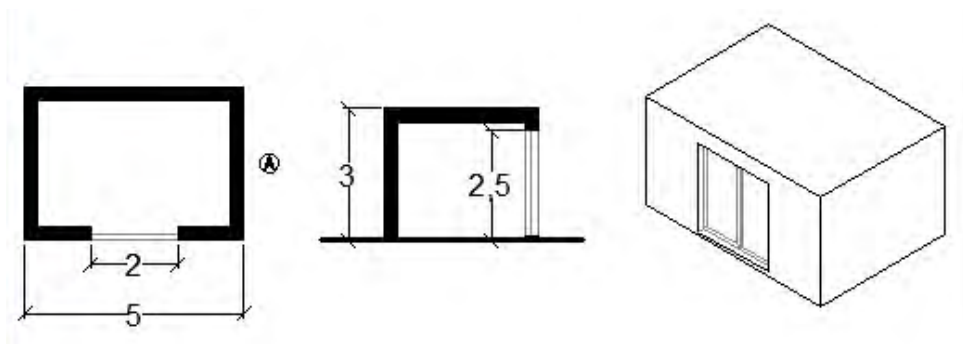
Grazia Lombardo

Introduction

In the future, Europe's environment will depend by the success of policies for reducing energy consumption and for improving renewable energy. This success can be searched in building sector as well. After Second World War, housing demand was increased. Residential buildings built from second middle of the XX century are mainly characterized by the intense use of synthetic materials and industrialized constructive techniques. These show, nowadays, a precocious physical and technological degradation. These problems depend on the fact that the choices, made at the design time, have mostly an economic nature. Moreover, buildings realized before of the emanation of the law on energy saving (L. 737/1976) don't have thermal insulation. For these buildings, energy consumption for cooling and heating is very substantial because of research of a better lifestyle, no connection with climatic characteristics and in particular the absence of insulation. As result, it is possible to observe that most of the fronts of the modern heritage buildings, in addition to being degraded, are covered by air conditioners that ruin the appearance of the cities.

Research in Europe aims to identify strategies for rehabilitation of modern heritage buildings. Rehabilitating pre-existing buildings means optimizing their performances in terms of reduction of energy consumption both for cooling and heating, improvement aesthetic qualities, improvement technological characteristics and reduction future interventions of maintenance. Refurbishment must concern some predominant building elements: envelope and integration of systems for production of renewable energy. To do this, characteristics of existing heritage and local climate, must be considered. So, rehabilitation intervention will not produce uncontrolled degradation processes.

Previous researches have studied performances of several types of envelopes for a simple building in Mediterranean climate. First results¹ have shown good thermal performance of envelopes composed by natural stone and external insulation. Natural stone is characterized by high thermal inertia and it contributes to guarantee good thermal comfort of the rooms especially in summer time. External insulation contributes to reduce energy consumption for entire year and in particular for heating. While,



Fabbisogno di Energia Primaria - FEP (kWh/m ² a)							
Resistenza termica - R (m ² K/W)	7,5	55,3	51,3	51	50	49,2	45,7
	3,75	50,9	45,1	44,5	43,7	42,4	40
	2	49,3	41,2	40,2	37,9	36,5	33,7
	1	56	43,6	42,3	38,6	35,3	29,7
	0,5	75,6	55,8	53,4	48,4	43,9	34,4
	0		101,9	91,2	76,3	68,9	54,8
	0	175	350	1050	1750	3500	
Capacità termica frontale - Cf (kJ/m ² K)							

Figure 1. Table of primary energy requirement and Simple building.

internal insulation decreases thermal performance because it produces peaks in temperatures and overheating of the rooms in summer time.

Based on this, successive research² has studied thermal performances of the envelope, in Mediterranean climate for a simple building (fig. 1), through the analysis of the ratio between thermal mass (in terms of heat capacity kJ/m²K) and external thermal insulation (in terms of thermal resistance m²K/W) that optimize thermal performance. Based on these performances, different envelope solutions have been hypothesized for several materials (natural stone, blocks of brick, concrete and wood).

Results reported in fig. 1 show that envelopes realized by low value of thermal mass, if combined with a specific value of external insulation, offer good thermal performances. Envelopes realized with blocks of natural stone, for example, are able to offer good thermal performances even with small thickness. In particular the envelope composed by 5 cm of natural stone (175 kJ/m²K of heat capacity) and 8 cm of thermal insulation (2 m²K/W of thermal resistance) offers an excellent value of primary energy requirement equal to 41,2 kWh/m².

Since the external insulation needs many interventions of maintenance or it must be re-

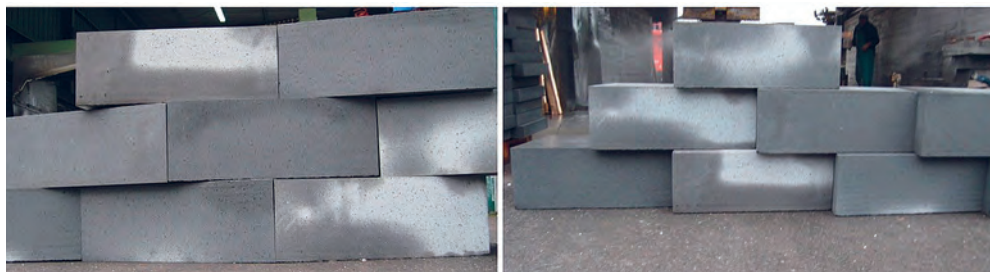


Figure 2. Different aesthetic solutions for stone façade.

placed about every 25 years³, the external insulation of 8 cm has been replaced by 6 cm of insulation then protected by a stone advanced façade of 1,5 cm (fig. 4d). This new envelope guarantees thermal performances quite similar of the previous but it is more durable in the life cycle [4].

The choice of natural stone, in addition to thermal performances, depends by several factors. In fact, some studies have assessed that natural stone has low environmental impact in the life cycle [5]. That happens both because working procedure is not polluting and natural stone façade doesn't require many interventions of maintenance thanks to its high durability.

From an aesthetic point of view, it is possible to observe that the use of local natural stone creates a pleasant connection with the context (*genius loci*). Because of this, the local stone considered in research is the Etna basalt stone. Moreover, in a previous phase of the research several surface treatments have been hypothesized that are able to produce a building characterized by high aesthetic quality as showed in figure 2.

In this paper, the study aims to compare results previously obtained, for a simple building in Mediterranean climate, with the ones obtained for a case study consisting in an existing building. This comparison will be made from different points of view: energy requirement, thermal comfort, durability and morphology.

To do this, differently composed envelopes will be considered to evaluate: natural stone performances, best position of thermal insulation and ideal combination between thermal mass and insulation on the envelope.

Method of Research

An existing building of the modern heritage, built before the emanation of the law on energy saving (1976), will be studied. This is characterized from a more complex morphology than the previously studied simple-building.

The case study regards a two-floor residential unit (fig. 3) built during the second middle of the century (1956) in Eastern Sicily. It has: usable area of about 500 m², total height of 11 m and terrace roof. It is characterized by a reinforced concrete structure with beams and pilasters and mixed slab (brick – concrete). The vertical opaque envelope is realized with blocks of concrete (54 cm) (fig. 4a) and the roof is not isolated (fig. 4f). External plaster and elements of concrete of surface are characterized by a substantial physical and technological degradation.

In this study, the glassed envelope, the volume and the morphological characteristics will be maintained.

Several envelopes, corresponding to different levels of intervention, have been hypothesized both maintaining the original envelope

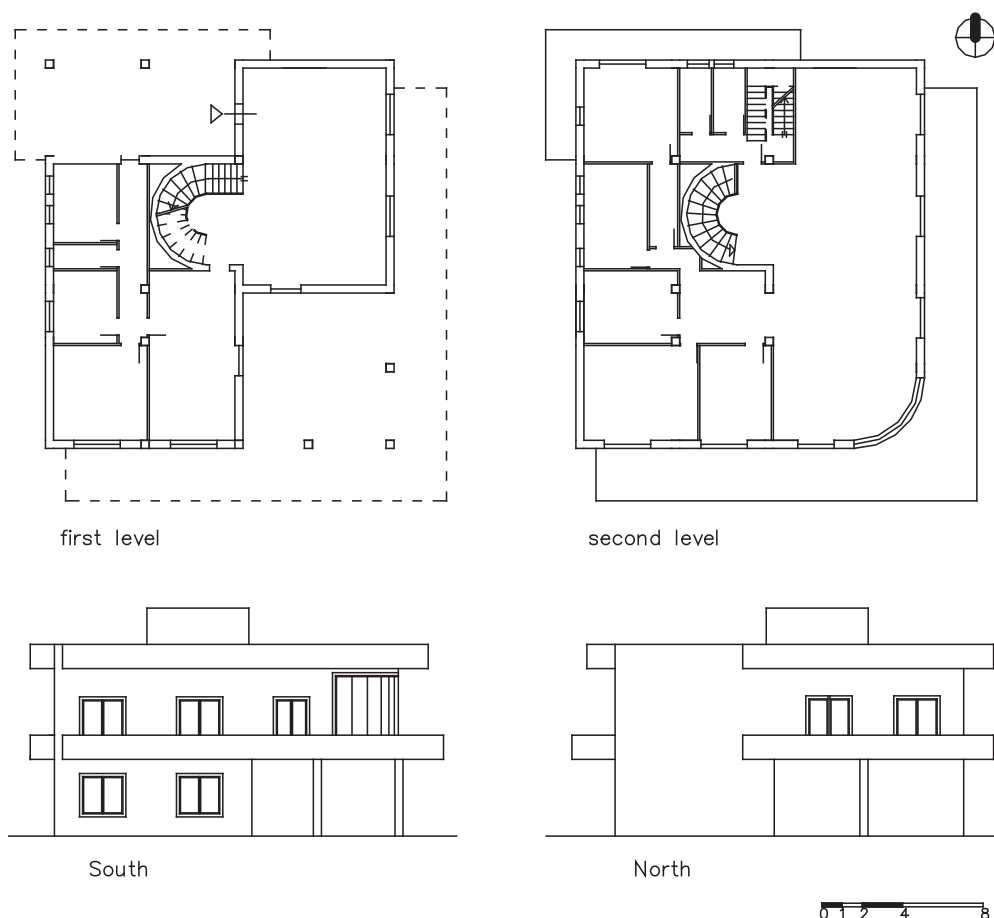


Figure 3. Studied building.

or replacing that one with innovative envelopes. Ratio between thermal mass and insulation of envelopes, according with results of previous researches (fig. 1), is made to optimize energy requirements in the entire year⁴. Types of studied envelopes are:

In_o. Original envelope consisting on walls realized with blocks of concrete as showed in figure 4a ($1,31 \text{ W/m}^2\text{K}$) and a roof without insulation as showed in figure 4f ($1,64 \text{ W/m}^2\text{K}$);

In_1. Original vertical opaque envelope, external insulation and plaster as showed in figure 4b ($0,44 \text{ W/m}^2\text{K}$) and isolated roof as showed in figure 4g ($0,38 \text{ W/m}^2\text{K}$);

In_2. Original vertical opaque envelope, external insulation and advanced stone façade as showed in figure 4c ($0,45 \text{ W/m}^2\text{K}$) and isolated roof as showed in figure 4g ($0,38 \text{ W/m}^2\text{K}$);

In_3. New envelope composed by blocks of basalt stone, external insulation and advanced stone façade as showed in figure 4d ($0,58 \text{ W/m}^2\text{K}$) and isolated roof as showed in figure 4g ($0,38 \text{ W/m}^2\text{K}$).

In_4. New envelope composed by internal insulation and blocks of basalt stone as showed in figure 4e ($0,45 \text{ W/m}^2\text{K}$) and isolated roof as showed in figure 4g ($0,38 \text{ W/m}^2\text{K}$).

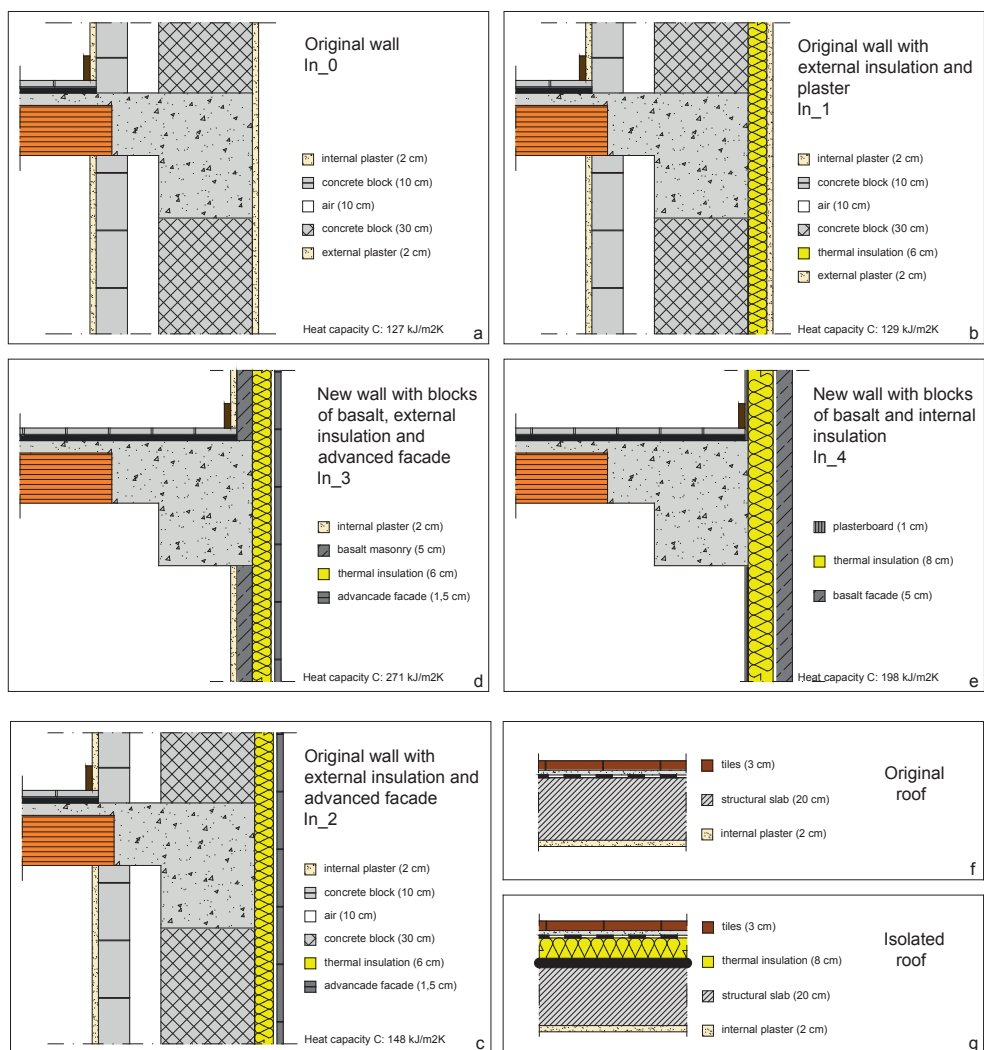


Figure 4. Solutions of vertical and horizontal envelope.

Energy requirements and internal temperatures (maximum and minimum), of the existing building for the hypothesized envelopes, will be assessed through analyses conducted with dynamic calculations thanks to computer simulations (EnergyPlus)⁵. Primary energy requirement will be evaluate to keep internal temperature between 18 and 23 °C in winter and to keep internal temperature between 24 and 28 °C in summertime.

Results

Results obtained through dynamic calculations thanks to computer simulations for an existing building in Mediterranean climate are showed in table 1.

Relatively the summer period it is possible to observe that every solution reduces both energy requirement for cooling (EnRsum) and for maximum temperature (Tmax) in comparison

Envelope solutions	Existing building	EnR sum (kWh/m ²)	T max (°C)	EnR win (kWh/m ²)	T min (°C)	PEnR year (kWh/m ²)
Orginal walls (1,31 W/m ² K)	In_0	8,5	32,8	42,0	5,9	57,9
External insulation and plaster (0,44 W/m ² K)	In_1	5,0	31,6	24,7	8,5	34,1
External insulation and stone facade (0,45 W/m ² K)	In_2	5,4	31,6	23,9	8,6	33,5
Blocks of stone and advanced stone facade (0,58 W/m ² K)	In_3	5,0	31,4	24,9	8,9	34,3
Blocks of stone and internal insulation (0,45 W/m ² K)	In_4	5,7	31,9	24,0	8,3	33,9

Table 1: Results of thermal simulations.

with the original state (In_o). In particular:

- EnRsum decreases from 33% (In_4) to 41% (In_1 and In_3);
- Reductions of Tmax ranging between 0,9 °C (In_4) and 1,4 °C (In_3).

Relatively the cold period it is possible to observe that every solution improves both energy requirement for heating (EnRwin) and values of minimum temperature (Tmin) respect to the original state (In_o). In particular:

- EnRwin decreases from 41% (In_1 and In_3) to 43% (In_2 and In_4);
- Increases of Tmin ranging between 2,4 °C (In_4) and 3 °C (In_3).

For the whole year it is possible to observe that every solution reduces, in comparison with the original state (In_o), primary energy requirement (PEnRyear) with similar values of reduction. In fact, reductions of PEnRyear ranging between 41% (In_1, In_3 and In_4) to 42% (In_2).

Conclusion

In terms of energy requirement and thermal comfort, for a residential existing building in Mediterranean climate, it is possible to observe that results obtained confirm our expectations. In fact, thermal performances improve very much for hypothesized interventions on the envelope, respect to the original state.

Moreover, values of PEnRyear are very similar each other. These values are close to those

of an house considered passive. Further improvements on thermal performances can be obtained studying others elements of the building that have not been studied in this research. Results of thermal performance, for an existing building, are in tune with the ones obtained for the simple building, except for the case In_4. Vertical opaque envelope in solution In_4 with internal insulation, respect to the simple building, has results good and similar to others interventions. Based on this, it is clear that the volume of the building influences thermal performance of the envelope in terms of energy requirement and internal temperature.

In terms of environmental impact, from the point of view of durability, the basalt façade (In_2, In_3 and In_4) is preferable, in the life cycle, than solution with external insulation and plaster (In_1). In fact, the stone façade has higher construction cost but lower cost in the life cycle because it needs less maintenance.

With same characteristics of durability, solution In_4 is preferable than solution In_3 because has lower construction cost. In fact solution In_3 has an element more consisting in the advanced façade.

So it is possible to affirm that for a conservative refurbishment of an existing building, keeping original vertical opaque envelope, the solution In_2 is preferable than solution In_1. While, choosing to replace the original vertical envelope, as proposed in this paper, it is possible to affirm that the solution In_4 is preferable than solution In_3.

Even if some solutions have similar characteristics in terms of thermal performance and durability, thickness of these envelopes is very different. Solution In_3 has, compared with original state (In_o) and some interventions (In_1 and In_2), a reduction of thickness of about 45 cm. This implies an increase of the usable area of 7% corresponding in about 36,5 m². In case In_4 the vertical envelope is external from the reinforced concrete structure of the building. This solution has a reduction of thickness of about 51 cm and it increase the usable area of the residential existing building of 8% corresponding in about 41,3 m².

At the end, in the life cycle, solution In_4 is preferable when intervention can be more invasive and the functionality of the building can be interrupted. In fact as showed, solution In_4 has high durability, good thermal performance and good internal thermal comfort, it increases usable area and it doesn't need the advanced façade. Moreover, being realized in blocks of local stone it maintains a pleasant connection with the contest, even in historical areas, with high aesthetic quality.

These results allow us to go beyond research to define mechanical performances and construction aspects of the innovative basalt façade also thanks to the realization of a prototype.

Notes

- 1 C. Cicero and G. Lombardo, "Buildings envelopes and energy," in *Journal of Civil Engineering and Architecture*, Issue 11, 2011.
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- 3 A. Campioli, S. Ferrari and M. Lavagna, "Il comportamento energetico-ambientale di involucri in laterizio," in *Costruire in laterizio* 120, 2007.
- 4 C. Cicero and G. Lombardo, "Sustainable building envelopes," (XXXVIII IAHS World Congress on Housing, April 16-19, 2012, Istanbul, Turkey).
- 5 C. Cicero, "Valutazioni termiche ed economico-ambientali di murature portanti in basalto etneo" (Final thesis for PhD degree in: Architectural, urban and environmental project and refurbishment, 2009).

The 'Vele of Scampia', Naples

Stefano Gizzi

Ugo Carughi

Cristina Mattiucci

Introduction

The paper presents some issue from the case in question the '*Vele*' of *Scampia*, a buildings' complex in the eastern suburbs of Naples.

Of the seven '*Vele*' originally built, nowadays four are still standing and the future of a piece of the city is played on their survival. They have been for years at the core of a high pitched debate about their conservation, which involves both the academic contexts, and the citizens public opinion, as well as the Institution of Protection. This is called to discuss to propose the identification of the '*Vele*' as a whole to protect, by taking, as well, through the institutional action, an incisive cultural role.

The '*Vele*' as Urban and Cultural Issue

The '*Vele*' is a housing complex built between 1962 and 1974 by the architect Franz di Salvo (and completed posthumously) in Scampia neighborhood, which was in that time one of the expanding suburbs of Naples.

Similarly to what was happening in other parts of Italy and of the world, the '*Vele*' - like

other public housing complexes designed for the working classes - were in a sense an experimental architecture that drew up an housing typology that could accommodate many people, while providing innovative structural solutions. Moreover, they were buildings that, with their own scale and on their whole, could have a spatial dimension, so to constitute an out-and-out real piece of the city.

They were articulated as mega-structures, which answered to a complex functional program, although it is now no longer legible, due to the typological changes, the increase of density, and also for the missed realization of all the urban and social equipment provided for by the original project.

They were characterized by the continuity of paths, not only within each "dwelling units" but also through inter-residential connections at the different levels. They represented an idea of alternative city, with reference to the Megastucture Movement ideas of the 50s and 60s of the last century, in turn originated from the Le Corbusier's principles, later materialized in the Unité d'Habitation. Their roots were developed, according to the principles coming from the theories discussed in the CIAM congress in



Figure 1.

Frankfurt (1929) and in the following year in Brussels: the reduction of the housing cell to the minimum necessary, reducing private space for the benefit of the public one; the rationalization of the structural and building elements; the resulting savings in production costs¹.

Taken together, they are therefore recognized as a testimony of a modern architectural culture, whose they are heritage, either as a memory, and as a resource².

As suggested by many scholars³, the story of the 'Vele' is common to those stories of other housing complexes made in those same years, which interpreted the concepts, the developments and the utopias of the European architecture and urban culture of the Twentieth Century, often sharing with those experiences the fate of being nowadays in the center of an heated debate, concerning the ways and the reasons for their preservation or redevelopment, or not.

Complex as the *Corviale* or the *Spinaceto* in Rome, the *Zen* of Palermo, the *Gallarate* Milan,

the *Biscione* of Genoa, the *Rozzol Melaradi* in Trieste have been originated by the same culture. A culture that made material the otherness of the State with respect to the dynamics of the private housing market⁴ and concentrated in mega structures all that facilities which, in the following years, would have filled, expanding, the suburbs.

Many of the places created by these projects are now at the center of the news items, mainly related to social tensions, which make them the manifest of a decline often due to political and administrative reasons, that, ambiguously, has also influenced the debates pro and con their conservation.⁵

Despite virtuous references of other European cities' experiences⁶ that have made similar complexes' redevelopment as an opportunity to rethink entire parts of the city for the contemporary citizenship, the debate about the 'Vele' still shows the comparison among the most extreme interpretations of the conservation or of

the demolition, forced into the restrictions that the Italian legislation poses to the institutional action. Anyway, it may however become an occasion for thinking about these same restrictions and proposing new approaches.

Actually, the case in question can be considered as an opportunity to discuss the theme of the survival of the modern, in the perspective of the conservation of the modern architecture, both in its most complex dimensions and from a very holistic point of view.

(Also) a Legislation Affaire

This perspective intercepts many issues. In primis, the issue of the legislation for the protection of architectural heritage in Italy and work of an institution such as the *Soprintendenza per i Beni Architettonici e Paesaggistici di Napoli e Provincia*.

The current Codice dei Beni Culturali e del Paesaggio does not allow to start the procedure for the declaration of cultural interest for buildings that are less than fifty years old, from the point of view of mere architectural features, but it provides the procedure for them, if their relationship's values (with the social and political history, and also with the history of architecture) are recognized (art. 10, comma 3, letter d).

In the articles 32 and 33, the Codice dei Beni Culturali e del Paesaggio contemplates also the possibility of issuing a series of prescriptions ad operandum. If such prescriptions are formulated contextually to the 'interest declaration' - which has primarily a value to attest - they help to convert these structures in living organisms, manageable within a territorial reality radically renewed. Thus, a tool of protecting, which has a character essentially passive and coercive could be also converted, receiving the 'active principles'⁷ in order to start a process of regeneration.

So, consequently, the issue of the value's attribution and recognition to a modern architec-

ture, because of its links with the social, politic and urban history of the city, that is amplified in suburban contexts such as the 'Scampia' one, could be effectively an issue to address the discussion for the 'Vele' conservation in a broader sense.

A Deeper Urban Social Issue

Each possible line of reasoning, in fact, should exceed the analysis of the single architectures for themselves and looks at the idea of the city which the 'Vele' implied, since that ideas could be reinterpreted for the contemporary city and for the multiple stories that those macro-structures are telling us⁸.

So, beginning from the specificity of the 'Vele' case-study, we aim to draw a broader question, concerning a story that is paradigmatic of a problem. In fact, the urban program for *Scampia* in the 60s aspired to build an urban plan through those architectures, in a place whereas there was not historical, nor civil, nor social, nor natural context. To discuss about the future of the 'Vele', it is therefore necessary to investigate the reasons why a sort of break in that program is happen and to understand how recover the modern architecture, making it pertinent to the contemporary city, beyond operations of "restoration" that would allow to recover only the singular buildings. That is in order to protect and improve the whole urban space.

In fact, with the work of Franz di Salvo in *Scampia*, where there was any context, we would have an architecture that could be also the context and, at the same time, a qualified witness of the European culture, able to go with the processes of that same Fordist society which had demanded it⁹. While they were working on the improvement of the living space for purchasers made up of millions of families, which after the war moved to the cities, the architects,



Figure 2.



Figure 3.

the planners and the engineers across Europe, found themselves taking on new social responsibilities in the construction of the "public city".

As Paola Di Biagi emphasized, in fact, the "public city" is a twentieth-century urban form, generated from a "housing issue" that was already evident in the Nineteenth century, but became central to the next century¹⁰.

For this, the 'Vele', in their complex, would determine a new urban area that experienced an alternative to the usual ways of city building and that put a central role into the hand of the open spaces, as a structural element for the *forma urbis* and for the network of public and collective spaces. However, as it is known, Di Salvo's work was be-

trayed because of several reasons. Because of the structural technology, made of transverse elements in precast concrete "in tunnel shape", that do not allow any spatial and distribution flexibility and of the secondary elements built with traditional technology, rather than with light and prefabricated materials; because of the greatest population density assigned to each building, since the number of those originally estimated was reduced; because of the resulting changes in the houses' shape, with narrowed multi-level and internal collective paths, so made darker; because of the ground floors' closure, which must have been free and, above all, because of the elimination of all social and urban facilities provided by the

original project and the conversion of the spaces originally designed as public into private spaces. Therefore, although the present complex's materiality lets many difficulties emerge for the collective recognition of their own value as context-reference architecture, any assessment - even the institutional one - cannot be regardless of the cultural assessment or thinks in purely legal terms.

Probably, putting a low-bind to those urban *simulacra*, in the state in which they are, does not make sense if it ignores the foreshadowing of a regeneration program which extends beyond the size of the mono-functional residential neighborhood and if it not configure a new part of the city, by planning simultaneous urbanization actions.

The idea, that starts from a cultural aspect, does not exclude, but rather imposes an imperative need to consider synchronically the territory in its social, economic and productive complexity. Here more than elsewhere, even if they

do not directly concern the *Soprintendenza's* scopes, these are issues that are essential pre-conditions to protection, which translates into an incentive to the territories' civil and management improvement, in the scope of a social responsible approach.

An Open Issue

In this perspective, the *Soprintendenza per i Beni Architettonici e Paesaggistici di Napoli e Provincia* have proposed the 'Vele' as a complex to be safeguarded (Gizzi, 2011), recognizing the opportunities of the cultural and civic values' transmission, for the collective urban memory that the 'Vele' materialized, and rejecting the strategy of the *tabula rasa* for Naples.

The exclusion of the demolition may be a catalyst of many other stimuli and allow a debate that could be the chance and the beginning of a different future for a part of the city.

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- *The three authors have worked together on the theme, editing a specification of it (S. Gizzi the institutional and cultural issues, U. Carughi the legislation issues and C. Mattiucci the urban-social issues).

Notes

- 1 Carughi, "Rinnovare gli strumenti di tutela del contemporaneo."
- 2 Di Biagi, P. in *Le vele di Scampia che fare?*
- 3 Gizzi, "La questione della conservazione delle Vele"; Di Biagi in *Le vele di Scampia che fare?* just to mention some recent critical re-readings.
- 4 Boeri, "Il dibattito."
- 5 For the 'Vele', this mix of topics is evident. During the last six years, just to name the most recent episodes, numerous opinions have appeared about, both in the local press, and in academic circles and in public forums and debates, both real and virtual. (For an up-to-date excursus see Gizzi, "La questione della conservazione delle Vele," 35, note 1) .
- 6 Among the most significant regeneration experiences, we signal: the Berlin-Britz district; the *Großsiedlung Siemensstadt* in Berlin; the *Lignon* satellite district in Geneva; the *Bi-jlmermeer*, satellite city of Amsterdam (where OMA-Rem Koolhaas worked in the 80s).
- 7 Carughi, 2 "Rinnovare gli strumenti di tutela del contemporaneo"; Carughi, *Maledetti Vincoli*.
- 8 Nocera and Anselmo, "Le Vele di Scampia e la tentazione della tabula rasa"
- 9 Beyond the cases already mentioned, those were times when the social role of the architect s became central and the solution of urban problems was proposed through a series of interventions on a large scale, in the wake of a series of international proposals and research. For example - the macrostructures that Yona Friedman proposed in the early 60's above the existing conurbations; the Kenzo Tange's proposal for Boston s and the Tokyo bay in the 70's; the "Plung-in-City" by Archigram and Peter Cook.
- 10 Nocera and Anselmo, "Le Vele di Scampia e la tentazione della tabula rasa," 63.

Integrating Modern Heritage Resources Into Urban Planning

Lessons Learned from the Transformation Process of The Factory Site Strijp S of Philips Electronics

Sara Stroux

While individual industrial buildings as the Van Nelle Factory (Brinkman & Van der Vlugt, 1931) or the Fagus Factory (Gropius and Meyer, 1913) are considered as milestones of the Modern Movement and, accordingly, are comprehensively analyzed and published, less attention is drawn to the overall design of the often vast industrial sites. Nevertheless the corporate planning and building activities, often executed by ‘anonymous’ employees of the construction division of an industrial company, represent key principles/concepts of modernism such as functionality, flexibility, economical use of resources and application of new materials and building techniques such as standardization and prefabrication. Due to structural change many industrial sites with their countless factory buildings were abandoned, awaiting transformation. But how to adapt the existing structures for contemporary use without losing their specific ‘modern’ identity? By monitoring the everyday planning practice in the Netherlands, it can be observed that the set of institutional

instruments and methods of assessing cultural-historical values are either too limited to meet the actual challenges or applied inappropriately. The analysis of the transformation process of the former industrial site ‘Strijp S’ of Philips Electronics in Eindhoven, forms a good example to demonstrate shortcomings and discuss possible intervention strategies.¹

Development of the industrial site Strijp S

Around 1915 the rapidly growing electronics company Philips expanded their factory complex to a 27 hectare site on the north-west border of the city of Eindhoven, called Strijp S. At first, parts of the site were used for the manufacturing of glass and packaging for the light bulb production but from the mid-twenties on Philips invested in the production of radios: in a very short period between 1925 and 1930 the world’s biggest radio factory was constructed on Strijp S

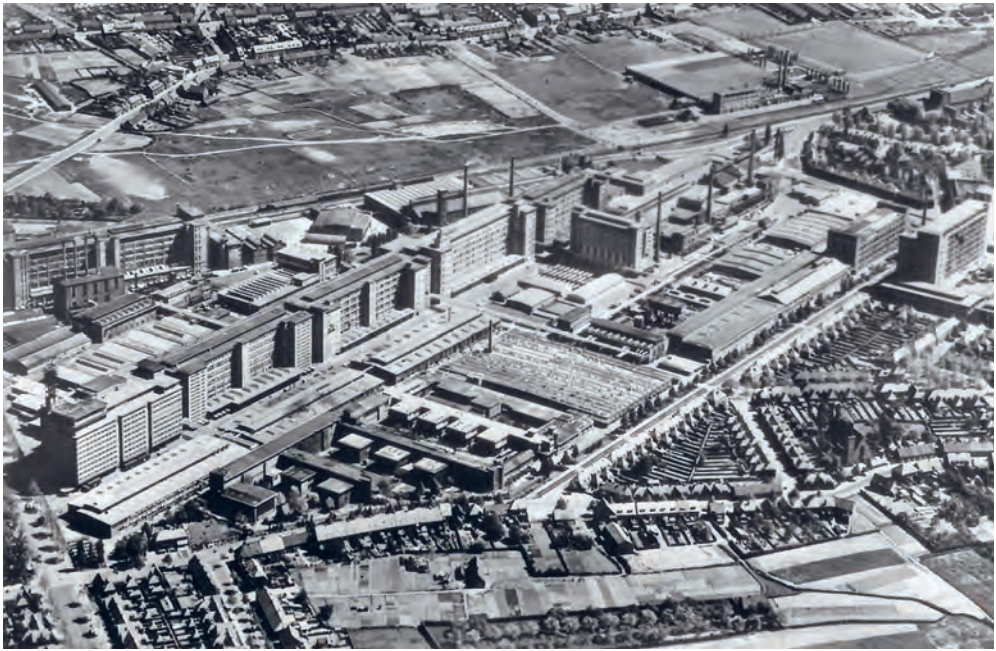


Figure 1. The industrial site Strijp S, around 1950. RHC Eindhoven.

and almost filled the site. The intensive building activities of the first half of the twentieth century resulted in a dense, coherent factory complex in which the spatial layout was entirely determined by the functional zoning of the manufacturing process and its logistic needs. The unique entity of buildings and infrastructure formed a tightly knit spatial structure on its own without any relation to the surrounding urban fabric (fig. 1). Neither in the archives of Philips nor the Municipality of Eindhoven could evidence be found that there was a master plan for the area of Strijp S. It is rather likely that the factory complex was gradually built in a pragmatic manner to achieve optimal functionality. To ensure an efficient circulation of raw materials, products and labour, an orthogonal network of railways, streets, skywalks and service lines were set up, and factory buildings were situated in-between. Most buildings and infrastructure was designed by the technical and construction division of Philips under the initial leadership of A.I.J. de Broekert and after 1939, J.R. Bouten. For Strijp S

they chose a combination of one-storey factory buildings with skylights for a linear or circular production chain at ground level and giant multi-storey factory buildings with transparent facades for a linear, vertical production chain. The buildings were arranged in a way that despite the dense building pattern, the working spaces of the multi-storey factories were exposed to a maximum of sunlight and air. With regards to their design three guiding principles can be identified: adaptability of the spatial layout to the dynamics of the production process; cost-consciousness leading to rationalization and standardisation of the construction (process); and the idea that a well-designed exterior has a positive impact on the mind-set of Philips employees.² In short, the construction of the industrial complex of Strijp S reveals that Philips applied key principles of modernism such as functionality, flexibility, economical use of resources and rationalization of the (production and building) process not only on the scale of the building and its detail but to the overall spatial layout of the site.

Transforming Strijp S

Evolving company strategies led to a steady adaptation of the industrial complex: the factory started assembling televisions instead of radios and from the seventies on, due to re-location of the production process, the site was mainly used by the product development and administrative departments of Philips. The spatial structure of Strijp S was adapted to these alterations in a pragmatic way. In some cases buildings were replaced, but for the most part existing buildings and structures were re-used. In 2000, when Philips decided to abandon the site the main elements of the spatial structure such as the network of roads and parts of the service lines and several factory buildings from the first half of the twentieth century had remained (fig. 2). In the wake of Philips' decision, the steady process of alteration accelerated: a complex transformation process started to turn the former industrial site into a dense urban district, and several public and private stakeholders became involved. Although the Municipality of Eindhoven and The Netherlands Cultural Heritage Agency (Rijksdienst voor het Cultureel Erfgoed) agreed that the built legacy of Strijp S was of outstanding cultural and architectural historical significance important spatial elements of the former factory complex, such as the orthogonal street pattern or the linear orientation of the building envelopes, were not incorporated into the new developments.

Since the first Historic Buildings and Monument Act of 1961 it is possible to protect larger spatial structures such as townscapes or rural sites (Beschermd stads- en dorpsgezicht) in the Netherlands. However, industrial complexes are rarely protected in their entirety, unlike urban extensions from the nineteenth century, residential districts or military infrastructure and despite the growing influence of the field of industrial archaeology. A main reason for this might be the legislation's focus on the co-

herence and appeal of the external appearance rather than functional integrity and the fear that a protected status will obstruct the necessary renewal of an industrial site (with its large amount of ordinary utilitarian buildings). Generally the most outstanding buildings or groups are listed in the National Inventory of Cultural Heritage.³ This strategy was applied to Strijp S where only five factory buildings were listed, partly as an ensemble. Another shortcoming at the beginning of the transformation process was the lack of a profound survey of the cultural historical values and spatial qualities of the site. When the public-private partnership of developers, housing corporations and the Municipality of Eindhoven started with their ambitious plans for the transformation of Strijp S their emphasis lay on the development of an urban master plan. This was done as quickly as possible so that it could serve as reliable framework for property sales and contract negotiations. The urban master plan by West 8 Urban Design and Landscape Architecture introduced a completely different urban typology to Strijp S: city blocks alongside two boulevards in combination with high-rise buildings (fig. 3). Amongst others, historical city centers with small plots and varying facades served as reference for the design, not the specific characteristics of the industrial fabric of Strijp S. From the remaining structures single objects such as the listed buildings, a lone sculpture and fragments of the service lines were integrated into the new design as 'historical artifacts'. The designers missed the chance to incorporate the industrial heritage of one of the leading industrial companies of the Netherlands in a more coherent way considering context in time and space and on all scales of the physical structure. Re-use and re-interpretation could have resulted in a unique urban district.



Figure 2.

Strijp S in 2008. The buildings, which will be integrated in the new developments, are outlined. RMIT.



Figure 3. Illustration of urban master plan by West 8. West 8 Urban Design and Landscape Architecture 2004, 8.

Managing Change

By monitoring the recent developments around Strijp S it seems that the urban master plan as a traditional planning instrument with a presumed final state does not respond to the challenges of a long-term transformation process. The zoning plan for Strijp S was officially approved in 2007 and to be executed within less than fifteen years; however, it is obvious by now that these expectations cannot be fulfilled in times of economic uncertainty. Unfortunately, in the interim, some of the buildings of the

Philips era have already been demolished according to the design of the master plan. On the other hand the deceleration of the planning activities created scope for alternative approaches for the remaining heritage resources. Of paramount importance was to conduct a systematic value assessment on different levels of the industrial site, ranging from spatial planning to the architectural detail, not forgetting the intangible socio-cultural values, which served and will serve as decision making framework and knowledge base for proposed interventions.⁵ The challenge will be to integrate these values

into new designs for the (remaining) buildings and to make them tangible for tenants and visitors of a transformed Strijp S in a spatial sense. Based on the value assessment the Department of Restoration, Modification, Transformation and Intervention (RMIT) at Delft University of Technology devised a strategy for the transformation of the giant multi-storey factory buildings in the center of the site, the so-called Hoge Rug, originally built for the manufacturing of radios (fig. 4).

In contrast to the urban master plan that split up the Hoge Rug by adding new city blocks to the individual factory buildings, RMIT's transformation strategy stresses the importance of the relationship between the buildings. Not only today's visual coherence but also the original use of the complex, mirrored in its structural design of monolith concrete, supports this approach: the production process ran in a horizontal direction via sky bridges through several buildings of the same type which resulted in spacious open floor plans; storage and transportation of products took place on the ground floor with direct connection to the railway; vertical 'service components' with staircases, freight elevators and locker rooms for the workers were placed outside the main structure. Accordingly the transformation strategy rather suggests interpreting the Hoge Rug as one giant and robust structure; a stacked city with fixed infrastructure for vertical circulation in the former service components and 'plots' (freely dividable open space) which can be filled with various programs and adapted to the dynamics of a mixed use urban fabric. By spreading uses in a horizontal direction people could follow the route of products in a re-interpreted way by wandering through a 'street' stretching from one factory building to another. The service lines, which run along the north façade of the Hoge Rug and should be demolished according to the urban master plan, can be used as sky-

walk giving access to the second floor (fig. 5). Based on the architectural qualities of the existing structure and the proposed new developments the former production floors and service components should be preserved and restored in their original materiality and architectural details whilst the ground floor and rooftops provide opportunities for more substantial interventions.

Such an approach does not ask for one overall design or designer. In fact it needs 'supervisors' who closely guide the process of transformation and look for the perfect match between the existing spatial qualities, the cultural-historical values deserving protection, and new functional use. The housing corporation Trudo, developer of one part of Strijp S including the Hoge Rug and some other historic buildings, did not took over the spatial concept of 'the stacked city' for the Hoge Rug but follows a comparable method regarding the transformation process.⁶ The characteristics of the existing site and buildings are taken as starting point for the redevelopment and serve as unique selling point for a future Strijp S. The developers of Trudo see themselves as somebody who creates a quarter ('kwartiermaker') for a certain target group by re-programming and transforming the existing, as somebody who is managing the process rather than working towards a presumed final state; in the words of the Dutch consultancy 'Urban Breeze', specializing in this method of working "no masterplan, but a planmaster" is needed.⁷ Parallels with the development of Strijp S during the Philips' era can be drawn: also then a steady process of transformation and adaptation had to be managed which required flexibility from the built structures and, just as important, a way of thinking which focussed on the use/users. In that respect Trudo's transformation strategy seems to be in line with the historical dimensions and in the 'true spirit' of the former industrial site.



Figure 4. The former radio factory Hoge Rug, 2008. RMIT.

Notes

- 1 This paper is based on a study on the transformation of the Hoge Rug at the former industrial site Strijp S, conducted by S. Stroux, I. Bernakiewicz, R. Stenvert and J. Roos at RMIT, Faculty of Architecture, Technical University of Delft: Sara Stroux, et al., *Transformatie van de Hoge Rug. Final report research project* (Delft: RMIT/TU Delft, 2009). On the transformation of Strijp S see also Nina Cerutti, *Creatieve fabrieken. Waardecreatie met herbestemming van industrieel erfgoed* (Utrecht: C2Publishing, 2011), 99-111.
- 2 On the history of the construction of the site see Van Meijel Adviseurs in Cultuurhistorie, "Strijp S: ruimtelijke en architectuurhistorische verkenning" (Nijmegen, 2008).
- 3 Paul Meurs, "Beschermd stads- en dorpsgezichten. Vijftig jaar erfgoed en ruimte: van reconstructie tot stadsvernieuwing," in *Toekomst beschermd gezicht? Stads- en dorpsgezichten, archeologie en cultuurlandschap* (2011), 18.
- 4 West 8 Urban Design and Landscape Architecture "Definitief Stedenbouwkundig Plan Strijp S Eindhoven. Een bruisende knoop voor Eindhoven" (2004).
- 5 Van Meijel Adviseurs in Cultuurhistorie, "Strijp S." See also the building surveys of the listed buildings: Bureau voor bouwhistorisch onderzoek J.A. van der Hoeve 2008 (a); Bureau voor bouwhistorisch onderzoek J.A. van der Hoeve 2008 (b); Bureau voor bouwhistorisch onderzoek J.A. van der Hoeve 2008 (c); Bureau voor bouwhistorisch onderzoek J.A. van der Hoeve 2008 (d). "Bouwhistorische opname gebouw SAN, Eindhoven, Strijp S" (Utrecht, 2008).
- 6 Sander Gelinck, "Van verboden stad naar moderne stadswijk," *Renda Special 2* (2011): 17-22. On the transformation of the Hoge Rug see also Jacqueline Van Santen, "Transformatie op Strijp S. Van 'daylight factory' naar Creatieve Stad," *Tijdschrift van de Rijksdienst voor het Cultureel Erfgoed* 1 (2012): 12-14; and www.lofthuren.nl (retrieved 10-04-2012).
- 7 www.urbanbreezz.com/english/re-usage-of-inner-cities-and-industrial-heritage (retrieved 10-04-2012).



Figure 5. Service lines between the Hoge Rug and warehouses, 2008. RMIT.

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The Revitalisation of Post-War Danish Residential Areas

Claus Bech-Danielsen

Introduction

The present paper derives from research that evaluated current physical renovation projects of Danish social housing areas built from 1960 to 1979. These housing areas are typical industrialised large-scale estates, consisting of 3-4 storey buildings. The estates are usually associated with both physical and social problems, and physical renovations as well as social efforts are made in most of them since the two aspects are considered mutually dependent. However, this piece of research only deals with the aspects of physical renovation since it is subject to an architectural focus on renovations.

The physical renovations are usually based on urgent needs for improvements of technical conditions in the constructions. Thus damaged concrete, leaking roofs, or other technical/physical problems are often the starting point of the renovations. Solving these problems, however, are often linked to a desire for creating architectural enhancements. The dwellings in these social housing estate ranges below other housing types at the Danish housing market. The amount of disadvantaged residents is high, and it is the housing societies' wish to increase the residential areas' attraction and value by architectural improvements in order to attract a wider range of residents.

The main research question is how to create architectural improvements in post-war industrialised housing estates? In this regard, it is necessary to clarify the basic architectural problems of the housing estates, and subsequently to discuss different ways to cope with these problems. In this paper two architectural concepts of renovations are analysed: One that neglects the architectural ideals of the 1970s and introduces new architectural ideals, and another that builds on the existing qualities and develops these in different ways.

Method

The study was conducted in two phases. The first phase was carried out from 2004 to 2007, and the next phase from 2008 to 2010. During both phases, 10 settlements, which faced a renovation, were chosen. The settlements were paid a visit at least twice – one prior to the planned renovation and one when the renovation was completed. The physical circumstances before and after the renovation was registered and remarkable improvements, as well as particular troubled conditions in each settlement, were identified. Typological analysis of the settle-



Figure 1. Sample analysis of the typological principles of a settlement in Korsør. Focus is on access to green outdoor spaces. Despite the fact that the homes have balconies towards the outdoor spaces, there are actually a few hundred meters' walk from the dwellings to outdoor spaces. The establishment of private front gardens with access directly from ground floor dwellings, may be a way to improve access.

ments as well as the completed renovations was carried out for this purpose.

Architects and representatives of the housing departments were interviewed. The interviews asked detailed questions about particular features that had been encountered in the actual renovation, and focused on the intentions behind the renovation and the experiences gained during the process of renovation. The interviews lasted one or two hours. They were recorded and were subsequently partly transcribed. The residents' experiences and assessments of the physical conditions before and after the renovation have also been examined. This was carried out in focus group interviews with residents of selected settlements. However, the results of this part of the study are not included in this paper.

The research demonstrated which particular concerns the physical renovations were directed towards - and which were left out of focus. The qualities of the completed renovations were subsequently evaluated and it was considered whether the completed renovations were viable - physically as well as aesthetically. On the scale of the estates, a particular focus was on the relations to the surrounding neighbourhood. On the scale of the buildings, focus was on the architectural changes on facades, gables, roofs, entrances, stairways, balconies, etc. Finally, on the scale of the individual apartments, the qualities were valued with focus on for example settlements where small apartments were combined into more spacious family homes. In this connection, furnishing plans, which were testing the new apartment's capability and flex-



Figure 2. Vejleåparken – buildings are extra insulated, and a ‘wallpaper’ of bricks cover the architecture of the 1970s.

ibility, had occasionally been done (the results of this study are also not included in this paper. The full study is published in two reports^{1,2}).

Erasing Modernism – or...

In many of the completed renovations, the projects were a confrontation with the original architectural terms of the housing. It has happened in various ways, ever since the first renovations were carried out in post-modern colour schemes in the early 1980s. A report³ from back then stated that the reaction against what was criticised as being colourless boredom led to a ‘colourful chaos’. Something extremely boring was replaced by something extremely festive. Both ways were boring in the long run and the report encouraged the creation of solutions that were more durable - both in terms of construction and aesthetics.

Among many current renovations, a confrontation, with the architectural ideals of the 1960s and 1970s, are still taking place. Examples include the renovation of one of Denmark’s major settlements of the 1970s, ‘Vejleåparken’ consisting of 54 concrete apartment buildings, with approximately 2000 flats. The original concrete facades were covered with face walls in traditional bricks, and the horizontal bands of windows, which provided a clear modernist feature, were tucked away. Various artists’ decoration of the facades at entrances, further contributed to blurring the development’s modernist touch. For example, organic patterns were

created by varying types of bricks in the new surfaces. Thus a contrast was established to the development’s original cubic forms. Elsewhere, ornamentation of the facades were designed in almost classical style. Traditional brickwork, ornamentation, organic shapes, and classic style – all that were proscribed in post-war assembly constructions has been brought into play. The great eraser was used and shapes of modernism were removed.

A completely different approach to post-war construction is chosen as the basis for the renovation of the settlement ‘Gyldenrisparken’, which Witraz Architects and Tegnestuen Vandkunsten were in charge of. The residential blocks were built in 1964 as prefabricated constructions with standardised concrete panels and flat roofs. The renovation was again motivated by damaged concrete in the facades and balconies. The renovation of Gyldenrisparken, however, was motivated by an assessment of original qualities in the settlement’s architecture that was worth building upon.

In spite of the comprehensive wrapping of all facades, the settlement has retained its overall expression. The renovation of Gyldenrisparken showed that this approach could be extremely productive. By adding a few elements that blended nicely into the original architecture and leads to basic architectural (functional as well as aesthetic) improvements, the settlement has gained a significant boost in terms of expression and the way it is experienced.

The new glass bay windows are samples of such elements. First, they improve the daylight

conditions of the individual homes and provide them with a whole new view of the surroundings and second, the bay windows create depth and variety to the facades. Another sample is the reading of the development's balcony facades. They have not been totally glazed as so often happens in similar renovations in Denmark. They have instead been extended, as they were too narrow, and glazing of balconies have been individually chosen and paid for by

individual households. As a result, the balcony facades are still experienced with its original structure, with a depth in the façade and the variation between light and shadow. The materials used express the building's original 'language' very convincingly and detailed and textural qualities are provided to be experienced up close. Fine profiling of the facades fibrous concrete is one of those details, while the details of the new bay windows is another.



Figure 3. Gyldenrisparken after the completed renovation. Left: Note the new windows on the gables. Right: The profiling of the fibrous concrete elements on the renovated facades.

Ideals on a Larger Scale

Based on the completed renovations it has repeatedly been pointed out,^{4, 5, 6} that the best architectural results are achieved when based on existing architectural qualities. Naturally, it is feasible to create a radical break with a building's original architecture, but one must bear in mind that it is difficult and can be a costly affair. The purge does not only serve an ideological character: It is a confrontation with the basic architectural concept, which has set its physical traces throughout the settlement and has guided the development's design at all scales. A confrontation with the core set of ideals of a settlement therefore entails that existing qualities will be lost, and it thus requires huge resources to create new qualities that can substitute the original ones. The existing structures are not likely to interact with the new architecture.

Consider for instance the scale of urban planning. Again, a wide range of physical

structures in the settlements and their surroundings are built from an initial set of ideals and the existing structures thus in different ways supports an overall scheme. The current renovation projects challenge these ideals. This applies to the ideals of traffic separation, which led to the construction of road systems that keep pedestrians away from vehicles etc. Today, these traffic systems are being phased out and one of the most striking innovations in this regard is the term 'shared space',⁷ that by contrast aims to blend various road users. It applies likewise to the transformation of mono-functional residential areas, which in its original mind set was about the development of zoned cities,⁸ where residential life could unfold at a distance from production noise and pollution. Today's intentions are to mix residential and commercial use⁹ - and to 'mix different types of ownership', for that matter. The ideal of equal-

ity, which in post-war building was developed into a ‘form-giving principle’,¹⁰ is in the Danish renewal projects replaced by the desire for diversity and multiplicity.¹¹ The original ideal of simplicity and harmony¹² has in recent years given way to complexity and the unforeseeable.¹³ The original dream of park estates, far from city noise and close to scenic landscapes, has been replaced by attempts to create urban qualities and ‘urban life’.

Table 1 lists a number of ideals, as they 1) were originally expressed in 1960s and 1970s residential areas and as they 2) are now expressed in renovations and in competition programs aiming at revitalising the housing areas in the suburbs. (E.g. in the competitions ‘Greve Midtby’, ‘Farum in development’ and ‘Bagsværd industrial areas’). As can be seen, the ideals are not just changing. The current ideals are all in contrary - diametrically opposed - to the original ones.

Conceptual ideals of the 1970s settlements	Conceptual ideals of the renovation projects of today
Mono-functional	Mixed functions
Landscape qualities	Urban qualities
Equality	Diversity
Traffic separation	Shared space
Simplicity	Complexity

Conclusion

As has been pointed out in this paper, current renewal and renovation projects of Danish social housing have a tendency to be based on architecture and planning ideals, which are diametrically opposed to those that formed the basis when the settlements were built in the 1960s and 1970s. Occasionally it happens - which I will address in my oral presentation at the Docomomo Conference - to a degree where it becomes paradoxical: In cases where the housing areas were originally established with the intention to create ‘landscape qualities’, the current renewal projects make considerable efforts to transform these areas in order to create ‘urban qualities’. Vice versa, in the few cases where the settlement was originally built

Table 1. Residential area’s original ideals and the ideals that underlie current attempts to revitalize the settlements

with the intention to create ‘urban qualities’, great efforts are made in order to transform the settlement through the development of ‘landscape qualities’. Both cases neglect existing qualities, and the primary goal of the renovation and renewal seems to be the creation of something new and different. Transformation seems to be the key word in projects where a modernistic praxis to ignore the existing structures and the establishment of a tabula rasa is again at stake. Thus in several renewal projects the idea of ‘dynamic change’ seems to be a goal in itself. Perhaps the ‘modernity’ in today’s activities lies exactly here?

Notes

- 1 Claus Bech-Danielsen, *Renovering af almene bebyggelser*, 2004-2007.
- 2 Claus Bech-Danielsen et al., *Renovering af efterkrigstidens almene bebyggelser*.
- 3 Claus Bech-Danielsen and Michael Varming, *Smukkere renoveringer. Arkitektonisk kvalitet ved renovering af nyere boligområder*.
- 4 Claus Bech-Danielsen and Michael Varming, *Smukkere renoveringer. Arkitektonisk kvalitet ved renovering af nyere boligområder*.
- 5 22 overfrakker, facadeinddækninger, en eksempelsamling.
- 6 Niels Bjørn, *Arkitektur der forandrer*.
- 7 B. Hamilton-Baillie, *What is Shared Space?*
- 8 Le Corbusier, *La Charte d'Athens*.
- 9 Kresten Storgaard, *Erhvervene i byen – Byens erhverv*.
- 10 Claus Bech-Danielsen, *Moderne arkitektur – hva' er meningen?*
- 11 Hans Skifter Andersen and Hans Thor Andersen, *Den mangfoldige by*.
- 12 Paul Abrahamsen, *Den danske enkelthed. Et samfund og dets arkitektur*.
- 13 Tom Nielsen, *Formløs*.

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- Bjørn, N., ed. *Arkitektur der forandrer. Fra ghetto til velfungerende byområde*. [Architecture making a change. From ghetto to well-functioning urban.] Copenhagen: Gads Forlag, 2008.
- 22 overfrakker, facadeinddækninger, en eksempelsamling. [22 overcoats. A collection of examples.] Copenhagen: Bygge- og Boligstyrelsen, 1997.
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In Urban Space The Commercial Break Lasts 24/7

Pasi Kolhonen



Figure 1. “Outdoor advertising – commercial break around the clock.” A poster campaign promoting outdoor advertising. Helsinki 2009.

Introduction

No matter how unique we think our cities are, there is one feature that is similar in almost all of them – advertising. Nowadays we have become so accustomed to advertising that it is actually hard to recognize just how much of it is around. Urban spaces without some form of commercial messages are becoming progressively fewer in today’s Western cities. It can be said that the city-dweller’s field of vision is dominated by commerce.

Even though advertising is one of the most visible elements in our cities, there has been very little research done on it from the point of view of urban planning, architecture and aesthetics. Academic research on the subject has usually fallen under one of two major categories: either *market-oriented research* or *critical research*. These two lines of research typically approach the subject from opposing angles and there rarely is any dialogue between them. They both have very different viewpoints about the role of advertising in society.

The research done typically in economic sciences is very market-oriented. It usually regards advertising as a positive force in people’s lives. These studies tend to focus on the practical problems of marketing and they usually aim to develop better and more effective ways to use advertising.



On the other hand, the critical research usually made in the social sciences can have a very critical outlook on advertising and commercial culture in general. In these studies it is common to regard advertising as something that is manipulative and even deceptive – a negative force in society. It is obvious that these two major lines of research do not have much in common with each other.¹

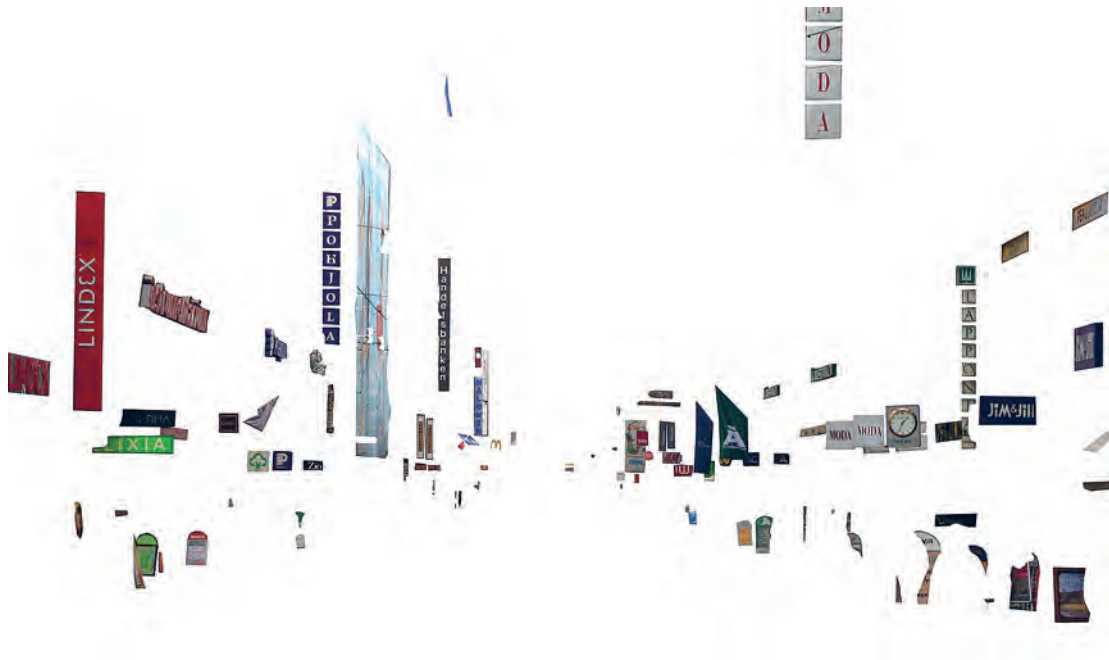
Also the advertising industry does its own kind of research. These studies usually centre on the impact of different advertisements on different focus groups. The impact of outdoor advertising, for example, is measured by how many people see a particular advertisement in any given time – or how many “hits” it gets. These studies would not pass as academic research. They are mainly marketing tools for advertising agencies and are used to convince potential clients of the effectiveness of their campaigns.²

The visual and social effect that advertising has on city space is an area of research that re-

quires more attention. It is important to provide city planners, city council members and architects with new tools both to recognise and to deal with this phenomenon. At present, the increasing advertising in cities might seem like an unstoppable force of nature. If left to its own devices, the advertising industry may eventually even start to dictate the way urban public space is used and how city politics is run. An alarming example of this is the case of the international advertising company JCDecaux in Helsinki, as described by Kaarin Taipale in her Phd thesis “Cities for Sale”.³

Public Space as Advertising Medium

Contemporary public space has become a profitable advertising medium. The attention of the city audience is being sold to advertisers in a similar fashion as column inches in newspapers and airtime on TV. The price of a given adver-



Figures 2 & 3. The first picture shows an ordinary view of the Aleksanterinkatu in the centre of Helsinki, while in the second picture of the same view everything apart from the advertising, signs and logos has been removed. All that remains is the blanket of advertising that covers the entire city.

tising spot varies according to how many people are likely to see it.

Photography can be used to demonstrate just how many advertisements can be found in our everyday environment. Photos of city centres can be processed so that everything apart from the posters, signs or logos is removed. All that remains is the blanket of advertising that covers the entire city centre. When these images are presented with ordinary pictures of the same location the amount of visual advertising becomes strikingly obvious. We may not even be consciously aware of it, but advertising is constantly present in our everyday lives.

The processed cut-out-pictures of different cities around the world are strikingly similar. The amount of visual advertising appears to be more or less the same regardless of where you are. This is a global trend and it seems to be growing.

A historical case study of the street Aleksanterinkatu in Helsinki shows how the explosive increase of advertising has occurred only after 1980s. Before that, the amount of outdoor advertising was growing at a rather constant rate. There are, of course, many factors that have influenced the dramatic change in that particular moment in history (e.g. advances in printing technology, freeing of markets, so-called “80s city-culture” in Helsinki), but the fact is that the extensive outdoor advertising we are now subjected to is rather a new phenomenon.⁴

How to Protect the Visual Environment?

Considerable effort goes into protecting the permanent elements of historic cities: many of the buildings, monuments, streets, and

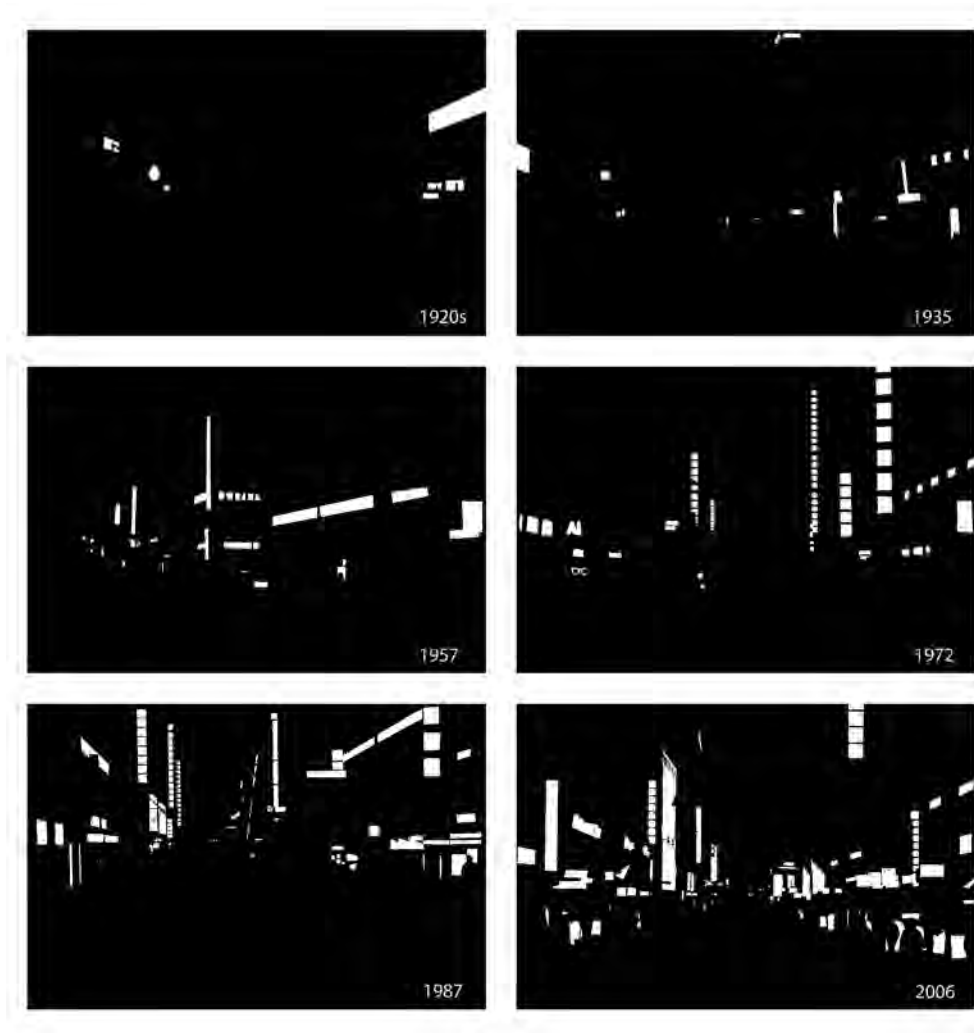


Figure 4. Cut out silhouettes of the Aleksanterinkatu advertising show how the exponential growth has occurred only during the last few decades. The original pictures have been selected from the archives of Helsinki City Museum in roughly 20-year intervals, starting from the 1920s and ending in 2006.

squares are being conserved and preserved. However, it seems that very little consideration is paid to control the amount and quality of advertising which is gradually taking over the city centres. The visual characteristics of living environments are hard to define, let alone protect.

Probably one of the reasons why the visual impact of outdoor advertising is not taken

very seriously is the inconstant character it has. Even though billboards and posters are always present in the city space, they are at the same time always temporary and can be easily changed. Only in selected places do advertisements actually make up city space to the extent that they are considered an important element of that place; for example, Times Square in New York and the Shinjuku area in Tokyo.

What sort of stance should be taken regarding outdoor advertising? The question is not simple by any means. Advertising is an essential part of Western cities. According to a 2011 study by the Finnish Advertising Council, 67% of Finns regard advertising as a positive thing in their lives.⁵ A city which has a lot of advertising placed within it is generally seen as lively and dynamic, whereas a city without it would appear to be some kind of relic from a former communist state. This kind of underlying way of thinking promotes advertising into some kind of engine of social good: advertising brings more business, which brings more profits, which brings more taxes, which brings more social services, which brings more well being and freedom. Obviously the reasoning is questionable, but no politician will risk taking up the issue and being labelled as the suppressor of economic growth.

Nowadays city planning is also seen as a part of political decision making, which (in its ideal form) should be based on informed argumentations and quantifiable variables. There is little room left for aesthetic considerations. However,

at least in Finland city planning is usually done by architects, and approaching problems from a visual position is in the core of their profession.⁶ There is a lot of potential aesthetic know-how in the city planning departments that is not being used.

It should not be impossible to make a reasonable set of rules for advertising in public spaces and to enforce it, providing there is a public interest in the issue. For example, the new shopping malls have very strict policies and guidelines regarding advertising in their interior. It seems that the free-for-all-advertising that we see now in city streets is not considered profitable inside the most commercial of spaces. The fierce competition eats away the power of an individual advertisement campaign and results in ever-growing set of gimmicks that we see as a blanket of mismatched advertising. With this kind of reasoning, some rationing of outdoor advertising should be welcomed, even by advertisers themselves. The only ones with something to lose from this would be the advertising agencies, who no longer could compete with each other with the most outrageous campaign.

Notes

- 1 Nando Malmelin, *Mainonnan lukutaito, mainonnan viestinnällistä luonnetta ymmärtämässä* (Helsinki: Gaudeamus, 2003), 176–178.
- 2 Anne M. Cronin, *Advertising, Commercial Spaces and the Urban* (Basingstoke: Macmillan, 2010), 24–34.
- 3 Kaarin Taipale, *Cities for Sale – How economic globalization transforms the local public sphere* (Espoo: Helsinki University of Technology, Centre of Urban and Regional Studies, 2009).
- 4 Pasi Kolhonen, "Kadun kuvat – visuaalisen kaupunkimainonnan muutoksia Aleksanterinkadulla," in *Seinät kertovat, Salomo Wuorio 150 vuotta -juhlakirja*, ed. Hilla Tarjanne (Helsinki: Gerda ja Salomo Wuorion säätiö, 2007), 222–259.
- 5 Mainonnan neuvottelukunta, *Kyllä kansa tietää, eli suomalaiset ymmärtävät miksi mainontaa tarvitaan* (last modified June 7, 2011), http://files.kotisivukone.com/mnk.kotisivukone.com/suomalaisten_suhtautuminen_mainontaan_tiedote_070611.pdf
- 6 Hanna Mattila, "Vuorovaikutteinen suunnittelu ja kaupunkisuunnittelijan esteettinen asiantuntemus", *Yhdyskuntasuunnittelu*, vol. 41:1 (2003), 55–56.

Continuation of a Planning Tradition: The Social Agenda of the “Functional City”

Konstanze Sylva Domhardt

The Congrès Internationaux d'Architecture Moderne (CIAM) from 1928 to 1959 was an unconventional working group and a complex laboratory of progressive ideas for the design of the city. Over three decades, CIAM united architects, town planners, artists, historians, sociologists and publicists.¹ Its writings on the ‘Functional City’ in particular were considered the core of modern urbanist theory. In 1952, almost two decades after the famous 4th congress on the ‘Functional City’ in 1933, CIAM published a book entitled *The Heart of the City: Towards the Humanisation of Urban Life*.² (Fig. 1)

Now planners, but also interested laypeople, held in their hands an impressive volume whose suggestive visual language and didactic text contributions addressed the design of the city centre and of urban public spaces and illustrated vividly the new strategy for analyzing and planning a city: focus on its social and cultural functions. This publication advocated a city space with new qualities that the urbanite would experience spontaneously, creatively, and comprehensively; a city space that would reflect

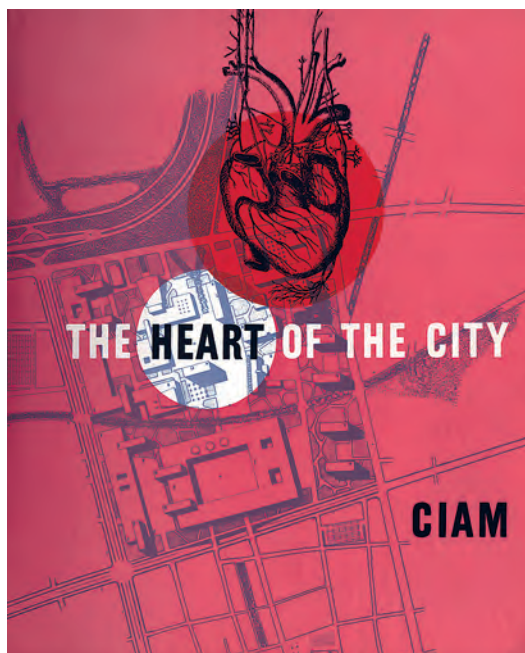


Figure 1. Cover of the CIAM publication *The Heart of the City: Towards the Humanisation of Urban Life*, by Jaqueline Tyrwhitt, José Luis Sert, Ernesto Nathan Rogers (London, 1952). © Ashgate Publishing Limited.

the social composition and intellectual heft of the people who used it. In the collage on the book's cover, the design for a modern city centre, the 'heart' metaphor, and the depiction of a human heart condense into a memorable cipher for the viewer. By defining a stable 'urban infrastructure' and designing 'fixed points' in the body of the city it was intended to produce an environment that fostered communal living. This "humanized environment", as CIAM called it, was emerging everywhere where the city was establishing the necessary preconditions.

The fact that the spearhead of prewar modernism turned the centre of the city into a topic for discussion in the early 1950s has not raised many questions previously; after all, its view of the city was seamlessly integrated into the comprehensive process of renewing society after the war. In that both issues involved reconsidering fundamental connections such as "the human being and space" or "the human being and technology," the sets of problems and answers were similar. Moreover, the sharp criticism expressed at the same time by younger planners of the organization's early premises—primarily the "Functional City"—fit in well with the assertion in the historiography of CIAM that there was a paradigm shift after the war. In fact, however, no such shift occurred. The conceptual phase of CIAM was completed with the end of the war. The integrative concept of the city presented by the organization in the early 1950s was not a product of the postwar period but was rather based on a theory that extended back to the 1930s.³ In the research on CIAM, it is often ignored that the organization never attempted to establish a consensus with regard to a model of a city. The congress delegates regarded the theoretical derivations of the "Functional City" as a methodological aid to organize the analysis of the city rather than as a blueprint for the city.

But it was not before the second half of the 1930s that the majority of CIAM representatives

shifted the focus of their interest in social aspects from single buildings and housing estates to the city as a whole. A view developed within the organization that clearly opposed a purely rational understanding of the city. In the run-up to the Second World War, CIAM members created new public urban realms that served as a social binding agent and hence a "civic landscape". This initiative gave way to a reform of the structure of the city at all scale-levels. CIAM's representatives discussed urban planning solutions that enabled urban functions to penetrate each other, to be expanded, and to be spontaneously rebuilt. The goal was not to separate residential areas, business areas, community and cultural centres, sports grounds, and parks in isolated zones, but to combine these forms of land use within one continuous city space and, furthermore, relate them to the context of its surroundings. The idea that an integrated city model had to be created that addressed social issues and weighed them against the backdrop of the rapidly changing society formed the core of CIAM's debates. Thus, the discussion of concepts for the city centre, the "heart of the city", became the primary task of urban planning. The parallels to the methodological approaches to the "Functional City" remain evident, however. The "Functional City" concealed the idea that proposals for improving living conditions could be derived from a thorough analysis of the city and that an ideal space can be created for every need. Conversely, it was assumed that the design of public spaces could affect the behaviour of residents of the city in a controlled way and could also trigger social interaction.

In order to serve social needs, CIAM members closely examined ideas and concepts of the American and European planning tradition and used historical models as references for their work. The central ideas of urban planning—such as the idea of the garden city, the idea of the neighbourhood, the comprehensive planning, and regional planning—that charac-

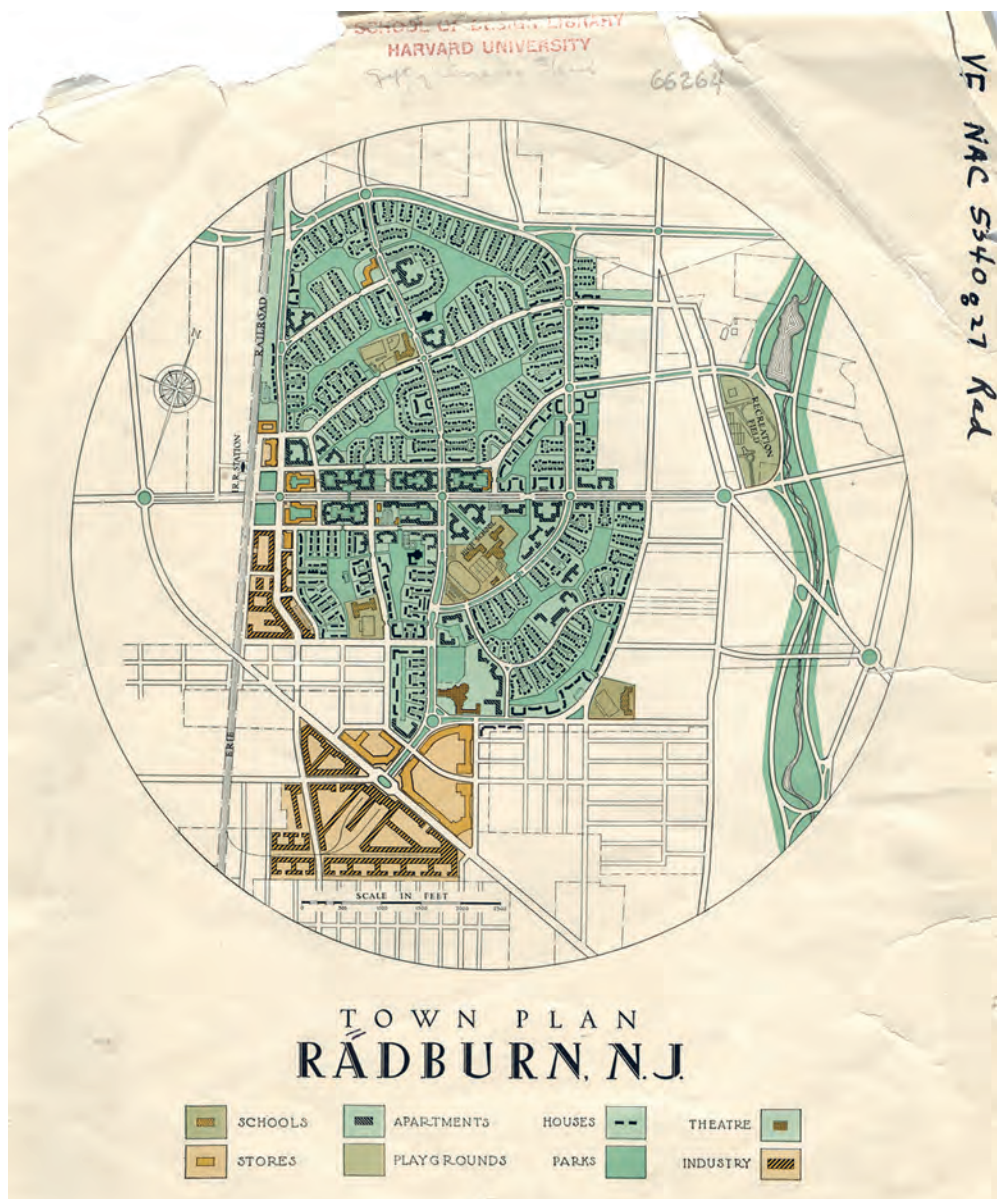


Figure 2. Extract from Clarence S. Stein's master plan for Radburn, N.J. (undated). Courtesy of the Frances Loeb Library, Harvard Graduate School of Design.

terized the evolution of an independent discipline of urban planning in Europe and North America since the turn to the twentieth century can be recognized as central components of the CIAM debates on the city. (Fig. 2)

If CIAM is understood not as a homogeneous intellectual movement but rather as a global network, and if one concentrates one's investigation—beyond work on the congresses—on the intense informal collaboration of



individual protagonists, many previously little known connections to pioneers of the planning profession can be shown, such as Patrick Geddes, Raymond Unwin, Patrick Abercrombie, Clarence Samuel Stein, and Lewis Mumford, with whom individual members of CIAM had close contacts.

Parallel to this interpretation of existing city models, the members of CIAM distanced themselves from the asceticism of the visual that the congresses had imposed during the first decade of their existence. In general, the publication for CIAM 8 *The Heart of the City* (1952) is marked by an associative visual idiom that expresses something that was scarcely present in the debates of the congresses. Here, the different identities of the city, including its historical one, are openly addressed. The drawings and photographs record, in the style of a collage, various impressions of urban life. Graphical structures overlap and intersect, change in scale, and seem to offer an overall picture in the viewer's eye only for a brief moment. (Fig. 3)

Figure 3. Attributes of The Core: The Human Scale – Attributes of the Core: Spontaneity, congress publication *The Heart of the City*, 1952. © Ashgate Publishing Limited.

For its work on urban planning, CIAM did more than take up historical concepts. In its discussions in preparation for and during the congresses and in publications, the historical city is repeatedly presented as a concrete reference. The city was definitely regarded as a living environment that develops over time and gradually gains its specific characteristics. It was by no means coincidence that a drawing by Saul Steinberg of the Piazza San Marco in Venice frames the book for CIAM 8. (Fig. 4)

References to the urban planning qualities of the Piazza San Marco could be found in the theoretical contributions of CIAM members since the early 1940s. For example, Ralph Tubbs mentioned the Piazza San Marco as a reference for his design “The Heart of the City” in the exhibition *Living in Cities* (1940) and commented

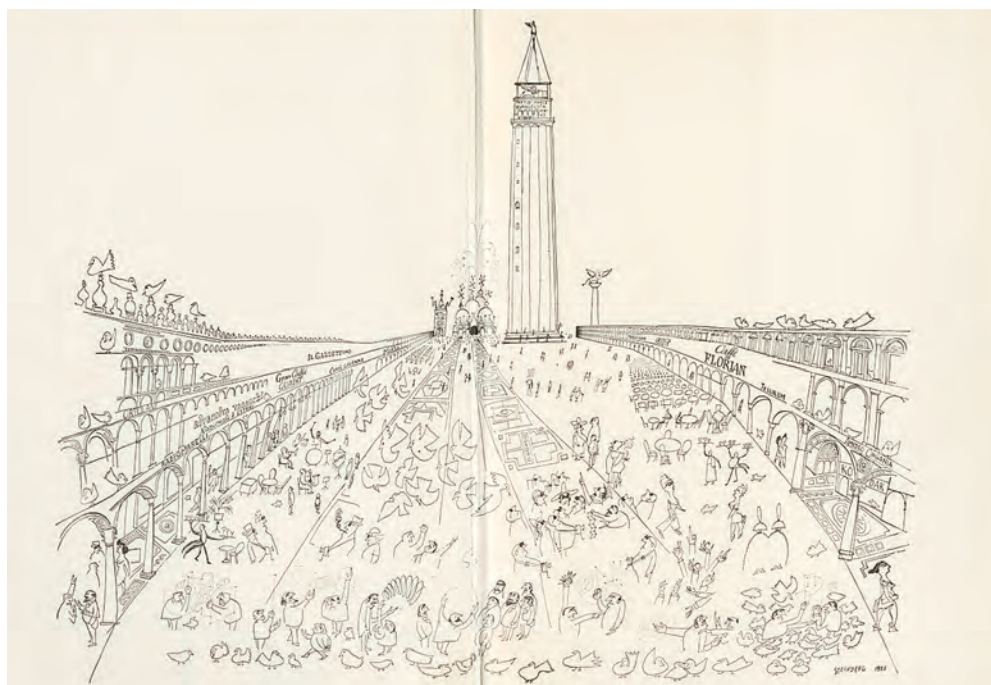


Figure 4. Saul Steinberg, «Piazza San Marco, Venedig», 1951, congress publication *The Heart of the City*, 1952. © Ashgate Publishing Limited.

on an aerial photograph of the Piazza with the words: “Perfectly balanced but informal grouping of buildings and spaces—expression of the free spirit.”⁷⁴ In Maxwell Fry’s book *Fine Building* (1944), the explanation of an illustration of the Piazza San Marco reads: “Piazza San Marco, Venice, for the grandeur and nobility of a connected architectural setting for a city centre.”⁷⁵ In 1951 Jaqueline Tyrwhitt chose the Piazza San Marco as the model for her design of a city centre, “The Heart of the Town,” in the Town Planning Pavilion of the Festival of Britain and summed up its unique spatial experience in these effusive words: “Passing under a heavy arcade suddenly the bright piazza opens before one’s eyes, an explosion of space and light; an oasis of space maintained against the pressure of surrounding life by a wall of uniform and hence inviolable facades.”⁷⁶ At CIAM 8 (1951)

there was little discussion of the specific qualities of the Piazza San Marco for architecture and urban planning. In the meanwhile it had become the epitome of a place for urban community, so that the president of CIAM, José Luis Sert, could exclaim enthusiastically yet noncommittally: “We all admire the Piazza San Marco. It is one of the most wonderful places in the world.”⁷⁷ The Piazza San Marco became the model for a well-proportioned urban square, a symbol of a stimulating collective urban life and of a place for the community. (Fig. 5)

The questions raised by CIAM are of great relevance to the context of current discussions in planning and building conservation theory concerning the quality of urban life and the mix and density of urban functions. While the CIAM debate on public space – the recognition of its social and cultural dimension – is



Figure 5. The Piazzetta, Venice, page from the congress publication *The Heart of the City*, 1952. © Ashgate Publishing Limited.

understudied, it shows precisely the view of the subject that today's progressive urban planners are propagating. The challenge to re-centralize urban areas acquires new importance not only among historians of urban design but also among representatives of other disciplines, such as architecture, sociology, and, above all, building conservation.

Notes

- 1 For a detailed description of CIAM's activities, see Martin Steinman, *CIAM: Dokumente 1928–1939* (Basel/Zurich, 1979), Eric Mumford, *The CIAM Discourse on Urbanism, 1928–1960* (Cambridge, Mass., 2000), and Konstanze Sylva Domhardt, "The Heart of the City," *Die Stadt in den transatlantischen Debatten der CIAM 1933–1951* (Zurich, 2012).
- 2 Jaqueline Tyrwhitt, José Luis Sert and Ernesto Nathan Rogers (eds.), *The Heart of the City: Towards the Humanisation of Urban Life* (London, 1952).
- 3 The impact of the emigration and the transatlantic exchange of ideas on CIAM urbanism in the 1930s and 1940s is discussed in Domhardt 2012.
- 4 Ralph Tubbs, *Living in Cities* (Harmondsworth, 1942), 35.
- 5 Maxwell Fry, *Fine Building* (London, 1944), Plate 49.
- 6 Jaqueline Tyrwhitt, "Form of Exhibition", RIBA British Architectural Library Drawings & Archives Collection, London (Tyl/14/9).
- 7 Tyrwhitt et al., *The Heart of the City*, 76.

Flexibility of Use – Two Architectural Landmarks in Vienna from the Early 1960s

Wolfgang H. Salcher

The first major World's Fair after World War II in Brussels in 1958 stood for modernity and an optimistic believe in the future. Nowadays only the Atomium and few national pavilions remind us of the many impressive architectural landmarks from that time. One of the last is the Austrian pavilion. Made of glass and 290 tonnes of steel, it symbolized the dawn of a new era - transparency and openness.

The exceptional construction, a 41 x 41 meter box resting on just four pillars, was planned by the architect Karl Schwanzer (1918-1975), who also became famous for his architectural icon, the BMW-Tower (1973) in Munich. Schwanzer's motto was, "Minimum effort for maximum effect." He also designed the shared pavilion of the OECD and the Council of Europe at the Expo 58 in Brussels with its 75-meter unsupported roof.

Due to the success of the exhibition the Austrian pavilion was not demolished but dismantled and re-assembled in a Vienna park. In 1962, the pavilion was slightly modified and inaugurated as the Museum of Modern Art. It was then renamed "20er-Haus" referring to the 20th century art. The special experimental atmosphere at the "20er-Haus" influenced Austria's cultural life for nearly 40 years.

In 2001, the protected building lost its function and stood empty for several years. From 2008 to 2011, the "20er-Haus" was restored and intelligently extended. On the one hand with a large two-level basement and underground courtyards and on the other hand with a well positioned 22 meter high office-tower so that the floor space was quadrupled. Like some other museums, e.g. Louvre's subterranean plaza under the glass pyramid (Paris, 1989), the Rietberg Museum in Zurich (Switzerland, 2007), the underground Visitor Center of the Joanneum Museum in Graz (Austria, 2011) and the Städel art museum in Frankfurt am Main (Germany, 2012), the architect in charge used the underground area as the extension.

The "20er-Haus" with its open ground floor is an example of modern flexible architecture which is still up to date half a century later. The main aim prior to the planning and refurbishment phases was that the building remained in keeping with the original property, one of Austria's greatest spaces of the 20th century. The chief concern was to maintain the quality of space and the ambience of lightness.

The pavilion, whose innovative facade consists almost only of glass, stands in the tradition of e.g. the Bauhaus (1926, Dessau), the Maison-



Figure 1. Steel construction of the „20er-Haus“ during refurbishment in 2009.
© BDA Austria, B. Neubauer.



Figure 2. Cover sheet of Thermolux catalogue (1962) showing the „20er-Haus“.
© K.-H. Wipperfeld.

de-Verre (1932, Paris), the Glaspalais (1935, Heerlen, Netherlands), the Van-Nelle-Factory (1931, Rotterdam), the Philip-Johnson-Glass-House (1949, New Canaan, Connecticut), Mies van der Rohe's Farnsworth-House (1951, Illinois) and the Crown-Hall (1956, IIT, Chicago).

The glass walls of the "20er-Haus" emphasize the idea of free space and its extension beyond the boundaries of the interior, like Ludwig Mies van der Rohe planned for the "Neue National-galerie" in Berlin (1968). The interior room's impression in both buildings is strikingly similar.



Figure 3. Thermolux facade of the upper floor of the „20er-Haus“ after restoration work.
© BDA Austria, B. Neubauer.

In 1962, the almost 6 meter high facades in the upper floor of the “20er-Haus” were entirely built up using Thermolux-glass. These insulating glass elements of translucent capillary panels with additional light-diffusing inlays protect against UV radiation and give the interior a splendid, breathtaking appearance. The capillary glass creates a very special interior atmosphere without glare and shadows. The reality looks much like a computer rendering.

Already in 1939, a translucent Thermolux glass, a new type of glass at that time, imported from Italy, was used at another Museum of Modern Art, at MoMA’s “International Style” facade (1939; designed by Philip Goodwin and Edward Durell Stone) in New York. The facade of the large exhibition gallery of architect Alfonso Eduardo Reidy’s Museum of Modern Art (MAM) in Rio de Janeiro was made of Thermolux glass in 1955.

After much research it was possible to retain the important bright “light room” at the “20er-Haus”. However, it was important to develop the general specifications at an early stage as the project was being done retrospectively. Analysis and documentation for the building as basis for the conservation assessment were undertaken by the architect and the Institute of Conservation and Restoration of the University of Applied Arts Vienna, who was previously involved with the investigations at the Villa Tugendhat in Brno (Czech Republic). One of the numerous results of the examination at the “20er-Haus” were the different colour schemes of the metal surfaces at Brussels and Vienna.

The exhibition space of the one-room museum “20er-Haus” consists of two storeys around an open square centre space lit by a wired glass roof light. Thus, like at the Frank Lloyd Wright’s Guggenheim Museum in New York (1959), there



Figure 4. „21er-Haus“ in 2012; Right the new six-storey administration tower.
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are clear sight lines from one floor to the other. By means of new conservation and architectural solutions the original building was able to retain most of its qualities whilst still fulfilling new standards concerning fire protection, security, accessibility, building physics, energy saving, HVACR (heating, ventilation, air conditioning and refrigeration), statics, floor load capacity, asbestos abatement etc. For instance due to fire safety regulations it would have been necessary to separate the two open floor spaces. However, by using special automatic smoke and fire curtains, which are hidden in the ceiling, the interior could be successfully preserved.

The „20er-Haus“ shows how past and future can be brought together. Arriving in the 21st century, it is now called „21er-Haus“. *“At first sight it is hard to notice that anything has changed. Everything looks like it was before,”* the Press wrote at the inauguration.



Figure 5. The original curtain wall facade of the former Hoffmann-La-Roche building. Today „Hotel Daniel“, after restoration in 2012. © BDA Austria, W. H. Salcher.

Only 250 meters away from the “21er-Haus”, close to the baroque Belvedere Palace and Vienna’s brand new Central Station district, is another architectural landmark with a changing history. 1960-1962, the architect Georg Lippert (1908-1992) built a modern laboratory and office building in Vienna for the Swiss global company, Hoffmann-La-Roche. Like the Lever House in New York (1952) and Arne Jacobsen’s SAS Royal Hotel in Copenhagen (1960), the detailed building block seems to be “cut with a knife”. This reinforced concrete building with its early curtain wall facade – the Pirelli Tower in Milan was inaugurated two years earlier - is also a good example of flexible use.

According to Le Corbusier’s “Five Points of New Architecture”, the “open floor plan” of the rectangular box, consisting of seven floors (17 x 34 meter), allows maximum freedom in configuring the floor space. 3 x 7 reinforced circular concrete columns (“pilotis”), which are set back 60 cm from the “free facades”, provide the structural support.

After several tenants, including Motorola, the building stood empty for some years. In 2008, the facade, causing thermal problems for an office building, should have been changed to a thermally insulated new curtain wall facade with the same detailed appearance as the original one. However, due to the global financial crisis the owners changed several times. The current owner maintained the original aluminium-glass-facade and transformed the office building into a “Smart-Luxury”-hotel. “Hotel Daniel” opened at the end of 2011. Indeed, the function changed, but the building and curtain wall was preserved. In this case, the change of function seemed to be a good way to preserve the original curtain wall facade. It was no longer possible to lease the office floor space due to the lack of market demand for 1960s offices also because of required improvements concerning thermal conditions, materials, window blinds etc. Furthermore, it was a big challenge - as al-

ways with protected buildings - to fulfill the fire protection requirements without destroying the original material and appearance. In order to prevent fire flashovers and as a fall protection a special parapet construction inside the rooms away from the glass was designed.

The design of a building has a lot to do with sustainability. Only good designs have future prospects. For that reason the planning and design work of a building, in particular by the architects and conservators, is essential for long term and high-quality strategies for both, original and newly added parts. Architecture is so to speak a permanent exhibition. Each of the two buildings described before is a source to be kept in a state of flux and at once a part of the jointly built archive of architecture.

Both examples, the “20er-Haus” and the “Hotel Daniel”, show that Modern architecture buildings are, with the help and support of an engaged architectural team, up to the challenges of our time and the future. And therefore these buildings are more and more appreciated.

20er-Haus, Arsenalstrasse 3, Vienna, Austria
Architect: Adolf Krischanitz ZT GmbH

Hotel Daniel, Landstrasser Gürtel 5, Vienna, Austria

Architect: Atelier Heiss Architekten

Monuments and Non-monument Maintenance and Transformation in the Genoa Fair Ground

Carolina Di Biase
Francesca Albani



Figure 1. The seafront of the Foce district before the construction of the Fiera del mare.



Figure 2. The area of the Foce district during the building of the Trade.

Introduction

The trade-fair facilities created in modern times within specially designated city areas seem to share the fate of the structures created for the great Expositions of the nineteenth and twentieth century, of which only the odd pavilion remained as a symbol of the event and its legacy to the city. Though comprising structures that are far from temporary in nature, trade fairs areas quickly became the object of extensive reconversion and redevelopment.

In Milan, this was the case with City Life, and in Genoa – a city bound between hills and sea – the redesign of the trade fair zone has proceeded piecemeal along the length of the waterfront; the fate of a number of existing buildings is uncertain. Originally, the very symbol of the trade fair zone was the Palasport, but now the new Blue Building is a candidate for that role. As for the Palasport itself, new uses are being proposed and tests carried out to evaluate the state of the structure.

Construction and Transformation

Designed in the late 50s by Luigi Carlo Daneri¹, the city's trade fair district stands at the mouth of the river Bisagno², and would radically change the layout of what had been a small stretch of beach used by fishermen, altering not only the morphology and use of the area but also its very appearance as a littoral. Daneri's design defined the overall external distribution of the volumes and the design of the interior spaces; subsequent competitions were to be held for the actual architectural form of the buildings.

Three structures followed an overall horizontal development and ran parallel to the shoreline: buildings "B", "C" and "D". At the far western end was to be the Ansaldo building, further Conference Hall and Auditorium, and at the eastern end the Palasport or Pavilion "S", which was to be the fulcrum of the entire composition, as will be seen later. Since its very

inception, the Genoa Trade Fair area has seen the active participation of renowned architects and engineers. As regard the main pavilions, the square-floorplan Building "D" in reinforced concrete, was designed by the brothers Vito and Gustavo Latis³; Building "C" was designed by E. Salzano, M. Vitale, D. Del Vecchio; Daneri designed the service building and the ticket offices. Furthermore, pavilions for the major public and private Italian companies of the day were designed by G. Pulitzer (FIAT Building), G.L. Giordani (Building "M", Montecatini) and Angelo Mangiarotti (IRI Building, built in 1963)⁴; all of these designers were international figures in the worlds of urban planning, architecture and structural engineering.

However, in the sixty years since it was first created, the layout and the buildings of the original area have undergone numerous changes. Amongst the reasons for this uninterrupted process of change – either through ordinary and special maintenance or radical substitu-

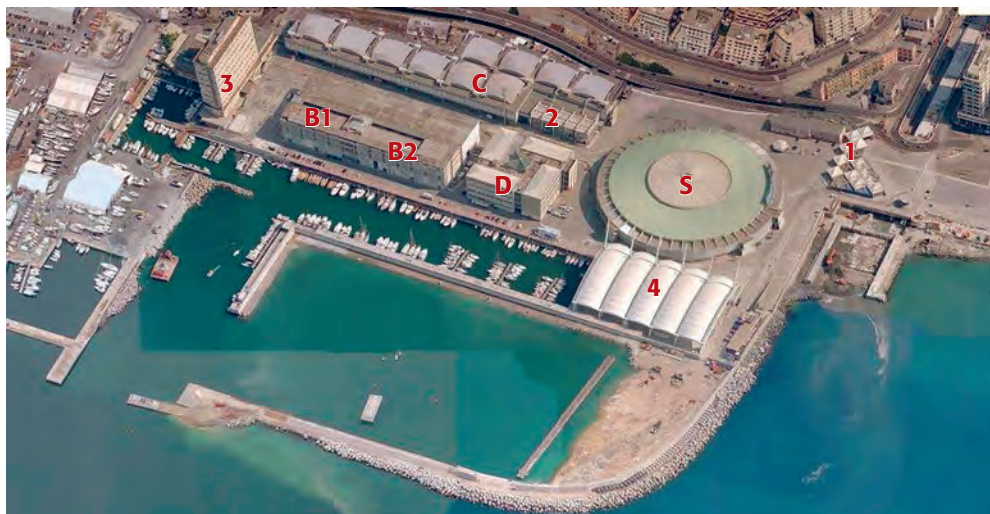


Figure 3. Genoa Fair District, 2004.

1- Service building and ticket offices by Luigi Daneri; 2- Pavillon FIAT, G. Pulitzer (1960-63); 3- Conference Hall and Auditorium; 4- Marina tensostructure (2002); Buildings "B1" by Latis brothers and "B2" by Natali Minoia e Spina (1970); Building "C" by E. Salzano, M. Vitale, D. del Vecchio; Building "D" by Vito e Gustavo Latis; Building "S" Palasport by F. Sironi, L. Martinoia, L. Finzi, R. Pagano (1960-63).



Figure 4. Area of Genoa Trade with Blue Pavilion by Atelier Jaean Nouvel and the new sea-front, 2010.

tion/replacement – were: the ageing and decay of steel and concrete structures, brought about by exposure to the sea air; the need for new exhibition spaces that meet new criteria; and (more recently), the need to stimulate the economic development of the trade fair zone. One of the cores of the city’s economic life, this area is perfect for “attracting new activities related to ‘business tourism’” – that is, conference facilities, etc⁵.

One of the first major transformations was the steel-frame structure added in 1970 to Building “B” (design: Natali Minoia e Spina) in order to increase the exhibition floor space by 10,000 m². More recently the buildings B₁ and B₂ were demolished to be replaced by the “Blue Building” designed by the Ateliers Jean Nouvel.

Earlier, in 2001, the abolition of the public finance body IRI led to the Pavilion designed by Mangiarotti being “silently” demolished. Defined by the local press as “A Midsummer Night’s Crime”, this was followed in 2002 by the erection of a tensostructure along the quay-side in front of the Palasport⁶. The former IRI Pavilion consisted of a rectangular white steel structure, with a wide, though very light roofing, standing on four pillars in the shape of the frustum of a cone. The open basement housed an exhibition illustrating the processes used in extracting and working the steel used in the shipyards.

The first stage in the construction of the Blue Building was the demolition of the “B” Pavilion, which began on 9 January 2009, television broadcasting “live” the work of the 26-metre hydraulic grip necessary to pull apart “the parts of the structure in reinforced concrete”. With two large spaces facing towards the sea and covered by a mirror that “suggests the surface of the sea itself”, the new structure has almost double the exhibition floor-space of its predecessor. Its roof, observed from the elevated road that runs alongside the city, looks like an immense blue rectangular mirror reflecting the blue of the sky. It creates a spectacle of dynamic, multicoloured and moving reflections that establish the building as a new symbol of the trade fair area.

The Marina exhibition area, created in 1988, was also subsequently expanded in successive phases and now can house more than 450 boats. The New Marina was officially open on occasion of the International Boat Show in 2006.

The Life and Future of an Unintentional Monument

The fulcrum of the Trade Fair District, the Palasport has for years been a symbol of a cultural climate in which people looked beyond the greyness of the post-war period towards the fu-

ture⁷. The competition for its design was called in 1960. Two designs came equal first: that by a group of young professionals (architect Lorenzo Martinoia and engineers Leo Finzi and Remo Pagani) coordinated by Franco Sironi; and that which Daneri had designed in collaboration with Pier Luigi and Antonio Nervi. For reasons of cost, it was the former which would actually be built, with tenders for construction work being invited the following year and building beginning in September 1961.

Second in the competition came the design by Mangiarotti, Morassutti and Favini, which envisaged an elliptical-shaped tensostructure with internal ribbing supporting the metal roof.

The design by Sironi group⁸ was quite explicit in its reference to the USA Pavilion which Edward Durell Stone had created for the 1958 Brussels Expo, and to the works and studies of Frei Otto, Fritz and Cornelius⁹. Completed in 1963, the Palasport was given a very favourable review by the architect and art historian Bruno Zevi, whilst in the public eye the building would gradually establish itself as a symbol of renewal and progress. To use the well-known definition coined by Alois Riegl (1903), the Palasport quickly became an “unintentional monument”: its size, circular shape and innovative structure,

plus the very events held in and around it, soon made it a very well-known building. *“At the time the design was drawn up (1961), the existing technical and scientific literature had perhaps even less to say about the procedures for investigating the static and dynamic performance of the tensostructure”*. This is what Finzi himself had to say about the difficulties encountered when making technical calculations, particularly those concerning the effects and intensity of the wind in a site that was heavily exposed thereto. Hence what were of decisive importance here were the aerodynamic tests carried out on models. These were in part a complement to, in part a substitute for, structural calculation¹⁰.

The circular structure of 160 metres in diameter was roofed by a ring-form tensostructure formed of a double weave of tensed steel cables anchored to a ring in reinforced concrete. The reinforced concrete structure itself was made up of 47 pairs of columns cast on site. Organized radially around the circular structure, these supported a series of prestressed reinforced concrete cantilevers, which themselves projected 14 metres outside the ring of pillars and 22 metres towards the centre. The defining feature of the Palasport roof is the central “basket form”. A 10.6-metre-high rotational

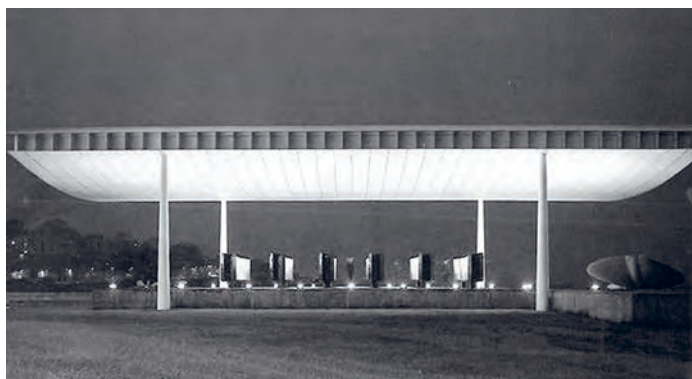


Figure 5. IRI Pavilion by Angelo Mangiarotti, 1963 demolished in 2001 and replaced by Marina Tensostructure.



Figure 6. Building “B” before demolition (2009).



Figure 7.
Palasport, the
Boat Show.

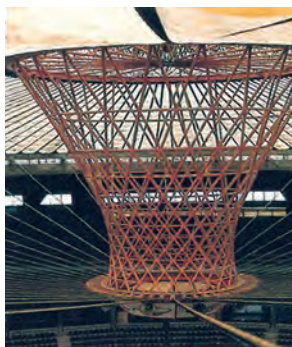


Figure 8.
Tensostructure,
central basket.



Figure 9. Decay
in the external
reinforced-con-
crete structures:
rust spots, crack-
ing, delamina-
tion, spalling.



Figure 10. Visible
traces of the con-
tinual programme
of repairs.

hyperboloid made up of welded tubes linked by flat components forming upper and lower rings, this would become the most characteristic visual feature of the Palasport. The fate of the Palasport is in part determined by the uses which its size makes possible. Over time, work on structural assessment and repair has had to fit in with the timetable of events housed. A very expensive programme of maintenance provides systematic cover for all its structures, having an essential influence upon the working life of the building¹¹.

Structures and surfaces in reinforced concrete have been repaired; the current state of the tensostructure has been evaluated and the roof repaired. There have also been also measures to bring the structure up to current safety standards (addition of external staircases, 1995). Such norms, above all with regard to fireproofing, have led to the substitution of some components in the roof and facades¹². At a cost of around 3%

of the value of the structure, the highly effective programme of maintenance would have as its main objectives to keep it functional and to counteract the effects of the aggressive external environment; in terms of existing norms and regulations, this environment is to be classified as “XSi” (involving “exposure to salty sea air”)¹³. Now recognized as a “multifunctional structure”, the Palasport is the object of a programme of redevelopment that aims to “increase the uses to which it is put. Along with its usual exhibition role, it will also house sporting events, conventions and theatrical performances”.

Before this programme is put into effect, engineers and architects from the Politecnico di Milano have carried out a first inspection of the reinforced concrete structures, damaged by the combined effects of carbonation and chlorides upon the outside, in order to assess the state of the structures themselves¹⁴.

Notes

- 1 Ligurian-born, Luigi Carlo Daneri (1900 - 1972) was an architect, engineer and urban planner who designed various important projects in Genoa in the interwar period and during the post-war reconstruction right up to the 1960s. He was linked to Italian Rationalism and was a member of the CIAM.
- 2 Luigi C. Daneri, *Fiera internazionale di Genova. Il volto architettonico* (Genoa: Ed. Sigla Effe, 1960).
- 3 Maria V. Capitanucci, Vito e Gustavo Latis. *Frammenti di una città* (Milan: Skira 2008).
- 4 Bruno Morassutti, "Padiglione IRI per la Fiera del Mare di Genova," *Edilizia moderna*, no. 82-83 (1963): 166.
- 5 In 2004 the Board of the Trade Fair Body envisaged an investment of 42.9 million euros, co-financed by the Genoa City Council, the Genoa Provincial Authority, the Region of Liguria, the Genoa Chamber of Commerce and the Port Authority.
- 6 The design is by Grattarola Associati & Partners. See, Andrea Bigotti, "Una grande vela si staglia sulla Marina della Fiera di Genova," *Prisma*, no. 77 (2002): 33.
- 7 Renato Severino, "Palazzo dello Sport - Esposizioni a Genova", *L'Architettura Cronache e Storia*, no. 105 (1964): 160-163.
- 8 "Palais des Sports de Gênes," *L'Architecture d'aujourd'hui*, no. 116, (1964): 36-37; "Suspension Roof frees arena from column obstructions", *Architectural record* (June 1964): 185; "Sport- und Ausstellungshalle in Genua," *Bauen und Wohnen*, no. 10, (1965): 380-383.
- 9 Bernard Fritz, "Radial vorgespannte, stählerne Stabhängewerke und ihre Verwendungsmöglichkeiten," *Der Stahlbau*, no. 5 (1958); W. Cornelius, "Die statische Berechnung eines seilverspannten Daches am Beispiel des US. Pavillons auf der Weltausstellung in Brüssel 1958," *Der Stahlbau*, no. 4 (1958); Frei Otto, "Die Raleigh Arena," *Bautechnik*, no. 10 (1951).
- 10 To test the performance of the roofing, against the action of the wind, a 1:140 scale model of the entire building was made in wood and plaster and tested in the wind tunnel at the Istituto di Aeronautica of the Politecnico di Milano. A 1:10 scale model of the basket-form central body was tested to the point of collapse in the laboratory of the Istituto di Scienza delle Costruzioni at the Politecnico di Milano. See Leo Finzi, Giulio Maier, "La tensostruttura del Palasport di Genova," *Costruzioni metalliche*, no. 2, (1964): 61-73.
- 11 See the accounts left by some of the designers themselves, reviews, magazines and books of the day, the archives of the body running the Trade Fair. The data regarding the techniques and materials used – subsequently maintained or replaced over time – could then be profitably compared with the information gleaned from new analyses.
- 12 Paolo Righetti, "30 anni dopo," *Modulo*, no. 231, (May 1997): 366-371; Daniela Pittaluga, "Mantenere il contemporaneo: 30 anni di manutenzione al quartiere fieristico di Genova," *Ripensare alla manutenzione: materiali, progettazione, materiali, tecniche per la cura del costruito* (Padua: Edizioni Arcadia Ricerche, 1999): 623-635.
- 13 UNI EN 206-2006 and UNI 11104:2004 classify 6 categories of exposure for structures in reinforced concrete.
- 14 "Il Palazzo dello Sport di Genova: un caso di studio. Le indagini degli architetti e degli ingegneri," in *Il degrado del calcestruzzo nell'architettura del Novecento*, ed. Carolina Di Biase (Santarcangelo di Romagna: Maggioli, 2009), 407-475.

Garden Pavilions: Copies Conformes

Ana Carolina Pellegrini



Figure 1. Rietveld's Pavilion floorplan (Puente, *Pavilhões de Exposição*, 122) and external view from the Rietveld's Pavilion 2010 reconstruction, Otterlo. Sergio Marques, 2011.

"Forget the original, just get a good copy". That is one of the many provocative statements in Abbas Kiarostami's film *Copie Conforme* (Certified Copy), leading the viewer to reflect upon issues such as the authenticity and originality of an artwork. Demonization of the copy is avoided by arguing that a good one leads us to the original, and in so doing certifies its value. This is a controversial issue both in the arts and in architecture. With architectural plans becoming more complete and accurate since the Renaissance and the advent of photographic records, replicas and reconstructions are increasingly common. The validity of this practice is challenged by many people who are concerned about the possibility of falsification of history through the extemporary materialization of a design, and the accusation of "intent to deceive" has hung over such operations since the time of Ruskin.

The most famous modernist reconstruction is probably Mies van der Rohe's Barcelona Pavilion. It has at least one important precedent: the replica of L'Esprit Nouveau Pavilion, built in Bologna in 1977. Yet there is a fundamental difference between the two: while Le Corbusier's pavilion was rebuilt outside its original context – next to the Grand Palais in Paris – the German-Catalan one was rebuilt "*com'era dov'era*" – which seems to have been crucial to its critical success.

This paper, however, focuses on less known pavilions by Gerrit Rietveld (1955) and Aldo van Eyck (1966), which share the particular features of having been built in the same Dutch park – Sonsbeek – and of having both been reconstructed a posteriori, at different times, in the Kröller Müller Museum Sculpture Garden in Otterlo, the Netherlands.



The Gerrit Rietveld Pavillion (1955, 1965, 2010)

Designed for the Third International Sculpture Exposition in Sonsbeek Park, the pavilion by Gerrit Rietveld (1888 -1964) was conceived as a temporary structure. Its neoplastic composition defines an area of approximately 144 m² and dissolves into space through the fluidity between exterior and interior. The nature of the project freed the architect from the need to partition or isolate the spaces from each other. The materials used for the walls were hollow concrete blocks – which shared the task of supporting the roof with a structure made from pieces of wood and metal angle sections – and glass. The same wall materials were used to build the sculpture plinths that spread throughout the building like small pillars.

The building's simplicity and quality at the time was so impressive that interest in its reconstruction was awakened ten years after it had been dismantled, less than a year after Rietveld's death. The reconstruction site in the Kröller Müller Museum Sculpture Garden was selected by the architect himself and the pavilion was reopened on May 8, 1965, exactly as it had initially been conceived, using the materials and structural systems suitable for a temporary building. Reassembled outdoors without any kind of adaptation, the pavilion was listed as a Dutch cultural heritage building, but suffered from the ravages of time.

Figure 2. On the left: the 1955 version of Rietveld's Pavilion, Sonsbeek. (Ponte, Pa-vilhões de Exposição, 120) ; on the right: external view from the 2010 Rietveld's Pavilion reconstruction, Otterlo. Sergio Marques, 2011

By 2009, the building was in a critical condition: the roof and floor were leaking and there were signs of serious structural wear. The decision was therefore taken to demolish the building and construct it again.

After a detailed and in-depth survey and research, the building works fell under the remit of the Dutch National Buildings Agency. The pavilion was carefully dismantled and rebuilt according to the 1965 designs, but on this occasion the architect supervising the project – a former colleague of Rietveld, Bertus Mulder – decided to adapt the building for permanent use.

The undertaking began in January 2010, using contemporary materials but retaining the appearance and textures proposed by Rietveld. The hollow ceramic blocks were no longer available on the market and had to be made especially for the building. The foundations were completely reworked to guarantee stability, the roof slopes and weatherproofing were revised, while the floor was raised above the ground and provided with wheelchair access.

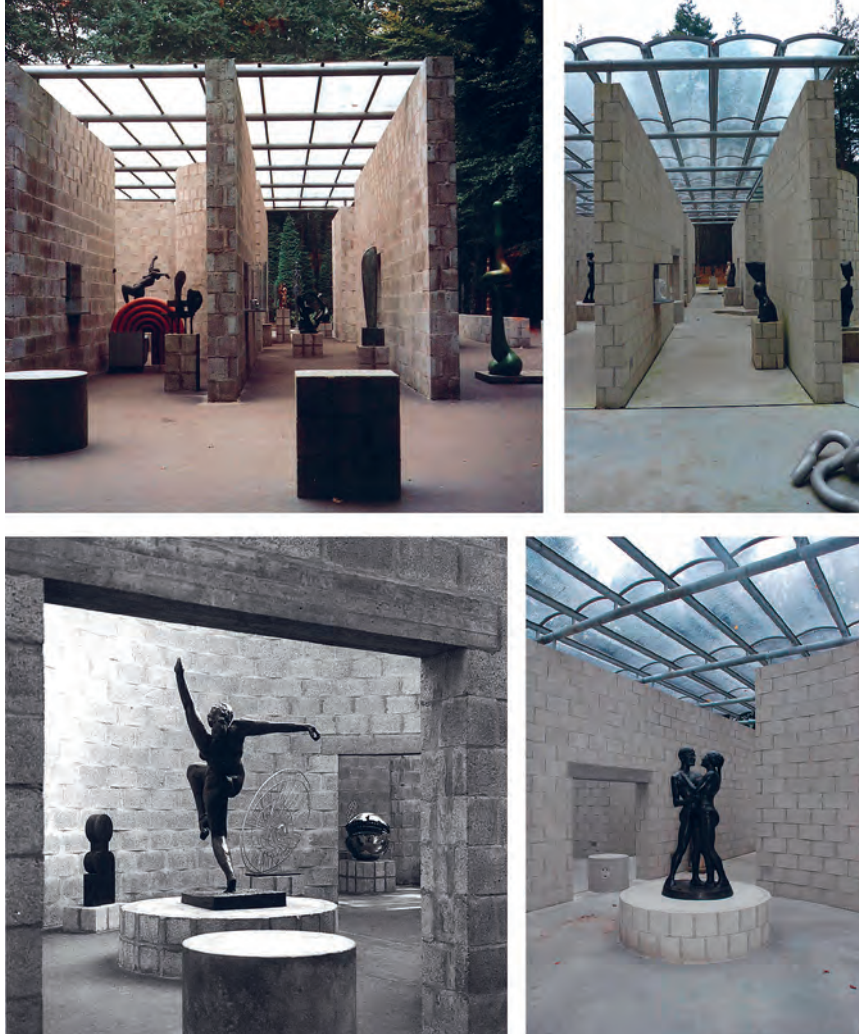


Figure 3. Comparisons. Comparing the roofs: above on the left: the 1955 version of Rietveld's Pavilion, Sonsbeek (Ligtelijn, Aldo van Eyck, Works, 137). Above on the right: Rietveld's Pavilion 2010 reconstruction, Otterlo, Sergio Marques, 2011; Comparing the sculptures of the "same" place: below on the left: "La joie de vivre", by Rik Wouters; below on the right: the lovers by Joseph Mendes da Costa.

The third version of Gerrit Rietveld's Pavilion was completed in September 2010 and the building opened under the care of the Dutch Government Buildings Agency.

As the photographs published on the Kröller Müller website show, the museum administration organises a busy cultural programme and often involves the pavilion space being used for purposes other than the display of sculpture, such as literary events, classical and popular music performances and even small dance pres-

entations, confirming its appropriation by the community.

The Aldo Van Eyck Pavilion (1966, 2006)

Aldo van Eyck (1918 – 1999) devised his pavilion for Sonsbeek in 1966 for the 5th International Sculpture Exposition. Nature itself played a part in the design composition, in which the boundaries between inside and outside were not de-



Figure 4. On the left: Aldo van Eyck sketch, indicating the position of each sculpture (Ligtelijn, Aldo van Eyck, Works, 134); on the right: external view from the 2006 Van Eyck's pavilion, Otterlo, Sergio Marques, 2011.

finished by vertical planes but by contrast on the horizontal plane, preserving an integrated and fluid visual appearance.

Built entirely from exposed concrete blocks – as were the sculpture plinths – the walls formed five parallel corridors arranged at 2.5m intervals and curving in some places to define alcoves for the display. In contrast with the Rietveld pavilion, Van Eyck's is more closed in on itself and, although it allows visualisation of the surroundings from the ends of its "streets", it assumes that the more important material for the visitor's appreciation is inside. Lighting had to be diffuse, due to the use of a light nylon roof tensioned over steel tubes, which was replaced by lightweight translucent panels while still in the design phase.

Inside Van Eyck's labyrinth the sculptures play a part in articulating the design. As the architect's sketches show, the position of each sculpture was determined so that artwork and pavilion became part of a single system.

When Van Eyck's pavilion was opened in Sonsbeek, its neoplastic partner had already been rebuilt in the Kröller Müller museum gardens, where the former would also establish itself forty years later. Although it only lasted a

few months, the building met with public and critical acclaim and was considered to be one of the architect's masterpieces, which was the reason for its reappearance years later.

Opening on March 21, 2006, construction of the replica was organised by Van Eyck's widow Hannie van Eyck-van Roojen and his colleague, Abel Blom, and is very similar to the previous pavilion but with a stronger roof made from a sequence of transparent plastic domes, allowing increased light penetration, which cancels out one of the principal initial intentions of using diffuse lighting to highlight the contrasts of the sculptures.

There were also changes to the collection. The photographs from the period show, for example, that one of the most important places in the pavilion, which Van Eyck intended for the Belgian artist Rik Wouters's bronze sculpture "*La joie de vivre*" (portraying the dancer Isadora Duncan), is now occupied by the pair of lovers by the Dutch sculptor Joseph Mendes da Costa, whose stable forms contrast with those of the dancer, which had suggested and stimulated movement.

Just like the Rietveld Pavilion, the building is also used for different cultural events, em-



Figure 5. Musical concerts in Aldo van Eyck's Pavilion (on the left) and in Rietveld's Pavilion (on the right), Otterlo. <http://www.kmm.nl/summer-night/archive>.

phasing the management's aim of integrating both buildings into the Sculpture Garden and establishing public contact with the works – pavilions and sculptures – together with Van Eyck's way of conceiving architectural spaces.

Authenticity and Originality

Reconstruction operations involve two fundamental issues: authorial authenticity and cultural authenticity. The first is of concern to many people because it puts two modern principles into the spotlight: the valuing of originality and the individual authorship of the work of art. The second raises the issue of valuing the old and the valuing of innovation.

Reconstruction of an already executed design should not, strictly speaking, involve any formal deliberation. There should not, in theory, be any problem of authorship. But adaptation to new or updated regulations is always required, albeit sometimes minimal; the importance of formal fidelity in this operation requires the person responsible for the reconstruction to imitate the author of the original design – at least in terms of form, since the building technique is gener-

ally replaced by a more up-to-date and efficient one. Nonetheless, it is common for the replica to avoid crediting those responsible, generally colleagues of the absent architect. Retaining the original signature matters because famous names sell more and it is precisely that signature that is the justification for the replica. Although it was rebuilt thanks to plans by Ignasi de Solà-Morales, Cristian Cirici and Fernando Ramos, the Barcelona Pavilion is known as the Mies van der Rohe Pavilion. It is no different for the Dutch pavilions.

Reconstructions are often judged as falsely old and falsely new. When done well, that is faithful to their previous existence, they can fool the historian. They are anchored in the past, but not from the past; they are simulacra. Made today, they seem to be from yesterday. They have neither novelty value, nor antiquity value, to use Alois Reigl's terms. In other words, they can be judged as insufficiently contemporary and insufficiently distant. For the more demanding, the absence of originality goes hand in hand with falseness, however well intentioned.

Nevertheless, this is a false dilemma, simply resolved by the truth: constructed in period X, reconstructed in period Y; artistically, by setting

aside the fiction of formal consensus and adopting the pluralism and diversity of this period, abandoning moral judgement when considering architectural heritage.

Like it or not, architecture is also merchandise. Justifiably or otherwise, this disturbs many people. But that in itself does not form a firm basis for the rejection of replication, which, it could be argued, reinforces the value of these projects as heritage.

Indeed, it is often forgotten that the whole operation of heritage preservation – and consequently replication – is a planning operation, at least in the broad sense of the term, since heritage institutionalisation in itself raises new requirements in relation to the materiality of the building to be preserved or reconstructed.

The replica is a reflection. More or less faithful, but always a reflection, although dating from yesterday. It is always an interpretation, rarely unanimous. Architecture has never been

an exact science, however, and any unanimity raises a degree of suspicion. Hence there is no need to insist on the establishment of standards, parameters and general prescriptions for regulating reconstructions, and greater concern should be on relevance rather than originality.

The Sonsbeek – now Otterlo – pavilions are located on a site that is very similar to the one they were designed for. Surrounded by the green of the Kröller Müller Museum Sculpture Garden, they retain their former functions in a nearby and similar setting. Considering the satisfactory attendance figures, which indicate public acceptance, it can be stated that the Dutch experiments join the Mies Pavilion in the team of successful replicas. Once temporary architecture, their existence has continued on paper, in photographs, text and *copies conformes*, which seems to indicate that the validity of reconstruction lies not in the nature of the operation, but in the quality of its achievement.

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The Uncompleted Project of Valkeakoski Administrative and Cultural Center¹

Miguel Borges de Araújo

"Periods which exist for the moment have been unable to create lasting monuments."²

The work of Kaarlo Leppänen (1929-2005) is not much known even in Finland. He was Alvar Aalto's collaborator (1955-1975) i.e., in the Vuoksenniska Church and the Finlandia Hall. Leppänen's contribution to the studio is known for his sense for drawing and for organic form, qualities he took to his own work. The Valkeakoski Administrative and Cultural Center, result of a competition in 1966, is a good example.³ Only the first stage was built in 1973: a brochure published in the occasion describes it as a big challenge for the town, aggravated by the economic climate. After adjustments and encouraged by the reception of the library and school among the community, the project is reaffirmed. Yet, the plan of the theater and the administration offices has remained on paper.⁴ The project's uncompleted condition offers a dramatic perspective: why was it interrupted? What qualities are present, what remain unfulfilled? How to continue it?

The delay of Leppänen's project speaks of a broader modern condition. The Civic Center promised to be the keystone of the process of urban renewal urged by postwar recovery and prospects of growth. Valkeakoski's natural rapids had been used for ages with mills for agriculture. With the arrival of paper industry in

late XIX, a small community started to take form. In the transition to 1960s the population reached 15000. This was a decade of tremendous change for many Finnish towns: the old wood milieu was dilapidated, opening up space for new commercial and cultural centers.⁵

The project can be situated in the international discourse. Writing CIAM's history, Eric Mumford describes the postwar reaction to the original premises of functionalization and decentralization, and a return to the theme of monumentality. CIAM 8 in particular, proposed the concept of "the heart of the city" dealing with the place of the collective and symbolic in the modern city. Mumford finds the root of the debate in the convergence of rationalism and empiricism in Nordic countries.⁶ Before long however, TEAM X started to expose the contradictions of the concept.

Among the first plans for a modern-monumental town center was Aalto's unrealized proposal for Avesta, Sweden (1944). This became a recurring project for Aalto, also one difficult to implement.⁷ Seinäjoki Center (1952-1988) is exceptional from this point of view, calling for a consensus which was both cause and consequence of Aalto's talent – perhaps also a limit. Leppänen collaborated in the long design proc-



Figure 1. Valkeakoski Center, south view. Miguel Borges de Araújo 2009.

ess and Valkeakoski's project assumes this direct lineage.

The brief for the Center in Valkeakoski was extensive and included the possibility of building it in stages. Leppänen separates the complex in parts, responding to functional and spatial requirements but also to this temporal dimension. The design develops in two scales: each part according to its purpose and the whole as an urban crown, a strategy observed in Seinäjoki, "[...] a fine example of how sensitively Aalto always managed to relate to an earlier, realized phase, and of how the buildings fit into a coherent architectural whole".⁸ The fate of Valkeakoski's project expresses nevertheless, dependence of a moment in time, representation of spatial growth rather than real flexibility.

The search for monumentality involves a relation with the past – in abstract references to the city's archetypes: the gate, the square, etc. – but also, a relation with the future – the choice of materials and construction in terms of permanence and precision (instead of economy and openness): "Aalto said that a building should age beautifully and that one should be able to read the age of the building from its face, its façade. That though implies an organic ageing process".⁹ In spite of his concern with temporal depth,

Leppänen accepts the demotion of the site's pre-existing constructions. The 1970s would give insight about the problem of the continuity of the built environment – together with, the modern-monumental paradigm would lose part of its prestige.

Aalto never saw an opposition between the functional and the monumental. He incorporated in the design even the more subjective or symbolic dimensions which – then again – he believed had had origin, remotely, in utility (!). Leppänen shared this cultural understanding. The choice of competition motto "Agora" reveals at the outset, that the Civic Center must be more than a grouping of services: an institution. How to give form to this charged space?

Aalto and Leppänen followed an organic approach, emphasizing the different internal uses at stake.¹⁰ The library over pilotis expresses it as a realm for thoughts and concentration. A hierarchical order emerges from the interaction between elements, resulting in a particular identity. The relevance of the theater as a collective hall can be read only from its dominant position in relation to the other wings. Leppänen's intention is very clear i.e., compared with the more abstract 2nd entry, but can't be properly experienced today since the project is uncompleted.



Figure 2. Valkeakoski Center, courtyard view. Miguel Borges de Araújo 2009.

The Jury of the competition valued how the complex related with the neighboring buildings, including the existing Town Hall. But the balance between organic integrity and good urban integration is difficult, and the Jury notes *“the festival square should not be so strictly separated from the street milieu.”*¹¹ Unlike Seinäjoki, all the parts are physically connected in Valkeakoski. In both designs, park areas intertwine with construction, and traffic is restricted to the outside perimeter. All these features strengthen the object-like quality of the design, making stand as an exception in the townscape. The need to be prominent is ultimately admitted by Aalto, already in the plan for Avesta, which he rotates from the town’s grid to create “a charming contrast”.¹²

The rectangular courtyard is a point of departure to be adapted to the specifics of use and place. Leppänen refers to the relation between classic and organic: *“[In Aalto’s] architecture, one can recognize classical formal elements, for example the form of the amphitheater as a natural form for a meeting place although it is true*

that he often deformed it to suit his own architectural solution”.¹³ The contact with topography creates a contrast between regular and free-form geometries. This motive is translated from the plan to the elevation, which is like a landscape over a rectangular basis. Leppänen avoids organic formalism: this geometry is achieved in a dialogue with the hierarchical accommodation of the contents.

The organic approach emphasizes spatial experience. Arrival from south is roughly as planned: the school over a plinth and the fluctuating library form a civic front. Their dialogue is cut by an outdoor stair leading to the raised courtyard. The scale is that of an intimate garden around a pond. Wondering down the landscaped platforms, the rest of the promenade has to be imagined. Space opens up into a formal park, under the vertical mass of the theater. The gallery surrounding the office wing gives this “northern piazza” a collective character. These outdoors, today so vague, would have ended the urban axis along the canal. Leppänen reserved place for a sculpture at the tip of the office wing,

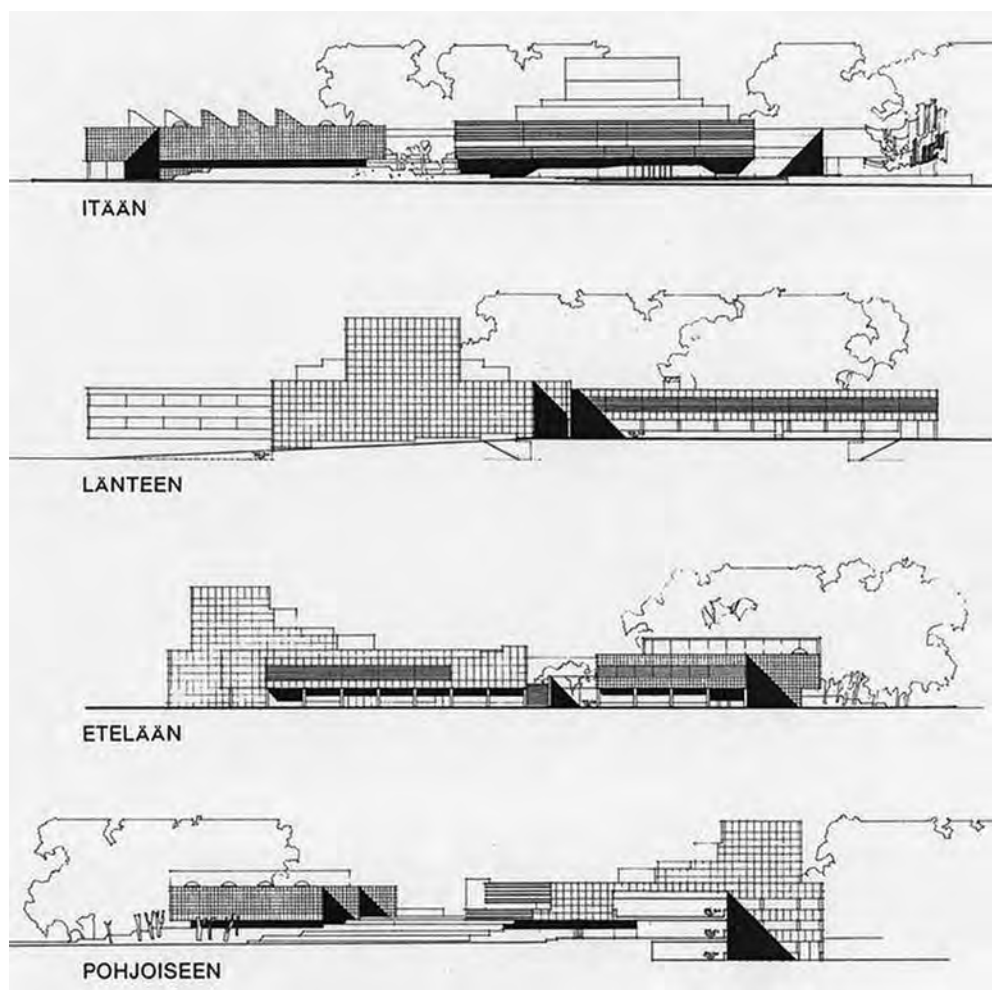


Figure 3. Valkeakoski Center, elevations. “Valkeakosken vapaa-aikakeskus,” catalogue (1975).

a location offering diagonal views into the courtyard and outwardly, over the Town Hall and canal.

At any rate, the build fragments show a formal purposefulness missing from its contemporaneous architecture – this is also why it is so sad they’re uncompleted. Space is worked positively as in Aalto’s works. It is even possible to identify type sections: how school and library sit in the terrain connected at two different lev-

els. The library is entered from below, with a set of stairs linking the lobby to the central reception desk and the reading room, lit through roof monitors and skylights.

The treatment of the surface is no less reminiscent of Aalto. Appearance relates with contents: band windows unify the rhythm of the classrooms while stepped frames reveal a special auditorium room. Serving spaces are left barely naked, whereas major spaces are finished

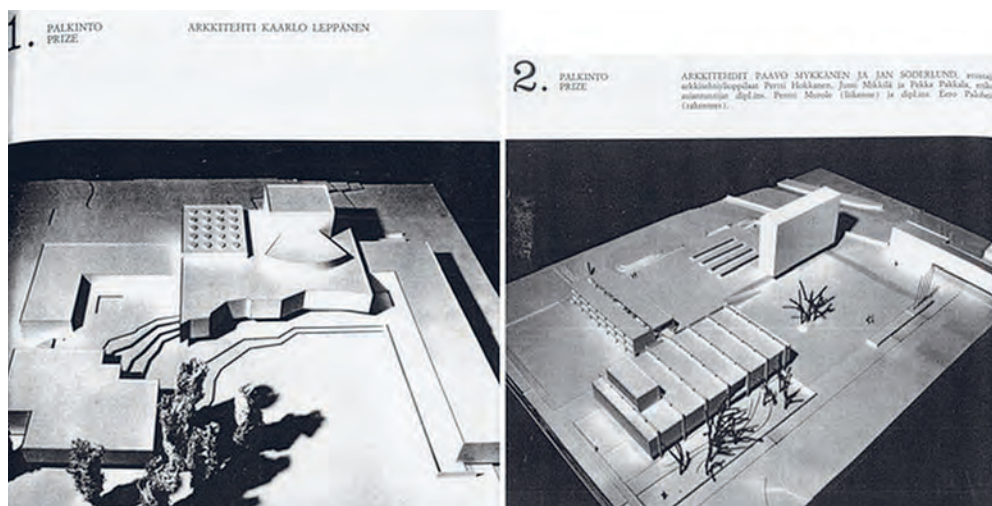


Figure 4. Valkeakoski Center, comparison between models of 1st and 2nd prizes. "Valkeakosken kaupungin hallinto- ja kulttuurikeskuksen suunnittelukilpailu," *Arkkitehtuurikilpailuja* 4-5 (1966): 5, 10.

in stone, ceramics or wood – a kind of recreation of ornament. When following so closely Aalto's style, Leppänen may change its meaning. Forms which resulted from a commitment to modernity become an emblem of resistance – here lies a vital problem of modern aesthetics. The design of Valkeakoski requests a level of craftsmanship that is at the same time disappearing under the rise of prefabrication.

It has been noted that Aalto's masterpieces were possible insofar they took advantage of the regional delay of Finland in relation to modernity.¹⁴ How would have Aalto dealt with late 1960s modernization, hadn't he been at the end of his career? One can only speculate

about it. More certain is how specific projects continued to offer, in spite of the promises of the end of architecture, counterexamples. For St John Wilson Aalto's work represents "the other tradition" regarding normative modernism. Valkeakoski could have been a natural extension but, what does it tell about the vitality of this alternative? Some could interpret its interruption as a definitive limit: it's no longer possible to do architecture in this way. I've tried to show instead, that Leppänen's project (analogously, his oeuvre) still raises interest – it is a new and an old project, a double condition which is a measure of authenticity for any approach in the present.

Notes

1 Also referring to St John Wilson's argument (ultimately, to Jürgen Habermas' critical modernity) see Colin St John Wilson, *The other tradition of modern architecture. The Uncom-*

pleted Project (London: Black Dog, 2007).

2 José L. Sert, Fernand Léger and Sigfried Giedion, "Nine points on monumentality," in *Architecture Culture 1943-1968: a Document-*

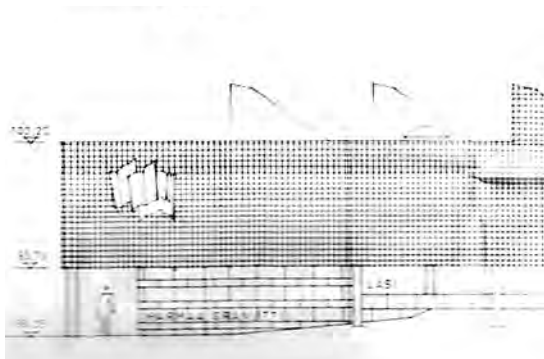
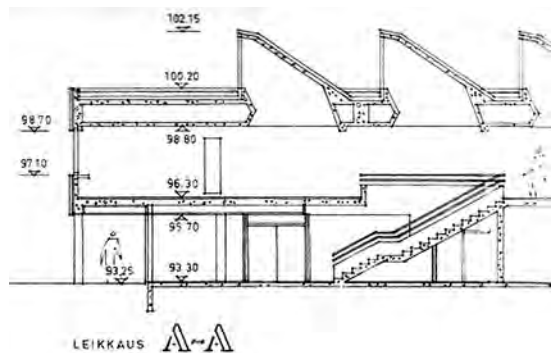


Figure 5. Valkeakoski Center, elevation and section of the library (detail). From the archives of Valkeakosken rakennusvalvontatoimisto.

- tary Anthology, ed. Joan Ockman (New York: Rizzoli, 1993), 28.
- 3 Leppänen's first published work is the Rovaniemi Bus Station, 1955 (with Niilo Pulkka and Pekka Rajala). Among later designs is the Helsinki Main Library, 1986. On the contribution to Aalto's studio see, Harry Charrington and Vezio Nava, eds., *The Mark of the Hand* (Helsinki: Rakennustieto, 2011), 44, 240, 255, 305-307, 323.
 - 4 Competition (May 1966), 1st phase (1971-73). Kaarlo Leppänen, "Valkeakosken kaupungin hallinto- ja kulttuurikeskuksen suunnittelukilpailu," *Arkkitehtuurikilpailuja* 4-5 (1966). See also, "Valkeakosken vapaa-aikakeskus," catalogue (1975).
 - 5 About the town's development, see Minna Kulojärvi, "Valkeakoski – Keskustan kulttuuriympäristön kehittäminen osana kansallista kaupunkipuistoa," (diploma work, Tampere University on Technology, 2011), 27-45.
 - 6 Aalto didn't attend postwar CIAM congresses but continued to exert wide influence. See Eric Mumford, *The CIAM Discourse on Urbanism 1928-1960* (Cambridge: MIT Press, 2002), 163-168, 201-225. See also Eric Mumford, *Defining urban design: CIAM architects and the formation of a discipline, 1937-1969* (New Haven: Yale UP, 2009).
 - 7 Designs of urban centers include: Säynätsalo (realized), Jyväskylä (partly realized), Marl (unrealized), etc.
 - 8 Kaarlo Leppänen, "The design process of Alvar Aalto," in *Changing Trends and Timelessness. Seminar on Architecture and Urban Planning* (Helsinki: SAFA, 1984), 66.
 - 9 Leppänen, "The design process of Alvar Aalto," 64.
 - 10 Colin St John Wilson, *The other tradition* (London: Black Dog, 2007), 123-130.
 - 11 See competition's report, Kaarlo Leppänen "Valkeakosken suunnittelukilpailu," *Arkkitehtuurikilpailuja* 4-5 (1966): 4, 5, 10.
 - 12 Aalto, cited in Göran Schildt, *Alvar Aalto: The mature years* (New York: Rizzoli, 1991), 80.
 - 13 Leppänen "The design process of Alvar Aalto," 64.
 - 14 Tafuri and Dal Co tell i.e., "The qualities of his works have a meaning only as masterful distractions, not subject to reproduction outside the remote reality in which they have their roots." See Manfredo Tafuri and Francesco Dal Co, *Modern Architecture/ 2* (Milan: Electa, 1980), 338.

Renovation and Revalorisation of the Werkbund Wuwa Housing Estate – From the Interiors to the Entirety

Jadwiga Urbanik

Model Experimental Werkbund Estate – WUWA

In 1929 the Silesian section of the Werkbund organized the “Wohnung und Werkraum” (“Dwelling and Work Space”) which comprised of two parts: the model housing estate and the exposition held inside the Centennial Hall (Jahrhunderthalle) and its surrounding exhibition grounds¹.

The estate programme had been consulted with and approved by the RFG - Reichsforschungsgesellschaft für Wirtschaftlichkeit im Bau- und Wohnungswesen (Imperial Research Society for Cost-Efficiency in Building and Housing)² The furnished homes remained open to the public for three and a half months³ and then were let out for two years by Siedlungsgesellschaft Breslau AG to have the proposed solutions tested in practice⁴.

Two Programmes of Restoration

The Werkbund WuWA model housing estate after over 80 years, needs thorough renovation. It involves the individual buildings, but also the surrounding environment.

2.1 Estate Area Belonging to the City

Currently in WuWA estate there are two kinds of ownership – private - most houses (except for houses by A. Rading's and H. Scharoun's) and town concerning public areas around the houses.

In 2010 on the order of Wrocław Municipal Council the “General restoration strategy of WuWA estate” was worked out. It was suggested the reconstruction of former kinder garden designed by P. Heim and A. Kempter that burnt down in 2006.

The Lower Silesian District Association of Architects committed itself to reconstruct the kinder garden building and make it its own seat.

On 8 July 2011 the city invited tenders for an architectural conception of the development of public space of WuWA area. There were over 50 entries, however 18 designs that complied with all the formal requirements of the competition, were worked out.

2.1.1 Competition Objectives

The participants were to present a design considering: general conception of the area devel-

opment, conception of transport system with parking spaces following the guidelines of Local Development Plan (LDP), conception of development of public areas with green belt, information system concerning the estate houses, lightning adjusted to the space character, fencing, waste bins, benches, colour conception of proposed elements of architectural details, pedestrian and traffic route surfaces and a tram stop.

2.1.2 Competition Results

An in-depth analysis of 18 designs proved a very differentiated attitude towards the task. Probably not only young architects but also landscape ones took part in the competition. In some of them the only subject matter the authors dealt with was the landscape design, sometimes considering the removal of the existing ancient forest. Not even single design included all LDP guidelines. There were works that presented too rich colouring resulting from the lack of knowledge of Wrocław's modernism. In one of the works a wide, yellow concrete pedestrian route running through the whole estate and thus competitive for the houses was proposed. In another, an openwork superstructure as high as the present height of A. Rading's house was proposed. In some works the incomprehension of the area scale being the subject matter of the competition was visible.

The competition jury evaluating the works, took on the rule "less means more", that is, all design proposals aim at highlighting the estate houses prestige not creating competitiveness for it.

The 1st award was given to BASIS c.c. (Krzysztof Szkółka, Dariusz Sirojć, Filip Kozak).

The authors proposed, among the others, a red concrete bench with the information on its surface concerning the estate to identify the estate area, WuWA pavilion from Z. Wróblewski

street side, Architects' Square in Tramwajowa street, the estate model in the park from the side of Tramwajowa and Dembowski streets, as a playground for children and meeting place for visitors; different types of fencing and lamps.

2.2 Estate Houses

The housing estate has been an experiment not only in regard to form but mainly in technology. It utilized the newly introduced materials and constructions in the field of housing development.

In 2011 we've run a program to financially support the repairs made by the proprietors. It includes the return of, at least, 70% money spent on the house front or garden repairs. The owner is obliged to bring forward a suitable outline. The repairs would be done under conservator supervision. Until now only one design concerning restoration of WuWA estate house has been received. It concerned Ludwig Moshamer's detached house. Hotel – like building by H.Scharoun renovation is paid since 1993 by the owner.

2.2.1 Detached House Designed by Ludwig Moshamer

The house was designed for a high-ranking official, merchant or professional who had an office elsewhere. It was an elegant, comfortable house, distinguished by its interesting architectural form. External walls - 44 cm brick wall with air-filled hollow block; second floor – 25 cm brick wall, insulation of Torfoleum plates, flat roof with wooden construction beams, insulation of corkboards, covered with Ruberoid.

After the war, the house underwent an inappropriate renovation changing its original look - change of flat roof form (strongly protruding eaves and enlarged roof slopes), change of form

and colour of window joinery, introduction of additional window divisions, insulating outer walls with Styrofoam. Now there was a chance to restore it properly within the programme started by the city.

2.2.2 Hotel - like building for single people and childless couples designed by Hans Scharoun

In the building by Hans Scharoun (Liedingheim) split level apartments for single people and childless couples were designed, 16 (37 m²), in the right wing and 32 (27 m²) in the left one. An interesting type of reinforced concrete structure ("house of cards" – "Kartenblattbauweise") filled with lightweight pumice concrete blocks was used⁵. The building represented the "colourful city" ("Die farbige Stadt") idea, promoted in Germany in 1925–1930. Hans Scharoun's use of colour reflected his unconventional and individualistic approach.

The building was listed on February 1972, entry 287/Wm (now A/2690/283), it means that its function, construction, building materials and outer and inner form are protected. The owner of the building – National Work Standards and Safety Inspectorate – commissioned in 1993 a detailed historical-conservation study⁶, which included, among others, a thorough inventory of door and window woodwork. The study also covered stratigraphic examination of paint layers, which made it possible to determine precisely the full colour scheme used by the architect⁷.

In the revaluation project the principle of restoring the original look of the building was adopted. Because of limited financial resources, restoration work was divided into stages. In the first stage, works were carried out to stop the process of destruction and reduce maintenance costs.

Restoration works in 2007–2012⁸ concerned reconstruction of the colour scheme of the dwelling wings' corridors, staircase (2010), interior arrangement reconstruction of split level apartment of the right wing of the building (No.

48) (2007–2010)⁹, restaurant reconstruction (2008) and reconstruction of original architectural details (2008–2011)¹⁰.

Restaurant walls were painted in different shades of pink, red, sky blue and ivory. Instead of originally used distempers, more durable silicate paints of „Keim“ company, applied in German architecture in the 20s of the 20th century, were used. The original red linoleum flooring (of UNI Walton collection of „Armstrong DLW“ company) was reconstructed. Tables and bentwood chairs, of „Thonet“ type¹¹, were selected from the collection of „Fameg“ company.

Renovation works carried out several times within the limits of corridors of both dwelling wings, dismantling of original partition walls and door joinery made the verification and supplementation of stratigraphic examinations from 1993 impossible. That is why the decision concerning the choice of colours with some alternations resulting from archive photographs and based on examination from 1993, was made. Alternate dark pink and light grey doors leading to rooms are a strong colour accent of the right wing corridor. On the walls of the staircase adjacent to the corridor, after taking off double paint coats, vivid colours of brick balustrade (cobalt blue), wall (brick-red) and ceiling (ochre) were managed to be reconstructed.

The concept of interior design of the living sections of the right wing assumed different colour schemes for apartment marked with odd and even numbers. The difference referred mainly to the colour of the walls and the linoleum (no data on furnishings).

In the modernization project of living interiors, worked out in 2007, the principle of restoring their original look was adopted. The authors of the project made in their rule to respect the architect's concept and keep to the aesthetics of the late 1920s. The only design preserved is the one of the built-in bedroom wardrobe (in Akademie der Künste in Berlin), the replication of which was made.

The project (split level apartment no 48 of the right wing of the building) adapted one of the two versions of sitting-room furnishing applied in 1929, as it better meets the requirements of a hotel function. A kitchen cabinet with an up-and-down sliding door, an étagère, a square table and sofa were reconstructed, “Thonet” chairs No. 209 and a white-glass-ball hanging lamp were placed.

In the hall the following were reconstructed: big steel windows with bottom hung casements in four sections¹², in place of those exchanged in 1993, thick profile PVC windows preserved in bad technical state and also an oval wooden window bricked up in post-war years, lighting three steps of the stairs at the southern entrance.

The southern wall of the eastern emergency staircase of the left wing was made in 1929 as a glass curtain wall. The wall has been preserved in good condition except for rusty threshold and lower part of the door. It was decided to renovate the glass curtain wall with simultaneous exchange of contemporary ornamental glass to safety, clear glass panels.

The WuWA estate’s peculiar features were flat roofs with roof-top garden terraces. In Schroun’s building in 1993 in its middle part, the renovation of the terrace and its roofing from the garden side was carried out. Materials available at that time, not resembling the originals were used what caused esthetical and techno-

logical fiasco. Constantly expanding moistness made survey of the floor in 2011 necessary. The presence of water in a concrete layer adjusting declivities was found.

In 2011 new renovation and conversion design of flat roofs of the left and middle wings¹³ on which recreation terraces were designed, were realized. Originally they were covered with 40x80cm concrete slabs of rough texture resembling „brickwork”.

In the design of the floor and recreation terrace details reconstruction application of inverted flat roof was suggested, a version with „ballast”, that is, with a layer of hydro – insulation made of EPDM membrane, insulation from XPS slabs as well as concrete slabs of original measurements.

On the lower level of the upper terrace, concrete plant pots and stairs in the shape of characteristic „peel” made as a reconstruction of similar forms from 1929, were placed, while on the upper one steel creeper trellis were fixed between reinforced concrete arches. Balustrades reconstructed according to their condition in 1929 will be attached to chimneys and vertical partition walls.

The owner who with particular care looks after the condition of this historic building and good cooperation with conservator’s services as well as preservation of its original function, make the existence of this interesting architecture for over 80 years possible.

Notes

- 1 Werkbund Ausstellung. Wohnung und Werkraum. Breslau 1929. 15. Juni bis 15. September. Ausstellungs Führer. Breslau 1929.
- 2 G. Lampmann, „Ausstellungssiedlung Breslau 1929,“ Zentralblatt der Bauverwaltung vol. 49, no. 29 (1929), 461–468.
- 3 W. Baranek, "Architektonische Bocksprünge auf der 'Wuwa'," Schlesische Handwerk und Gewerbe vol. 10 (1929), 357.
- 4 "Ausstellung 1929 'Wohnen und Werkraum'," Schlesisches Heim vol. 6 (1928), 171.
- 5 P. Pfankuch (ed.), Hans Scharoun. Bauten, Entwürfe, Texte, Schriftenreihe der Akademie der Künste, vol. 10 (Berlin 1974), 88.
- 6 J. Urbanik, A. Gryglewska, Historical-conservation study of hotel building at 9, Kopernik street in Wrocław. Vol. 1–4.
- 7 J. M. Żelbromski, Stratigraphic examination of outer and inner walls. House for singles and childless couples designed by Hans Scharoun, 1929, Wrocław, 9, Kopernik street. 1993.
- 8 First stage of the building renovation carried out in 1993–2005 was presented by the author of this text in Barcelona in 1994 during the 3rd international DoCoMoMo conference (Renovation Problems of the Hans Scharoun Building on the WUWA Housing Estate); in London in 1995 during international conference – "Modern Matters - Principles and Practice in Conserving Recent Architecture" (Conservation goes East: The Restoration of the Hans Scharoun Building on the WUWA Housing Estate, Wrocław, Poland); in Zielona Góra in 2006 during conference „Renowacja budynków i modernizacja obszarów zabudowanych"; (Rewaloryzacja wrocławskiego budynku hotelowego Hansa Scharouna z 1929 roku - osiedle wystawy WUWA) and in Gdynia in 2007 during the 1st international conference "Modernism in Europe – modernism in Gdynia" ("Dzieło całościowe" w rewaloryzacji architektury modernistycznej – „Comprehensive Work of Art" (Gesamtkunstwerk) in Revalorisation of Modern Architecture).
- 9 J. Urbanik, A. Gryglewska, Project of modernization and interior arrangement reconstruction of split level apartment of the right wing of the historical hotel building at 9, Kopernik street in Wrocław designed by Hans Scharoun (2007).
- 10 J. Urbanik, A. Gryglewska, Project of reconstruction of original architectural details in the Park-Hotel building at 9, Kopernik street in Wrocław designed by Hans Scharoun (Wrocław 2007); J. Urbanik, A. Gryglewska, Renovation and conversion of terraces on the roof of the left and middle wing of historical hotel building at 9, Kopernik street in Wrocław designed by Hans Scharoun (2011).
- 11 Werkbund Ausstellung. Wohnung und Werkraum, 109; G. Botta (ed.), Idea Thoneta. Meble drewniane i z rur stalowych. Exhibition Catalogue (Nürnberg 1989), 244, 246, 248.
- 12 Hall windows were designed for the exhibition in 1929 as fixed casement. The necessity to air the hall, especially at the time of high solar exposure, made installation of bottom hung casements designed by Scharoun necessary after a short period of time.
- 13 J. Urbanik, A. Gryglewska, Renovation and conversion of terraces on the roof of the left and middle wing of historical hotel building at 9, Kopernik street in Wrocław (in the former house for single people and childless couples designed by Hans Scharoun, 1929), 2011.

Looking for Balance

The Transformation of Modern Heritage and the Urban Vibe as Mutual Incentives for Sustainable Redevelopment in an Integral Approach

Job Roos

Case-study: TPG-Building (Telegraph Post Giro) in the City of The Hague, the Netherlands

My story is about the necessity of sustainable redevelopment of a (recent) industrial heritage building within the urban context. To understand and value the DNA and the transformation of the building and its Genius Loci today, we need to look at it from several points of view. This understanding through a broad value-assessment is the condition for a sustainable redevelopment of the building in its future context. It may seem strange that at the beginning of this decade of crisis and shrink, a relatively big redevelopment into substantial office-space can be done. I will explain to you why this is happening. How cultural-historic value 'will ride together' with real estate value, if there is a real sustainable development-plan. And with sustainable I mean all the efforts that can be undertaken to do a 'fit for purpose' planning: social,

economical, cultural and technical. This means a thorough approach in the assignment and the design by architect(s) and a good supportive team, to facilitate this building on its spot with good incentives for the next few decades.

Theoretical Framework, Generic Point of View

For me sustainability/transformation has to do with balance, in fact active balancing. I am not an expert on sustainability, I am a curious architect and associate-professor at TU-Delft Faculty of Architecture looking for interesting ways to search. Like the inspector that investigates and has to find out: who committed the murder and, by bits and pieces, in laying a complex puzzle. I am interested in use by people to be conversed in spatial planning, re-use even more for its complexity and the interesting time-layers of predecessors. A story of use in meeting history,

of growing interest in our time, of culture to be handled with care and understanding.

Thus I feel not an autonomous author, I feel like a co-author with time, and I feel also the responsibility to bring further what is or was valuable and maybe even place it into new perspectives. Thus, make visible what was forgotten, use its potential with the means of today and tomorrow. To make this into a success is a complex task that asks for a lot of knowledge one person can never have: time for team-work to find the balance in design between past and future in a **cultural**-driven way.

But not only! It should also be a balance for **eco and societal** drivers. Because building is about our future and the challenges we meet today are huge. The complex balancing could be compared to a sensitive neurologic system which makes our body function: the result goes without saying¹.

For a through re-use applied sciences are needed for an integral approach. Very recently we constituted a department (Architectural Engineering and Technology), which deals with *technology driven design*.

Technology should be explained in terms of underpinning the design task. I would prefer to definition of technology to: "the total of processes needed in knowledge and processes resulting in products and services for societal needs". So we should leave the one-sided and hard technical side and choose for the approach in which both alpha, beta and gamma sciences processes are involved such as culture and ecology.

Ecology for me has to do with balance, now still often neglected in the design process often disturbed over the various scales, like f.i. on the urban scale where inner cities just remain as tourist's focus. Ecology is the science that matters about the balance between living organisms (people) and their environment or the mutual relationship between biological and a-biological elements on different levels of scale. This is a pretty subtle and even a nice metaphor for ar-

chitecture, if you add at least social and cultural aspects.

Main question: how can we be in control in the transformation processes, to weigh and balance the social, cultural and ecological needs. What are the incentives and constraints, what are the opportunities? I did an attempt for a theoretical framework on methodology in my book 'Discovering the Assignment'², which resulted in a *model of thought*. Looking for a firm methodology, this model was the outcome. Particular open for debate and further research...

The DNA of the Building and its Development

The case-study of today, the TPG-building (a modern Post Distribution Office at its time), was designed in the late thirties by state-architect Gustav Bremer. Because of the Second World War it was not built before the late forties.³

The building was erected in the city of The Hague in the west of The Netherlands anno 1949 as a huge, modern and brutal building. At that time it could be regarded as an icon in the city. A building designed in great ambition with a strong identity, conceived as a freestanding object with a focus on functionalism. In its massive scale it really ruled over the city of 1949 (similar to the Van Nelle Factory in Rotterdam designed in the thirties by architects Brinkman and van der Vlugt). The expression in architecture can be described in terms of: 'smooth forms and curving lines a symbol of optimism and great dynamics synonym with its function: the heart of post-transport and distribution, a center of communication'. One might understand the architecture of the building even better within its own timeframe, in the knowledge of the design of the Dymaxion-vehicle by Buckminster Fuller.

The original lay-out of the building is clear. It consists of two wings in a T-shaped position.

One small wing that consisted mainly of office space and one bigger wing with a footprint of 2.500 m² floor space. This wing was used for the efficient use of post-handling as a big logistic machine that was on duty for 24 hours a day.

The construction of the building is durable: a carefully designed and articulated concrete bearing construction with a tremendous overcapacity in its foundations. The big span of the industrial floors with a height of 7 meters (except for the ground floor) is without supporting columns, which means great opportunities for future use.

Together with the transparent elevations, this resulted in an overwhelming spatial experience. Especially on the top floor with the vaulted ceiling and the presence of the rooflights. The elevations were originally constructed in enamelled bricks, glazed bricks, steel windows and copper corniches. The nature stone statues on the corner of the building were designed by the artist Hildo Krop.

The building was transformed rather brutally towards the end of the eighties of the last century. The use of the building changed into mainly office space, which resulted in the loss of the spatial quality of the industrial wing. New floors were added in between, which meant the loss of character and applicable use of these floors. The span of the wing related to the height of the floors now, was too large to fill the transformed wing with sufficient daylight. The used materials were poor. Result today: unattractive not sustainable office space, 'suffocation and breathtaking' with a very moderate indoor-climate. Also the elevations were changed dramatically. The original abstract looks of mainly glazed bricks with an articulation of small steel windows, resulted in the special and industrial character of the building. This could not be maintained in the eighties because of the change in use to office space. The number of windows was consequently doubled and steel windows were replaced by (technical) low qual-

ity aluminium. Result today: loss of overall industrial character and aluminium windows in poor technical state now.

Also an adjacent building (in mass equivalent to the TPG-building) was constructed at that time and was connected to the TPG-Building with several glazed bridges on a very vulnerable position. Misunderstood in its architectural qualities, this was the beginning of the end of the TPG-building as a freestanding object and icon in this part of the city.

This rather drastic transformation of the building could be done, because there was not enough awareness of the architectural quality of the building and its meaning for the surroundings.

The appreciation for the building was rewarded not before the beginning of this century: put on a list of the Minister of Culture Plasterk (one hundred very special post war buildings) and its status as a listed heritage-building.

In the awareness of the historical features of the building⁴, the DNA of the building, its strong composition and silhouette, the original use and the original spatial and material quality, the assignment today is of a different kind.

The DNA of the Urban Site and its Development

Today, the site on which the building is located is determined by the presence of the main Station Hollands Spoor and the over time developed complex urban infra- and building structure of the city.

The historical site of 1949 was more comprehensive. The city-center at that time had developed mainly at the west side of the building between the railroad and the city center. The east side of the railroad in which the TPG-building was erected, was mainly occupied by rural housing and the industrial site 'Laakhaven and Binckhorst'. At that time the TPG building was

located on a relatively vital urban junction, directly adjacent to the railroad and the crossroad Rijswijkse Weg; this was of course because of its function as Postal Distribution Office.

From 1949 until now there has been much development in the area; it evolved slowly and steadily to another scale, in which the TPG building started to vanish and became isolated. This is very clear in the comparison of the aerial photographs of 1949 and 2012

This present urban context can of course be valued but is a matter of fact; this kind of transformation belongs to the development of modern cities. This means that it is not all under control. Political, economical and pragmatic drivers determine(d) the (non-)quality of our built environment. Since we have no influence on what is there today, at first hand we can only be visionary with the building. And we can only do this if we understand the relationship of the building and its site in past, present and its possibilities for the future.

Challenge of the Assignment

The building is empty now since the beginning of 2012, waiting for its 'second' life.

Economically driven, the investor started to think about new development since 2007 to fill up the building with new vital and sustainable urban functions. What appeared very soon in the process of re-development was the great complexity of the assignment, full of dilemma's, paradoxes and conflicts of interest. For instance:

The political demand to intensify this weak spot in the city, add new programme and 'double' the building in height. And... the fact that the building got a special status from heritage point of view in 2009, which means that the approach in design is one of even greater care and understanding to link the past, present and future. And... the fact that a substantial part of the building could only be transformed into

high-end office-space, also is quite a challenge in these times of shrink. Politically three aldermen are involved (spatial planning, economics and heritage) with great ambition in spatial and economics. The aldermen even overruled other advisory boards on spatial planning and heritage during the process.

This growing complexity of the assignment gradually started to transform into a challenging and interesting puzzle.

The need for thorough analysis and design-methodology in an integral and unorthodox approach became more clear through time.

A broad value assessment was needed to understand the building in its design, its technology, its use, its poetical expression and its transformation. This confrontation of value assessment with future demands, the immense transformation of the site, the wishes, demands and ambitions of client and city did help in the unorthodox discovery of the assignment. This could only succeed in the awareness that dogma's in the approach of the design were doomed to fail. New use that wouldn't fit within the capacity and the character of the building for instance, was the biggest challenge here.

Discovery of the Assignment in a Double Paradox

Starting with the broad analysis of the quality of the transformation of the building and site, scenario's of use and design started to come up.

The methodological approach of the design task was inspired by the Spiral of Thought⁵, all relevant aspects were touched in a comprehensive story with the credo:

"Looking for balance, the transformation of modern heritage and the urban vibe as mutual incentives for sustainable redevelopment in an integral approach".

Integral refers to the process of mobilizing the relevant stakeholders to exchange the hy-

pothesis of a constructed story of new use and design, by studying and valuing the existing in its transformation (value-assessment) and make it fit for future purpose.

And integral also means: the new incentives for the (built) environment that can emerge out of the 'second life' of the transformation of the Heritage object.⁶

The process of exchanging arguments and modelling and discovery took over half a year.

What were the incentives for the 'plot'? The transformation and further intensifying of the urban vibe which lead to the loss of the original icon in the area was the real incentive, together with an authentic process and value-assessment of the building.

The outcome is onorthodox, with a new mix of functions (parking, retail, housing and high-end offices) had to fit into the building and should re-vitalize the urban context.

Enhancing the original design and icon of Bremer, the genius loci should be reinforced in the uptopping the TPG-building of Bremer as a Bremer. That's the way it could be recognized in the urban jungle again. We could fulfill the demands of politics to design an icon here again, if we were able to integrate the new design with the existing. Starting point was the mix of vital urban functions, including the high end-office space. This actually was the *first paradox* to overcome. In this context Hilde Remoy⁷, stated that status, imago, visual and spatial quality, are vital conditions for development of office space. If one adds the special quality of heritage, there is a really good starting point here despite the difficult times.

The *second paradox* was the design task, 'double' the building of Bremer in melting and still keeping it apart in creating one new icon. So to continue and not to continue, follow the composition and do it differently. To take over measurement system in the new elevations and disobey at the same time. To follow 'Bremer' and be brutal again. To find authenticity in the

new mix of functions and building composition by adding value to the city and to the heritage-building.

The lessons that could be learnt out of the development and design process that is still going today, is that a real sustainable design is in the integral approach of the 'old and the new'. Sustainability is not something separate, it's a part of a holistic approach. (Braungart) and there is a lot more involved than the energy-issue only.

Working on the 'old' has to be done with great care and understanding of the cultural, technical and historical dimension, and looking forward with the right luggage in in the awareness of societal relevance. A too one sided approach in aesthetics, ethics⁸ or pragmatics will not help. Being generic and specific at the same time, the position of the architect develops into being a director in a very complex task. It is about attitude, absolutely open in exchanging knowledge and skills, curious and willing to work in impossible paradoxes with the focus on new value-creation.

With the awareness that we should focus on cities as intelligent organisms instead of individual buildings, (Professor Andy vd Dobbeltsteent, TU-delft, Chair Sustainability, department AE+T), the new assignment of transformation the existing is a thrilling challenge.

A Short Number of Facts

1. 1949: a new icon (De Haagse 'Van Nelle') is built in the urban environment of Hollands Spoor (railway-station), The 'Haagse van Nelle'.

2. 1989: a big transformation of the building itself, loss of cultural, spatial and material quality, and loss of value of use; lack of sustainable development.

3. Over the past decades: big transformation of area, the building almost vanishes in the urban vibe.

4. Today: an empty building, there is no prosperity in value of use without redevelopment.

5. 2007: Redevelopment starts. The Proposal is a mix in program of housing, high-end-offices, restaurant(s), retail and parking.

Notes

- 1 Dr. Ir. Michael Bitterman, as PhD at RTU-Delft introduced this metaphor.
- 2 Job Roos, *Discovering the Assignment* (VSSD 2007).
- 3 Gustav Bremer 1880-1947, Rijksbouwmeester Rosa Visser Zaggagnini, Rotterdam Bonas 2007.
- 4 Richtlijnen bouwhistorisch onderzoek.
- 5 Duurzaam is dierbaar door Christoph Grave, Vlaams Architectuur centrum 2012.
- 6 Hilde Remoy, *Out of Office, a study on the*

cause of office vacancy and transformation (IOS Press, 2010), 254.

- 7 Rousseau en ik, de erfzonde van de authenticiteit. Maarten Doorman. Uitgeverij Bert Bakker, 2e druk maart 2012; PhD TU-delft 2010, 'Out of Office'.
- 8 William McDonough and Michael Braungart, *Cradle to Cradle* (2002); Maarten Doorman, *Remaking the way we make things the impossibility of authenticity*.

Transformation of Modern Urban Space of New Belgrade in the Conditions of the Post-Socialist Transition and Sustainable Development

Jelena Ristić Trajković,

Danica Stojiljković and Dragana Ćirić



Figure 1. Blocks 1 and 2, New Belgrade, 1965.²

Due to political, demographic, and ownership changes, spatial and functional transformation of New Belgrade as a modern city has been intensified at the end of the XX century. Built as a big housing area according to the principles of Athens Charter and modern urbanism, in the strong ideological context of self-management

socialism, New Belgrade continuously presented a point of interest in terms of its future development and quality of life. The socialist system provided a systematic implementation of CIAM's principles on a large urban scale, in contrast to capitalist countries where these principles are carried out on a smaller scale.¹

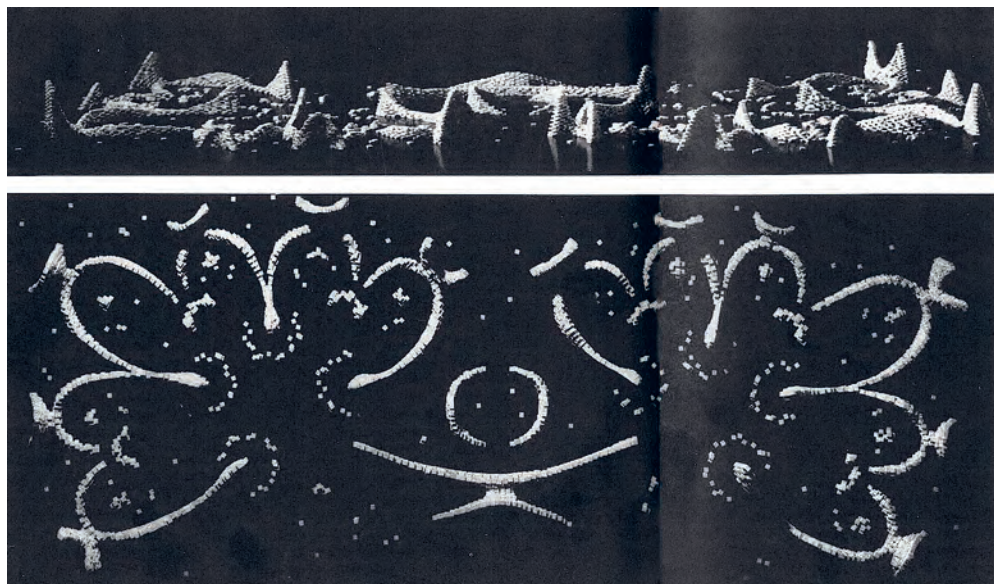


Figure 2. Andrija Mutnjaković, Competition project „Biocity for Belgrade“, New Belgrade, 1965.⁷



Figure 3. Miloš Perović, Proposed reconstruction of New Belgrade and Sava amphitheater, 1981-1984.⁸

Today, when New Belgrade is undergoing a post-socialist transition, the issues related to various city planning problems have arisen as a consequence of urban densification and open market economy processes. This paper puts an accent on the research and analysis of theoretical considerations and planning concepts, as well as spatial realizations of town planning ideas, which have emerged in response to ecological and social problems of city planning practices. By studying the previous experiences and models of the planning history of New Belgrade and the beginnings of environmental consciousness development, it can be noticed that similar problems appeared soon after the realization of New Belgrade first areas. Analyzing the concepts of a modern city and modernism and the ways they are conceived, perceived and lived in the contemporary moment and conditions, the paper investigates them through the sustainability methodological framework. It questions further New Belgrade development in terms of contemporary sustainable models of preserving social capital, natural resources, and the issue of new environmental and economic needs for more building density and energy saving solutions.

Modern City Criticism and the Idea of Sustainable Development

The concept of sustainability can be related to the ideas of modernism in terms of sustainable nature-city connection. The ideology of modern movement in New Belgrade development was promoted through the vision of a new, clean and healthy city and application of new modern technologies. The elementary structural model of the New Belgrade functional city concept was open block which included freestanding objects surrounded by greenery, and rejected classical street model that "generates noise, dust and harmful gas emissions"³. In accordance to

the then-current development of worldwide sustainability idea, numerous initiatives were taken in Yugoslavia in order to preserve and protect the environment during the 1970's. The SFRY Constitution, enacted in 1974, comprised a provision that *"it is the duty of socialist society to provide conditions for preservation and development of natural and other values of the environment that are of interest for a healthy, safe, and efficient life and work for both current and future generations"*⁴. Since Brundtland Report published in 1987 defined sustainable development as the development that *"meets the needs of the present without compromising the ability of future generations to meet their own needs"*⁵ we can take into consideration the progressive quality of ecological views within the socialist community of Yugoslavia.

Although conceived upon the ecological principles, as early as 1960's modernist ideas provoked numerous criticisms primarily directed towards urban zoning method which resulted in the breakdown of integrated and polyfunctional communities, applying mono-functional zoning strategies.⁶ Questioning ideas of sustainability in Yugoslav professional public opinion of that period, we can distinguish the project "Biocity for Belgrade" ("Biograd za Beograd") by architect Andrija Mutnjaković. The project was submitted for the Yugoslav competition for a housing complex for 30000 inhabitants on the bank of the river Sava in New Belgrade, in 1965. Mutnjaković proposed the city as an organism of mutually interrelated spaces with a free composition organically integrated into the landscape, while investigating the possibility of organizing the city as a bio-logical urban unit through the theory of biourbanism.⁷

As an expression of modern movement criticism in the period of 1970's and 1980's, Miloš Perović advocated urban revival proposing complete reconstruction of New Belgrade through the principles of traditional urban neighborhood design, the city economy, and



Figure 4. Central Committee Building, New Belgrade, 1967.¹²



Figure 5. Central Committee Building (now Ušće Tower) with Ušće Shopping Center, New Belgrade, 2012.¹³

thus spatial and programmatic sustainability. Perović asserted spontaneous urban growth processes and open city-transformation under influences of new social, economic and cultural development.⁸ Main question of the modern city future development was raised at the Competition for urban structure improvement of New Belgrade in 1986. Among the submitted papers one of special importance was the interdisciplinary proposal of Henry Lefebvre and his team that advocated the idea of the “right to the city”⁹ as a criticism of the present conditions of the functional city.

Modern Urban Space of New Belgrade in the Conditions of the Post-Socialist Transition

To mid-eighties of the XX century, New Belgrade planning was based on the principles of population growth and the economic development model. The changes of ideology conditions that ensued after the 1990’s, as a result of both political system (from socialist to democratic society) and economy system transformation (from economic planning to market economy), conditioned specific transformation of the modern space of New Belgrade and put in question the future land use. The most obvious changes in physical, functional and spatial urban structure of New Belgrade were reflected in the construction of commercial and business zones through the green field private sector in-

vestments. The Master Plan of Belgrade to 2021 proposes that the central zone of New Belgrade should become a new business, commercial, administrative and cultural centre of both national and regional importance.¹⁰ According to Blagojević, New Belgrade undergoes the process of a contemporary re-urbanization in the post-socialist transition conditions that characterizes a part of space production in the global urban society.¹¹ Such changes have had a significant impact on the very structure of the users and quality of life in New Belgrade, particularly in terms of the complementarity of functions that enables sustainable transport and the reduction of the space-time fragmentation of human needs (accommodation, work, free time).

In this context the question of the Modern Movement and Modernism heritage of New Belgrade and its preservation has been compromised. The New Belgrade urban structure, theoretically considered as an unfinished historical project, represents an open field for contemporary interpretation.¹⁴ According to this the space of New Belgrade that was divided into zones and functional wholes is now given a more complex and more integrative structure, thus proving the sustainability of the modern city open plan. On the other hand, contemporary researches by method of thermography have shown that there are significant heat losses in building system of prefabricated construction. Considering that the largest part of New Belgrade was realized in this technology, it is necessary to reconstruct existing buildings in order to achieve a higher level of energy efficiency.¹⁵ In order to preserve cultural identity of New Belgrade, as well as the concept of the modern city, its aesthetics and philosophy, it is not enough only to preserve the physical structure, but also to recognize the ways for further development of such space as a part of the continuous and sustainable planning process.

Conclusion

This paper advocates the stance that rational action in further urban development could be achieved only by understanding the meaning of the phenomenon, processes, conditions and planning strategies of the city throughout history. Future researches on development of New Belgrade should be based on experiences of historical models and theoretical considerations, as well as on the possibility for their improvement by implementing the contemporary global strategies and experiences in accordance to the local needs and possibilities. It is necessary that the urban structure development of New Belgrade should meet the conditions for creating compactness and sustainability of urban structure. On the other hand, it is important to recognize and protect all the important qualities of New Belgrade as a modern city in order to prevent their devastation in the system of the market oriented economy, through the system of sustainable conservation.

Acknowledgements

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- 2 *Arhitektura urbanizam* (Belgrade), no. 32 (1965), 9.
- 3 Fransoaz Šoe [Françoise Choay], *Urbanizam, utopija stvarnost* [Urbanism, Utopia and Reality] (Belgrade: Građevinska knjiga, 1978).

- 4 Danilo Ž. Marković, *Socijalna ekologija* [Social Ecology] (Belgrade: Zavod za udžbenike i nastavna sredstva, 1986), 133.
- 5 United Nations, "Report of the World Commission on Environment and Development", General Assembly Resolution 42/187, 11 December 1987.
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Boston's Heroic Modernism

Mark Pasnik

Boston's urban developments in the period 1960-1976 transformed the city's historical core through the insertion of a vast number of buildings, many of which were constructed in concrete. New districts and major infrastructural improvements were launched, serving the needs of government, hospitals, universities, housing, and the financial sector, with the goal of creating a modernized city. The Heroic Project, a research initiative into Boston's concrete architecture, has identified more than 150 buildings, including structures by Marcel Breuer, Walter Gropius, Le Corbusier, I. M. Pei, Paul Rudolph, and Josep Lluís Sert.¹ While this legacy is especially notable, contemporary discussions surrounding the preservation of concrete buildings in Boston often suffer from false associations of the structures with urban renewal policies and the term "brutalism." This paper attempts to clarify those relationships to situate contemporary debates within a more accurate narrative.

Boston's ongoing discourse on the preservation of its concrete heritage has unfolded pointedly over the past six years surrounding two sites, Boston City Hall (figure 1) and the Christian Science Church Center (figure 2). The debate was first catalyzed by Mayor Thomas Menino's proposal in 2006 to relocate the

offices of city government to a new waterfront site, at the same time calling for the sale or demolition of the existing monumental structure by Kallmann, McKinnell and Knowles. The second building complex, the Christian Science Church Center by Araldo Cossutta of I. M. Pei and Partners, faced the possibility of destructive modifications proposed by the site's owner. A campaign to grant it landmark status succeeded in 2011.

These two examples form an object lesson in preservation of the 1960s-era concrete buildings. Boston City Hall has been a "third rail" for public sentiment about concrete buildings—involving inflamed editorials, dedicated magazine issues, the creation of activist groups, and studies by local architects, all foreshadowing the difficulties that lie ahead for buildings of this character.² Only the economic downturn of 2008 was able to postpone destructive action. By contrast, the quiet and relatively uneventful landmarking process for the Christian Science Church Center benefitted from a widespread public appreciation for the complex and its beloved reflecting pool.

Choices regarding the preservation of these buildings will be predicated on many factors, including economics (the cost of moderniza-



Figure 1. Kallmann McKinnell Knowles – Boston City Hall.

tion versus replacement), technical challenges (inflexibility limits their responses to new demands), and environmental concerns (many suffer from energy performance issues). However, one of the central questions about their future lies in the value given them by the public. Does society understand them? Are they worth preserving? Convincing the public to appreciate such structures will require overcoming the misleading associations concrete buildings have with urban renewal and the authoritative, overbearing implications of the term brutalism.

Heroic Urbanism

Strategies for developing Boston were dramatically overhauled in the period immediately following the founding of the Boston Redevelopment Authority in 1957 and the arrival its director, Ed Logue, in 1960. The city had been reeling from the disastrous West End demolition and it looked to create less draconian models of renewal in an effort to establish a “New Boston.”³

Logue’s aspirations were demonstrated in his goals for the Government Center project:

“First, to remove a decadent and blighted area in the heart of the City and convert it to a major center of governmental and private activity. Second, to develop an area of highest design and construction quality, marked by buildings of architectural excellence...”⁴

Logue himself implies the link between the urban and the architectural as a one-two process—demolition followed directly by construction in his preferred language of concrete. Today the urbanism of concrete continues to be mistakenly identified with the destructive force of CIAM-inspired urban renewal, despite the fact that many of the designers who built in Boston promoted alternate urban visions. In a speech given at Boston’s AIA convention in 1954, Paul Rudolph outlined his approach:

“We need sequences of space which arouse one’s curiosity, give a sense of anticipation,



Figure 2. Cossutta – Christian Science Church Center.

which beckon and impel us to rush forward to find that releasing space which dominates, which climaxes and acts as a magnet, and gives direction.”³

Rudolph achieves this vision in Boston’s Health and Human Services Building (figure 3), where the varied exterior spaces, sally ports, sinewy staircases, and sectional shifts form a compellingly orchestrated experience across the site.

These devices stand in stark contrast to the earlier visions of CIAM that led, via the Housing Act of 1949, to destructive results in Boston’s West End, with its middle-class towers replacing “blighted areas.” Writing in 1964, critic Ada Louise Huxtable argued that Boston had learned from its earlier “catastrophes” and set out in a new direction with “one of the country’s most progressive and promising urban renewal programs.”⁶ A case like Rudolph’s building may have occupied cleared land, but unlike the languages of urban renewal, it created rich sequences of public spaces and carefully defined street edges.

Other examples illustrate a similar move away from standard urban renewal strategies.

Josep Lluís Sert’s Holyoke Center (figure 4) at Harvard University skillfully manipulates the large massing, defines street walls, extends existing pedestrian routes, and defines well-scaled spaces. Cossutta’s Christian Science Church Center forms a religious acropolis, where buildings act in concert with one another to define a dynamically composed space. The very diversity of these urban approaches indicates the independence of these architects from the tenets of CIAM-inspired urban renewal, yet today their buildings are often linked falsely to the very policies against which they reacted.

Heroic Architecture

The association of concrete with the term brutalism has had an equally negative effect on the public’s assessment of these buildings. Structures such as Boston City Hall, the Health and Human Services Building, the Christian Science Church Center, and Holyoke Center attempted to form a new civic-minded language that ran counter to the era’s predominant strand of post-Miesian, corporate glass-and-steel modernism.



Figure 3. Rudolph – Health and Human Services.

In their material authenticity, these concrete buildings followed ideals of bold expression and monumentality growing out of the late work of Le Corbusier. Within the profession, they were celebrated widely. From 1964 to 1980, the Boston Society of Architects awarded thirteen of sixteen Harleston Parker Medals to concrete buildings. Public reception has been less embracing. In her New York Times review on Boston City Hall, Ada Louise Huxtable issued a warning embedded in her praise:

“Boston can celebrate with the knowledge that it has produced a superior public building in an age that values cheapness over quality as a form of public virtue. It also has one of the handsomest buildings around, and thus far, one of the least understood...”⁷

City hall and many of its concrete counterparts continue to be misunderstood today. Their original intent has been lost, only to be replaced by negative terms associated with brutalism.

An effort by the Heroic Project to replace the term “brutalist” with “heroic” in the lexicon of preservationists and the public represents more

than a simple word change. It is an attempt to overcome the burden of false associations. Using concrete, architects struggled to reinvigorate the modernist language at a time dominated by a debased International Style. While divergent in many ways from one another, Boston’s heroic buildings share an interest in material authenticity, a return to principles of structural honesty, and a fascination with monumentality. The results are rugged buildings that contrast with the era’s corporate strains. Michael McKinnell addressed this architectural direction:

“We were particularly interested in imbuing architecture with an authenticity. We thought concrete was the appropriate material to achieve this... Concrete stood against the stream of what we considered decadently degenerate frippery and surface concerns.”⁸

Architecture like McKinnell’s represented a fresh set of ambitions, aspirations, and ideals. Speaking recently of his seminal 70 Federal Street (figure 5) completed in 1968, Tad Stahl echoed the desire for a “new and relevant architecture in concrete—expressive of universal

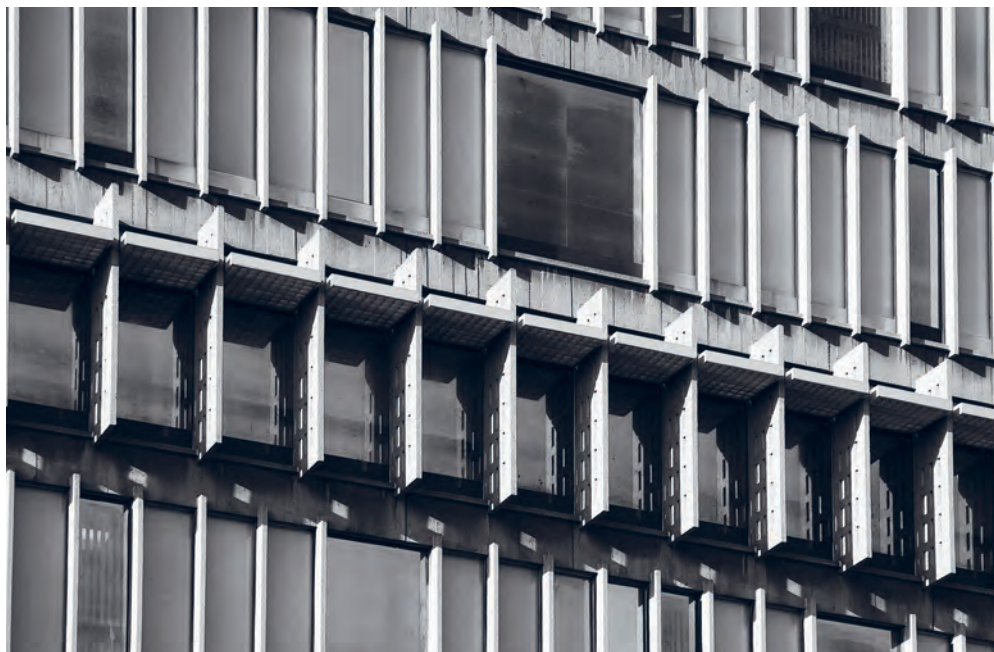


Figure 4. Sert – Holyoke Center.

*principles, authenticity, and civility.*³⁹ The public often does not fully appreciate these ideals today because American society lacks faith in its civic realm and the capacity of architecture to express collective aspirations. Political and social upheaval that took place in the late sixties and seventies has inverted the perception of these static objects. Qualities that were once seen as civic have since been reinterpreted as authoritarian in an era that distrusts government. Only by understanding the original ideals that sponsored the production of these buildings can the public assess their full worth.

Reclaiming the Heroic

The future of Boston's heroic architecture—and indeed concrete buildings in many other cities—surrounds a central question: what

value do these buildings have for society? The modernist language records values from another era. The discourse about the future of concrete buildings should be framed to make those values accessible and understood. In Boston's case, heroic buildings are a reminder that the city's heritage includes a time where designers celebrated civic virtue through monumentality.

These characteristics have been distorted in ways that will likely lead to the destruction of many excellent examples of this powerful architectural and urbanistic lineage. While technical, economic, and environmental concerns dictate many decisions about preservation, it is only through a wholesale commitment to the significance of these buildings in the broader public eye that we can hope for them to garner respectful treatment. It would benefit the preservation community to attend to its role as an educator in times such as these.



Figure 5. Stahl – 70 Federal Street.

Notes

- 1 The Heroic Project started in 2009 and is led by Chris Grimley, Michael Kubo, and the author. The project has produced documentation, exhibitions, essays, courses, and interviews. All photographs are by the author.
- 2 David Monteyne, "Boston City Hall and a History of Reception," *Journal of Architectural Education* (October 2011), 45-62.
- 3 Thomas H. O'Connor, *Building a New Boston* (Boston: Northeastern University Press, 1993).
- 4 Edward J. Logue, *Seven Years of Progress* (Boston: Boston Redevelopment Authority, 1967), 17.
- 5 Paul Rudolph, "The Changing Philosophy of Architecture," *Architectural Forum* (July 1954), 120.
- 6 Ada Louise Huxtable, "Renewal in Boston: Good and Bad," *New York Times* (April 19, 1964), 24.
- 7 Ada Louise Huxtable, "Boston's New City Hall: A Public Building of Quality," *New York Times*, February 4, 1969.
- 8 Michael McKinnell, interview with the author, September 4, 2009.
- 9 Tad Stahl, "Modernism in Search of Authenticity," unpublished exhibition essay, 2009.

Concepts and Survival of the Alternative Housing Projects in Soviet Lithuania in the 1960s

Marija Dremaitė

In the paper I discuss architectural shaping of the Soviet industrialized housing with the focus on architects' influence in creating 'a better living' in a well known stiff Soviet construction system. The paper examines how the all-Union mass housing industrialization policy and practice was carried out in the 1960s in the Western periphery of the USSR, namely Soviet Lithuania, which became the leader in mass housing urban design because of the Western oriented ambitions of the Baltic architects.

The decade known as the Khrushchev's Thaw can be viewed as a period of certain 'welfare program' started by the meeting of Soviet architects, engineers and builders in December 1954, where Khrushchev delivered his famous speech on industrialization of architecture. For the Baltic architects the political reform in architecture played an important, however, different role. The Thaw encouraged the process of cultural liberation that could be characterized by a clear re-emergence of national, Western-oriented and modernist aspects of culture. Architects and designers were able to return to modern aesthetics, known from the pre-war period of independent national states and foreign architectural magazines. Important impulse was the 1959 study trip of Lithuanian architects to Finland. 'We really felt architecture there', Vytautas Čekanauskas remembers.¹ Nordic regional-

ism was an acceptable example for Lithuanian architects since it combined modernist design with regional tradition and thus expresses their aspiration for national idiom. It might explain why Western inspired aspects of modernist architecture in Lithuania can be seen not only in the area of exceptionally designed public buildings that marked the breakthrough of modernism, but also in the field of banal or budget mass housing modernism.²

In 1957, when the mass housing programme and construction became widely industrialised, building of private houses become proscribed in capital and larger cities (like Vilnius and Kaunas in Lithuanian SSR) and restricted in the mid-sized towns³. The ban to build individual houses encouraged a distinctive housing programme in the Soviet Union – the construction of the *cooperative flats*. Politically it became a solution to the difficult situation of the well known soviet apartment shortage. Socially this process started to accumulate a better provided group of urban society. At the same time it also encouraged designs of alternative and experimental dwellings.

The cooperatives for the construction of flats could be established within local municipalities, and also within industrial enterprises and organisations. Members of more prosperous departments and organisations were allowed to

advance and improve the construction of their housing with their own financial contributions. In Vilnius the first housing cooperatives were established in 1963, and the first nine houses were built. In fact these buildings did not fight either industrialisation or standardisation, because they had to be built following a standard design and according to standard technology. However, the range of privileges included a selection of better building materials and a more comfortable flat layout. Nevertheless, some housing cooperatives were especially craving for a permit for 'individual design'. Needless to say that architects supported such activity as it was almost the only field to practice non-standard housing ideas. However, acquiring permit for 'individual design' was not an easy task and the stories behind those permits beautifully illustrate the complicated formation of informal ties within the soviet society and bureaucracy.

The community of artists in the Soviet Union had more privileges from this point of view. Members of creative organisations were allowed to apply for the larger living floor space (exceeding the existing norm of the square metres per person), under the need for a creative workshop or study room. The members of these organisations (being a member was obligatory for the professional existence), united in a cooperative, had the right to apply for a land plot for construction of a house or houses, and a permit for an individual design issued on the grounds of the special purpose of the buildings. As socialism progressed, these organisations advantageously used the possibility to build cooperative flats with studios, which meant highly desired extra space. True to their name, creative workers, together with architects showed much more creativity than the party elite or the technical community. In their projects, the highly improbable soviet urban housing schemes like semi-detached houses of two or three floors with separate entrances, fireplaces and halls were born.

For example, the Union of Composers' block of houses in Vilnius (architect Vytautas Edmundas Čekanauskas, design 1960, construction completed 1966), was indeed a unique occurrence in housing construction in the Soviet Union. It can be considered the first outstanding architectural object, where unanimity of innovative composition, typology, and use of materials, structural construction and interiors was created. The object is exceptional by its social origin, and its individuality as a project makes it unique in the context of mass pre-fab assembled construction that had begun to gather speed in the USSR.

Composers developed a concept of low-rise terraced houses (16 single-flat houses and a concert hall building), thus saving the historic area from the standard five floor pre-fab slab – such buildings were already planned on the adjacent land plot⁴. Čekanauskas has stated that his 1959 study trip to Finland helped to decide on using mostly traditional, natural and locally available building materials (red brick, thick pale plasters and timber). He also adjusted the buildings to natural terrain, thus saving the pine trees. The architecture of houses has many connections with a group of buildings in Tapiola (houses by Kaija and Heikki Siren, 1955). Just like in Finland, the flats in Vilnius were economical and simply furnished, yet functional. The chairman of the Union of Composers helped to gain permits for all these extra-ordinary solutions.

Innovative planning and decking outside the houses undoubtedly state a higher quality of housing. In Lithuania, such way of positioning of houses in the terrain and use of local materials began to be treated as a national style. However, not this individualized and cosy housing block, but *Lazdynai*, a huge residential area for 40.000 inhabitants in Vilnius, became a real highlight of the new Baltic housing design.

Young and ambitious architects Brėdikis and Čekanauskas were commissioned to design *Lazdynai* in 1962 with expectation of the

fresh ideas. Both architects openly talked about strong influences of the Finnish (Tapiola), Swedish (Vällingby, Farsta) and modern French (Toulouse-Le Mirail) suburban designs.⁵ The neighbourhood unit concept was implemented here with semi-open courtyards and pedestrian avenues, as well as adaptation to naturally hilly terrain and development of alternative housing models.

The naturally hilly site with pine trees was meant to be preserved and serve as a part of landscape design. Architects argued that dispersing standard five- and nine-storey housing blocks among hills would create a unique silhouette. However, this idea required different house designs, therefore the architects collaborated closely with the Department of Standard Design of the Institute and designed 15 types of the improved standard All-Union House Series 1-464-LI (LI – meaning Lithuania). The new series of five-, nine- and twelve-storey prefabricated large panel houses (among them unique stepped and terraced 5- and 9-storey house types as well as 5-storey slabs of the broken plan). The upgrade in apartment design was minimal – architects were obliged to keep the standard panel measure of 3.20, but they were able to carry a better apartment planning and also improve the façade aesthetics introducing loggias instead of balconies. The twelve-storey panel towers were first built in *Lazdynai* to create vertical landmarks. The same could be attributed to the design of public centres of the *microrayon* – although planners were committed to use the standard design, all three centres were individually detailed therefore gaining original characteristics especially featured by public art. According to architects, institutional nationalism played its role when there was the need to support novelties of *Lazdynai* at the State Construction Committee.

After several visits of important heads of Soviet Union Construction committee, *Lazdynai* was nominated and later awarded the Lenin

prize for the All-Union Architectural Design in 1974 (it was the first highest-level award for urban design). Following this award, Lithuanian urban planners became well-established leaders of the Soviet urban design while *Lazdynai* became widely featured home and abroad culminating on the cover of the East Bloc's international survey of modern panel housing construction.⁶

There is no wonder that *Lazdynai*, and not the cosy individualised Composer Union's unit was awarded with the most prestigious soviet award. It was not until *Lazdynai* that qualitatively different modernist town planning ideas were introduced in the Soviet space, and in the growing critique of the monotony of the mass housing *Lazdynai* demonstrated the bright future of the standardisation with a touch of "landscape" and "architecture".

The research shows that although officially different housing models could not exist in the Soviet Union, it existed in all forms and shapes. Cooperative housing served as a field for experimentation for architects. Individually designed cooperative flats and multi-flat houses were made possible because of the rather privileged position (both by income and by privileges). It remains to be a well desired residential space maintained by family members.

Different situation exists in *Lazdynai*, where two paradoxes might be seen. The housing district that was designed as an opposition to the standard Soviet mass housing started being used as a new 'socialist' design excellence. It was also evident, that for the local architects and planners *Lazdynai* signified direct Western influence, carried out on behalf of a more successful architecture. Nevertheless, the poor quality of construction resulted in the fact that today a casual observer only sees the area as a typical socialist housing scheme and the apartments see an intensive settlement of inhabitants with limited budgets.

Notes

- 1 Author's interview with Vytautas Čekanauskas, Vilnius, 2006, personal archive.
- 2 For the explanation of 'banal socmodernism' see: D. Crowley, "Socmodernism and the architecture of leisure in Eastern/ Central Europe in the 1960s and 1970s," *Different Modernisms, Different Avant-gardes: Problems in Central and Eastern European Art after World War II* (Tallinn, 2009), 247.
- 3 Lithuanian Communist Party Central Committee and Council of Ministers 1962 09 10 decision No. 592, "Regarding individual and cooperative housing construction."
- 4 "Design for the Union of Composers' housing and concert hall", Vilnius county archive, f. 1036, ap. 11, b. 228, (1960), 2.
- 5 Author's interview with Vytautas Čekanauskas, Vilnius, 2006, personal archive.
- 6 Rietdorf, Werner, *Neue Wohngebiete sozialistischer Länder* (Berlin: VEB Verlag für Bauwesen, 1976).

Taking a Dim View of a Dam:

Daring Modernization, Mystified Territorial Decisions and a Possible Overturn via an Exemplary Case-Study Research of a MM Premise

Ruth Verde Zein

Leda Maria Brandão de Oliveira

Cecília Rodrigues dos Santos

Introduction

The banks of the Guarapiranga dam lake are also known by the nickname of “Mar Paulista” (Paulista Sea) and have had an important, if unintended role as a place to spend the time off, a kind of subrogate “tropical beach” that the city lacks and the local inhabitants crave. Nevertheless, the construction of the Guarapiranga dam and water reservoir (1905) was not brought out to beautify the landscape. The possibility of using the lake’s borders as a qualified urban space was a non-existent concern to its creators, and its margins were never properly designed for the open use of the population. The artificial lake and the mesh of rivers that crisscross São Paulo have been completely transformed almost exclusively from a technical and engineering-oriented point of view, without concerns with ecological impacts and landscape design.

That condition is a very important aspect when considering the preservation of one of the most outstanding Paulista¹ Brutalist Architecture landmarks: the Santapaula Yacht Club Nau-

tical Pavilion (SYCNP)², on the borders of the Guarapiranga’s. Our studies on this subject suggest that it would be an error to try and restore it as an isolated piece, through its monumentalization and further segregation by some unsuitable use; and suggest that the correct premise for the rehabilitation of this building would be to consider it as a strategic opportunity to foster a broader landscape transformation of the lake’s borders into public spaces.

The critical concern and brief historical and geographical studies here presented were matured during a research on the preservation of the SYCNP, as part of our studies on the 1955-75’s Brutalist Modern Architecture buildings in Brazil and abroad. Although considered by the architectural milieu as an indisputable work of art, the SYCNP is not yet listed as a Heritage property; it remains abandoned and risks becoming an irrecoverable ruin in a few years. There have been some efforts carried by the municipality to contemplate its restoration, unsuc-

cessful and misguided, since they fell short to understand its urban potential and seem inattentive to its peculiar architectural characteristics, that prevent its mediocre use as another “so-so museum”. It certainly deserves a better fate.

Progress and Territorial Changes

São Paulo was founded in 1554 by Jesuits, as an strategic spearhead to conquer the sertão and occupy the inner territory of Brazil. During the 19th century the coffee plantations and railways construction brought an euphoria of progress that transformed the sleepy capital into an dynamic industrialization pole and vibrant financial center in Latin America, growing from a few thousand inhabitants in 1880 to five million in the 1950's and today's 19 million in the metropolitan area.

Such achievements were made possible through a vast territorial domination, not always wise. One of its main drivers was the necessity to generate electricity and to provide its regular distribution by means of hydroelectric power plants. In the late 19th century was founded “The São Paulo Tramway, Light & Power Co. Ltd.” (or “The Light”) with Canadian, Scott and Brazilian capital. Without dissecting its history, it is possible to claim that, being just a private company with definite and relentlessly pursued business objectives, it concomitantly exerted a deep and always controversial influence on the urban history of Sao Paulo. Here, only the role “The Light” played on the creation of two dams located in the southern part of the city of São Paulo will be briefly examined, with an emphasis on the Guarapiranga's case.

To ensure the continuous supply of water for the Santana do Parnaiba power plant it was necessary to compensate the water regime of the Tietê River, the simplest solution being an upstream dam. For political reasons “The Light”

chose a cheaper alternative, placing the dam at a secondary tributary, located in the neighbor city of Santo Amaro - and thus having to inverting the river flux. So was born the Guarapiranga dam in 1906-8, “only to regularize the flow of the Tietê River at the Parnaíba power plant.”³ Although privately owned by “The Light”, the new lake had an obvious scenic and recreational value; but it was not, and never became, a public space. And its owners only reluctantly allowed the use of its banks and its waters. Paradoxically enough, in 1900 “The Light” encamps the tramway line connecting downtown São Paulo to Santo Amaro, ensuring access to their enterprise and indirectly encouraging its use as an weekend leisure option, albeit in a precarious way. Occasionally “The Light” would allow the presence of few private high-class clubs, at limited tracts of the Guarapiranga's margins.

The annexation of Santo Amaro territory to São Paulo in 1935 changed its status from a devalued region to an enviable recreational area, a “privileged place for real estate investments, directed to São Paulo's bourgeoisie, both by the availability of land and by the gentle landscape provided by the lake built by “The Light”⁴. Which nevertheless never permitted a proper urban use of the Guarapiranga, zealously guarding its margins and body, never turning them into an open urban space, using the lake as a private resource, exclusively for their technical purposes. Even then, its natural attraction as a leisure option fostered the gradual occupation of the nearby areas, initially as a holiday suburbia.

After 1960's São Paulo's accelerated and mostly unplanned urban dynamics advances the region intense occupation, juxtaposing the high class neighbourhoods with modest and poor quarters, with “favelas” eventually occupying inappropriate areas, like valley bottoms subject to seasonal floods or excessive slope lands with high risk of catastrophic sliding. In 1979's when “The Light” goes out of business,

being taken over by public authorities, the areas around the Guarapiranga were almost fully occupied. The company successors keep on following the same anti-urban attitude but do not take good care of their properties, favoring by default the ongoing illegal occupation and inappropriate private use of the lake and its banks, eventually leading to a complete urban degradation of the “Mar Paulista”.

At the turn of the 21st century there are still no proper urban policies aimed at reversing the transformation of the Guarapiranga margins as public spaces, with the exception of recent sanitary programs applied to the district slums, quite effective from a strict technical point of view. Recently there have been some discontinuous punctual interventions removing illegal settlements and opening limited stretches of the shore to public use, with no effective program to rehabilitate them as a whole.

The Santapaula Yacht Club and its Nautical Pavilion

In the 1940's the Venezuelan investor Luis Romero Sanson promoted important enterprises in the south axis of São Paulo, like the Congonhas Airport, the Interlagos Racetracks and a highway connecting them and to a new allotment, the “Satellite Garden-City Inter-Lakes Resort” (Cidade Satélite Balneária Interlagos⁵, with large residential plots, shopping and leisure areas and a small pond. Crowning the visual axis of its main boulevard, there would be a large hotel and casino, whose construction was interrupted after the casinos proscription in 1944. Around 1955 the Santapaula Yacht Club bought and adapted the existing premises and was granted permission to use a corresponding tract of beach, providing an underground passageway to its private access. The Club headquarters occupied a large horizontal bar with an added north wing at the main block, that

underwent an extensive renovation in early 1960 designed by architects João Baptista Vilanova Artigas and Carlos Cascaldi, adding two swimming pools. They also carried out some studies for the occupation of second block, or the “nautical sector”, the initial perspective studies showing different solutions for an open pavilion providing shade and minimal support for the enjoyment of the “beach”. However, the finally built pavilion is quite different in its program and construction; plastically, it does not refer to Vilanova Artigas past achievements but signals a turning point in his career.

The SYCN Pavilion is a rectangular covered area (70 x 14 m) defined by two longitudinal main prestressed concrete beams, defining two external balances of 10 m, two spans of 10m and a central span of 30 m; the beams height varies from 0.65 at the tip to 2.25m at the support points. They are connected by transverse beams, disposed at every meter, and reinforced by two intermediate longitudinal beams; the transverse beams are placed in different heights, so as to form a tripartite covering slab. The longitudinal façade beams widen down designing triangular points with a folded detail resting on four supports. There are no columns, and massive steel appliances, designed with four different shapes, articulate the contact with the basement walls. The upper structure is absolutely isostatic, a cover above the thick cyclopean concrete walls that define the basement, which can be interpreted as a kind of exposed foundation.

Despite the SYCN Pavilion only two levels and relatively small space its design proposes varied vertical voids. The upper level resonates the covering tripartite rhythm, with a double height void in the center and two open rooms at north/south ends, connected by a very narrow covered stretch, along with small independent structures for facilities. The basement level is defined by a continuous thick cyclopean concrete wall; it stretches and folds defining, from north to south, a retaining wall, a quasi-double height

wall and a closed compartment with tiny windows for storage. The floors connect by a discreet ladder between the retaining wall and storage space. Access to the lake's beach from the north open area is granted by a uniquely designed prestressed concrete stair, that hangs from the retaining wall and "floats" above ground. Counterpointing the deep shadows day light floods by the absence of vertical closings and the two zenithal "faults" of the tripartite slab plus five "light cannons" with fiberglass lids.

The only closed compartment would be used for motors and sails storage, and the double height space would receive a metal frame structure with deep niches to storage very small boats, relieved from their sails (probably 420 Class type). But that facility was never constructed, neither the pavilion was ever used as Boat Garage. A concrete slab runaway stretches from the SYCNP to the lake, but has lost its purpose since the dam maximum level was lowered for security reasons in the 1970's. At roughly the same moment the Santapaula Yacht Club declines and closes. Its premises remain abandoned and unused; its access is forbidden by its *de facto* caretakers, albeit it is not clear to whom does it legally belongs nowadays.

The SYCNP rehabilitation should be considered as a piece of a complex puzzle including Interlagos neighborhood and Guarapiranga dam, meaning, as an urban, landscape, historical and architectural preservation site. The SYCN Pavilion was built as a non-autonomous annex and cannot be used as an independent building without damaging its intrinsic characteristics. It would be better to give back its original use as a belvedere, a "brutalist" gazebo, a pleasant shady place to appreciate the lake. When properly understood from a broader scene, and correctly placed inside a responsible research that takes into account the different scales into which it is inserted, it seems clear that the best way to preserve this very important of Paulista Brutalist work is to let it become what it in fact is, and

use it to transform the site in what it should always have been, its reuse giving example as to how to redesign the lake's borders into public spaces; such as the city for so long deserves.

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<http://www.brutalistconnections.com>

Notes

- 1 "Paulista" is the patronymic to what belongs to São Paulo, as in "Mar Paulista" (Sea of São Paulo).
- 2 In Brazil it is incorrectly named (as will be further explained) as "Garagem de Barcos do late Clube Santapaula" (Santapaula Club Boat Garage).
- 3 The lake had only a regulatory purpose until 1926, when it also begun to be used as a water supply source.
- 4 Carvalho and Mendes, "A ocupação da bacia do Guarapiranga", 48.
- 5 Carvalho and Mendes, "A ocupação da bacia do Guarapiranga", 54-58.

The Italias of Caracas: Preserving the Venezuelan Modern Heritage

Hannia Gómez

*"Shelter me, oh wonderful land!
I'll be with you worshiping your stones,
Which in the darkness have the faces of new gods."*
- Vicente Gerbasi, *My Father, the Emigrant* (1945)

La Città Invisible

Caracas is a modern city-jewel that is highly scenic, because of the features of the natural landscape on which it developed: a valley flanked by a monumental mountain-park, the Avila, and a ring of urbanized hills.

Of all languages that developed in Caracas in the twentieth century, the modern architectures and urbanisms that best understood the land-scaping potential of this extraordinary natural environment were those introduced by the immigrant Italian population.

Venezuela became by the mid-century the fourth largest Italian colony in the world. Since the 1930s, countless waves of immigrants from all the regions of Italy arrived at Venezuelan ports in the great Italian liners of that period. Some times to return to Italy after a while and resume there their lives interrupted by war and poverty, but most of the time to stay in Venezuela forever.

These are the "Specialists", as they are locally called. A brave crowd of workers who came to rebuild their lives, and that in doing so, the first thing they rebuilt was their own fragmented city. Fleeing from the political and economic problems of their homeland, they came to fill the valley and its hills with the architectural and urban fragments of their memories. The constructive momentum that the country lived due to the oil boom, found in these fine Italian craftsmen the most effective tool for the transformation of the environment, learning from them, relying on them... and also *becoming* them a bit.

Their vast urban memory and their architectural culture, of light and refined modern designs, marked and modeled the character and identity of Venezuelan modernity. Cities were transformed. Entire fragments of Caracas are like pieces of Rome, Genoa, Florence or Na-



Figure 1. Quinta Caurimare, Antonio Lombardini. Paolo Gasparini - Archivo Fundación de la Memoria Urbana, 1956.

ples, avant garde villas overlook into the valley's *vedute*; stylish arabesques turn the city corners into places of genius. Caracas piled up images and nomenclatures of peninsular roots, naming streets and buildings as *Messalina*, *Tiberius*, *Arno*, *Julius Caesar*, *Nero*, *Fontana d'Amore*; making anonymous tributes to Scarpa, Ridolfi, Piacentini and Libera; hanging rationalist lyricisms from the cliffs, risking cantilevered *gesti di ingegneri*. With Master Gio Ponti at the head of the list, the names of Domenico Fillippone, Nigra Montini, Graziano Gasparini, Antonio Lombardini, Angelo Di Sappio and many others, with their untold stories, are today being documented by Docomomo Venezuela, facing the urgent challenge of density and growth.

This Italian layer of Caracas Modern Heritage, this *città invisibile*, in its divine hybridizations with local culture, changed the environmental psychology of the modern city, cultur-

ally revealing to the people the scenic potential of the place, the specificity of sites, and teaching them to make a more urban architecture. Without its *Italías*, the Caracas living environment would have never been the same.

Luogo

The natural landscape of the capital is spectacularly beautiful, varied and powerful. Hills, river beds, ravines, shifting views, unexpected panoramas. Towards 1930, when urban development began to grow fast to the east, the Colonial use of the territory still prevailed on a practically intact landscape. The hills had not yet been built. Bringing in the ancient Mediterranean landscaping culture was the first urban lesson brought by the Italians, helping to validate place and the take landscape into account,



Figure 2. Casa Los Borges, Athos Albertoni. Archivo Fundación de la Memoria Urbana, 1959.

contributing to the qualitative construction of the city.

The greatest Caracas residential palace, Miraflores, had been designed c. 1900 by an engineer from Genoa, Giuseppe Orsi de Mombello. Then the city had its first grand monumental *belvedere*, overlooking the historic center. This would only happen again half a century later with the new-coming Italian architects. Gio Ponti said about this almost unexploited Caraquenian potential in 1954: “Caracas unfurls its main urban shape along a valley that is bordered by beautiful hills. These are spectacular stands to ‘see the city’. The whole city becomes a spectacle of itself, of unrivaled quality.”

In the 1950s three new Italian *palazzi* will be built on the hills, to start dominating the whole

valley’s landscape: the Quinta Caurimare (Lombardini), the Casa Los Borges (Albertoni) and the Villa Planchart (Ponti), together with the smaller Villa Capri on the Caraquenian coastline (of unknown author). All of them were topographically skillful belvederi. Influenced by these villas, the city began to be filled more and more with the strategically placed topographical episodes of the *Architectures of the Look*. Something that also occurred in urbanism, thanks to the lyrical and theatrical topographical planning of Colinas de Bello Monte (Lombardini), inspired in the winding street grid of the Florentine Fiesole. As Michel Angelo wrote in a sonnet: “By art nature is defeated”. The Latin tradition of mastering the territory through architecture, lived in Caracas a modern renaissance.



Figure 3. Villa Planchart, Gio Ponti. Archivo Gio Ponti Caracas, 1957.

Città

Caracas had been enriched since the Colonial times by the legacy of the Laws of the Indies. Patios, squares, corner sites and monuments were part of its urban memory. But with the arrival of modernity and the impact of growth, the new projects forgot gradually the importance of the urban role of architecture. Therefore, the urban fabric started to become more and more functional and programmatic, leaving to a second plane the language of the city.

The lesson that Italy teaches to the city makes two key contributions: Urban Architecture (1930s and 1940s), and Monumentality (1950s). Coinciding in the beginning with the arrival of families coming mostly from the Mezzogiorno, from Sicily, Campania, Abruzzo, and from Puglia -this is, not from the big cities but from the smaller towns and villages-, the first

buildings that began to appear everywhere had a more urban rather than academic wisdom.²

These buildings marked cornersites, emphasized entrances, were filled with ornamentation and nomenclature, lined the streets in the traditional way, raised their cornices to achieve significance, reinforced with their volumes a given direction, the presence of a square, or were sensitive to nearby remarkable architectures. With their humble but cultured gestures of civility, they re-educated the city in the art of urban architecture, and keep doing it until today. The best example of this is the area of the Avenida Victoria-Valle Abajo, dominated by the Basilica de San Pedro (Redini).

In the late 1940s, and from the following decade on, Caracas is already thoroughly imbued with the Italian urban culture. Venezuelan developers, associated with their architects -Italian or not-, design and build large urban



Figure 4. Casa Italia, Domenico Filippone Maggio. Valeria Ragonne - Archivo Fundación de la Memoria Urbana, 1954.

Figure 5. Villa Olary, Nigra Montini. Archivo Fundación de la Memoria Urbana, 1959.

projects of clear italic affiliation. There, references are more architecturally cultured, and, as much of the Italian architecture of the time, torn between modernity and tradition. Two places would be linked together by erecting at the same time, and in the best spirit of the Baroque Rome of Sixtus V (and also in the best spirit of the *Risorgimento*), monumental obelisks: the Altamira neighborhood (Roche) and the Sistema de la Nacionalidad (Malaussena).

In Altamira, a pair of ascendant monumental avenues that branch forming a *bidente*, reminiscent of the Piazza del Popolo in Rome, depart northward from a large square, leading the views to the scenic mountain of El Avila. In the Sistema de la Nacionalidad, instead, a large civil/military urban complex that includes avenues, promenades and architecture, focuses on the monumental rhetoric of the commemorative axis. A great monument dedicated to the Venezuelan Independence War heroes, is the heart of the complex. This is where the resonances of the aesthetics of Rome's EUR are most striking.

Architettura

Along the whole twentieth century, the city was a real architectural quarry, and its modern

legacy is remarkable. Great architects, beginning with Carlos Raúl Villanueva, were busy populating the valley with their works. So the architecture lesson from the Italian emigration was rather an influence within this vast sea of modernities, an influence that began to be felt more strongly from the 1950s.

In the same manner that the effort of laborious and tireless Italian geometers, artisans and builders re-educated Caracas in the art of city building, their multiplied and active presence almost in all of the works in town, allowed the filtering of the influence of Italian modern architecture. Three major events catapulted the spreading of the word: the construction of the Casa Italia (Filippone) in 1954, of the Villa Planchart in 1957 and of the Venezuelan Pavilion at the Venice Biennale in 1956 by Carlo Scarpa. Three magnificent buildings that were true lighthouses of italianness.

Thanks to this influence, architecture became increasingly lighter (Ponti), structures were increasingly creative and ingenious (Morandi), modernity could also be mannerist or baroque and, above all, lyrical (Montini). The city learned what expert *artigianato* meant when applied to architecture, and witnessed a creative explosion of floors, railings, doors, windows, fonts, murals and lighting fixtures

designs, while construction materials diversified to meet the peninsular building traditions: glass mosaics, granites, *terrazzo*, plasters, facings, ceramics and marble.

But, most importantly, the city appropriated and domesticated the ideal of integrating art in architecture and in public spaces, something

which was masterfully introduced by the Ciudad Universitaria de Caracas, but also by the total work of art that is Villa Planchart. By the Sixties, after three decades of coexistence with its Italías, Caracas modern architecture had become a *dolce stil novo* that began to be part of the city's own character. Now is its heritage.

A Dolce Stil Novo

1. A villa by Athos Albertoni, with wall sconces by Napoleone Martinuzzi and Alfredo Barbini for Vetri di Gino Cenedese, and mural ceramics by Lucio Fontana: Casa Los Borges.
2. A mural by Harry Bertoia: Old US Embassy Building.
3. Sculptures and friezes by Franco Bianchini.
4. Sculptures by Pietro Ceccarelli.
5. A sculpture by Gaetano Chiaromonte de Castrogiovanni: Plaza Italia.
6. Five sculptures by Arturo Dazzi: Monumento a Los precursores.
7. An office building by Angelo Di Sappio: Atlántique Building.
8. A sculpture by Federico Fabbiani: Cementerio General del Sur.
9. The architecture of Domenico Filippone Maggio.
10. An urbanism and a villa by Antonio Lombardini: Colinas de Bello Monte and Villa Caurimare.
11. Two villas by Nigra Montini: Villa Olary and Villa Mi trio.
12. Two bridges by Riccardo Morandi: Puente Nueva República y Puente over the river Tuy.
13. An abbey by Humberto Poletta: San José del Avila.
14. Four villas by Gio Ponti, with a ceramic mural by Fausto Melotti and enamels by Romano Rui: Villa Arreaza, Villa Matos-Guzmán Blanco, Villa González-Gorron dona and Villa Planchart.
15. A basilica by Marco Redini, with sculptures by Ronaldo: San Pedro.
16. Five sculptures by Attilio Selva: Monumento a Los precursores.
17. Seven mosaic murals by Ennio Tamiasso.
18. Murals and sculptures by Hugo Daini.
19. The architecture of Graziano Gasparini.
20. The architecture of Juan Pedro Posani.
21. The architecture of Antonio Pinzani.
22. Murals and sculptures by Giuseppe Pizzo.
23. A house and a building by Italo and Juan Trivella: Quinta Deyanira and Machango Building.
24. Two sculptures by Mario Ceroli and Arnaldo Pomodoro: *Monument to the Emigrant*, and *Disco Grande*.

Notes

- 1 Gio Ponti, "Idea per Caracas," *DOMUS* 295 (1954): 12.
- 2 Alberto Filippi, compiler, *Italia en Venezuela: Italia y los italianos en la nacionalidad venezolana*, (Caracas: Monte Avila Editores Latinoamericana-Embajada de Italia en Venezuela, 1994), 182.

A Study on the Preservation and Revitalization of Modern Heritage in Tokyo

The Case of the International House of Japan

Toru Ajisaka

Masami Kobayashi

History of the International House of Japan (I-House)

Site

Set in the backdrop of Cold War in the mid '50s, the Rockefeller Foundation *et al.* had provided a large endowment for the establishment of an international cultural exchange in Tokyo. Thus the International House of Japan (I-House) was established to promote cultural exchange and intellectual cooperation between the peoples of Japan and those of other countries and specifically to deepen the bilateral friendship between Japan and the US. The I-House, with its history of more than 50 years, is a non-profit private organization with financial support from various institutions and more than 3,000 individual members.

The I-House site was located in Tori-i-zaka, the placid residential quarters where the estates of samurai lords once stood in the *Edo* period (1603–1868) only blocks behind the dazzling glimmer of Roppongi's main streets. It is comprised of auditorium, seminar/conference rooms, banquet halls and residential/

hotel facilities. The project was a rare architectural interlude as it was designed jointly by three leading Japanese architects of the period, Junzo Sakakura, Kunio Mayekawa and Junzo Yoshimura. Constructed with poured-in-place thin-set reinforced concrete roofs, pre-cast concrete columns and beams and Japanese *tufa* or *Ohya-ishi*, and combined with large wooden window frames and *shoji*-screens; together, created the crisp and limpidly modern, yet implicitly Japanese spaces. When it was completed in 1955, although drawing some criticism describing the building as being “*somewhat resembling a Japanese ryokan style hotel*,” nevertheless, the I-House indeed had won the 1955 AIJ Prize.

Extension and renovation

The addition of a new conference room (presently converted to a restaurant) in the basement was made in 1958 by Yoshimura. Subsequently in 1976, an extension of a new annex by Mayekawa was built. The I-House's management originally considered replacing entirely with a brand new structure. However, because of the soaring cost induced by the 1973 Oil Crisis, the plan was



Figure 3. The International House of Japan at the time of the opening in 1955. Mayekawa Architect Office.

The joint design of three architects

Junzo Sakakura (1904-1969); securing his employment via an introduction from Kunio Mayekawa, he worked for Le Corbusier at his Atelier in Paris from 1931, and returned to Japan in 1936. He designed the Japanese Pavilion at the Paris International Exposition 1937. He established his own practice and started as an architect in Tokyo in 1940.		1951 Kamakura Modern Art Museum
Kunio Mayekawa (1905-1986); after graduating from the Imperial University of Tokyo he went to work/apprentice for Le Corbusier at his Atelier in Paris from 1928 and returned in 1930. Upon returning to Japan, he worked at the office of Antonin Raymond until he launched his own practice in 1935.		1952 Sumitomo-Mitsui Bank Tokyo Central Branch
Junzo Yoshimura (1908-1997); worked also at the office of Antonin Raymond from 1931. He began his own practice in 1941.		1962 The Nippon Foundation Building

abandoned, and instead just a new annex to the existing complex was realized.

After approximately fifty years since completion, it was evident that many of its old guest rooms lacked such basic amenity as private showers and/or bath tubs, which in turn lowered the occupancy rate of those rooms. As such, it was time for a major functional renewal. Moreover, the 1995 Great Kobe (Hanshin-Awaji) Earthquake had prompted the comprehensive

revision of the Building Code for more stringent seismic standards. Accordingly the I-House was also required to make a major upgrade with more earthquake resistant structural integrity. Yet it became apparent the full implementation of new seismic standards would make it functionally rather difficult to operate in providing required amenity and service. Therefore, it was understood at that time that perhaps the only pragmatic solution would be to replace it. The

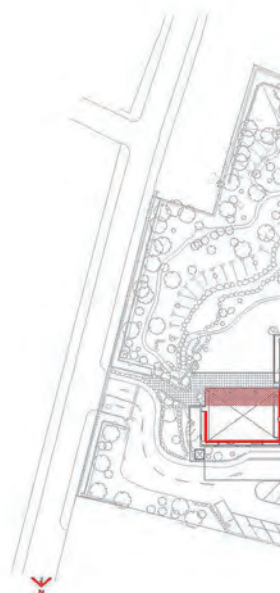


Figure 1. The Iwaskaki House, designed by Shintaro Ohe, was built in a traditional Japanese wooden construction. However, the part of the Iwaskaki House on the first floor facing the garden was constructed in steel reinforced concrete structure. Its garden, designed by a notable Kyoto landscape/garden designer Jihe-e Ogawa VII (1860-1933), has been considered as an excellent embodiment of the notion of Modern concept in garden design.

funding for the project was considered feasible through the sale of its 'air rights' to the commercial redevelopment project underway in the neighborhood.

By 2001 the plan to build a new complex was progressing. Alarmed that one of the principal buildings that embodied the Modern movement in Japan would be lost, in 2003 the Architectural Institute of Japan (AIJ) and the Japan Institute of Architects (JIA), and in 2004 DOCOMOMO Japan had issued the petitions to preserve the complex.

Preservation Process

The formal petitions for preservation were hence received by Takatsu Takanagi, the newly appointed Chairman of the board of trustees of

the I-House. In response to those urgent and formal petitions from the AIJ and others, in July 2004 the I-House's management had forwarded to the AIJ a request to assess and advise accordingly the I-House's plan to replace the entire structure while preserving its garden.

In order to deliver a formal response, the AIJ had hastily convened a special committee chaired by Professor Hiroyuki Suzuki of the University of Tokyo (also the DOCOMOMO Japan Chair) with the committee participants including the members of both AIJ and DOCOMOMO Japan. The AIJ had presented an assessment report to the I-House's management in September 2004, suggesting alternately preserving the garden and renovating the original structure with the latest state-of-the-art seismic reinforcement technology which would not interfere with the provision of amenity and serv-

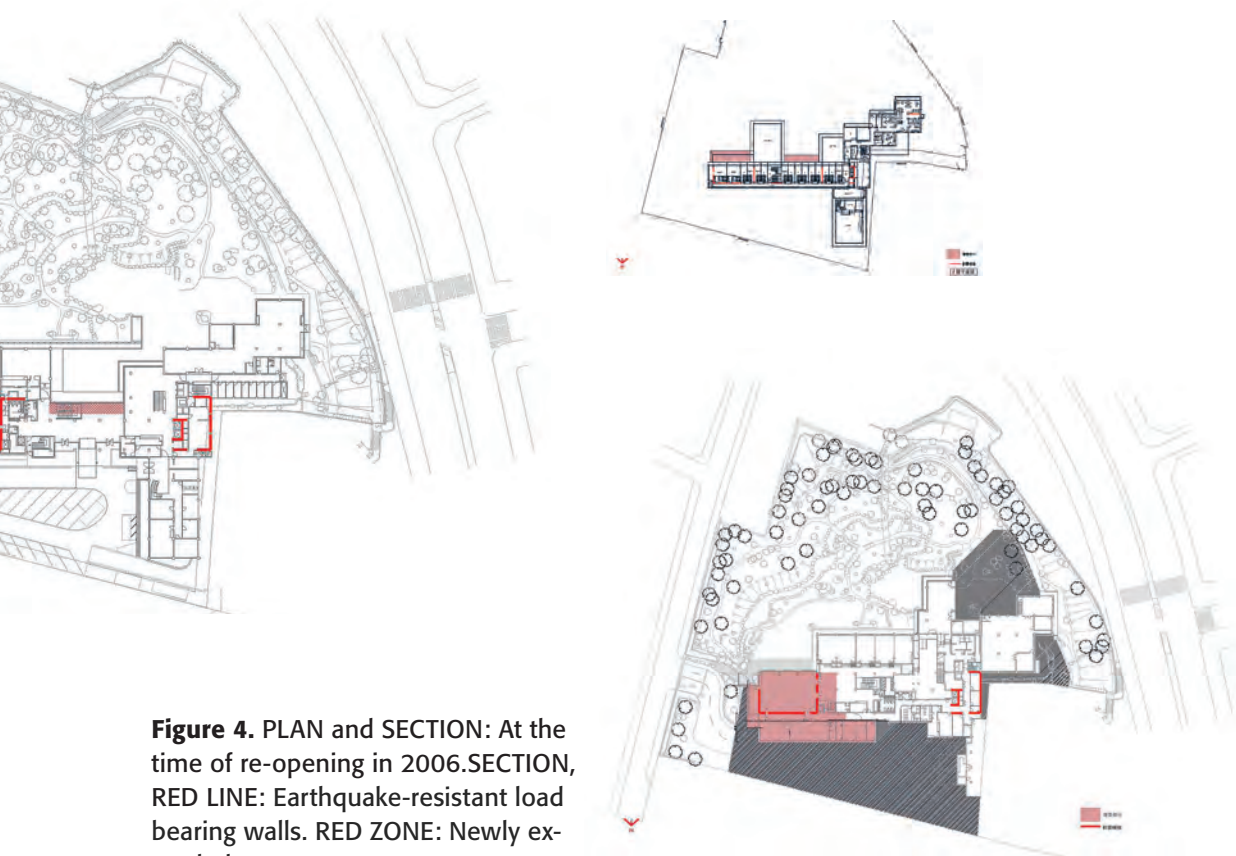


Figure 4. PLAN and SECTION: At the time of re-opening in 2006. SECTION, RED LINE: Earthquake-resistant load bearing walls. RED ZONE: Newly extended area.

ice while allowing for the replacement of the existing new annex.

Upon reception of the AIJ's counter proposal, the I-House's management rescinded the original plan and formally adopted the AIJ proposal on September 6, 2004 for the preservation of the original structure and a construction of the new annex. The AIJ proposal was accepted primarily on the following grounds:

(1) Feasibility and merit of the revitalization plan with preserving the structure's exterior appearance as well as conserving the garden.

(2) Shortened duration for the closure of the complex.

(3) Latest technology allowing for the continued provision of amenity and service and also being economically more feasible in lowering the overall cost including the cost for the temporary relocation.

Thus in the fall 2004, the work for the design of the new annex and the main building's seismic upgrading and renovation began as the existing library and administrative spaces were utilized continually until the commencement of the construction in May 2005.

Preservation and Revitalization

Basic policy for the preservation and revitalization

The objective of the preservation and revitalization was to achieve the overall enhancement of the functional quality of habitable environment and the aspect of structural durability of the existing building which would be equal to and/or better than building a new one while significantly upgrading the structure with new seismic standards.

Under the provisions set above, the work was intended to maintain its attributing architectural quality, the crisp and limpidly modern, yet implicitly Japanese spaces, by conserving most of the exterior design details —save for minimal additions and structural strengthening— and by gutting the interior to bare structure before renovating and replicating back. The Building Code of Japan mandates large scale renovation works to adopt the latest standards prescribed, thus upon obtaining a requisite permit from the Architectural Review Board of the Tokyo Metropolitan Government, the project had proceeded.

Seismic-resistant reinforcement

The existence of former Iwasaki House's massive column bases in the sub-basement ground made it non-feasible to introduce the seismic base isolation system; hence, the seismic-resistant retrofit reinforcement method designed to absorb much of the seismic loading via the new elevator shaft and the hall structure in the basement was adopted, which in turn afforded the authenticity of the building.

Extension for the functional augmentation

A new auditorium in the basement maintained the symbiotic relation to the garden and the new staircase was installed where the original light-court was located allowing the natural light to pour once again into the basement area.

Plan modification for the enhancement of comfort and amenity

All 30 guest rooms were redesigned to face the garden front by relocating the corridor and equipped with pre-fabricated module unit bathrooms. The raised floor for plumbing also acted as the extra acoustic barrier.

Reduction of the burden on the environment

After 50 years the original wood frames —later painted in gauche pink on the exterior— were

in noticeable decay with loosing both the airtightness and water-proofing. Thus windows were substituted with double glazing and the frames were reassembled with repairs where needed and covered with aluminum cladding on the exterior while the interior were brought back to the original wooden finish, together becoming more environment friendly and contributing to reinstall the authenticity and reducing the overall cost.

Reuse/Recycling of furniture

Both the original 1955 and '75 furniture had become part of the collective memory of the I-House, accordingly they were restored at the furniture shop.

Re-opening

Upon completion of the project the I-House was re-opened in April 2006 and the new auditorium was inaugurated in the following June. In March 2006 the I-House was nationally designated as the Registered Tangible Cultural Properties. With the enhanced amenity and service and the tax exemption status given by the register, the financial condition improved significantly.

Challenges for the Preservation and Revitalization in Tokyo

Predicament of the historic buildings of the Modern movement

The problem with the Modern movement derived buildings are; that they are difficult to comprehend as possessing merits by the general observers unlike the traditional historic buildings with distinctive quality or the early modern buildings from 1868 onward with particular building materials such as brick, stone, steel and concrete don in distinct various western styles.



Figure 5. Extension of a new auditorium under construction.

Tasks in preservation: Seismic retrofit strengthening

There are two basic ways to meet the seismic standards; the seismic base isolation system and the seismic-resistant retrofit reinforcement to absorb the seismic loading.

Economic ramification of the preservation and revitalization

It was never quite popular to consider the preservation and revitalization in the central Tokyo area for various financial and other contextual reasons; however, the I-House case proved otherwise by not only being feasible but also becoming attractive by demonstrating the eco-friendly sustainable solution to our cultural heritage.

Observation for the Prospective Consideration

Unlike the traditional buildings there are only few successful specimens of preservation among the significant buildings based on the Modern movement in Japan. Thus ambient benefits, even in an economic sense, of architectural preservation is not widely accepted or recognized at present. The issues and challenges for the preservation and revitalization of notable architecture of the Modern movement in Tokyo are as following:

- (1) Low public interest/concern on the architecture of the Modern movement.
- (2) Need for an establishment of modified and flexible application of the prerequisite stringent standards of the Building Code for the preservation and revitalization works of historic buildings, which almost by definition are likely to be in some violation of standards.

(3) Refraining from seismic resistant retrofit reinforcement works that often end up compromising the provision of desirable amenity and service in the habitable environment.

(4) Preventing the loss or impairment of authenticity through seismic resistant retrofit reinforcement works.

(5) Economic assessment should be conducted more holistically to include not only the construction cost of the preservation and revitalization but also to include the cost of relocation, du-

ration of construction and correctly the positive effect of renewing significant historic buildings.

Under the auspices of the entire architectural community, the AIJ, the JIA and most certainly DOCOMOMO Japan are collectively called upon to promote a more enthusiastic appreciation and endorsement from the society at large for the preservation and revitalization of the historic Modern heritage by imparting relative information through wide range of media and events.

Landscape and Mass Tourism in the Modern Movement

A Possible Utopia

José María López Martínez

Edith Aroca Vicente

Juan Pedro Sanz Alarcón

Beginning of Mass Tourism in Spain

Spain, after the post-war period, in the fifties, started wishing to be internationally recognised in spite of the political system and the economic autarchy. The culture of tradition began to let the new ways to get into the Spanish homes through the television and the radio. From 1962, when Mr Fraga arrived at the government as Minister of Information and Tourism, the touristic activity was promoted till it became the “first national industry”. In that point, the Administration was aware about what important was its role in the beginning of the Spanish touristic activity so it was proposed a new planning model and promotion of the tourism.

For that reason, the government decided to create a new *National Plan of Tourism* (the first one was made in 1955) through some regional presentations. The targets were that the new National Plan of Tourism contained an economic and social plan, and a territorial framework for the tourism activity development which includes winter stations and coasts not developed but with extraordinary natural conditions (Mar

Menor in Murcia, coast of Huelva, Canary Islands). This development model was supported by a specific legislation: “Areas and Centres of National Tourism Interest Law”. To reach the designation of National Touristic Interest Centre, the promoter had to guarantee that the tourist product quality was higher than the average. In exchange for this fact, the promoter was able to turn not building land into building land, just making an Urban Planning.

Inside this regulatory framework, La Manga del Mar Menor, situated at the coast of Murcia, reached the designation of Touristic Interest Centre. La Manga is a narrow land “tongue” of 20 kilometres length that borders on sea lagoon of the Mar Menor. In the sixties, this place was a land without any kind of service and it belonged to a few number of owners. Mr Tomás Maestre, owner of a part of the land and promoter of the project, aware of the need for reaching a higher quality at the urban and architectural planning to get the designation, decided to hire the architects Antonio Bonet Castellana and Jose Puig Torné.



Figure 1. Image of La Manga in promotional brochure. 1964.

Landscape and tourism. The urbanistic model of “La Manga del Mar Menor”

“The tense and instable cohabitation between the order and transgression, between what is sensitive and what is reasoned, between the contingent and the protected, was the most estimated attribute from the places where originally the tourism was developed, introducing in exceptionally geographic scenes, urban pieces build with modern architecture.” (D. Quero Castanys, 2004)

In 1961, A. Bonet and J. Puig Torné projected an Urban Planning for La Manga del Mar Menor. The first ideas and plants were the result of the experience lived by Bonet at Le Corbusier atelier and at the CIAM IV where he assisted with José Luis Sert as the GATCPAC representatives. The project was based on the conceptual change lived by the tourism of the edge: from the “traditional holidays” to “the masses tourism”. Like Bonet says in “New precisions in Architecture and Urbanism” (1949): “The future, will be the planning in three dimensions, where the buildings won’t be on the traditional way, but like city fragments which architectural elements will be made of a systematized structures.” At the 29th paragraph of the “Athens Letter” you can read: “High constructions, situated far from each other, must occupy a small piece of land and leave the rest for green spaces (...)” But it is also necessary that this buildings, were situated

far from each others because if they weren’t, their heights, instead of being an improvement, it would increase the wrong situation (...)”. The first plan of La Manga reminds the Plan of Buenos Aires made by Le Corbusier in 1929, and it is a step between the Punta Ballena planning (1945) and the Plan of Buenos Aires (1956), and the Plan of Montjuic and the Plan of Ribera (Barcelona, 1964).

Bonet and Puig Torné studied deeply the values of the autochthonous landscape, we can confirm this because of their visits to the territory and the quality of the topographic plans that were used as the base to future works. Their planning committed themselves to a punctual architectural intervention, leaving most of the territory without being touched. The building, located directly in geography with just a little trace of urbanization, without an alteration on the topography. Showing how places for tourism can be understood and constructed with the cosmopolitan forms and attributes of the metropolis without changing the geographical condition of the place, in this way, these places were developed as a utopia of cosmopolitan social meeting in nature. It proposed the construction of tourist units, sufficiently far apart and strategically placed along the linear axis which is the territory of La Manga. The different cores were connected by an axial route

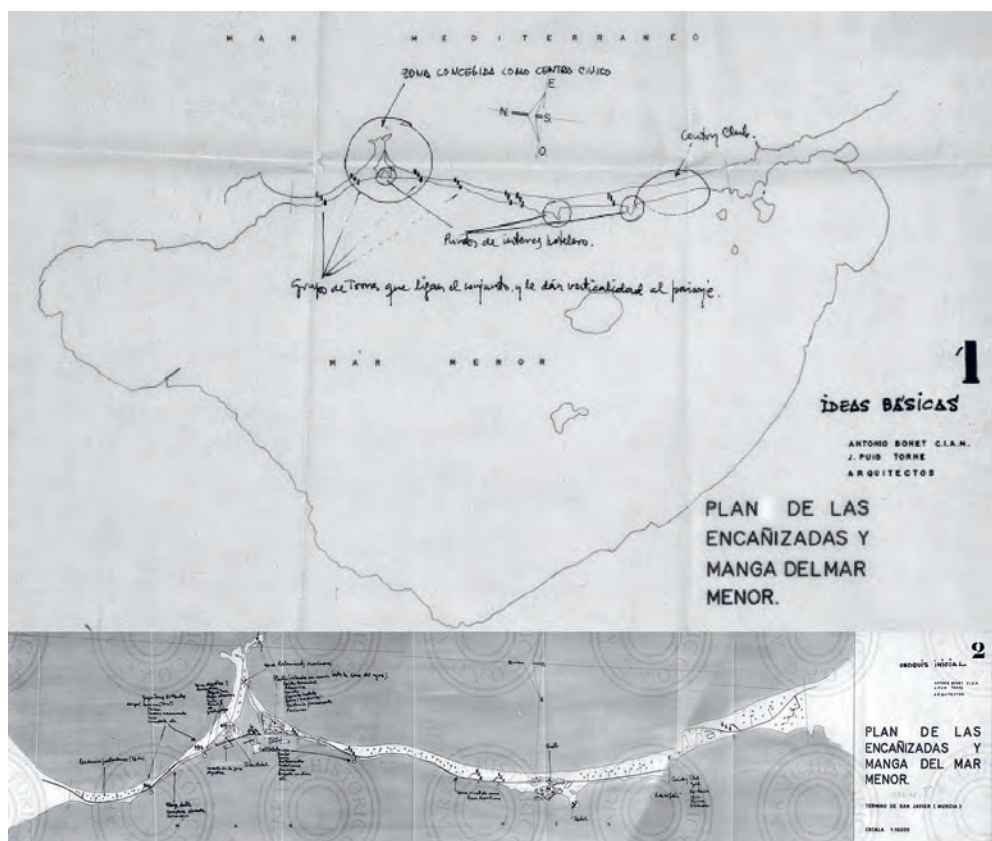


Figure 2. La Manga urban plan. Preliminary draft.

implemented directly on the shaft scenery. The separation of the units built allowed enjoying the landscape and its values and conditions of the situation paradise between two seas.

This distance between cores ensured the preservation of existing landscape and therefore its valuation and conservation, becoming a touristic attraction important over time. This project ahead precept as current as the “sustainability” (economic and ecological) and the conservation of landscape values of the territory.

The longitudinal axis that links to all units was not designed as a rapid way, but as a “city tour”. Bonet designed this way with a single

lane in each direction, adding one more in the service areas and including a particular separation between vehicles and pedestrians. Despite the linearity of the territory that requires automobile dependency, the low density of the group and the functional autonomy of each of the cores, minimizing the number of journeys, turning the axes of traffic into a landscape element (in some sections the road was raised respecting the topography of the land (sand dunes).

Each unit was independent, and presented as the main building a hotel with its own pier. The hotel was completed with services and residen-

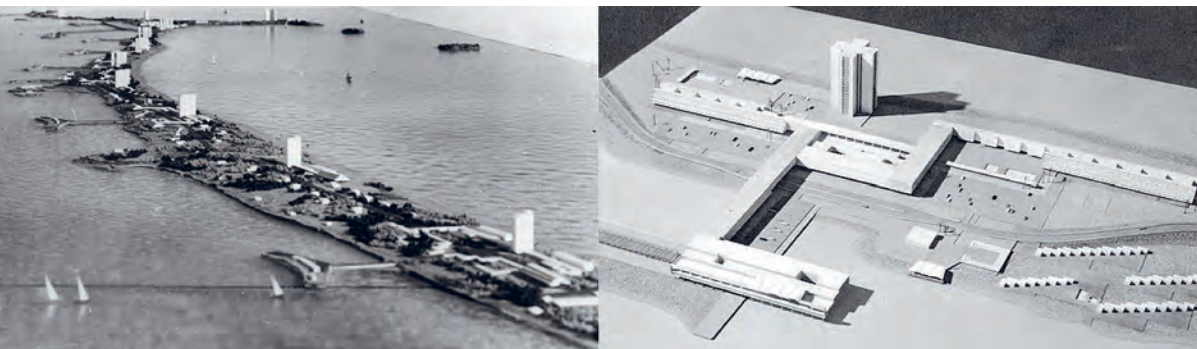


Figure 3. La Manga urban plan, model. Tourist unit, model.

tial buildings (2 blocks staggered with terrace, groups of bungalows and 3 apartment towers). These housing cells could be dimensioned by the expected population and the availability of urban services (water, electricity, etc.), doing possible the construction in phases under the economic availability of the promoter. The initial draft of Bonet and Puig Torné, had twelve tourist units, a marina and a community centre with a tower of twenty floors. The number of the hotel guests and the number the housing owners would be the same on each core, so the seasonal variation would be reduced.

Landscape and Golf: "La Manga Golf Resort"

In 1970, Bonet returns to La Manga for a new urban planning in the golf course. The property developer Gregory Peters commissioned a plan for the development of an area of the "La Manga Golf Resort". Demonstrates again the architect his sensitivity to the values of the field and respect for the landscape. The area of the "Golf Club" is located in the foothills of the "Sierra de Atamaria", locating the golf course in a small valley and the necessary buildings on steep terrain surrounding it.

In 1960 the Ministry of Housing announces an international competition to develop the resi-

dential area "Elviria" in Marbella (Málaga). The competition had an important participation and results a large influence on all later developed residential tourism projects. Among the participants was Antonio Bonet with Angel Serrano. The greatest impact proposal was submitted by Jorn Utzon, who had already won the competition for de Sydney Opera House three years ago. In 1971, in the proposal developed by Bonet for "bungalows", the architect proposes a set of low-density housing, with terraced construction to merge with the topography. In this strategy, we can observe similarities with the proposed section for the "Elviria" competition by Utzon.

For the area that was entrusted to Bonet, next to the Golf Course and south of the social club, proposed the location of housing according to two strategies. In the lower area, lie the "golf bungalows". The dwellings are linearly ordered and staggered to adapt to the existing topography. Thus, all the apartments had terraces and direct views of the golf course. Access to each dwelling was pedestrian and the vehicles are segregated to the lower part of the settlement, (hidden from the view of the first line under cover), or the highest, being hidden from view of any pedestrian under a deck. This provision also ensures the views of each property and control of view of any passer-by, as the views from the highest points are only adapted decks to the terrain.

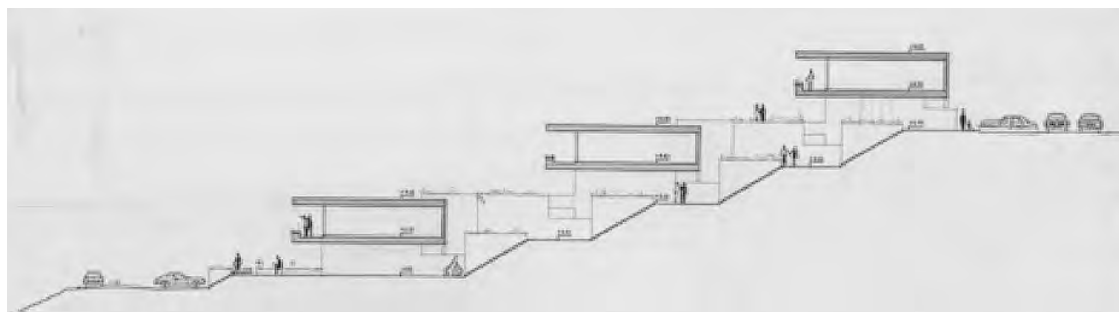
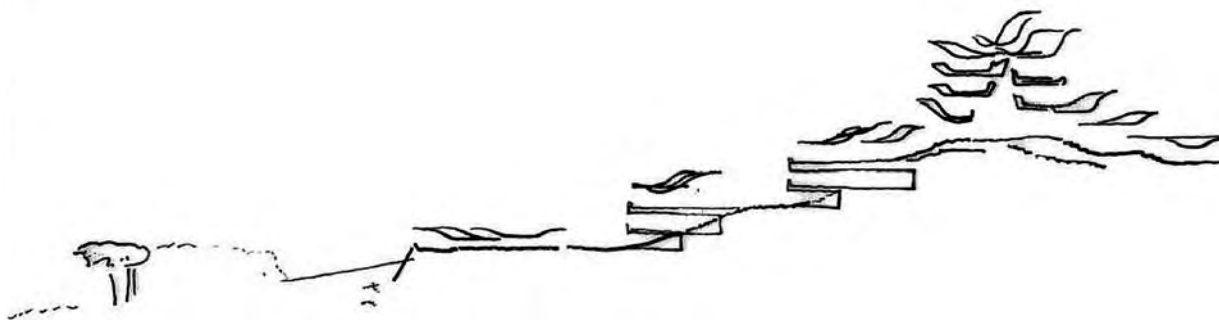


Figure 4. “La Manga Golf Resort”. Golf bungalows. (Bonet), “Elviria” competition (Utzon).

In the most high and steep area, the “Atamaria apartments” (30 dwellings), were arranged according to the conditions of the plot. The rugged topography articulated the disposal of housing. The complex consisted of five units with different orientations arranged in a fan shape to fit the contour of the hill and ensure the views of each dwelling. Each unit has six apartments, four on the same level and two at a higher level creating recessed terraces. The use of a stone facade on the lower level, makes housing be integrated into the landscape, giving appearance of “terracing”. Vehicles access is on the rear of each core, so they disappear from the view of each residence.

A Possible Utopia

Both La Manga as the “Golf Club” were designed tourist developments for “long term”,

sustainability of the tourism business and the preservation of the landscape. The impatience of the developers made the initial draft of both examples was densified and plots, as was dividing the initial developer and entering private capital. The promotion of second homes not guarantee the sustainability of the model, but assumed fast revenue for promoters and no need for them in the landscape, building and infrastructure maintenance.

During the 80s accelerated the process described and the first decade of XXI century, estate pressure on the two areas has been brutal. The original landscape to La Manga has practically disappeared.

Given the current circumstances in which tourism has to rethink, from economic and ecological aspects and from urban and architectural quality, it is time to recover Management Plans in La Manga and the “Golf Club”, to assess its precepts, their intentions and the

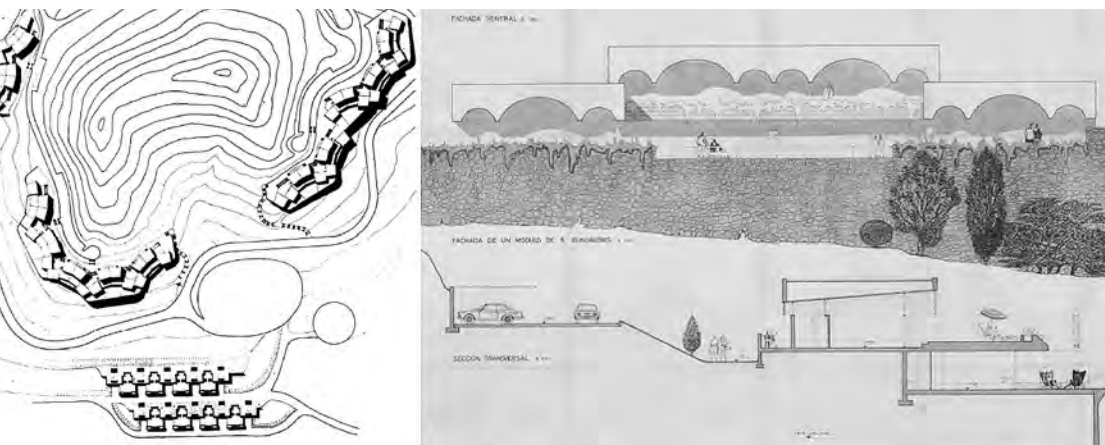


Figure 5. “La Manga Golf Resort”. Urban plan, “Atamaría” apartments on the north, “golf bungalows” on the south.

implementation model in the territory, since, with the length of time, have been shown yet in force and in currently.

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Between Cultural and Natural Heritage:

Conservation of a Modernist House in a Natural Park

Mariana Esponda Cascajares



Figure 1. Exterior view of the Strutt House, sensitively integrated into their natural environment.

“To protect our culture the land must also be protected because the places on the land where the stories are told give the stories their meaning. Without these places to give the stories their meaning, the value of the stories would be lost.”

- Leroy Andre

The relationship between culture and nature is unique and entirely dependent on the perspective of each society regarding nature, culture and their interrelationship. Failure to recognize these differing perspectives has resulted in inappropriate conservation decisions. And unfortunately, a potential example of this mis-

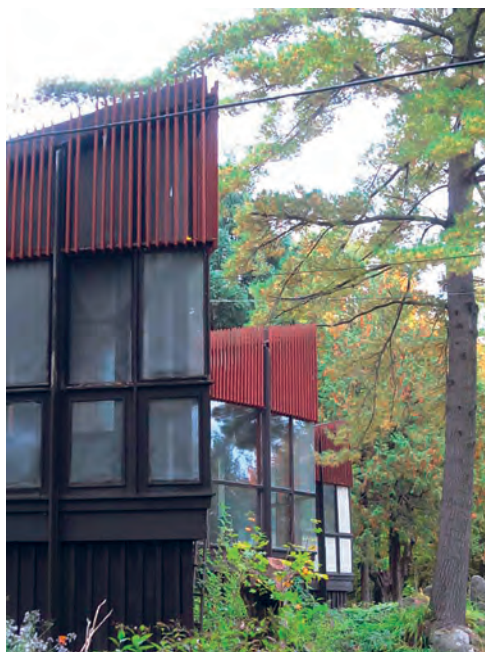


Figure 2. Culture versus Nature.

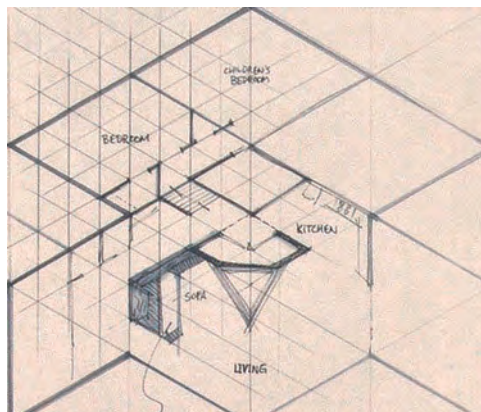


Figure 3. Triangular grid. Both the composition of the plan and the elevations are originated from an equilateral triangle grid.

interpretation of values and approaches could be currently threatening a modernist house in a Natural Park in Quebec, Canada, to be demolished.

The Strutt House designed by James W. Strutt (1924-2008), involved complex geometries and weight-efficient structures which were sensitively integrated into their natural environment. This house was built in 1955-56 in the confines of the Gatineau Park¹, in Quebec.

The Gatineau Park is the principal green space just north of Ottawa, Ontario and is considered a natural protected area of National importance. The park covers a total area of 36,131 hectares and receives around two million visitors every year. The park has a rich biodiversity and a wide range of protected habitats and five valued ecosystems. The concentration of species² is far greater than elsewhere in Québec. The park contains three major physiographical

features representative of the Canadian Shield³, namely the Gatineau Hills, the Eardley Escarpment and the Eardley Plateau.

Set aside from the main street and enclosed by an oasis of vegetation, the Strutt House is built over on the south side of the Gatineau Hill in a mountainous topography of the Eardley Escarpment⁴. One would have to climb steep hill to gain access to the house where you can reach an outstanding view of the Ottawa Valley. The seclusiveness alone can give the initial hint to visitors that this is not an everyday house. The architect Strutt, aware of the remarkable natural environment of the Gatineau Park incorporated nature into his architectural design⁵. His geometric design influences came from Frank Lloyd Wright's organic approach and Buckminster Fuller's space-frame structures⁶.

With this building, Strutt notably contributed to Canada's architecture development by

Figure 4. Wooden hyperbolic paraboloid roof and the connection with the landscape.



exploring innovative structures, with his interest in non-orthogonal geometries (curved or non-perpendicular lines) and by using local and new materials. Some of the materials are dark-stained cedar on the exterior coating in the lower portion of the house⁷, big surfaces of glass, concrete panels as walls, plastic and vinyl on the flooring, a rabbet 2-inch-by-6-inch wood board as the standardized element throughout the structure, and styrofoam for insulation. In 1958 Strutt⁸ explained that the experimental design had used conventional methods and materials (wood frame and mill roof) to allow further reapplications and to decrease the man hours used to erect the structure⁹.

The Strutt House stands out for two dominant features: the integration of the house to its natural surrounding and the unusual geometry—specially the roof's silhouette. This roof is the first known Canadian example of a wooden hyperbolic paraboloid¹⁰. The triangular roof that one sees from ground level is actually the edges of a system of hyperbolic paraboloids that form the shells and the wooden ceiling. This roof structure is virtually self supporting and

the entire roof distributes its load to the outer posts and the central concrete core¹¹. In addition, it was built to carry a 50 pound snow load. This roof system enables a larger open space with minimal use of weight bearing walls that is mostly evident in the living and dining areas.

The use of the geometry and proportion was not only a feature applied in the hyperbolic shells. Most importantly, the entire concept of the house follows a geometric pattern. Both the composition of the plan and the elevations are originated from an equilateral triangle grid. The structural elements and all the details of the building (central fireplace, built-in furniture, cabinets on the kitchen and lighting) are designed following the same system of lines (vertical, horizontal or diagonal direction to the grid). Therefore, we can say that this structure accomplishes a precise plastic expression without randomness, minimizes potential misalignments in the execution, and also integrates all aspects of the space and form.

This design pursues some of the principles from the modern movement in architecture¹² such as: the integration to the site; the geom-

etry of the forms¹³; the development of a basic module –the triangular grid; the experimentation with new materials and structure; the de-compartmentalization and the polyvalence of the interior spaces; and the importance of the natural light. The whole house is surrounded by big panels of glass allowing a better inter-relationship with the environment. This iconic building testifies/displays a “savoir-faire” and a high-quality job.

During the site visit in fall 2010, the physical state of this building could have been ranked as medium. The main problems were the decay of the floor, the absence of sealing in some joints, water infiltration that have caused damage to the woodwork, and the presence of salt in some of the exterior wooden panels which need to be replaced. Even though the presence of asbestos in the internal and external coatings constituted a major problem, at first glance the existing damage did not compromise the structural integrity of the house.

Currently, this residence considered as a prototype¹⁴ and forerunner of modern architecture in Canada, is at risk of being destroyed. This house was bought in November 2010 by the National Capital Commission (NCC) following their Master Plan to strategically acquire¹⁵ private residences located within the Gatineau Park and prevent further development. Over the last years, the NCC has been concerned about the natural environment of the Gatineau Park especially with the protection of the biodiversity and species at risk, habitat fragmentation, increase of urban development and pressures from human activities, and their impacts.

The NCC is analyzing the possibility to demolish this residence in order to re-naturalize this area of the park located on the cliff of Eardley¹⁶, which is a region identified as a sensitive ecological conservation area. A controversy started in recent months regarding the rescue and preservation of this building and, consequently, the NCC has decided to conduct a

detailed study to assess the physical state, the restoration costs and phases, and the urgency to have work done.

How can you conserve this heritage house -classified as a “recognized”¹⁷ federal property-without damaging the surrounding sensitive ecosystem? First we need a change of attitude, approach and mentality. Natural and cultural heritage are intertwined. One option to ensure the effectiveness and success of the preservation efforts would be to find a balance between the dichotomy of these two concepts inside the Gatineau Park. Right now it is only considered as a Natural Heritage Area¹⁸, where there main priority is the conservation and protection of the ecosystem. “National park management has been reoriented to focus more on the ecological integrity and the preservation of natural environments”¹⁹. However, this park reflects not only the natural values, but also the way Canadian people have lived on the land and the traces they have left on this site²⁰.

A new approach to change the strategy to effectively value and preserve the natural and cultural features of the Gatineau Park, would be by applying the concept of cultural landscape.²¹ Cultural landscapes are LIVING landscapes that have: cultural, social, economic, psychological, spiritual, and historical values; as well as ecological values²². All landscapes are cultural, subject to cultural influences, and a source of cultural knowledge. And as such, sustainability of ecological systems is achievable only within the context of cultural landscape²³. We have to look at the Gatineau Park as a whole rather than a series of separate parts. We cannot understand and manage their natural environment unless we understand the human culture that shaped it.

More than suggesting a static protection procedure, the Strutt House specifically calls for a more dynamic enhancement. This could be done by achieving an appropriate adaptive reuse with minimal impact on the original fabric, and by protecting the overall integrity of the place.

As a studio project at the School of Architecture at Carleton University, we would want to study the possibilities of uses and to repurpose this house as loci for creativity and research in the fall of 2012. Some ideas could be an artist-scholar residency program or a research center for ecology of the Park.

The key element would be to design and implement a project that actively promotes the

concept as an integral part; injecting life and vitality into the Strutt House, and generating direct and indirect social, cultural, economic, and sustainable benefits for the community.

Only by understanding the influence of culture on nature, and by effectively assessing the interrelationship of the two concepts in theory and in practice, many natural and cultural heritages will be widely protected.

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Notes

- 1 Gatineau Park is located in the National Capital Region, in Quebec's Outaouais Area and extends over more than fifty kilometres in length, between the Ottawa and Gatineau River. The Park was created in 1938 by the effort of Percy Sparks. Since 1958 is administered by the National Capital Commission (NCC).
- 2 The Park concentrates a broad diversity of more than 1600 plant species, 50 fish species, 54 mammal species (including the white-tailed deer, beaver and black bear), 232 bird species, 17 amphibian species and 11 reptile species. Of all these species identified, 133 are classified as being at risk (2008).
- 3 Is a Precambrian rock mass that was formed at least one billion years ago; it covers more than half of Canada.
- 4 The Eardley Escarpment forms, at north, the dividing line between the rock of the Canadian Shield and, at south, the St. Lawrence Lowlands. It represents the home of the richest and most fragile ecosystem in Gatineau Park. It rises 270 metres from the floor of the Ottawa Valley and extends over more than 30 kilometres. NCC Site Web, March 6, 2012 <http://www.canadascapital.gc.ca/places-to-visit/gatineau-park/eardley-escarpment>
- 5 The house location was chosen to take advantage of the natural slope with two levels of platforms. In the front, wooden posts rise up from the footings lifting the structure and giving the public areas the feeling of being cantilevered. In the back, the private areas sit flat in the upper plateau surrounded by rocky outcrops and seem anchored to the landscape.
- 6 Fuller patented the geodesic dome in 1950. A geodesic dome is a spherical or partial-spherical shell structure based on a network of great circles (geodesics) on the surface of a sphere.
- 7 The dark-stained cedar accentuates the raised horizontal line of the main level and serves to ground the building visually.
- 8 In Canadian Architect, June 1958.
- 9 The structural system offered an efficient construction that was completed in just six weeks.
- 10 It is a series of non-parallel straight lines that are close together at one edge and farther apart at the finish edge that generate a curved surface.
- 11 Wooden beams radiate around the solid core to the outer posts, pulling the structure together and preventing torsion.
- 12 The Strutt design follows Halprin's definition about modernism "...is not just a matter of cubist space but of a whole appreciation of environmental design as a holistic approach to the matter of making spaces for people to live".
- 13 Specially the wooden hyperbolic paraboloid roof.
- 14 After the construction of the Strutt House,

- during 1956 to 1962 Strutt built a dozen of houses with the hyperbolic paraboloid roof.
- 15 Since 2008, the NCC has acquired 34 properties on 158 acres at cost of \$11.5 million. Maria Cook, "The battle for Strutt House," *Ottawa Citizen*, March 9, 2012.
 - 16 The geology and location of the Eardley Escarpment make it a special ecosystem. Its southern exposure ensures a hot, dry microclimate similar to the forests of the American Midwest. Because of this unique microclimate, the Escarpment is home to many rare species. More than half of Gatineau Park's about 145 at-risk plant and animal species are found on the Eardley Escarpment. NCC Site Web, March 6, 2012 <http://www.canadas-capital.gc.ca/places-to-visit/gatineau-park/eardley-escarpment>.
 - 17 On January 2012, the Federal Heritage Buildings Review Office (FHBRO) designated the house as recognized federal heritage property. The "recognized" level is a lower designation than "classified" and means that NCC can choose whether or not to preserve the house. However, it must seek conservation advice and explore options for an alternative use before making a final decision.
 - 18 The Convention of United Nations World Heritage (UNESCO), 1972, considered as "natural heritage": natural features consisting of physical and biological formations or groups of formations, which are of outstanding universal value from the aesthetic or scientific point of view. Also geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants from the point of view of science or conservation.
 - 19 Gatineau Park Master Plan (2005), 12.
 - 20 Centuries ago, the nomadic Algonquin peoples hunted and fished in this region. Later for their strategically location in St. Lawrence Basin, it was a trading post and a battleground. Toward the end of 19th century mining activities emerged. During the 20th Prime Minister William L. Mackenzie King lived on and his residence -the Mackenzie King State- is the Park's most important cultural attraction, contains historical garden and historical buildings.
 - 21 A cultural landscape is a set of ideas and practices embedded in a place. It has to be experienced to be understood. Smith, *Definition and Assessment of Cultural Landscapes*, 159. UNESCO experts identified three basic groups: (1) landscaped gardens, designed and built for a purpose; (2) settlements and other cultural landscapes that have developed over time; (3) spiritual and cultural sites that are important for what they mean more than for the physical signs that people have left.
 - 22 First Nations communities in Canada have had a significant role in defining a new paradigm for this overlap between cultural and natural realities. For them cultural, natural and spiritual aspects are all part of a single landscape.
 - 23 Bridgewater and Bridgewater, "Is there a future for Cultural Landscape?", 193.

How to Preserve Modern Next to Classic

The Case of Border Twin Cities

Niko Jurca

The town of Gorica owes its life and development to its geographical position, to the fact that it is the meeting and communication point of socially and ethnically different regions, tied with reciprocal interests. Lying on a plain where the Alps come to the close nearness of the Adriatic Sea, throughout the history it has been the intersection of commercial flows and a meeting point of different cultures. The ethnic composition of the town and its surroundings was various: on the outskirts the majority was of Slovene and partly Friulian speaking peasants, inside the town perimeter the German language of the nobility and the Italian of the merchants were added. Gorica functioned as a mediator of profound human interrelations and reciprocal understanding of respective conditions and demands. Gorica was the meeting point of people and ideas, the political, strategic, ethnic and cultural conditions, besides the geographical, helped her to develop and prosper.

The war which began in 1915 was a tragic experience. Gorica suffered a number of severe

attacks and was nearly destroyed, the number of deaths surpassing 60.000. After the war the town only slowly recovered but the opened wound never healed and Gorica was never the same again. A long period of aggressive italianisation of the territory followed and the cosmopolitan character of town was never regained. In the 1941 war broke out again. This war divided the people and territory even more severely. The new frontier that was to be traced over the territory would divide two profoundly different worlds. The world of eastern Communism and the world of western Democracy. Various options of land division were proposed and the French line was chosen which still represents the actual frontier between Italy and Slovenia. The Slovenian populated area which had previously been an Italian territory, became a part of Slovenia while the administrative center of this area the town of Gorica remained on Italian side. Such a division deprived the town of its surroundings and viceversa, 92% of land with only poor infrastructures remained on one side

of the division line while 8% of land containing the city with all the vital institutions and facilities remained on the other. Gorica was trapped, cut off its background, pressed against the wall of the iron curtain.

On the other side the greater part of Slovene population lost their regional urban center, the heart of their cultural and economic power. In such a desperate situation the building of new regional center was a task of great political importance and priority. It was given the name Nova (New) Gorica and its location was intentionally chosen to be close to the state border in the very neighborhood of the lost Gorica. The town was born in the context of post-war restructuring of Europe and principally as a consequence of emergence of two rival and ideologically hostile systems. Even if the general belief was that Nova Gorica will represent a part of a greater Gorica because the division did not seem to last, it was to be designed as a self-sufficient town intended to perform two functions. Primarily it was to become a new administrative, economic and cultural center for the region which belonged to Slovenia, and additionally it was supposed to express all the benefits of new social order. As an opposition to Gorica, the remainder of the outlived social order of Western capitalism, Nova Gorica was supposed to display the innovativeness, freshness, modern outlook and a revolutionary new concept flourishing in the revolutionary political system. It should be something great, beautiful and proud, something that would shine and radiate across the border.

The opportunity motivated many a concentrated effort of the whole society and among those who were inspired most, were the architects and urban planners. For them Modern urbanism was not just something new and enthusiastic but much more, it was the anticipation and promise of solution for all the principal problems, social, technical and esthetic ones. Urbanism became a new weapon in national

and political struggle. The planner became the organizer and teacher of new life. The plan proposed by professor Edvard Ravnikar was a crisp and clear model, an intriguing combination of new urbanistic knowledge of the discipline of Modern Urbanism, achieved at the atelier of great Le Corbusier and architectural skill and the solemnity of the mediterranean tradition inherited from his other great teacher, Jože Plečnik. A linear center of mediterranean type should develop along a straight nearly 2 km long main axis bordered with shady trees, with shops and offices opening on comfortable sidewalks encouraging abundant public life.

The building of new town began with great enthusiasm, volunteering groups coming from all over the country to help. When the main axis of Nova Gorica was traced, it was still believed it would become just the north-eastern part of greater Gorica, given back to the Slovene. But the French line soon became a long term reality. Nova Gorica faced the bitter destiny and gradually continued to develop as an individual and self sufficient town. So the state border, which had separated previously undivided territory brought about a completely new town next to the old one and created a unique urban phenomenon: conurbation of two paradigmatically different cities. Center of the new town was from the old one separated only by a distance which was according to military reasoning considered as still safe in context of postwar conspicuousness and temporary hostilities. While Gorica struggled to survive in its old pattern Nova Gorica tried to grow as a completely new town, designed according to the contemporary doctrine of Modern Movement in Architecture.

Unfortunately the division was not the only disappointment for designers of the new town. Even more bitter was the recognition that the ideas of Le Corbusier spread like a flame among the architectural rising generation but never really reached the political and econom-

ic spheres and were never accepted as guiding principles among the politicians. That resulted in slowly but persistent abandoning of the originally planned dispositions caused by lesser and lesser understanding of the basic guide lines, principles and intentions of the modern town plan. The basic concept slowly dissolved and the growth of the town was more and more casual and chaotic.

The two towns, existing side by side, even more overlapping in parts, for decades to come lived and solved their everyday problems more or less separately. On the separated maps Gorica and Nova Gorica were somehow similar to seaside towns. For both of them one half of the map seemed inhabited and plannable, the other half like covered by sea. The only difference was that on these maps the sea was not wet it was just blank space, the sea of political self sufficiency and mutual ignorance. Gorica and Nova Gorica seemed to be each for itself at the end of the world. Planning in such conditions led to duplication of a number of facilities, irrational solutions of networks and waste of vital resources.

Evolution of European consciousness and rapid improvement of political relations, integration of Europe and simultaneous disintegration of Socialist ideological block, brought about a new understanding of international borders and of way of life along them. The constraints which had been affecting our lives until yesterday have over night become less important or even unimportant. The state border which had up till yesterday been representing the end and the finality of everything, has become a new opportunity for transcending the limitations which the development of the two cities had to comply with. The longing for a co-ordinated planning of urban growth has finally become a real option. Conurbation of the two cities has a much greater potential than each of them separately. The two cities as an integrated agglomeration would in this sense regain and

refresh its past role of an economic and cultural center.

The world is crowded with classical cities, traditional by their origin and pattern. There are much less towns of Modern Urbanism. Co-existence of both traditional and modern in the manner of Gorica and Nova Gorica are rare. So a provoking urbanistic problem displays itself: is there possible such a physical integration of the two cities which would simultaneously preserve their different symbolic and cultural identities? How to preserve Nova Gorica as a city of Modern Movement in Architecture and Gorica as a traditional Middle European city. This preservation is important since each of the two cities is belonging to its own nation; so the idea of their integration must respect their cultural differences which are to be preserved and mutually tolerated. And along the preservation of those differences how to introduce an additional character which would transcend both existing ones while simultaneously preserving them.

On formal level of urban design the already established morphologies of each of the two towns should be preserved by a special consideration to be given to the strip of empty land along the border line. This strip might be developed or landscaped either in form of nature or park which is integrative by itself or by using it for new construction. The new construction should solve the problem of mediation between the two different patterns and morphologies: the traditional of Gorica and the modern of Nova Gorica. On both sides along the border activities of marginal character have developed. But as both cities are considered a unified territory, these margins become a core of the conurbation. The area along the border appears as an unexploited opportunity which only few cities have: a vacant space in the very centre waiting to be utilized for either completely new programmes or for further development of existing functions.

On functional level the integration is usually attainable through mutual adaptation of urban infrastructures, particularly communications network; in case of Gorica and Nova Gorica the primary road network ought to introduce equal access to both. Gorica and Nova Gorica have developed their connection each with its own hinterland, divided by state border. Their existence was founded on the absence of connection between them. Both cities have developed its own road system which looked like it was designed so as not to connect what should be connected in the first place. Urban plans of each tried to ignore the existence of the other as much as possible. One of basic conditions for coordinated urban development of both cities is connection of their traffic networks. So a unique concept of the road network should be planned for both cities. Since each one has already established its own road network the easiest way for their integration could be attained by designing and constructing joint ring road and later on equally efficient symmetrical in the direction north-south along the corridor of the state border. By planning a joint ring road it would be possible for both cities to keep their own morphology and visual identity.

Nova Gorica is a town that grew up in relatively short time. It could not benefit the luxury of slow and timeless modelling and adapting its shape to surrounding natural structures. It is the result of distress, of strong pressure and trauma of a difficult moment in history. The original plan was realized only in fragments. The town grew up and developed step by step, following different concepts and sometimes controversial and opposing decisions. Never-

theless the original idea was so strong that it still unmistakably defines the main character lines of the town. The main dilemmas for town planners constantly appear on points where the overlaid orthogonal grid of the modern town collides with the existing structure of land lines and traces beneath. The clear and definitive superimposition of the supporting orthogonal grid was not realized in full extent and consequently enough from the beginning to avoid any doubt. The colliding of two line systems, the planned rectangular one which is clearly defined and crucial for the urban image and character of the town, and the system of original ground lines which remains strong enough to penetrate through, imposes demanding and difficult tasks for town planners over and over again.

Even if it experienced many declinations, the modernity of the urban concept and the mediterranean richness of sunny and green open spaces still represent the key elements for the comprehension of the character and soul of town. The close connection and interweaving of a modern planned town of Nova Gorica and a classical millennial town of Gorica offer a charming image of conurbation of two basically different urban models where two clearly formed characters in unison compose a third one. For its structural richness and variety the case is extremely rare if not unique. Just as classical cities try to consolidate their roots with reviving and renewing the tissue of their historical cores, Nova Gorica must persist to preserve and foster its identity by preserving and fostering the legacy of original Ravnikar plan, the legacy of Modern movement and Mediterranean culture.

The New Town of Guidonia

Features of a Modern Urban Space and Guide Line for Conservation, Valorization and Improvement of its Characters

Edoardo Currà

"In Guidonia, "città dell'aria"¹, serving the strategic aeronautical research center - a kind of aristocratic West Point for the elite of the air officers - which [G. Calza Bini] designs with Cancellotti and Nicolosi in 1937-38, there is the only Italian example of "pilotis", a building on pillars whose ground level is left completely free. [...] Le Corbusier preached them in Italy until the end of the Second World War and G. Calza Bini in Guidonia was the only one who listened to him".²

This architectural exception is just one of several remarks regarding the quality of this new town, built in 1935-1937, serving the principal aeronautical research center in Italy. The interest in modern new towns, and, generally speaking, in Italian modern architecture, is due to the relevant functional and aesthetic results reached both in urban planning and in architectural design³. These qualities derived from typological experiments and from studies on functionalism and on the objectivity of the architecture. They also come from the search for technical solu-

tions which, still based on traditional masonry, locally take advantage of new technologies, principally reinforced concrete. So they reach lightness and expressivity in design and formal clarity required by the aesthetic of the modern designers.

Therefore New towns urban planning and their architectures may be considered "subdued monuments", still to be completely discovered, surely to be appreciated and especially to be protected for their intrinsic "fragility".

"This fragility derives from their design based on rationalist rigour, from the strong dependence of formal and distributional characteristics on functional ones, and, finally, from constructive and technical features. These features are often entrusted to a technology demonstration "of needing" because they were built in a historical period marked by the Italian economy autarchy".⁴

In this context the case of Guidonia has been studied according to a research program con-

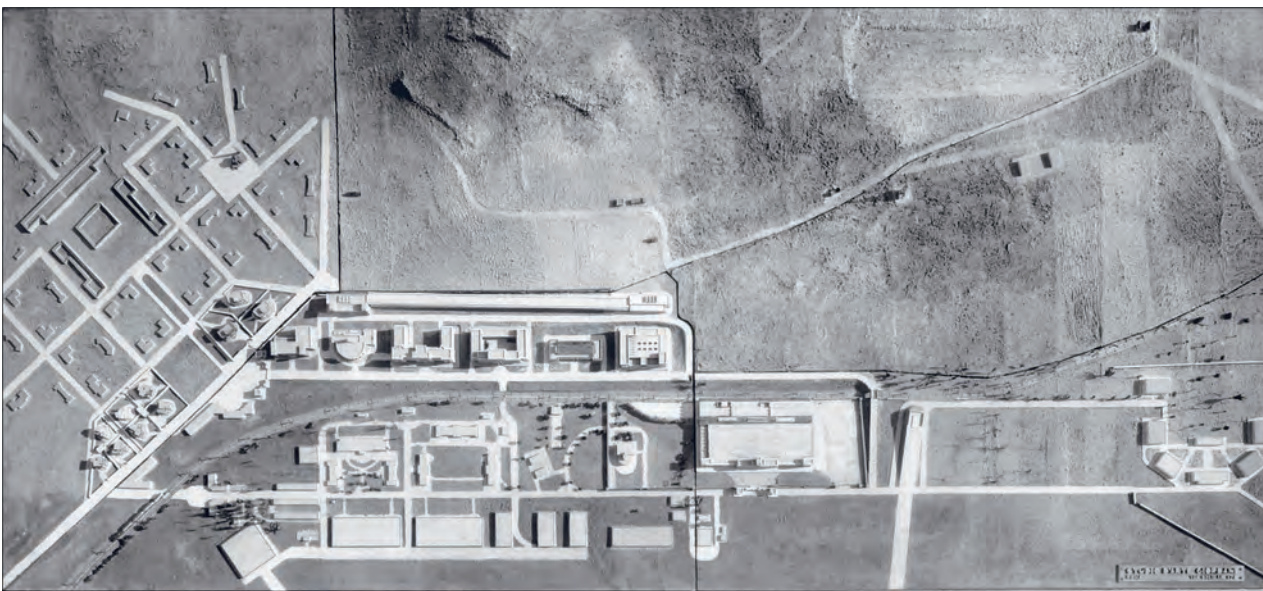


Figure 1. Master plan scale model, 1931.

ducted in several years. The principal goals were the definition of historical-architectural values of the heritage, through the architectural survey, the study of historical and constructive characteristics⁵.

The planning of Guidonia started in 1935, when at least three new towns had been just inaugurated by the fascist government: Mussolinia (October 28th 1928), Littoria (December 18th 1932) and Sabaudia (April 14th 1934). Another one, Pontinia, was going to be inaugurated in December 18th 1935. The town rises to meet the housing needs of workers and soldiers of the Air Force Studies Centre, which was built between 1932 and 1935 near the airport. The center was the main effort of the dictatorship in promoting aeronautical research for military purposes and all its inhabitants were aeronautical soldiers of workers. So Guidonia and the Studies Center can be considered one main site, and its uniqueness confers it a specific cultural identity which is totally different from the other new towns in Latium.

Airport and New Town

Both the urban and military system originates from airport plants. Before the foundation of the airfields, the territory of Montecelio, an ancient village east of Rome, was characterized by rural landscape and archaic nature; extensive farming occupied the plains from Rome to Tivoli and to the area of the Roman Emperor Hadrian's Villa.

In 1916, thanks to the presence of a railway station, the first airfield was established and, after various vicissitudes, in 1924 it starts the research activities at the airport.

The Experimentation Center and the Higher Studies and Experiments Direction (DSSE) are finally established in 1928, and three years later a new master plan is drawn up with the final arrangement of the new Centre.

The structure of the plan shows how the presence of the railway played a decisive role: to avoid soil subtraction to the airfields south of the railway line, they decided to build the Stud-

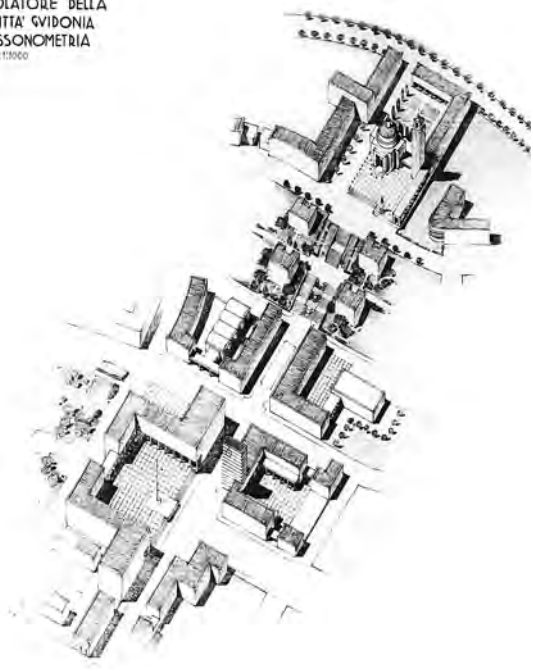


Figure 2. Wind tunnels pavilion, 1935.

ies Center in the north of it, incorporating all in the military complex.

Then the railway became the boundary between the spaces used for studies and experiments, located to the north, and those dedicated to the airport, to the south. All the buildings settle, from west to east, along two main streets surrounding the railway and the main pavilions were built between 1932 and 1935.

Finally in 1935, during the inauguration ceremony of the Studies Center, already working, it was laid the foundation stone of the new town of Guidonia. The project was coordinated by the Alberto Calza Bini and designed by Giuseppe Nicolosi, Giorgio Calza Bini and Gino Cancellotti.

In 1934, several preliminary plan were drawn up already including some features that will be also in the subsequent ones. First, the organization of the main roads in according to cardo-decuman axes.

“From the entrance of the Studies Center, it starts an avenue, perpendicular to the main street, which will be the principal axis of the town, dedicated to housing and carrying on the square. The direction of the road allows a wide view of the Tivoli Mountains from the square and from the road”⁶.

Another new avenue, the secondary axis perpendicular to the principle one, runs from the direction of Rome to the central square, continues and ends in the monumental staircase of the church.

Second, the position of the sanctuary on the top of the hill at the end of the decuman, and, third, the location of a square at the intersection of the two axes.

Finally the organization of the urban fabric according to a grid of streets parallel to the two principal axes ordered depending on the orthogonal grid.

These features are common in new towns already laid, different territories topography permitting, and the designers will try to uncheck the architecture from simple geometric organization. Although order in planning remains a stated goal.

Nicolosi (1936) also writes:

“Despite the adherence to natural surrounding and context, which helped to prevent ordinary schemes, the whole composition is inspired by the fundamental concept of geometric order, as it should and as it always was when the building complexes derive from an accurate and simultaneous program.”

In the first design solutions the monumental character of the central square had been expressed mainly through the axial symmetry and the centrality of the system relative to the main roads. The only exception allowed was the



Figure 3. Preliminary master plan of Guidonia, 1934.

tangent position of the Littoria Tower (fascist tower) in the intersection between the *cardo* and the *decuman*.

The main changes in the next plans will concern precisely the configuration of the town hall square and its relationship with the road. Then it changed the general layout and, instead of a single linear building for all the public functions, positioned in axis with the main street, it was thought a square tangent to the intersection of the *cardo* and the *decuman*, with an architectural design according to weight ratios between the volumes of the different buildings.⁷

In the square there are the town hall - G. Nicolosi - and the hotel building - with spaces for a bank and a post office, G. Calza Bini - facing each other on the short sides of the square. They show up, thanks to the coating slabs of travertine. Among them it stands the littoria tower - fascist tower, G. Calza Bini - whose materiality is accentuated by the covering slabs of basalt.

The mass of these three buildings visually contrasts with the lightness of the other two, which define the long sides of the square, and with the volume of the theater that completes the side with the hotel. In this context the façade of the building for housing is treated with strong and continuous projecting loggias on a transparent glass base designed for shops.

Finally, on the opposite long side, there's the office building - G. Calza Bini. Toward the street, it's a closed and daubed volume which hovers on a pilotis composed by two rows of pillars coated in black marble.

The space, although covered, allows to look from the street to the plaza and permits pedestrians to move freely. It significantly evokes the ancient city lodges.

We often look to Guidonia as a marginal phenomenon of the new towns of Latium, as an "other", an exception that confirms the rule of agrarianism and conquest of new lands⁸.



Figure 4. View of the square from the town hall, 1937.

Actually, the decision to materialize the need for housing and residences in support of Montecelio Airport in a “new town”, rises right after the media had a significant impact from the other pontine new towns and should be linked to it.

The idea of fascism which founds new towns and colonizes new lands, is strengthened when they proceed to drainage the Pontina plain.

Everyone recognizes that the design of the first Master Plan of Littoria was considered a mere technical operation to be managed within the ONC, entrusting Oriolo Frezzotti the most of the projects.

So much so that the Duce himself not presented at its opening, but already for the second city, Sabaudia, a competition was held which caused a great stir and its foundation was an important ceremony, surpassed only by the great sensation of the solemn inauguration at the presence of the king Vittorio Emanuele III.

So the case of the study center and of the city is inserted in a very lively context, from the architectural and political points of view, and while the study center, which, moreover, falls into forbidden military zone, was designed by the military technicians themselves, with simple architectural and planning guidelines (among which stand out, however, some own interesting characteristics) the city of Guidonia, from the inauguration to the foundation is totally placed in a program of “internal colonization and urbanization” promoted by the dictatorship, although according to different needs and conditions.

In conclusion a few themes emerge mainly in the synthesis expressed in this paper: Modern town/Natural Context, City / Airport, Function /Sincerity, Type / Construction. These issues, expressed in summary, constitute elements that characterize the modern design and contemporary intervention guidelines.

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- 2 Pennacchi, *Fascio e Martello*, 166.
- 3 De Seta, *L'architettura del Novecento*.
- 4 Storelli, "La città di Guidonia e il suo aeroporto", 11
- 5 Currà, "La città di Guidonia ed il Centro".
- 6 Nicolosi, "Il piano regolatore di Guidonia", 394.
- 7 VC 1935.
- 8 Cresti, *Architettura e fascismo*; Mariani, *Fascismo e città nuove*.

Kibbutz Planning in the Valley of Jezreel and the Modern Movement (1920's-1940's)

Avner Amiri

Liora Bar-Am Shahal

Baruch Baruch

On the centenary of the kibbutz and the settling in the Valley of Jezreel we are witnessing the final stages in the demise of an ideology of an unprecedented settlement type.

In this paper we compare drawings of original kibbutz settlement plans in the Valley of Jezreel, and examine their relation to Modern ideals. These kibbutzim are located within a confined geographical area, and were planned during a defined time frame - 1920's-40's, a period which coincides with the arrival of Modernism in Israel.

Two types of kibbutz plans are analyzed and discussed: Richard Kauffman's 1920's-1930's and Arie Sharon's 1940's plans. By studying these two types we distinguish the change in planning concepts in those years.

Our focus is the planning of the kibbutz in the Valley, thus we shall not refer to architecture in the kibbutz, although the latter is manifestly Modern in spirit, idiom and matter.

Zionist Settlement in the Jezreel Valley:

Between the 1920's and the 1940's a large scale settlement project, designed to inhabit the marshlands and the surrounding hillsides of the Jezreel Valley took place. This socially utopian project led by the Zionist Movement included the foundation of over 40 kibbutz and moshav type communities (fig. 1).

Kibbutz and Moshav Type Settlements:

The kibbutz and the moshav are two unique types of community agricultural settlements with varying degrees of communal life generated by pioneer settlers in the Land of Israel. The kibbutz began as a collective utopian community, combining socialism and Zionism, and the moshav – as a cooperative agricultural community of individual farms with emphasis



Figure 1. Valley of Jezreel.

on communal labor. These two types of settlements are the backbone of rural settlement in the Land of Israel.

Evolution of the Spatial Layout of the Kibbutz:

The first cooperative settlements (Merhavia, Kinneret 1911-3), adopted the model of the Prussian agricultural study-farm which were planned as one or two courtyards, the residential and the agricultural, as appeared in the technical literature of the period.

In the early 1920's there were no established traditions for the physical organization of a kvutzah (literally a group). Each kvutzah independently sought its own solutions for social issues as well as for its physical layout. The first kvutzot put emphasis on closely knit community life, aiming to keep their population small.

Institutional planning of the kibbutz begins in 1922 with Fritz Kornberg's plan for *Degania B*, a communal kvutzah of 20, located in the Jordan Valley. This was the first layout plan

approved and financed by the Zionist Commission's Settlement Department. This layout plan was built as a symmetrical and formal courtyard plan.

The idea of the "large kvutzah" was put forward in 1923 proposing the vision of a diversified society of hundreds or even thousands of members living a life of work and equality. Translating this vision to physical planning required a new model of settlement with flexible boundaries (contrary to the bound courtyard of the "small kvutzah"), enabling continuous expansion and development, while still maintaining the relationships and reasonable walking distances between buildings and center. This was the end of the 'group commune' and the birth of the kibbutz as a unique settlement without precedent: "neither town nor village".

Two Types of Kibbutz Layout Plans in the Valley of Jezreel

Richard Kauffmann and Arie Sharon were two of the most notable and prolific architects work-

ing in Israel. They both planned kibbutzim in the Valley of Jezreel: Kauffman from the 1920's through the 1930's and Sharon in the early 1940's.

Richard Kauffmann and the Evolution of the Yard plan

Kauffmann was a Jewish German architect and town-planner. He worked with Georg Metzendorf on plans for garden suburbs and was influenced by the 'Garden movement' ideals. Since his arrival in Palestine in 1920 he was one of the predominant architects in the country. Kauffmann headed the settlement planning department of the Jewish Agency. He established the planning of rural settlements as a discipline, shaping the future of kibbutz and moshav layouts in rational and aesthetic lines.

Kauffmann was responsible for some 640 projects (approximately 160 moshavim and kibbutzim), garden suburbs and modern buildings.

The yard plan (1920's): Kauffmann's planning was based on functional, separate yards: the dwelling yard around a central communal space, separated from the farm yard by a green belt. In some plans a third yard was laid out for the children community. Climatic considerations determined the relative location of the yards: the farm yard to the east/southeast of the social yard due to the northwestern breeze.

In Kauffman's early layout plans one can find traditional traits – the layout follows the topography; there is a clear division into functional yards without losing the picturesque elements of tree-lined avenues, green belts and formal yards. The yard layout is still discernible in his fan shaped schemes ruled by radial axes.

Arieh Sharon and the U Shaped Plan

Arieh Sharon studied architecture at the Bauhaus school in Dessau, after completing his

studies he was manager of Hannes Meyer's office in Berlin. Upon his return to Palestine in 1931 he was among the leading members of an architectural avant-garde circle introducing progressive European approaches into architecture and planning.

In the 1940's he planned new kibbutzim. From 1948 to 1953 he was head of the *Government Planning Department*. In 1951 the first Master plan for the State of Israel "*The Planning of Israel*," known as the "*Sharon Plan*," was published.

The U shaped plan (1940's): In Sharon's plans dwelling houses are arranged in a U form facing the central communal space. The children's house is located in the center of this space. The U shape is separated from the farm yard by a buffer zone.

This plan is grid based adhering to function, practically disregarding local topography. There are no visual axes nor tree lined avenues. All functions are located on rectangular grids for maximal efficiency and defense.

Here forth will be presented 3 of Kauffman's kibbutzim and 2 of Sharon's as examples of the differences in their planning approaches.

Kauffman's Plans for Ginegar Gvat and Ramat David

Between the years 1924-31 Kauffmann planned Ginegar (1924-27) Gvat (1927-29) and Ramat David (1931) located in the north of the Valley. The study of their plans reveals the nature of Kauffmann's planning approach.

In both Ginegar and Gvat Kauffmann's preliminary plans show distinct courtyards (in his first Ginegar plan of 1924 he uses the term Hof) each designed for a function: dwelling, agriculture, and education. These courtyards were interconnected by wide, tree-lined avenues – an idea influenced by the Garden City ideals. Nevertheless, in the final plans of both kibbutzim (as built) all that remains of the tightly drawn

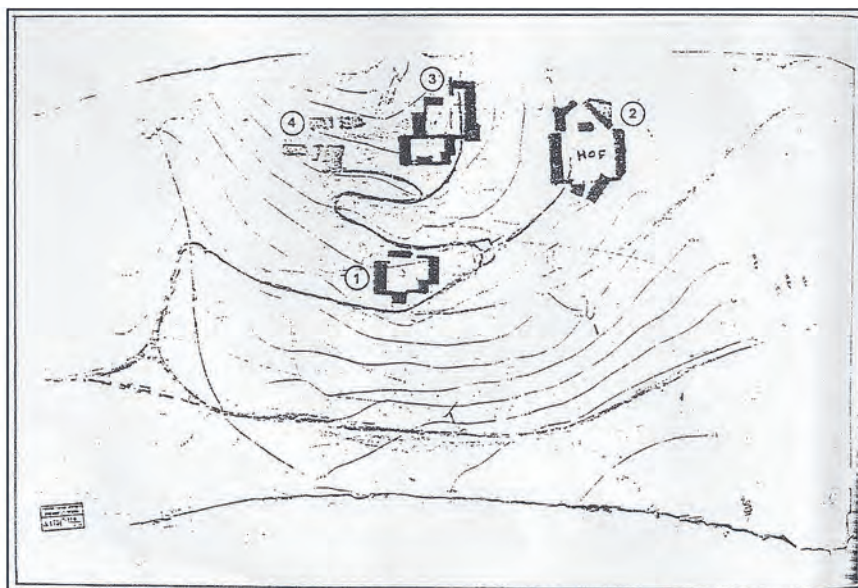
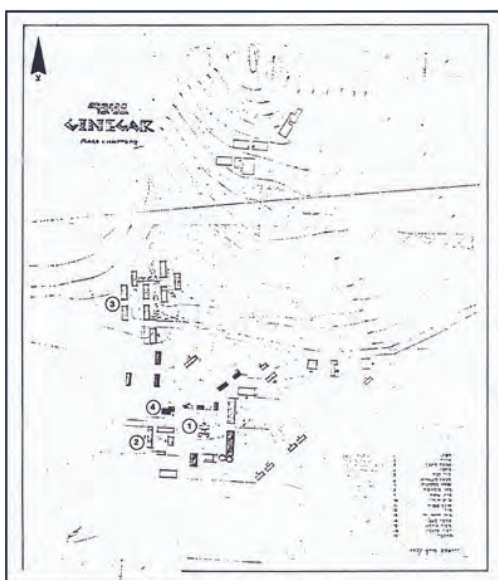


Figure 2.
Ginegar.

Preliminary plan for kibbutz Ginegar, R. Kauffmann, 1924. [Tal, 1991]
1. Children's yard 2. Farm yard 3. Dwelling yard 4. Old existing village



Final plan for Ginegar, R. Kauffmann, 1927. [Tal, 1991]

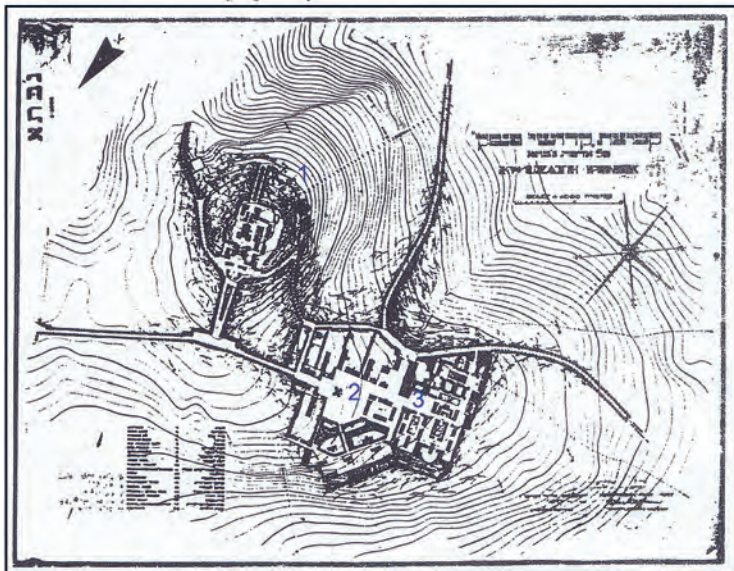


Retrace according to Kauffmann's final plan for Ginegar.
Blue line: 'lightning shaped' axis defining the plan.
1. Farm yard 2. Light industry yard 3. Dwelling area 4. Dining room 5. Tree lined avenue 6. Old existing buildings.

rectangular courtyard plans are loose shaped courts and symmetrical axes, attentively obeying the topography. (fig. 2,3).

In the final plan for Ginegar (1927) (fig. 2) Kauffmann created a south-north 'lightning shaped' axis originating at the entrance of the

kibbutz, continuing along the western edge of the farm yard to the dining room where it continues its climb along a tree-lined avenue accompanied by houses on both sides. This plan is different from his preliminary 1924 Ginegar sketches, showing three distinct and totally



Preliminary plan for Gvat, R. Kauffmann, 1927 [Tal, 1991].

1. Education and Children's yard 2. Farm yard 3. Dwelling yard.



Final plan for Gvat, R. Kauffmann, 1929 [Gvat archive].

In this plan only the Dwelling and Farm yards remain.

Fan shaped plan based on radial lines.

Radial lines: a,c: Dwelling b: Center- Dining room

d. Center of Farm courtyard

separate closed courtyards, each planned on a different topographical level.

In Gvat (fig. 3) Kauffmann delineates three radial fan shaped north-south axes (lines a,b,c) towards the natural slope. The central axis crosses the kibbutz dining hall and the communal space. The two side axes (a,c) serve as 'construction lines' for Kibbutz housing located on circle segments crossing the axes. Parallel to the three axes, separated by a green belt, Kauffmann delineated a north to south axis crossing the center of the farm courtyard (d).

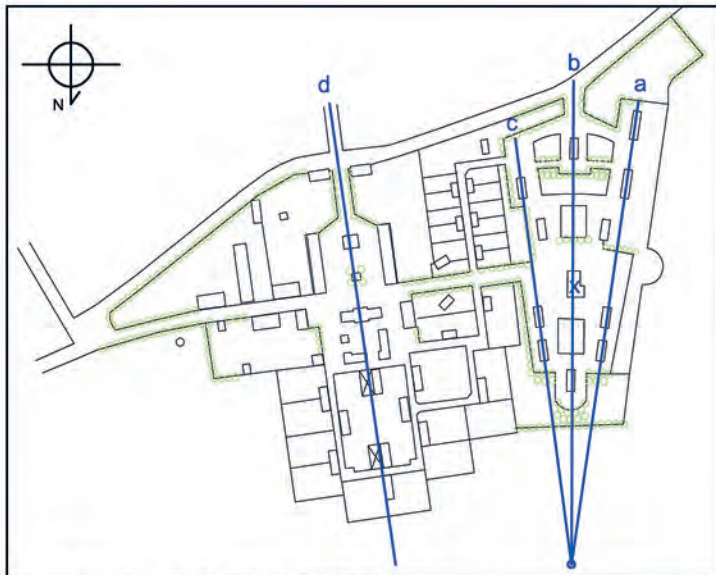
The story of Ramat David (fig. 4) is unusual: Here two kvutzot chose to settle on the same site, nonetheless remaining two distinct groups. Kauffman drew a mirror-like settlement in which all dwelling and agricultural areas are doubled.

This extraordinary plan is based on two division lines - tree-lined avenues: the North-South axis (a) separating dwelling from agriculture, and the Northeast-Southwest axis (b) mirroring the plan, and so delineating two separate

kvutzot. A large yard is located in the center of the plan (x) close to the point where the two division lines cross. At the center of this yard a shared chick incubator building is located (the only structure used by both groups).

Sharon's Plans for Ein Hashofet and Dalia

Sharon planned Dalia and Ein Hashofet (fig. 5) about 10-15 years after Kauffmann's plans. Even though the topography is different in the two locations, the general layout is near identical: on the west – the dwelling area with houses arranged in a U shape, defining the edges of the kibbutz. The children's house is located in the center of the U, within the communal central space. The open side of the U faces a buffer zone, separating dwelling from the well defined rectangular farm yard. The dining hall is located either within the U (Ein Hashofet) or in the buffer zone (Dalia).



Retrace according to Kauffmann's final plan for Gvat.
Left: the farm yard with a single axis at its center (d), Right: the dwelling yard designed with three radial axis (a,b,c). Dining room: X.

Figure 3. Gvat.



Final plan for Ramat David, R. Kauffmann, 1931. [Ramat David archive]



Retrace according to Kauffmann's final plan for Ramat David.
Blue line: a. North-South axis separating farm yard from dwelling yard. b. Northeast-Southwest axis separating the two Kvutza. X. The central yard
1. Dwelling 2. Children's house 3. Dining room 4. Showers 5. Laundry 6-18. Farm uses.
9. Water tower.

Figure 4. Ramat David.

The entrance to both kibbutzim is asymmetrical; the road follows the kibbutz edge and leads to the center of the plan, at which point one chooses whether to access the dwelling or farm areas.

Kuffmann and Sharon Plan Types and Modernism

Kauffman's plans show conservative concepts leaning towards the ideals of the Garden City. He takes into consideration the topographical layout and creates carefully balanced plans. His plans have multiple centers, evolving from the 'closed courtyard' plan to a set of defined but loose yards connected by tree lined avenues and green belts, as well as radial axes and fan shaped plans enabling flexibility and growth.

Kauffmann's planning work respected the ideals of the settlers; he believed that the formal structure of the settlement should be responsive and adjusted to its nature, and that the plan should reflect the spirit and social structure of the settlers. In these respects his plans are modern in spirit.

Sharon began his planning as a modernist. His plans are based on the U shape laid over a rectangular grid, dividing the kibbutz into two functional areas with the entrance always located between the U and the farm yard. In Sharon's kibbutzim there are no multiple yards, no avenues and no particular attention is given to local topography - elements so typical of Kauffmann's planning.

It can be argued that Kauffmann's more modernistic elements (mainly the dismantling of the courtyards) were actually an adaptation he had to make, not necessarily to modernism, but rather as a reflection of the shift in the social structure and needs of the settlers, and the reality of time and place that required modernistic solutions. Sharon, on the other hand, was

from the onset, strictly functional - a modernistic planner.

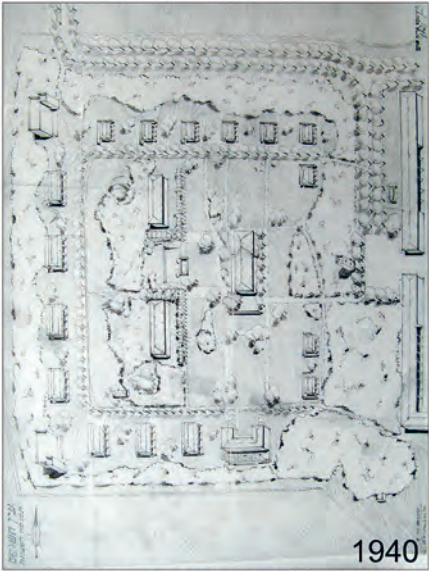
If we maintain that Modernism is not a style, but rather a set of ideas rejecting history and tradition, then the very idea of the kibbutz, as a society with utopian desire to reject tradition and create (or reinvent) a new and better world order, is in itself a manifestation of modernism. Accordingly, the two types of plans for kibbutzim shown here reflect two modern approaches to this unprecedented settlement type.

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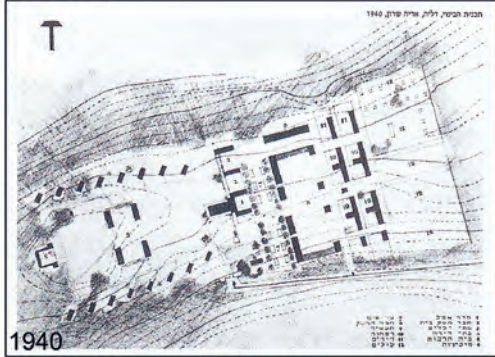


Axonometric view of original plan for Ein Hashofet, Sharon 1940. [Bar Or, 2010]



Aerial photograph of Ein Hashofet, 1944 [Ein Hashofet archive].

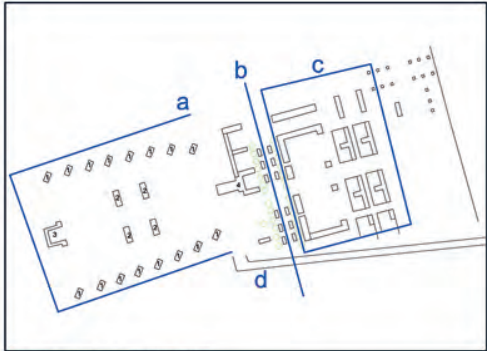
Kibbutz Dalia



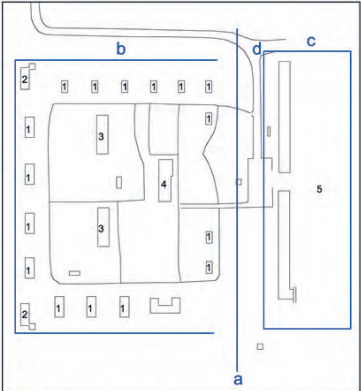
Original plan for Dalia, Sharon 1940 [Dalia archive].



Plan of Dalia as built, 1949 [Dalia Archive].



Retrace according to original plan.
(a) U shape (b) Central axis separating the yards (c) Farm yard (d) Entrance.
1. Dwelling 2. Children's houses 3. Cultural house 4. Dining room.



Retrace according to 1940 axonometric view: (a) central axis (b) U shape (c) Farm yard
1. Dwelling 2. Dwelling and defense 3. Children 4. Dining 5. Farm

Figure 5. Ein Hashofet and Dalia final.

Lake Burley Griffin, Canberra, Australia

Conserving the Heritage Values of a Modern Urban Space in the Ideal City of the Future?

Sheridan Burke

The 1911 international competition for the design of the new national capital city of Australia, Canberra was won by Chicago architect Walter Burley Griffin¹, with the concept of an organic city, a scheme portrayed by his architect wife Marion Mahoney in delineations of comprehensive elegance, outlining a utopian concept that has arguably delivered one of the finest city plans of the twentieth century.

To build a totally new capital city was a national dream that had been made a necessity by the Federation of the Australian states on 1 January, 1901. The spirit of optimism and confidence of the Australian people was well matched with the keen interest of the architectural and engineering professions in the opportunity to plan an ideal city. In May, 1901 a major architectural Congress² was held in Melbourne to discuss the building of the capital city, with presentations of City Beautiful imagery and reports of the 1893 Chicago Exposition, as well as discussion of Ebenezer Howard's Garden City ideals, all debated and dissected as opportunities that might engineer a healthier and nobler society, set within a fresh Australian landscape context.

A design competition for the Australia Capital City was duly announced, following a 1903 Royal Commission into the Federal Capital, incidentally held at a time when one of the worst droughts in Australia's history was ending. The essential need for a permanent water supply was a major determinant for selecting the location of the new capital, and water management was to be a cornerstone of the city design consideration.

Extensive topographic surveys were carried out across South East Australia to identify suitable sites - a good distance from the existing state capitals of Melbourne and Sydney being a pre-requisite. Forty possible locations were quickly narrowed to fifteen and eventually the Limestone Plains of Canberra were selected to be the Australian Capital Territory (ACT). The favoured site of the new capital city was a site well-watered by the Molonglo River, amply demonstrated as flooding rains swept through in 1909.

Detailed topographic and climatic data, the civic requirements for a city of 25,000, as well as photographs and elegant water colour pictures of the site were provided to entrants in the



Figure 3. Lake Burley Griffin.

competition brief boxes that were dispatched nation-wide and throughout the world on 30 April 1911. However, major decisions about the city layout were already being made even as the competition entries were being developed, with the Department of Home Affairs (which was responsible for the competition organisation) seeing “*the competition as providing support for their work rather than the other way around, as competitors would have assumed*”³.

In all, 137 competition entries were received and at the end of the selection process in 1912, three finalists were selected by an Advisory Board. The winner was controversially selected by the Minister for Home Affairs, King O’Malley, rather than expert adjudicators⁴:

Third prize was awarded to Prof Alfred Agache of Paris, second prize went to Eliel Saarinen of Helsinki.

The winner was a plan by Walter Burley Griffin of Chicago. Walter was newly set up in practice with his wife architect Marion Mahony Griffin⁵, both having recently resigned from the studio office of Frank Lloyd Wright. Marion had worked for Wright for 15 years, was his first and closest associate; Walter had worked for Frank Lloyd Wright for six years⁶. They began their newly independent practice with several residential commissions and suburban subdivisions. They had followed the Federation of the Australian states with some interest, enthusiastically entered the international competition for

the national capital with a plan that aimed to provide for its future citizens the daily experience of democracy.

Their winning design was superbly rendered on silk in sepia and burnished gold by Marion, persuasive works of art as well as comprehensively informative city plans. Walter's concept was to provide: *"The very best design on the most modern lines for this City, which should be an example to the rest of the world I have planned a city not like any other in the world. I have planned an ideal city."*

Griffin showed all the symbolic civic functions of a modern democracy laid out alongside the commercial realities and residential neighbourhoods of a city for 25,000⁷ people. The plan was a bold geometry of axial roads responding to the topography of the inland pastoral site and capitalising on the Molonglo River running through it by confidently envisioning the creation of a splendid lake in the open valley between the hills.

Many Chicago influences were evident in Griffins plan for Canberra- the aesthetic concepts of the City Beautiful with its monumental edifices and sweeping vistas; the practical elements of Daniel Burnbaum's inspiring 1909 Plan for Chicago with its grand geometry, and interconnecting avenues. These ideas were echoed in Griffin's Canberra design, with its emphasis on integrated civic infrastructure design, formal axes, sweeping parkways and avenues and a generous open space system.

But utopian and aesthetic ideals aside, what the Griffin's plan understood better than any other competition entry was landscape. The power of topography, the essentials of water supply and recognition of an erratic Australian climate cycle dictated the Griffin design. This underlies its success today- as a city in the landscape⁸, with a magnificent central urban space: Lake Burley Griffin. No mean feat for a totally new inland city in the driest inhabited continent on earth.



Figure 2. Griffin Plan for Canberra.

The Griffins' winning design was portrayed in 14 exquisitely rendered sepia panels and a large monochrome plan and sections, each prepared by Marion and a design report written by Walter, explaining his logical architectural approach to the function of the democratic heart of a new nation, the city of Canberra. The water axis was to be a formal central lake, and intersecting it at right angles, the land axis extended 30 miles from Mt Ainslie to the peak of Bimberi, with major buildings to be set in parallel to these axes. A "national triangle" was formed by three broad avenues radiating from the base of the water axis on the northern side of the lake, meeting in an apex on the southern side with the land axis, thus defining the structure of the city plan, with bridges connecting the north-side commercial and residential communities with the southern governmental sector. The impressive vistas of the main avenues terminated not in monumental buildings, but in topographic features such as Capitol Hill and Mt Ainslie.

Griffin's plan identified the location of all major building groups: governmental, military, municipal and educational with emphasis on the perspective effect of avenue, axis and vista- setting into the geometry of the new city



Figure 1. Walter and Marion Griffin.

his personal theories about democracy, giving symbolic meaning in its layout relationships and grouping of functional elements. Denser mixed use areas were to be linked by tramways and a railway system with lower density family neighbourhoods units to the periphery, laid out with Garden City principles.

Professor James Weirick has noted: *“We have a great diagram of representative democracy (Canberra) and it was predicated on the idea that as you would move about the city you would understand the bounded domain of powers and responsibilities of the institutions which our constitution created and our role as individuals in the great schema.”*⁹

The central water feature of Griffins’ new city design was a formal segmental lake and two adjacent circular basins of differing character, detailed by individual landscape edge treatments. By 1913 ambitious landscape planting

was already underway, directed by the visionary horticulturalist, Thomas Weston. Weston had swiftly established an Experimental Nursery at Acton and an arboretum at Yarralumla by 1914. He recognised the need for extensive testing and acclimatising of exotic trees on the windswept Limestone Plains. Weston purposefully experimented with select exotics to swiftly create the sense of a mature city scape-with a reflection of Englishness- memories of a landscape still then fiercely regarded as “home” by many Australians.

Appointed as Director of City Planting in 1913, Weston’s enduring legacy was to create a tree dominated landscaped urban character for the city, overseeing between 1921 and 1924 the planting of 1,162,942 trees in what are now Canberra’s inner city suburbs

But the new city was essentially also a political dream, and its swift accomplishment was an administrative priority.

Even before the competition prizes were announced and the premiums awarded, the Department of Home Affairs had begun to prepare its own plan for Canberra, incorporating elements and ideas from various entries, just as it had always intended.

Meanwhile, in Chicago, Griffin assiduously collected press clippings about the competition and site development, and an impressive scrapbook of carefully curated articles clipped from a huge array of newspapers was created- The Dublin Evening Post, the African, German and French newspapers, the London Illustrated News, the Manchester Guardian as well as all the Australian and American papers. An extraordinary range of views and reportage was being personally gathered in Chicago to keep the Griffins abreast of Australian happenings and the international commentary on the city.

When he won the competition, Griffin had expected to immediately set out for Canberra to direct site works, but he was not invited. Instead, a Departmental Plan was published that

nobody liked, and with a change of government, the new Minister sent for Griffin in 1913, who had already offered to act as consultant to the government.

Thus the Griffins arrived in Australia in May 1914 to find Walters' planning concepts were being re-interpreted, adapted, and changed: respected not so much a city blue print as a sketch plan to which attractive elements from other entries could be attached. Moreover, Griffin was not employed to implement his own plan, but rather to advise on the Departmental Plan- an amalgam of ideas from other entries; of concepts from engineers worried about mosquitos and water levels, and from politicians worried about expenditures.

Eventually the Departmental Board was dismissed and its plan abandoned, and late in 1913 Griffin was at last engaged as Federal Capital Director of Design and Construction, giving him executive control to lead city implementation works. His staff, however, was the very officers who had been dismissed, and bitterness and recriminations would eventually thwart Griffin's involvement.

At first, Griffin undertook revisions to his competition winning plan and the first amendments to the original lake concepts were initiated in 1913, then yet again in 1918. But Griffin's Departmental adversaries were many and by 1920 Griffin could no longer work with the obstructive Canberra bureaucracy. He resigned and adjourned to Melbourne, then to Sydney, designing the inspiring harbour-side suburb of Castlecrag before departing to India in 1935, where he died in 1937¹⁰.

Following Griffins departure, a visionary English architect John Sulman chaired the newly established Federal Capital Advisory Committee from 1921. Sulman unsuccessfully attempted to abandon Griffins 1918 plan, but converted the concept from a medium density city of consistent streets of imposing, yet narrow two/three storey terraces with rear lane access

to a much lower-density cityscape- one based on Sulman's preferred model of Garden City suburbs of detached single storey cottages in gardens, Sulman's NCAC laying out low density suburbs on the southern side of the Molonglo floodplain. Without the consolidated avenues of denser mixed development to support the civic and commercial nodes planned by Griffin on the north, the essential railway and market centre were scrapped.

The Great Depression and WWII abruptly halted Canberra's city construction in 1929, but landscape planting city wide continued under distinguished botanist and later academic Lindsay Pryor, with a gradual change from Weston's exotic preferences to Pryor's selections of indigenous species. In terms of city planning and national capital development, little else was achieved for more than two decades- administrative frustration, financial stringency and external preoccupations dominated, and although the Canberra population rose to 40,000 by 1958, more than 70% of the city appeared to be vacant sheep paddocks.

Preparation for Canberra's post war era started with the development of the Australian National University site in 1946, a pre-emptive bid to halt the brain drain to Europe by Australia's new Prime Minister Robert Menzies. By 1949, Menzies was pro-actively refocussing the nation on Canberra's development, stepping up the transfer of public servants from Melbourne to the capital and establishing the National Capital Development and Planning Commission (NCDC) in 1950, another in the long succession of Departments responsible for planning Canberra.

City construction was spurred on by a Senate Select Committee hearing held in 1954 that heard evidence that the realisation of Griffins design did not require the construction of grand buildings, but that buildings would be made important by their setting¹¹. Prime Minister Menzies firmly encouraged the NCDC to



Figure 4. Lake Burley Griffin west.

consult with English based planner Sir William Holford, who had recently adjudicated the 1955 design competition for Brasilia. The winning scheme by Lucia Costa was an assertive modernist response to a flat greenfields site in the centre of Brazil, the plan defined by functionalist geometry with a monumental grassed mall edged by extraordinary architectural accents and Lake Paranoa, the other major landscape element, created as an irregular ornamental lake to the east of the city.

Visiting Australia immediately after Brasilia in 1957, Holford recommended converting Griffin's avenues to accommodate "modern traffic needs". His advice was based on his belief in

the future of a city of car-based suburbs (reflecting the British new town concepts) and his recommendations facilitated the construction of major roads beside the lake, barriers that effectively separated local community access to the lakeshore – which had been a key Griffin planning concept. Under the direction of the National Capital Development Commission (NCDC) Canberra was to become a city of the automobile-like Brasilia.

Holford also amended Griffin's formal lake design, favouring informal shorelines and edges (similar to Lake Paranoa), rather than Griffin's formal terraces and promenades, changed the proposed geometry and symmetry of the Griffin



Figure 5. Bridge Lake Burley Griffin.

fin's proposed water bodies. Holford's 1961 report¹² designated the two major lake bridges and associated lakeside motorways which he considered *"provided an overall balance between the traditional order of Griffin's geometry and the freer elegance of modern road engineering"*¹³.

This was in marked contrast with Griffin's plan that had used landscaping to define avenues of dense development of mixed uses and as settings for future buildings and monuments, creating urban spaces in relationship with the lake as a positively designed space. Where Griffin had formally edged the lake with active promenade interfaces to denser civic and commercial areas immediately adjacent to the lake, Holford's lakeside was more picturesque, in the British landscape tradition.

In contrast, Holford's recommendations gave

primacy to traffic movement and located major independent buildings in park-like open spaces, with the lake as a neutral and informal contribution to their setting, rather than the central organising landscape feature Griffin had designed. Christopher Vernon observes that "instead of the precise, geometric clarity the Griffins originally envisaged for the central basins, the new lake's margins were alternatively executed with an irregular edge and cloaked with picturesque parklands. Although this result was, to a lesser degree, an economic concession to the steep topography at the lake's edge, the new lake's configuration and its parklands was, more prominently, the product of Modernism's benign landscape imagery."¹⁴

The maturing plantings of Weston and Pryor provided a city landscape of shade, colour and

sheltering beauty, yet the central unifying water body was still missing!

In 1960 the lake earthworks, dams, and bridges were constructed, with landscape architects Richard Clough and Englishwoman Sylvia Crowe landscaping the shoreline and creating two islands, so that when, in 1963 impounding of the waters began, there would be facilities for recreation, boating, fishing, and swimming.

By 1969 the lake had filled. It was the largest artificial ornamental lake in Australia, furnished with a Carillion and a water jet in 1969, its shoreline ornamented in 1968 with the National Library; in 1980 with the sculptural forms of the High Court, then the National Gallery in 1981. The lake had become picturesque parkland at the heart of a suburban city¹⁵ “

As Australia’s post-war economy boomed, cars proliferated and as Canberra’s population grew rapidly, the attractions of the maturing garden city landscape created resistance to any increase of urban densities to Griffin’s originally proposed levels. New development was kept low commencing with new centres at Woden in 1964 and Belconnen in 1966 and in the 1968 “Y plan” the new towns were inked by modernist transport parkways to civic employment centres fringed by acres of parking.

The 1980 decision to locate the new Parliament House on the crown of Capital Hill instead of on the lakeshore provided an opportunity to create the foreshore terrace envisioned in Griffin’s original design, with the design of Commonwealth Place, centred on Griffins Water Axis, and in 2005 the Commonwealth Place forecourt interpreted Griffins original Water Gate at the crossing of the Land Axis.

Lake Burley Griffin has indeed become the link which unifies the axes and vistas that Griffin planned, and as Griffin had prophesised, “the city was not divided, but became one. The vistas avenues and mountains became one, united by the locus of the lake; it became a sensitive and monumental landscaping achievement.”¹⁶

Urbanist Edmund Bacon wrote in 1968 that “Canberra confirms, beyond anything else I know of, the dominant importance of space design. Here is a network of sweeping vistas, vast gulps of fresh air, superbly exciting and dynamic interaction between the peaks of hills and mountains and the movement of people.”¹⁷

Cultural Landscape Historian Ken Taylor focusses on the landscape: “*The form of the physical landscape – natural and created – is a palpable, tangible presence defining the city; but equally so is its content or intangible, symbolic meaning. Places like Zurich or Kyoto are similar in the way landscape open space surrounds and penetrates the city, but not to the comprehensively planned extent or with the same founding visions as Canberra*”¹⁸.

Today, the principal form of the Lake is much as Griffin had planned it (absent the East Lake), with the functional city units more or less retained: the civic and governmental areas on opposite banks. But what is missing is the city intensity and density of development than Marion’s City Beautiful competition perspectives had envisioned.

The second major phase of the Lake design, its construction phase, in the hands of the modernist Holford provided the more informal edge shapes, treatments and details, such as the islands, but also edged the Lake with roadway barriers.

Griffin’s planned ornamental water body in full city beautiful mode has evolved through planning decisions for lower city densities and by the very different design intentions of the international modernists who were ultimately responsible for the lake construction. Future management of the lake requires respectful and consistent handling of its many historic layers and the varied community interests who use and appreciate the Lake daily.

In 1988, the Australian Capital Territory (ACT) became self-governing, and the responsibility of planning the city of Canberra now

falls to two planning agencies. The Commonwealth agency, the National Capital Authority (NCA) is responsible for the public interests of the national capital dealing with designated land¹⁹- through the National Capital Plan is the strategic plan for Canberra and the Territory. The ACT government's Land Planning Authority controls development of territory land, planning Canberra's future growth with the community through the Territory Plan²⁰.

In 2004 the National Capital Authority set out its approach for the future planning of the Central National Area (CNA) of Canberra in The Griffin Legacy. It promotes conserving significant elements of Griffin's Plan and seeks- in part- to revitalise and intensify development within the CNA into a more compact, sustainable form. The Griffin Legacy framework seeks to reduce barriers between the city and the CNA, extending the city to the lake through continuous waterfront promenades, reinstating Griffin's connection of the city with Lake Burley Griffin and the National Triangle. It retains the essential geometry of the original City Beautiful vistas of the 1911 Griffin plan. Supporting technical studies and Sustainability Principles are still needed. Careful resolution of the interface with the lake and the scale of intensified residential development are essential, but a new planning framework and a sense of reflection on the Griffin Plan have now been officially set out. The Griffin Legacy has been describes as a handshake between our past and our future.

The role of the Australian Capital Territory Planning and Land Authority (ACTPLA) in relation to the Griffin Legacy will be fundamental in the success of such bold changes- redefining areas of the established city will certainly challenge some concepts of amenity and the low scale garden city that is now such a familiar characteristic of Canberra.

Lake Burley Griffin plays a central role in linking the Griffin Legacy framework. Its proactive management as a nationally significant

heritage place began in 2009, when the NCA commissioned the preparation of a Heritage Assessment and Heritage Management Plans for Lake Burley Griffin and Adjacent Lands. In completing the brief, heritage consultants Godden Mackay Logan not only assessed the history and physical development of the lake, but also analysed community attachment to it and identified the values of the place for indigenous communities and non-indigenous communities, through a range of surveys, focus groups, and meetings.

This very complex Heritage Assessment process confirmed that the Lake is highly valued as an important symbol of the national capital- valued for its formal design and spatial qualities, its recreation values and for its indigenous cultural and archaeological sites. The realisation of the Lake and the achievement of Griffin's vision is a source of ongoing national pride.

The layers of heritage values of the lake build upon its natural ecosystems, and include its associated cultural plantings, the indigenous cultural landscape and its engineering accomplishments, as well as its superb visual qualities. The formal Heritage Assessment found that the Lake is significant for its social and aesthetic values, and concluded that it is outstanding at the national level- worthy of National Heritage listing²¹.

As the statement of heritage significance in the Heritage Assessment report concludes:

Lake Burley Griffin is an essential part of what defines Canberra and an essential component of the Griffin plan of a lake to link and unify the axes and vistas of the plan to the underling landform of the place. The Lake is a unique and creative aspect of Australia's most successful urban plan, which is highly valued by communities for its aesthetic qualities. It reflects two key periods of urban design, the City Beautiful /Garden City discourses, associated with the design of the Lake and the later discourses of International Modernism associated

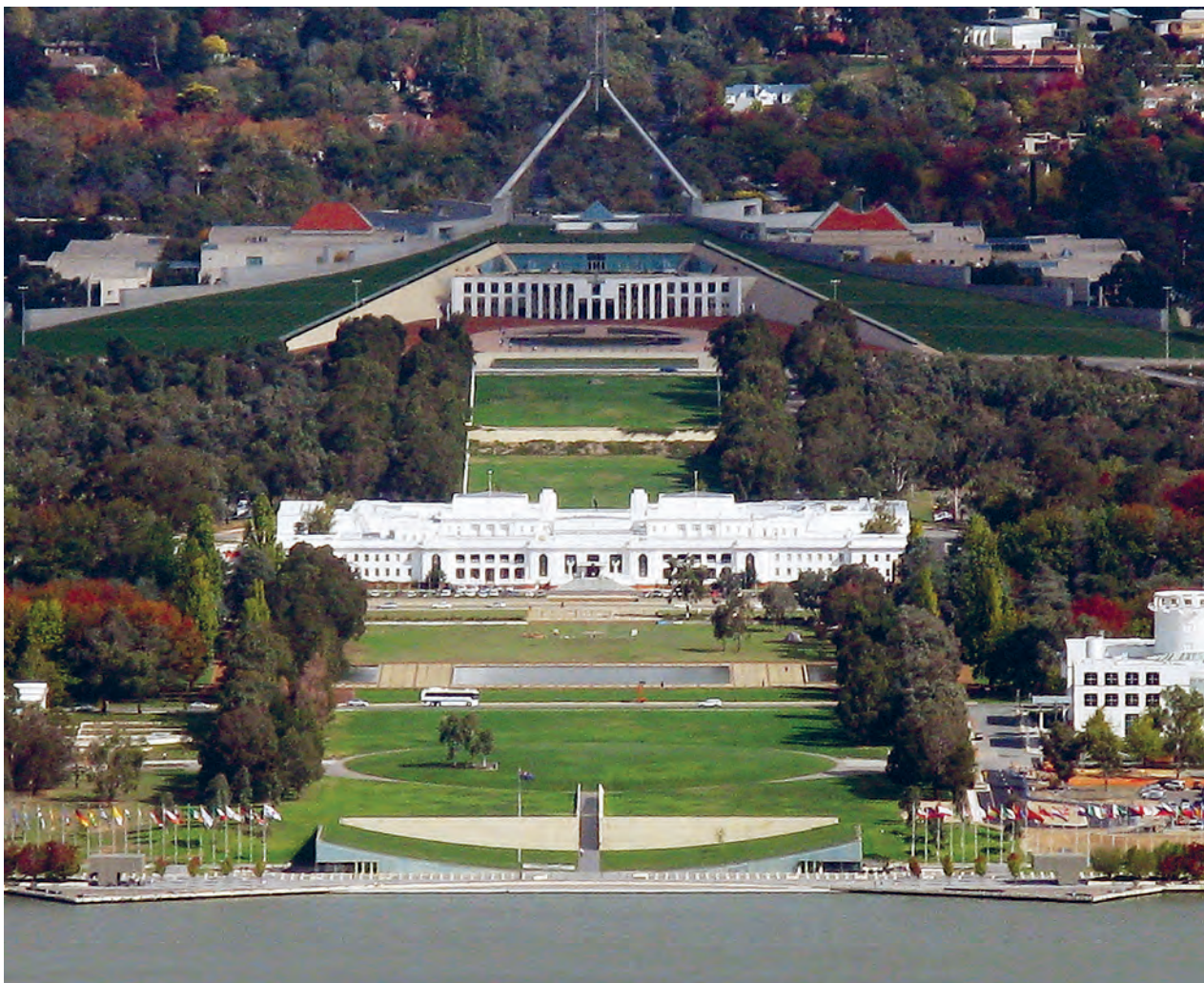


Figure 6. Canberra.

with its construction, edge treatments and features [such as] the dam and bridges.²²

The Heritage Assessment report led directly to the preparation of an Heritage Management Plan for the Lake and several adjacent areas, which also exhaustively considered stakeholder issues in relation to the identified heritage values, as well as existing planning and statutory documents, of which there are many, preparing policies and guidelines for future management and development of the Lake and its adjacent land.

In June 2012 the federal Government announced the proposed national heritage listing of Canberra, with the statement that

Canberra is vital to all Australians as the heart of our democracy and pinnacle of our justice system. Born of the utopian ideals of the founders of Australian Federation and grounded in the Griffins' visionary town plan, Canberra has grown to be one of the world's great twentieth century cities. Australia's national heritage comprises exceptional natural and

cultural places that contribute to Australia's national identity, from the Great Barrier Reef and the West Kimberley to Bondi Beach and Sydney Opera House.

The proposed national heritage listing will capture those outstanding elements of Canberra that contribute to the key themes of:

- Canberra's historical and symbolic significance as a new capital city established by the Australian Constitution

- the city's role in facilitating public engagement in the political process and as the site of landmark decisions and national remembrance

- Canberra as a showcase of cutting-edge twentieth century town planning ideas.²³

The National Heritage listing process is presently on exhibition for public consultation. When finalised, it will ensure ongoing Federal engagement in the impacts of development of the city on its heritage values. It is also a requisite step if the city is to be considered for World Heritage listing.

In Conclusion

Is Canberra still the "ideal city of the future" that Griffin conceptualised a century ago?

It is certainly a city in which a nation's Twentieth Century past is writ clearly- it documents the changing planning ideas in Australia and abroad, it influenced the development

of many other new cities- from New Delhi to Brasilia.

In the broader city context, pragmatic politicians and generations of committees, Departmental Boards, Advisory Boards and Commissions have evolved the Griffin's city design over the last century, as the costs of implementing City Beautiful principles and terrace house streets. These concepts quickly gave way to John Sulman's push for implementing the Garden City theories of picturesque low density cottages in gardens. The post war advice of Modernist planner William Holford responded to the demands of motor traffic circulation swiftly modifying the design of the lake shores to facilitate motorways; then gradually landscaping, planting and finally filling the Lake. Most recently pressure for increased environmental management, higher urban density and lakeside connectivity have reflected upon Griffin's plans of a medium density city.

Lake Burley Griffin remains a major vestige of Griffin's outstanding creative vision of the City Beautiful, layered with Sulman's Garden City neighbourhood concepts and edged in Holford's post war modernism. It is a modern urban space that is being actively protected and functionally managed in an age of new ecological and economical needs for more building density and energy saving technical solutions its heritage values are well recognised, its future planning framework confirmed.

Notes

- 1 Walter Burley Griffin, architect, 1876-1937.
- 2 Congress of Engineers, Architects, Surveyors and Others Interested in the Building of the Federal Capital of Australia, was held in Melbourne, May 1901.
- 3 Paul Reid, *Canberra Following Griffin A Design History of Australia's National Capital* (Canberra: National Archives of Australia, 2002), 21.
- 4 An adjudication system that caused the partial boycott of the competition by the RIBA and local institutes of architects.
- 5 Marion Mahoney Griffin, architect, m Walter 1911 (1871-1961).
- 6 WBG worked for FLW 1900-1906; MMG worked for FLW 1895-1909.
- 7 Canberra was planned for 25,000 with the potential to expand to 75,000.
- 8 Ken Taylor, *Canberra City in The Landscape* (Canberra: NCA Halstead Press, 2006).
- 9 James Weirick, "ABC Compass programme" (2004), <https://abc.net/compass/s108992.htm>
- 10 Marion survived Walter's loss by 24 years, returning eventually to Chicago to write *The Magic of America*, an extraordinary record and commentary about their lives and work.
- 11 Peter Harrison, *Walter Burley Griffin: landscape architect* (Canberra: National Library of Australia, 1995).
- 12 William Holford, *Observations on the Future Development of Canberra*, (Canberra: ACT, Government Printer, 1957).
- 13 William Holford, *Advisory Report on the Landscape of the Canberra Lake Scheme* (Canberra: ACT for the National Capital Development commission, 1961), 1.
- 14 C. Vernon, "An Emerald City? Water and the Colonial Picturesque at the National Capital," *Australian Humanities Review* 36, July 2005.
- 15 P. Reid, *Canberra Following Griffin A Design History of Australia's National Capital* (Canberra: National Archives of Australia), 270.
- 16 D.L. Johnson, *The Architecture of Walter Burley Griffin* (1977), 24.
- 17 E. Bacon, "Canberra as a Statement of World Culture," *Architecture in Australia* 57, 4.
- 18 Ken Taylor, *To know the reason for things. Re-engaging with Canberra's planners, designers and visions*. Unloved Modern Australia ICOMOS conference, 2009.
- 19 Designated land means "areas of land that have the special characteristics of the National Capital".
- 20 ACT Planning and Development Act, 2007.
- 21 Environmental Protection and Biodiversity Act, 1999.
- 22 Godden Mackay Logan, *Heritage Assessment Lake Burley Griffin and Adjacent Lands* (2009), 187.
- 23 Carmen Lawrence, *Celebrating Canberra: A Nations Cultural and Democratic Landscape* (2012).

Learning to Love Brutalism

Anthony Vidler

Even today, while a portion of the architectural community might be supportive, the general public remains convicted that these, often mega-structural and urban planning related structures, are both unredeemably ugly (to use one of John Allan's terms) and worthy to only of being torn down. John Allan made the point that we cannot any more use our own aesthetic and professional criteria to argue for their preservation – energy, economic, and political considerations demand to be fore-fronted – and Mark Pasnik's coalition in Boston has tried to re-frame the debate by re-naming the style – not "Brutalism" but "Heroic Modernism". I don't want to rehearse these arguments again, but rather to speak about this undeniably unfortunate word "Brutalism". John Allan, in his response to the session on the Tugendhat restoration, made the point that Modernism for many was received in photographs and that it was essential to unravel the equally "mythic" status of photographic Modernism. I will briefly try to unravel the equally mythic status of a word – "Brutalism". I turn first to the dictionary definitions as quoted in that repository of the

common wisdom Wikipedia: "Brutalism" is, according to the dictionary, a commonly accepted term for a particular style of architecture dominant in the 60s: "a style of Modern architecture, primarily in the 60s, emphasizing heavy, monumental, stark concrete forms and raw surfaces"; "term applied to the architectural style of exposed rough concrete and large Modernist block forms, which flourished in the 60s and 70s and which derived from the architecture of Le Corbusier."; "term coined (1953) to describe Le Corbusier's use of monumental, sculptural shapes and raw, unfinished molded concrete, an approach that represented a departure from International Style". Readers are referred to Louis Kahn, Denys Lasdun, and James Stirling. In these senses the term is generally applied to a wide range of buildings, and not necessarily just to British buildings, that include to give just a few examples which without expanding upon this evening I would just note have all been the object of public dislike if not animosity more or less from the outset, and that all are nearing, according to their owners, public or private, the end of their useful life.



Figure 1. Boston City Hall, vilified on completion as “a giant concrete harmonica” a “pigeon cage,” or an “Aztec gas station.”

Boston City Hall

Vilified on completion as “a giant concrete harmonica” a “pigeon cage” or better, an “Aztec gas station”. At the very least it was, and still is, with most so-called Brutalist buildings characterized as unwelcoming, cold, ugly, with poor lighting, ineffective heating, and having a labyrinthine layout.

By contrast, the architectural community was more or less ecstatic, at least for a few years: Ada Louise Huxtable wrote, “what has been gained is a notable achievement in the creation and control of urban space, and in the uses on monumentality and humanity in the best pattern of great city building. Old and New Boston

are joined through an act of urban design that relates directly to the quality of the city and its life”. Donlyn Lyndon wrote in the *Boston Globe* that “Boston City Hall carries an authority that results from clarity, articulation, and intensity of imagination with which it has been formed”. Architectural historian Douglass Shand-Tucci, author of *Built in Boston: City and Suburb, 1800-2000*, called City Hall “one of America’s foremost landmarks” and “arguably the great building of twentieth century Boston”. Ada Louise Huxtable noted “the architectural gap, or abyss, as it exists between those who design and those who use the 20th century’s buildings.



Figure 2. Birmingham Central Library, which has been torn down in favor of a new library building by Mecanoo architects.

Birmingham Central Library

This building was built by John Madin (1924-2012), one of Birmingham's often unappreciated master architects of the second half of the 20th century, between the mid-60s and 1974, as part of large civic centre scheme on the newly created Paradise Circus site. Originally planned to be built alongside the library was a School of Music, Drama Centre, Athletic Institute, Offices, Shops, Public House, a Car Park with 500 spaces and a bus interchange. The Collection of civic buildings was all to be connected by high level walkways and the network of galleries which bridge the roads. According to Madin, it was designed with the inspiration of Leslie Martin's Law Library at Oxford, and of course, Boston City Hall. Prince Charles famously described the library as "looking more like a place for burning books, than keeping them" It will, as

you know, soon be torn down in favor of a new library building by Mecanoo architects – an undeniably good contemporary structure, that in the place of its "austere" forbear will provide a "worlds-class new Library [...] a 'people's palace' for people of all ages, offering communities across the city and beyond a library to truly be proud of".

London South Bank Arts Centre

Even Charles Jencks tried to defend this structure in his review for *Architectural Review* in 1978, against the change leveled by nearly half of 550 engineers surveyed as "Britain's Ugliest Building"; qualified by the press variously as "quasi-fortified", "neo-antheap", "mini-Zig-



Figure 3. London South Bank Arts Centre, qualified by the press as “quasi-fortified”, “neo-Antheap”, “mini-ziggats”, “bunker”, or an “army of centipedes, carrying of the dried carcass of a broken turtle.”

gats”, “bunker”, or what I think of as very best that British journalism can have ever come up with “an army of centipedes carrying off dried carcass of a broken turtle.” The fate of the South Bank is yet undecided – perhaps, like that of Boston City Hall only in limbo by reason of the recession.

Charles Jencks in his argument for the South Bank development, admitted that to the eyes of a rationalist these attacks were partially justified: no apparent structural logic, no underlying coherence, no visual logic to explain the functional logic, a “confusion of shapes and ambiguity of forms – all in exposed concrete – with dark apparently useless space beneath circulation deck; changes of level stairs turn inward; no provision for daytime activity – in short as far as the always anti-elitistic public is con-

cerned, just one more post-war cultural ghetto.” Yet there was, he insisted, a sensible answer to each of these objections: “the architects were not trying to create a building in any conventional sense but rather a sequence of extended places and events along a route. And where they were trying for a building, it was probably *intended* to be conventionally ugly”.

In other words, the architects of the South Bank were deliberately trying for something other than either the classical monument or the already traditional anonymous International Style Modernism of corporate usage. The true ancestor of the South Bank, Jencks argued, is the Brutalist work of the Smithsons. Sheffield University scheme of 1953 was “the first really blunt expression of a non-building, organized around non-formal principles by means of a

circulation deck". The Berlin Hauptstadt competition scheme was "open aesthetic for the open society", "a loose, polycentered arrangement which is organized as a series of fixed places on a route for movement, as well as an ad hoc arrangement of elements.

How did this movement come in to being? (I will call it a movement for the moment, although as we shall see, as a movement with an ethic rather than an aesthetic sense since it was severely restricted in its adherents).

"The New Brutalism" was a term invented by Reyner Banham in concert with Alison and Peter Smithson in 1953-55. Later, following irate letters from Hans Asplund, Banham admitted that "Brutalism" as a term had originated in Sweden in the form "Neo-Brutalism" but defended "New Brutalism" as entirely different, as composed of a mash-up of two Gallicisms: *Art Brut* and *Béton Brut*. The first one referred to Jean Dubuffet and later Edouardo Paolozzi, and the second one to the concrete work of Le Corbusier's Unité d'Habitation in Marseilles. There were, inevitably, other memories of this semantic history. Peter Smithson thought the term came from his colleague and friend Edouardo Paolozzi, who had taken it from Dubuffet's *Art brut*. Georges Candilis, probably paraphrasing Sigfried Giedion, thought it came from the conjunction of Peter Smithson's nickname, "Brutus" and Alison's pwn name: "Brutalism, yes of course. It was our slogan. The term has to be taken in the sense of directness, truthfulness, no concessions. I rememeber writing: 'You have to be direct and brute' [...] We used to say: Smithson = Brutus (Peter's nickname) plus Alison". Banham, not to be outdone, added another twist, noting in his entry on "Brutalism" for the *Encyclopedia of Modern Architecture* that it was a friend of the Smithsons, Guy Oddie, who was "the first person to utter the phrase in early summer of 1954" – despite the fact that this directly contradicted Peter Smithson's own use of the term in print the year before.

As late as 1956, the origins of the term were still giving rise to what the photographer of the vernacular tradition, Eric de Maré, called "a subject for academic research". In 1950 the Swedish journal Bygg-Mastaren (Build the next few years) had published a special issue on the work of the architect Gunnar Asplund, with an English summary that used the term "Neo-Brutalist".⁵ De Maré wrote to The Architectural Review summarizing a letter he had received from Gunnar Asplund's son Hans, explaining how the term had arisen in Sweden. Hans, it seems, had coined the term in jest to characterize a house design by Edman and Holm, and had shared his comment with two English architects, Shankland and Cox, who brought the words back to England where "it had spread like a wildfire" and had "somewhat surprisingly" been adopted by "a certain faction of young English architects". Hans Asplund took "no pride" in this invention as a self-described "paleo-sentimentalist". Thus, a term that was apparently invented to repudiate Swedish Modern, and its importation to Britain, has in fact been invented by the Swedes.

Banham's riposte to this idea was belated and followed the orthodoxy of art-historical terminology. "Neo-Brutalist" he stated in his summing up of the movement, "is not the same as 'The New Brutalism' [...] 'Neo-Brutalist' is a stylistic label, like Neo-Classic or Neo-Gothic, whereas 'The New Brutalism'", the privileged users of which werve, he concluded predictably, Alison and Peter Smithson, was "an ethic not an aesthetic". In this context it is worth remarking that the word "brutalist" as used by the friends of Hans Asplund was from the start "negative" while for Banham and the Smithsons, with their attempt to translate a "New" brutalism into an "ethic", it was positive.

But as a British movement, the *New Brutalism* was born out of a particular context – that of postwar "austerity Britain" – it was a society of scarcity, subjected to what historian Tony

Judt describes as the “unprecedented conditions of restraint and voluntary penury”, with “almost everything either rationed or simply unavailable”. But as far as building was concerned, and despite fuel shortages, bricks were in plentiful supply. Brick production reached prewar levels by 1954 and continued to grow until the early 70s.

Of course, the British, from Georgian times, were very proud of their bricks. In a 1940 advertisement for the most popular of bricks, the Accrington Brick and Tile Company showed a bomb landing harmlessly on their “Nori” (Rion) brick that resisted with a crushing load of 1028.8 tons per square foot⁶. Part of Churchill’s charisma as a wartime leader, and afterwards his folksy image in retirement, was his passion for bricklaying: “each afternoon, we’d spend a couple of hours together, laying bricks. If anyone had asked me what my grandfather did, I’d have said: ‘he’s a bricklayer’”.

But the British were also slightly embarrassed by their bricks; they were a little too much of a reminder of the working-class streets of Midland industrial towns, not part of the establishment – as in the sobriquet “Red-brick Universities” to distinguish local and regional foundations from Oxbridge and London. As Jim Stirling was to note regarding his and James Gowan’s re-housing at Preston “I suppose some would think them too Victorian”. But it was this very ambiguity that allowed for the fighting words of the “Angry Young Men”, their novels, films, and plays celebrating the resilience, comradeship, and sometime upward mobility of working-class culture. It was in some sympathy with this sentiment, though not as politically charged, that New Brutalism was able to adopt its rough materialism and attitude toward brick-and-steel culture. It was not accidental either, as Banham reminded his readers much later, that the rubric “New Brutalism” was “claimed particularly by an English team of Redbrick extraction”.

The Brutalism word itself first appeared in print in a short text by Peter Smithson for *Architectural Design* in 1953, introducing the drawings for a house in “Soho” (which was not for Soho at all but a project for their own house in Colville Place) and claiming that, if it had been built, it would have been “the first exponent of the ‘new brutalism’ in England”. Modest in the extreme, with its load-bearing brick party walls and exposed concrete floor beams on front and rear facades, the project inherited the already five-year preoccupation with neo-Palladian geometry: the facades were controlled by regulating lines, the plan was nearly square, and the internal divisions were equally geometricized. But the interest of the design did not lie in this survival (Peter Smithson was later to declare the Palladian movement over by 1948) but rather in the use of materials specified for the builder:

Bare concrete, brickwork and wood... Brickwork may suggest a blue or double burnt or colored pointing; but the arbitrary use of color and texture was not conformed with, and common bricks with struck joints were intended. The bars and color variation have some sort of natural tension when laid by a good bricklayer.

- Alison and Peter Smithson, “House in Soho, London” *Architectural Design*, December 1953, 342.

In their preamble to the builder’s specification, the Smithsons exhorted the “Constructor” to “refrain from any internal finishes wherever practicable”. The conclusion was that he should “aim at a high standard of basic construction as in a small warehouse”.

A house like a small warehouse: this suggests the stringent conditions of material supply and construction at the time, but also an emerging sense that the formulas of the Modern Movement were outworn and unsuitable for the postwar British condition. This was a

sense shared by many, and not only Le Corbusier himself whose wartime designs for emergency housing, the *béton brut* of the Unité, and the soon-to-be-completed Jaoul Houses, had demonstrated a turn towards the expression of materials. Indeed, while it might seem that the Soho house had been drawn up without knowledge of the Jaoul Houses (as published in the 1953 edition of Le Corbusier's *Oeuvre Complète 1938-1945*), there is every reason to believe, given the strong similarity of the Smithsons' elevations to those of the first Jaoul project, that Peter Smithson had either seen them in a presentation at a CIAM meeting or, more likely, at Le Corbusier's talk at the independent Group in 1951 or in his subsequent visits to the RIBA and AA in May 1953.

Theo Crosby elaborated on the term Brutalism a year later, as an "attitude taken by certain younger English architects and artists, and known, half satirically, as the New Brutalism, as a reaction against the tendency to over-refinement and dry academic-abstract geometries which lurk in the International Style".

With this new traction, "New Brutalism" was now retroactively associated with a built example - the Smithsons' Hunstanton Secondary School, designed in 1949 and completed in 1954, and reviewed favorably by Philip Johnson, presumably as the reigning Miesian. Johnson was less favorable towards the general turn represented by the Smithsons, calling it "an Adolf Loos type of Anti-Design which they call the 'New Brutalism' (a phrase which is already being picked up by the Smithsons' contemporaries to defend atrocities)". In their explanatory article, the Smithsons took issue with this American diatribe against the new British architecture, affirming that "the architects themselves would certainly disagree with Mr. Johnson's separation of Hunstanton from the New Brutalist canon, even though the term had not been coined when the school was designed", and stirring claiming that the whole issue devolved

around the truthful display of materials: "It is this valuation of materials which has led to the appellation 'New Brutalist', but it should now be clear that this is not merely a surface aesthetic of untrimmed edges and exposed services, but a radical philosophy reaching back to the first conception of the building". The Smithsons traced its philosophy back to English precedents - Hardwick Hall (by another Smithson in the late 16th century for its long gallery heating system) and Butterfield's All Saints Margaret Street, a building already praised by Ruskin and John Betjeman as "fearless" in pushing the gothic language to an extreme. Standing on these safe shoulders Hunstanton could claim further radicalism. It was, the Smithsons claimed, "ruthless" in its avoidance of the "gentlemanly" Modernism that characterized what they saw as the English version of Scandinavian Modern, and was "free from the sentimentalism of Frank Lloyd Wright or the formalism of Mies van der Rohe". It was also designed according to new structural principles - the calculation of the steel structure by means of the Plastic theory developed by Baker and Heyman during the war, and the insertion of brick panels that "were conceived from the very first [...] as performing structurally, functionally and decoratively as parts of an integrated structure". Banham wrote:

It is this valuation of materials which has led to appellation 'New Brutalist', but it should now be clear that this is not merely a surface aesthetic of untrimmed edges and exposed services, but a radical philosophy reaching back to the first conception of the building. In this sense this is probably the most truly Modern building in England, fully accepting the moral load which the Modern Movement lays upon the architect's shoulders. It does not ingratiate itself with cosmetic detailing, but, like it or dislike it, demands that we should make up our minds

about it, and examine our consciences in the light of that decision.

This school, proclaimed Banham a year later in his seminal article “The New Brutalism” of 1955, was the real originator of the New Brutalist manner, despite its pre-dating the term. Thus Banham, having referred to what he called “the New Brutalist canon” as if one already existed, opened his review and description of Hunstanton polemically enough, with a section entitled “Design principles”.

Confusingly then, New Brutalism originated in a work that, for all intents and purposes, was inspired by Le Corbusier’s Jaoul Houses, yet its most significant exemplar was a building designed three years before that, and four years before the term itself was adopted, a building that was inspired in turn by the IIT Campus buildings of Mies.

With the fervor of an art historian who had discovered a new movement that matched his favorite Modern one – Futurism – Banham now took up the cudgels for the term: “as Britain’s first native art movement since the systematic study of art history reached these islands, the New Brutalism needs to be seen in a double historical context – that of post-war architectural thought, and that of post-war historical writings on architecture”. It is a mark of the historicization of architectural styles that New Brutalism was introduced as an effect of art-historical writing, and as an art historian in-training Banham did not disappoint, taking care to define the origins of the term before characterizing its reach.

For Banham the term “New Brutalism” was a natural response [natural?] to “New Empiricism” if not “New Humanism” and was a direct attack on what he called the Marxist/Communist cell in the LCC. Against the “soft” Modernism of this cell, something – a “New X-ism” – was bound to emerge. And with the help of a few continental words—Le Corbusier’s *béton*

brut, Dubuffet’s *art brut* – the Smithsons managed to capture the term “as their own, by their own desire and public consent”.

It was indeed literally and figuratively a “brick-bat thrown in the public’s face, a program, a banner”. But this banner was on closer inspection decidedly vague. For in the end Banham is reduced to defining New Brutalism in extremely general terms as “1, Formal legibility of plan; 2, clear exhibition of structure; and 3, valuation of materials for their inherent qualities ‘as found’”. Indeed, these are general enough that they “can be used to answer the question: Are there other New Brutalist buildings besides Hunstanton?” in the affirmative. Banham lists Le Corbusier’s Marseilles block, Mies’ Promontory and Lakeshore apartments, Eero Saarinen’s General Motors Technical Center, the Dutch work of Aldo van Eyck and the architects associated with Team X, only to admit immediately that New Brutalists (i.e. the Smithsons) would reject most of these from the canon. Only Louis Kahn’s Yale Art Gallery of 1951-53 might survive the test, but even this not quite, since with its inconsistent detailing it could be construed as too “arty”. This leaves us alone once more with Hunstanton.

But the application of the idea to architecture, and to Hunstanton in particular, demanded more than a general sense of the word. According to Banham, it required not simply “that the building should be an immediately apprehensible entity” but that “the form grasped by the eye should be confirmed by the experience of the building in use”. New Brutalism’s “form” is actually “aformal”, (and this despite the apparent “formality” of Hunstanton which he admitted with a certain condescension, was not the Smithsons’ fault). Rather, it was the Golden Lane and Sheffield University competition entries, with their full deployment of *collage* to present a “coherent visual image” by “non-formal means” that evoked “aformalism as a positive force”. Here Banham brings in a surpris-

ingly contemporary terms to characterize his new aformalism - “topology” - that allows for a new bridging of the gap between what he called “ideal beauty” and the Brutalist “image”, for in topological terms as he argued “a brick is the same ‘shape’ as a billiard ball”. It was this term of course that allowed for the relinquishing of bricks and mortar for the smooth abstract surfaces of reinforced concrete.

Looking back on the “movement” he had theorized in 1955, in his *The New Brutalism: Ethic or aesthetic?* ten years later, Banham decided not to reprint the article ‘The New Brutalism’, deeming it not “truly representative of the state of the Brutalist movement at that important time in its evolution”, revealing “only too clearly” his “attempt to father” some of his own “pet notions”. This self-critique reinforces the impression, fostered by his earlier editorial comment on Hunstanton, that if there was indeed a movement with the title ‘New Brutalism’, it was almost entirely of Banham’s own invention, supported by only one completed building. The book itself was brief enough, with no more than fifty text pages, but these were supplemented by nearly two hundred illustrations of buildings and projects that, in Banham’s eyes, demonstrated that New Brutalism, beginning in England, had by 1966 become an almost worldwide phenomenon.

One of the major problems of the book however, and that had been faced by Banham since the beginning, was that apart from the Smithsons, very few of the architects claimed as New Brutalists by Banham wanted to be called Brutalist. Among the first to react were Stirling and Gowan. When Banham had reviewed Ham Common in 1958 in an article that associated Stirling and Gowan both with the “Angry Young Men”, in his title - “Plucky Jims” - and with New Brutalism, by reference to their obvious debt to Corbusier’s Jaoul, the architects replied immediately: “we do not consider ourselves ‘new brutalist’”, stating bluntly (and with

hardly concealed animosity towards Banham’s art-historical appropriation), “‘New brutalist’ is a journalistic tag applied to some designers of architectural credit, in a morale-boosting attempt to sanctify a movement as ‘Britain’s contribution’ and to cover up for the poor showing of our postwar architecture”. In a later article, Stirling and Gowan, responding to the suggestion that the flats were “brutalist in design”, summed up their position:

The ‘New Brutalism’, a term which we used to regard on the one hand as a narrow interpretation of one aspect of architecture, specifically the use of materials and components ‘as found’ - an already established attitude; and on the other hand, as a well-intentioned but over-patriotic attempt to elevate English architecture to an international status. But whatever the term might initially have meant it is clear from recent and repeated derisive journalistic asides, that it must now have created in the public eye an image of pretentiousness, artiness, and irresponsibility, and as such the continuation of its use can only be detrimental to Modern architecture in this country.

As for the flats, they were, the architects stated, simply built in accordance with the client’s low-cost specifications, with “simple and everyday materials” - load-bearing brick walls “calculated structurally to get the maximum of window openings”, with recessed pointing to cast an “oblique shadow” and the concrete floor beams “patterned by the formwork”. “We do not know” they concluded ironically, “if this specification is in accord with the ‘new brutalism’”.

The lone partisan left was Coin St John Wilson, former architect at the LCC, partner of Leslie Martin, and lecturer in architectural theory at the new Cambridge School of Architecture. His extension at 1 Scroope Terrace in Cambridge, completed a year before I entered

the school in 1960, was perhaps the most canonically New Brutalist of all buildings of that period. Reyner Banham opined that “into this relatively small building were poured most of the intellectual aspirations of the Wilson, Smithson generation”. A two-storey cube, with thirteen-inch thick brick walls, exposed concrete floor slabs, wood and tubular steel details, and a *béton brut* projection “pulpit” sculpted like a van Doesburg axonometric, it seemed to realize everything that the Smithsons’ unbuilt Soho house of 1952 aspired to. Carefully proportioned according to Le Corbusier’s Modulor, it was also a living memory of the neo-Palladian, pre-Brutalist moment that was influenced briefly by Rudolph Wittkower’s publication of *Architectural Principles in the Age of Humanism* in 1949. Wilson, the most academic of all the Independent group had in microcosm perfected a model New Brutalist exemplar - indeed realized what the Smithsons had failed to build in their little house project at Colville Road.

Even the Smithsons wanted out from under the art historical trap. The last - or penultimate to last words - were appropriately enough spoken by Peter and Alison Smithson in a conversation with E. Maxwell Fry and Jane Drew. In response to Fry’s observation that Brutalism signals “a very fierce morality which will only deal with London stock brick and bush hammered concrete”, Peter retorts: “we were stuck, and are still stuck in many ways, with the problem of the brick. I am obsessively against the brick, you know, we think brick the antithesis of machine building and yet for practical reasons we never have built in anything else. It is a tragedy. When I was 19 I said I would never design or build anything in brick in all my life, and yet one has to face in England and in this Northern climate and in the middle belt of Europe with the fact that brick does the job. You cannot argue with it, and therefore you know there is a certain sort of common sense in it. If common sense tells you that you have to make

some poetic thing with brick, you make it with brick”. Alison agreed:

But a time is coming now for a further stand against being pushed towards building in bricks, even if it means refusing a job that needs bricks. Now everything is being done in brick, rough concrete, vast sections of this and that and varnished planks. I still cannot face brickwork. On Tyneside I was surrounded with brickwork still being dirtied by industry. Even Banham in the conclusion to his 1966 book admitted that the movement was, to all intents and purposes, “over”.

And yet, as we now know, the word ‘brutalism’ refused to go away.

Despite all the arguments for “ethics” rather than “aesthetics”, by as early as the late 60s, Brutalism was to be attacked, not only by the public but also from within, by both the unrelenting supporters of a Gropius style Modernism and the initiators of what, already in 1960 was termed “post-Modernism” by none other than Nikolaus Pevsner. Pevsner indeed had always hated “Brutal ism”. He didn’t mind the Smithson’s Hunstanton (“symmetrical clean, precise, in short Mies van der Rohe and not Le Corbusier in origin”) nor did he mind the Economist Building (“again entirely unbrutal [...] and a Townscape sensitive job”) but he hated Denys Lasdun’s Royal College of Physicians (“next to Nash’s Regent’s Park [...] with two square concrete posts in front of one bigger square concrete post to mark the entrance - take it or leave it, Mr Nash”). “Sculptural” and “personal” like Le Corbusier’s Ronchamp or Chandigarh, Brutalism represented for him “self-expression of the artist-architect”, “a fervent avoidance of lightness, of anything that could be called elegant, and also of anything that could be accounted for purely rationally” and, “forms of overpowering - what shall I say? - yes: brutality”.

Visiting Rudolph’s Yale Art and Architecture Building, he admired the spatial intricacies but

thought the building failed absolutely in terms of its program. The problem there, as with any other “brutalist” buildings was the return of what he called expressionism. And not of the proper line of descent from Gropius and Mies. It was not by accident that Pevsner launched this diatribe in 1966-67. This was the year in which Banham had published his summation of the Brutalist movement, *The New Brutalism: Ethic or Aesthetic*, and it was Pevsner’s purpose to demonstrate that the New Brutalism was only an aesthetic, “expressionist” and narcissistic in form, that directly negated the principles of his favored “pioneers” of the Modern movement, Gropius and Mies van der Rohe, and their “ethic” of “simplicity, honesty, and service”. If in that year Banham had celebrated the movement he had started, Pevsner was determined to kill the residues of the movement that his wayward student, Banham, had started.

But Banham himself was disabused. In his conclusion to the book, Banham closed this “period” that he had himself initiated, with the statement that, for the British contribution at least “it was all over”. “For all the brave talk of ‘an ethic not an aesthetic’, (which was, one has to say his own brave talk of an ethic as applied to a few buildings of the Smithsons) Brutalism never quite broke out of the aesthetic frame of refer-

ence”, it would never produce what he had wanted in 1955, “an other architecture” (*une autre architecture*) with an “uninhibited functionalism”, and free of a “machine aesthetic”. For Banham the Johnsons, the Johansens, and the Rudolphs were more the followers of a Brutalist ‘style’ than of his ethical program; they were, “their allies, not mine” as he caustically remarked.

End of story - or at least for Banham, seemingly now agreeing with his teacher that an ethic had become a style at last.

It is the objects of the style that we are now obliged to contemplate as works of architecture, representative of a period of reaction to international Modernism, attempting, as Mark said this morning to supply what Sifried Giedion called a ‘new monumentality’ for a continuing Modernism, caught in a period of intense urban renewal that emphasized circulation, infrastructure and connectivity, all of which has reached an age limit of usability, if not economic renewal and investment feasibility. It is a period that docomomo is I know, beginning to confront in every respect.

I conclude with an example of what may happen if docomomo does not become active for even the smaller iconic buildings of the period. Stirling and Gowan’s House in the Isle of White: before and after [figure 4].

Notes

- 1 *McGraw-Hill Dictionary of Architecture and Construction*, McGraw-Hill, 2003.
- 2 *The Concise Grove Dictionary of Art*, Oxford University Press, 2002.
- 3 *Britannica Concise Encyclopedia*, Encyclopaedia Britannica, 1994-2010.
- 4 *Daily Mail*, October 1967.
- 5 In an apparently innocent footnote to his seminal article of 1955, Banham wrote: “there is a persistent belief that the word Brutalism (or

something like it) had appeared in the English summaries in an issue of Bygg-Mastaren published late in 1950. The reference cannot be traced, and the story must be relegated to that limbo of Modern Movement demonology, where Swedes, Communists and the Town and Country Planning Association are bracketed together as different isotopes of the common ‘Adversary’.”

- 6 AR vol. LXXX-VII, nr 518, January 1940.

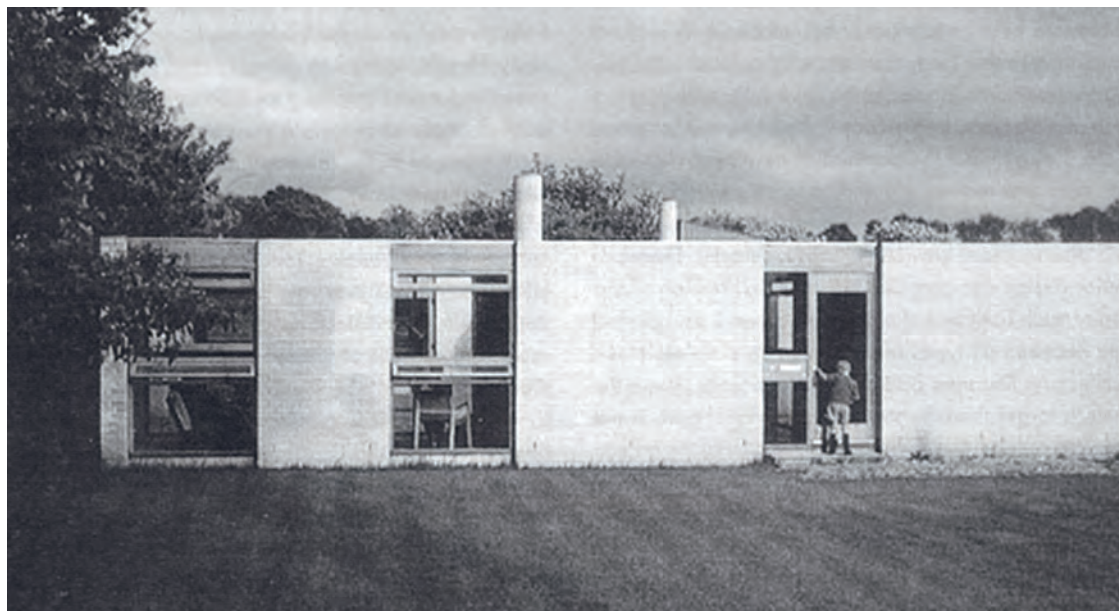


Figure 4. Stirling and Gowan's House, Isle of White: before and after.
Russell Light, 2011.

