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10th International Docomomo Conference

The Challenge of Change

Dealing with the Legacy of the Modern Movement

Abstracts

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Introduction

The legacy of the Modern Movement has gained legendary status, largely as a result of the increased recognition and appreciation of its masterworks visionary architectural concepts. Against the realities of everyday life, however, it has been difficult to maintain the architectural creations of the Modern Movement in such a way that they still reflect the original intentions of their designers. Knowing that many Modernist architects sought new heights of functionality and changeability, the challenge for today is how to deal with Modernist heritage in relation to its continuously changing context, including physical, economic and functional changes, as well as socio-cultural, political and scientific ones. Conservation in general – and the conservation of Modernist Architecture in particular – has assumed new challenges. Rather than attempting to return a Modernist building to its presumed original state, our challenge is to revalue the essence of the manifold manifestations of Modernist architecture and redefine its meanings in a rapidly changing world of digital revolution, worldwide mobility and environmental awareness.

The bi-annual, Tenth International DOCOMOMO Conference aims to provide its multidisciplinary participants from around the world with a variety of platforms for the exchange of ideas and experience. A large, international group of architects, historians, scientists, preservationists and other parties involved in the processes of preserving, renovating and transforming Modern buildings has been invited to investigate the paradox of the Modernist monument, and to reflect on the manifold dilemmas of change and continuity.

The general theme of the Conference, 'The Challenge of Change', is elaborated through five sub-themes, around which are organised the presentations and discussions of the conference. The sub-theme 'Change and continuity' addresses the tensions between change and continuity in a historical-theoretical way. 'Restructuring cities and landscape' focuses on the larger scale of city and landscape, while 'Shifts in programme and flexibility' draws attention to the scale of Modernist buildings and questions limits of re-use and flexibility. The fourth sub-theme deals with education, and the fifth, 'Progress, technology and sustainability', considers specific issues of techniques and materials.

The three-day conference consists of a wide program of lectures, debates, exhibitions, excursions and public evening lectures. An international call for papers, case studies and issues, issued in 2007, provided more than 400 entries, from which a scientific committee selected 55 speakers and 40 poster presenters from more than 25 countries. In the Conference Proceedings, all 55 papers of the speakers and the 40 short papers of the poster presenters are presented. Students and teachers have also taken a special role in the Conference, through an international student


Modern Architecture is Durable: Using Change to Preserve

The legacy of the architecture of the Modern Movement left by twentieth-century architects offers historians and designers a platform of confrontation rich with contradictions. It is not necessary to dwell on the concept of 'monument,' which is directly associated with that of heritage, to come to this conclusion. Only a few decades after Riegl, although the statute of modern monument has become a focal point in the process of acknowledging the values of the architecture of modernity, the battle is not yet won. In other words, it is significant that the form of resistance adopted by the confrontation of the longevity of the Modern architectural thinking, borne out of its history, has first generated icons, and consequently frozen their mythical aura, transforming them into untouchable works of art.

There is no doubt that in this globalized society of the third millennium it will seem a bit awkward to talk about the actuality of this legacy, and even more problematic to think about preserving those architectural creations by respecting the designers' intentions and the physical characteristics of the buildings. We are facing a cultural revolution generated by the "paradox of the Modern Movement," which has opened the door to this much debated topic, both on theoretical and practical grounds, surrounding the principal issues of the conservation and restoration, refurbishment and transformation of architecture of the Modern Movement.

One should recall that the main objective of the majority of the designers of the Modern Movement was to build projects that were rational, functional, innovative and rich, with strong political and cultural identities—futuristic in all senses, and at all costs, and bathing in an optimistic faith in progress. Accordingly, the challenge their conservation generates is the confrontation between their status as heritage (as goods to pass on to future generations) in a society which has modified its own scale of values (for example, that of the post-colonial condition), and as a physical, economic and functional context of rapid transformation. To conserve means we should acknowledge those structural changes, rather than attempting to keep all Modern heritage in its original state.

Thus, our objective should be to create a grid of criteria taking into account all the significant characteristics of the architecture (e.g., respecting the character of the designer, his language, his relationship to time, materials, and the commitment to the collective memory), while remaining compatible with the conservation or restoration project. The challenge in this is to envision changes without betraying the legacy and spirit of the architecture of the twentieth century. It is clear that a thorough reflection on this complex process must bring together the architect and the restorer, as well as integrate the historic value of the building using both the material and historical elements.



In an essay on demolition, Francoise Choay demonstrated that the *raison d'être* of architecture lies in the practice of rehabilitation. Modern architects may not have thought about the demolition of their own urban landscape when they imagined a better society, but nevertheless, they were the first to confront the dilemma between continuity and change. It is clear that we have reached a certain level of consensus regarding preservation practices, which is most true in the field of antique architecture. Nevertheless, the number of Modern buildings that need to be preserved is even more important—and, in addition to the iconic and outstanding works, one must not forget the importance of the conserving those “imperfect fragments.”

Maristella Casciato

Chair DOCOMOMO International

workshop. In this, a large group of students from around the world has developed specific analyses and multidisciplinary design solutions for the Coolsingel area in Rotterdam.

This Tenth International DOCOMOMO Conference marks the 20th anniversary of DOCOMOMO, and provides an excellent opportunity to evaluate the organisation's past and to set new goals for its future. For DOCOMOMO Netherlands, this year has been a particularly turbulent one. The fire that consumed the van den Broek & Bakema's Faculty of Architecture destroyed not only an important example of our Modernist heritage, but also destroyed our office and complete archives. 2008 – and the years to come – are a Challenge of Change for our organization in many ways.

We are proud to present the Conference Proceedings for the first time at the conference itself. Reflections on specific debates and issues, on the keynote lectures and on the student workshop will be published in the DOCOMOMO Journal of September 2009.

With our best wishes for a challenging and productive conference,

Organising committee



Change and Continuity: Issues of Temporality

chair: Horacio Torrent

Being and Becoming of Modern Heritage

The Challenge of Planned Conservation

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The 'modern monument paradox' has always cast a different light on conventional restoration practices and theories. On the one hand the problem seems to be represented by the paradox of preserving transitoriness, on the other hand the main dilemma is about preserving a structure made of experimental details, new materials, and short life-expectancy solutions. Indeed, preserving Modern architectural heritage means having to deal with buildings and built environments that are fragile, both with regard to their material qualities and the tight, original relation between form and function. Preserving original materials, and through them authenticity, and aura, means preserving their historical testimony. But because of their very fragility, we have to face the impossibility of safeguarding this authenticity without constant care. Preventive conservation and monitoring are then the most suitable tools for preserving any historical evidence and value of Modern architectural heritage.

This current challenge is actually cultural rather than technological. A shift to a conservation strategy, based on a coherent and planned research activity, on prevention and maintenance, means a shift away from restoration as a single, extraordinary event, that would bring a building to a fixed state of perfection, i.e. the modern monument as icon. It is a shift to conservation as continuous attention, as process, or a set of activities.

This broader concept of conservation embraces the notions of compatibility and sustainability, dynamic identities and co-evolution of cultural heritage.

Within this framework there are no contradictions between conservation as dynamic management of change and the legacy of the Modern Movement. Therefore, rather than discussing the extent to which restoration might contradict original intentions, the point is to understand why some architectures are part of our cultural heritage, and which are the values contributing to the construction of our memory and identity.

Notes on the Unfinished Modern Monument: Clorindo Testa's Civic Center in Santa Rosa, La Pampa

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When Clorindo Testa won the competition for the expansion of Santa Rosa Civic Center (La Pampa, Argentina) in 1980, the decision of the jury gave rise to a peculiar case of urban renewal. Years before, Testa himself had actually designed the major buildings in this site, when he participated in and won the former Civic Center design competition in 1955. The original configuration of La Pampa Civic Center was designed according to clearly Modern principles, although related to the square-lined Santa Rosa urban plan. The Government Building, the Bus Station and the covered central space were built between 1958 and 1963. By the beginning of the seventies, Testa also developed the Legislature Building, which opened to the public in 1976.

Nevertheless, those buildings have structured only a part of the whole Civic Center area, which amounts to eight Santa Rosa urban blocks. The polemical 1980 competition entry, a postmodern exercise designed by Testa together with Lacarra and Rossi, was actually never executed. And even though Testa was able to insert another building there in 2006, the little pavilion of the Legislature Library, half of the Civic Center area remains an open space.

Concerning the 10th Docomomo International Conference purposes, it can be suggested that La Pampa's case has been, historically, an opportunity to prove the many possibilities of change and continuity, as a living piece of the never completed Modern project as installed in the far south. This paper explores the case in two complementary directions. One focuses on the results of the first competition (1955-1963) recognizing its original contribution to the relationship between modernity and monumentality. The second one, more closely connected to the session theme, stresses the unfinished condition of the Civic Center as constitutive to Modern tradition. Since part of the site remains empty, it is still a work in progress, in the very modern sense of the city as a never completed work. But, as the very nature of this unfinished condition also implies a risk, it seems imperative, to the architectural community, to better know this place.

Architecture and Temporality in Conservation Theory: The Modern Movement and the Restoration Attitude in Cesare Brandi

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This paper focuses on theoretical issues of architectural conservation, especially the influential 'Theory of Restoration' by Cesare Brandi, and other of his writings. His proposals are both an advanced explanation of restoration and a guide for practice; not only in art conservation, but in architecture in particular.

Brandi's theory seems limited to the work of art as such, and hence is detached from an existential understanding of the human being, offering but a partial account of the relation between humans and Modern Movement architecture. Existentialist concern about collective intentionalities is crucial here, because architecture is bearer of socially significant values, particularly historic significance and collective memory.

Awareness about existentialist issues of temporality in conservation has been offered before in the past by several authors. However, these reflections have mainly focused on the past and perhaps the present, but rarely the future. Authors have regarded the problem from a postmodern, relativist perspective; ignoring the manifold condition of architecture; others have characterised conservation as based on changing values in society, seemingly encouraging attitudes of 'everything goes'.

This paper approaches the problem of conservation by uncovering attitudes behind Brandi's theories, and by envisaging a more comprehensive consideration of time in the relation between architectural place and human existence. The phenomenological ontology proposed by Roman Ingarden and the illuminating treatise about memory by Paul Ricoeur support an approach to memory and the complete spectrum of time which considers conservation and assimilation as processes that facilitate society to accept changes in its environment.

The aim of this paper is to assess ontological and phenomenological assumptions regarding architecture and time against Brandi's theories, and to evaluate their correlation in the context of the architecture of the Modern Movement. This connection between Brandi's theories about architecture as art and his concept of restoration elucidates his attitude regarding time and memory as well as revealing certain inconsistencies with regard to Modern Movement architecture.

Metsäpaviljonski, Form Follows Wood

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Nowadays, the emphasis in the design of exposition pavilions is mainly full of pseudo-technical or rhetorical ideas of progress. Nevertheless most of them do not communicate a vision. They show a lack of spatial qualities and continuity with the built environment. In general, there is not a common conservation agenda to adapt or reuse exemplary Modern pavilions. Some emblematic cases are haunted icons, a consequence of undocumented, incorrect or simply fake reconstruction, whilst others are victims of neglectfulness and degradation. Nevertheless, what can we still rediscover by reviving or reconstructing Modern Movement Exposition pavilions? During the 1930s, pavilions were not only visionary and experimental manifestations of living systems but were also temporary and fast-built showrooms disseminating a cultural or ideological message.

By exploring the work of the Finnish architect Alvar Aalto, we find that all his Modern timber exposition pavilions have been rapidly dismantled. What kind of continuity can we generate by rebuilding Aaltian pavilions? How did this sense of primitiveness become a manifesto for the use of rudimentary within Modern Movement Architecture? In order to respond to these queries, we must search on the idea of Aalto's space-frame as a '(...) fantastic structure of free forms; a building with an inner façade'. This pavilion-type becomes an organism of assemblage.

Metsäpaviljonski or the Forest Pavilion, built in Lapua in 1938, was characterized by a sense of impermanency of the framework, fleetingness of the event, and primitiveness in the use of wood. The first condition refers to durability of the structure, the second one implies a transient condition of use, and the third one contains the essential material. Despite it being an ignored masterpiece of Nordic ephemeral architecture, the design cleverly combined Modern and traditional ideas of fabrication. The spatial outcome was both tent and hut. It synthesized a morphological transformation, evolving from a geometric form into a fluctuating organism. The Forest Pavilion was an elementary space for display: a primitive frame wrapped by turbulent and fibrous textile patches.

Exposition Pavilions as structures are inherently transitory. This establishes a double dialogue: from nature to architecture and from architecture to nature. Thus the Forest Pavilion emerges as a playful manifesto of Primitiveness. Following a Semperian viewpoint, the Forest Pavilion re-bridges the ideas of Modernism rooted in vernacular living rather than avant-garde trends. It refers to the notion of the Finnish tent, *kota*, a temporary nomadic dwelling based on the logic of 'camouflage', where its skin constitutes the bark or shell.

In the Forest Pavilion form follows wood.

Historic Present: the Modern Movement in Situation

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This paper explores the question of time in the conservation of the works of the Modern Movement both theoretically and empirically. At the centre of this question lies the fundamental distinction between the short life span of the movement and that of the more lasting architecture and urbanism it produced. There is a historic gap between the early aspirations of the movement and the contemporary meaning of its material testimonies. Moreover, we live under a different temporal framework.

Less concerned with the present and the past of architecture and cities than with the future, the Modern Movement aspired to provide cornerstones for modernization and social utopia. Its fulfilled purpose yielded to the present, a continuous present theoretically with no place for the past and no need for the future. The currency of the movement expired, and its works persist in a different context of cultural values.

In other words, modern buildings and sites are present among us, but the historic situation in which they were conceived is not. The transformation of the Modern Movement into heritage and the conservation of its modern sites comprise a significant characteristic of this change, and represent a symptomatic experience of our time.

This paper proposes a twofold perspective to discuss this issue, both empirically and theoretically. On the one hand, it presents the concept of 'historic present' developed by Italian-Brazilian architect Lina Bo Bardi (1914-1992) in her works of conservation and adaptive re-use. She has refused the Western conception of linear time used that term to show the conservation of historic sites is not different from the creation of new ones. She believed architects face human realities that primarily serve inhabitation instead of visual appearance. Architecture articulates living situations over forms.

On the other hand, this paper introduces theoretical considerations about the notions of time and temporality. It analyzes the change of historic framework since the outset of the Modern Movement, highlighting the current diffusion of heritage sites and practices of conservation. This change represents the passage, in Western culture, from a modern, teleological framework of time focused on the future to a contemporary framework increasingly focused on the present.

This combined approach suggests that the conservation of modern heritage could benefit from a critical approach to the modern concept of time. It also suggests resourceful analogies for envisioning a critical and productive conservation of modernist buildings with different degrees of use and significance.



Restructuring Cities and Landscapes: Cities

chair: Paul Meurs

The Urban Validity of Modern Experiences

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Urban experiences that arise from the implementation of the criteria inspired by the Modern Movement provide an added value as historical exemplars as alternative models to the traditional city. Their major contribution lies in their validity as an urban practice, in the recognition of a response capable of being exploited for the most urgent demands of our time, such as increasing the levels of environmental quality, achieving better social balance and equality of opportunities, and stopping aggressions against nature and landscape.

From different interventions that can be encompassed within the denomination of the Modern city we can infer the final meaning of the motivations that encourage modernity, and of the conditions that guide the final formulation of a Modern project. We can draw conclusions from them: the choice of its location and possible relationships with the site, models of urban structure, systems of order and balance in the relationships between spaces and activities or the composition criteria that characterise the project.

The different alternatives – that have been considered and implemented once modern town-planning has been eliminated – have not solved the necessarily complex urban transformations that are currently required. The most banal Post-modernism provides our environments with commercial architecture that unifies the most popular (the historic) and the most shocking (technological showing off) without important urban reflections other than re-using the traditional morphology. The new urban ecology has posed very interesting challenges for the city through its principles of sustainability and protection of the natural habitat, but regarding the formulation of new urban spaces, it has opted for an almost rural conception, with its social and physical weaknesses. Besides, the most significant architectural projects, as instigators of –tourist– ‘city-making’, follow de-regulation assumptions leaving behind the systems of order and rationality of the Modern Movement.

The neighbourhoods and new towns belonging to the Modern Movement are neither exhausted nor completely obsolete experiences. They still suggest forms of intervention to improve and recreate both our old and new urban spaces, so as to imbue them with vitality and richness through egalitarian approaches, although now it may seem a bit contradictory. In tracking the fundamental principles we will see how current alternatives can be improved towards better living conditions taking advantage of their relationship with central cities and territories concerned with nature and, above all, with order; among other basic questions.

Translating the New Old-World into the New New-World – Reassessing Ernst Plischke's Plan for Naenae, Lower Hutt, New Zealand

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Internationally significant Modern Movement architect, Ernst Plischke designed a number of urban centres throughout New Zealand, the most complete of which is in Naenae, Lower Hutt. Today Naenae is a lower socio-economic suburb, with immigrant communities, and unemployment. Many shops are empty and graffiti competes with art work commissioned for local government buildings. The centre is proposed for listing as a heritage area for its Modern Movement design origins and association with Plischke.

In the late 1930s, to counter a housing shortage, the New Zealand Department of Housing Construction designed and built public housing which also created work for unemployed builders. The city of Lower Hutt was the focus of much of the construction as it was a desirable area to live having land for residential development, large scale industrial employment and with transportation networks for civil servants commuting to the capital, Wellington. In 1942, Viennese migrant architect, Ernst Plischke, was appointed head of the community planning section of the Department. His focus was the design of suburban shopping and community centres and he completed plans for a number throughout the North Island including five in Lower Hutt.

Plischke planned the suburb of Naenae, which was based on the garden city concept, as well as the commercial centre. Following Plischke's resignation, Government Architect Gordon Wilson took over the project, modifying its design. This paper will firstly explore the historical context of the Naenae commercial centre and its place in New Zealand Modern Movement urban design. Secondly it will explain local government strategies to improve the centre which, are failing. Finally, it will propose strategies which have worked elsewhere but tailored for the area to recapture the sense of community, providing it's services and facilities, while retaining and celebrating the values for which is proposed to be listed. It is recommended that an adapted Mainstreet programme, which has worked elsewhere in New Zealand, be initiated and that its agenda include:

- a centre manager;
- investigating ownership options with the local authority taking a major role;
- promotion and conservation of the area's nationally significant Modern Movement heritage, including Plischke's involvement;
- promoting the Modern Movement aesthetic through design guidelines;
- investigating reintroducing community activities such as a weekly market and re-establishing the local cinema; and
- investigating sponsorships with local industry.

Transformation: an Alternative Approach Renewing the Postwar city

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In current urban renewal projects huge parts of the post-war, Modernist neighbourhoods are demolished. Housing blocks in green, open settings are replaced by up-to-date apartments in fashionable urban lay-out. Existing qualities are erased, discontinuity is introduced, and an important historic layer is taken away. This paper investigates an alternative approach to this way of renewal: transformation. The essence of this approach is the use and adaptation of existing structures to renew the city. This method has to deal with different topics of transformation and specific designer skills. Transformation is illustrated by some of our projects.

Topics of transformation:

- *Programme and flexibility*: research into the possibilities of re-using the structural framework of buildings for new programmes; and into the possibilities of re-organizing the existing mass-housing block into a collective building with a differentiated programme, fitting the (redefined) urban lay-out.
- *public space*: redefining the public/collective space around the block.
- *inhabitants*: Inhabitants are important partners in the process of transformation. The architect has to take care of the whole of the project on the short and long term.
- *architecture*: looking for an architecture and concept that fits the goals of the renewal project and the existing architecture.

The designer's skills:

- *Design as search for qualities, problems and possibilities on different scales*
Research of existing structures: dwellings, blocks and urban context.
- *Analyzing the Modernist city*
The urban composition is often a subtle composition of dwelling types, public space, architecture, and green-design. To show this richness we need a new way of analyzing.
- *Designing plans open to discussion*
A transformation process is an open, complex process. At the start the effect of transformation isn't yet clear. A vision is needed which shows the possible future of a complex or district. The plan is also a vehicle for the process: people discuss the plan and their own future.
- *Ability to speak different architectural languages*
The architecture has to fit the goals of the projects and its context. This is achieved by architecture which respects, interprets and renews the language of existing architecture. In this way earlier, 'forbidden', misunderstood architecture is changed into an object that still reflects an unique period of our cities.

Plymouth: City of the Welfare State in the 21st Century

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Plymouth, the largest English south-coast city and a strategic naval base since the 17th century, was heavily bombed during the Second World War. The decade after the war saw the rebuilding of the city centre and the development of new suburbs to the designs of Sir Patrick Abercrombie, the leading urban planner of the period, and James Paton Watson, the City engineer. The reconstruction produced a unique urban landscape of international significance, designed by many of the best British architects of the day. Now, in the 21st century, a programme of regeneration is needed to reflect the changing needs and ideals of post-industrial Plymouth and widespread change can be anticipated. This paper aims to highlight the importance and interest of the post-war landscape and to inform the debate about the nature of change today.

The city centre and the suburbs reflected the vision of the age – Plymouth, more than any other British city, represented the aspirations and optimism of the Welfare State. The planning and architecture of the new Plymouth were not universally popular. They were either vilified or ignored by the architectural press and were omitted from standard histories of Modern architecture. Now Plymouth's importance may be academically recognised but there is a gap between academic acceptance and its wider public recognition. The level of protection that these buildings and landscapes enjoy is weak, since they are not as obviously 'historic' as those of older cities and the City authority sees Listing and the establishment of a Conservation Area as a threat to land values.

The architect-planner David Mackay of MBM Architectes has presented a new Vision for Plymouth which shows how the centre can reconnect to the outer suburbs, attract new uses, have denser development and remain accessible. The first of these new projects are arriving now but many of them are poor quality and inappropriate to the character of the place. In the face of an ignorance of the period and impending change, it is important to raise levels of awareness of the qualities and significance of the resource, with a view to informing the debate about the direction and nature of change and to influencing decision making, so that plans for regeneration take account of the importance of Plymouth's post-war heritage.

The Pittsburgh Civic Arena: Memory and Renewal

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This paper explores the tensions between advocates of re-use of an innovative Modern design, and those who believe that social justice or political expedience requires demolition. It also makes the case that Modernist planning strategies are not incompatible with current urban design strategies to create more sustainable communities.

The history of urban renewal and Modernist design in Pittsburgh, Pennsylvania is a story of success and failure. Pittsburgh's post-war environmental reforms (smoke control) are well known, as are the groundbreaking projects of patrons such as Edgar Kaufmann and Frank Lloyd Wright (Fallingwater).

Today, Pittsburgh is challenged with reconstructing once-innovative attempts to re-design large areas of the city. Pittsburgh's lower Hill District – one of the nation's most important, historic African American communities – was extensively destroyed for construction of the Civic Arena, a 415-foot operable dome (architects Mitchell & Ritchey with structural engineers Ammann & Whitney). The project, conceived by Kaufmann and funded as an inventive public-private partnership, evicted 8,000 people from their homes.

Four decades later, the community has not recovered and many see the Arena as inflammatory or obsolete. As a new, state-subsidized arena is under construction adjacent to the Civic Arena, a reconstruction of the lost street grid between the Hill and Downtown is proposed. Many view the Civic Arena as an obstacle to be torn down in a 'renewal of urban renewal.' This reflects trends by cities hoping to 'undo' the damage of urban renewal by promoting current New Urbanist planning over Modern design that is considered unworthy of preservation or even re-use.

The author has proposed that renewal of physical connections across acres of parking can be accomplished more successfully through re-use of the Arena shell as a civic space that could anchor the community, in the tradition of a town square. One of models is Lucca, Italy's ancient Roman coliseum – a model urban space surrounded by housing and shops.

The complexities and contradictions of twenty-first century design and preservation are not easily navigated in the rich social context of the Hill. One of its greatest residents, playwright August Wilson, may point the way: 'My plays insist that we should not forget or toss away our history.' While he was referring to his roots in the community and the culture he knew, his words challenge us to ask questions about the many histories and memories that exist – good and bad.



**Technology, Progress and Sustainability: Modern Building Skins -
Integrating Climate Control and Energy Efficiency**

chair: Wessel de Jonge

Simulation of Natural Ventilation Flows

Possibilities for the Restoration of the Viipuri Library Ventilation System

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This paper is part of a broader research agenda, which aims at a re-reading of selected architectural icons of the Modern Movement sharing the characteristic of the free-flow open section. Through this re-reading, the research project investigates the complex relationship between spatial composition and thermal and climatic conditions using an interpretative qualitative approach of drawings and comparing them with computational fluid dynamics (CFD) simulations to find common patterns between the two. The aim is to better understand the integration of spatial conditions and air movement as it affects the transfer of energy, and apply the knowledge to restoration projects and new-build projects for greater sustainability in building design and usage.

The Viipuri/Vyborg library by Alvar Aalto (1898 – 1976) is currently undergoing a long-term restoration process and serves as the initial case study for this paper. Its three-dimensional 'cubistic shift' opens up spatial connections that are not only aesthetic, but facilitates air movement and the flow of people. Aalto introduced mechanical ventilation and an under-ceiling heating system to the library; to date, the heating still works but the mechanical ventilation system has long ceased to function. Currently the library is only ventilated by natural means through the meandering open spatial sections when a door leading to an outside gallery is opened. The fact that the air movement is induced by the spatial composition could be beneficial for the future restoration of the mechanical system as a hybrid ventilation system, and could possibly be a solution to the problem of fitting contemporary HVAC requirements into the existing structure.

This paper will present detailed CFD simulations of the air movement within the library due to buoyancy and enhanced by wind, and show how the resulting temperatures differences influence energy transfer. Simulations will also be performed to predict the effects of heat transfer due to the under-ceiling heating. The results will be used to provide insight as to how air moves within the library, which can be used in the development of a hybrid ventilation system. Ideally, hybrid ventilation systems can use smaller mechanical ducts and reduce the mechanical energy demand for ventilation of the building. The paper will demonstrate the potential of using CFD in restoration projects as a method to gain greater insight as to how an existing building can remain sustainable.

The Feet of the Duck or Dynamic Insulation

Tackling Single Glass Facades of Modern Movement Buildings

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The renovation and transformation of Modern Movement buildings often requires the adaptation of the architectural features of their facade in order to comply with present functional requirements. For example their new uses as offices require energy conservation strategies and strict thermal comfort conditions that conflict with large expanses of single glass. Also moisture in the form of condensation at the facades, or icing in window rabbets, challenge the sustainable conservation of such facades. If, in cases of renovation or transformation, large single glazed facades are to be maintained, these conflicts have to be solved in the design.

This paper presents different design approaches to cope with such functional shortcomings of large, single glazed facades, which are implemented in various buildings. It deals not only with thermal comfort, moisture and energy conservation but also with noise abatement.

Two overlapping strategies to achieve solutions for energy conservation are presented. The first strategy involves the principle of dynamic insulation, which has also advantages for moisture control. The second is a form of biomimetic design: minimising heat loss like in the feet of a duck. Both strategies can reduce transmission and ventilation heat loss by two categories of solutions:

- To allot areas near to single glass surfaces to functions that require less severe thermal restrictions or allow for lower temperatures e.g. by creating improvement of thermal comfort only locally by placing specific thermal comfort screens close to the work stations, which also serves the reduction of glare effects. This solution is applied in the first renovation (1995-1997) of the Oranje Nassau office building in Heerlen, The Netherlands.
- To introduce technical solutions which eventually result in smaller temperature gradients over single glass surfaces e.g. by creating double facades that, in addition, allow air infiltration to be used to recover transmission heat losses: dynamic insulation. This principle has for example been applied in the second project for the Oranje Nassau building (1999-2000) and the transformation of the Van Nelle Design Factory (1999-2004).

The ventilation concept plays an import role in creating pressure regimes that invoke proper air-infiltration at the facades. Infiltration serves moisture control which is especially important in case of humidification, as has been the case in the second project for the Oranje Nassau building.

Both principles of heat loss reduction offer smart design solutions for the retention of large single glazed facades in modern architectural heritage.

Comfort Conditions in Early Post-Colonial Architecture in Ghana

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Many buildings, civic and residential, were designed and constructed in the Ghana during the 1960s and 1970s elegantly in the international style and post-colonial style to function using passive methods of cooling and ventilation. The Kwame Nkrumah University of Science and Technology, where many of these buildings were constructed in the Kumasi is a prime example of university campus where many buildings were designed with passive control as the design method and are being fitted with new systems.

The methods of comfort control used by the architects in these designs made use of appropriate orientation for the buildings; correct material choice and careful consideration of the windows positioning to encourage cross ventilation and the passive cooling of the interiors. These methods of design are appropriate for the architecture of the warm-humid climate of West Africa.

It has however become evident that increasingly these buildings are being fitted with air conditioning systems. Unfortunately, because many of these buildings were not designed with air-conditioning in mind many problems arise because of the inappropriate location, untested load requirements and poor positioning of ancillary of the new air-conditioning equipment.

This paper attempts to examine the comfort conditions of the designs of the civic and residential buildings that were built in the early 1960s (which still exist) without air-conditioning equipment and compare them with similar buildings that have new environmental controls systems installed, and find reasons for the transition to a more controlled environment.

Using building energy computer simulations of civic and residential post-colonial buildings, the paper will also attempt to examine, document and explain the reasons for changes that have been made in architectural designs since that period and compare the energy requirements of the refitted building to their older passive condition.

Modern Glass Walls on the Way to Sustainability

Comparing Examples from Germany and Brazil

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Modern glass curtain walls of the early and mid 20th century have always been synonymous with innovative and sophisticated building concepts. These building skins were often established as a feature reflecting international stylistic standards, enhancing the prestige of builders and users – though often independent from or even in contradiction with climatic requirements and local conditions.

Comparing selected examples from Germany and Brazil, this paper will assess and describe the architectural character and value of these buildings and constructions, that are representing different climatic and socio-cultural conditions and requirements. The focus is on multi-storey and high-rise buildings from the 1950s serving for commercial and office use, in this case:

- Haus Hardenberg by Paul Schwebes in Berlin, Germany, 1955-56
- Europa-Center by Egon Eiermann in Berlin, Germany 1961
- Banco Mineiro da Produção by Oscar Niemeyer in Belo Horizonte, Brazil, 1953
- Conjunto JK by Oscar Niemeyer in Belo Horizonte, Brazil, 1950/1960

Both German buildings have passed through certain episodes of modification and renovation. Both are preserving their original appearance, but while the original facade construction of Haus Hardenberg has been modified, the single glass wall of Europa Center has been changed into a double facade system. Their functions, construction, environmental qualities and architectural design will be described and evaluated with regard to the original concepts and requirements. These two examples will be presented addressing their impact on the refurbishment of modern building skins in general.

Especially in Central Europe varying strategies for the renovation of modern glass curtain walls and facades have been developed and realized. The exemplary and very diverse approaches of Haus Hardenberg and Europa-Center will also be compared and described with regard to different planning and decision frameworks. The way in which Modern Movement buildings can be adapted to other climatic and socio-economic conditions - such as to Banco Mineiro and Conjunto JK in Brazil - will also be discussed. This part is related to a research project within the framework of the cooperation between the Universidade Federal de Minas Gerais (UFMG) in Belo Horizonte and the Hochschule Ostwestfalen-Lippe (HS OWL) in Detmold.

Until recently, and compared to the implementation of other relevant and specific planning requirements and regulations, the particularities of local climatic conditions have often been neglected. This paper will demonstrate that good planning must work with and not against the local climate.

Sustainability, a Modern Movement

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Current issues in the preservation of innovative Modern architecture demonstrate that the ideals of sustainable integration have their cultural origins in early twentieth century experiments in building systems, which can guide today's "green" transformations. This concept engages the potential for Modern Movement buildings to be sustainable—both in terms of their new uses and with regard to performative energy-efficient systems as a continued evolution of a Modernist aesthetic and philosophy. The projects discussed here demonstrate how issues around "greening" Modern buildings can have synchronicity with the architect's original design intent, and can be achieved through a gradual, multi-staged project approach.

The early Modern Movement incorporated "back to nature," "light and air," and "Life Reform" philosophies while integrating many untested "sustainable" technologies as building elements, such as airflow systems, lighting and shading devices, with structure and form. Architects such as Le Corbusier often made comparisons of the flow of the city to the body and buildings' internal systems were anthropomorphized as holistic organisms. Paul Scheerbart stressed the importance of glass that would "remove the sense of enclosure from the spaces in which we live." And Rudolph Schindler focused on bringing the outside in to improve the mind. Concepts about the natural world evolved into built objects.

Today, in seeking ways to "green" experimental Modern Movement architecture, architects and environmental consultants focus on how to integrate new technologies and intelligent building systems in performative projects that are also aesthetically compatible with the original design intent. Often approached through incremental phasing, new elements such as double glass facades, low-E coated replacement glass, and locally controlled systems for airflow and climate control, improve upon previous systems. These technologies have the potential to both fulfill Modernist concepts and improve performance. In addition, when a building's use is changed—from corporate to residential, e.g.—its life can be sustained spatially through individual microclimate adjustments and adaptive systems.

The paper will include examples of projects that demonstrate both restoration and sustainable approaches including Inland Steel and IIT's Crown Hall Building, Chicago; the A&A Building and the Yale Art Gallery, New Haven; Imperial Tobacco Headquarters, England; and provocative concepts for Eero Saarinen's Bell Laboratories in New Jersey.

Rather than follow the rhetoric that Modern Movement architecture is unsustainable, I intend to demonstrate how preservation projects take on the challenge of new sustainable uses and systems while simultaneously maintaining the original design intents. Sustainability is a Modern Movement.



Shifts in Programme and Flexibility: F(r)ictions in Flexibility

chair: Marieke Kuipers

Conservation as Project

Dealing today with Latin American Modern Heritage – a Realistic Approach

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Urban centres and buildings are cared for as long as they are used, yet fall into decay when obsolete. Particularly in Latin America, where developmental pressures are intense, it is difficult to preserve Modern buildings when their original function is lost, and their attraction as items of a new era has long since passed. When decisions need to be made about their future, and possibly their conservation, these buildings are more often referred to with the deprecatory adjective of 'scrap' rather than the much more evocative one of 'ruin'.

This paper explores the ways in which the conservation of Modern architectural heritage can be improved between these two extremes: the 'museification' of a site, on the one hand, and on the other, its constant updating – that is, the regular update of a building's programme and its reinsertion into a contemporary context. 'Museification' is a rather utopian option, considering Latin American economic realities, where owners and architects are constantly urged to intervene in existing structures, or to demolish and rebuild. However, conservation by means of adaptive re-use – as an architectural project – can be a way to reconcile the desire to preserve a building, and the need to use it.

An exemplary case is the conversion of the former Railway Station of Concepción (Chile) into the headquarters of the local government agencies. Designed in 1941 by architect Luis Herreros after the previous station building collapsed in the earthquake of 1939, the new station was designed on rational principles and built of concrete, as an economical and anti-seismic material. Still a strong urban landmark with its straight, austere and white principal body, and marked by its distinctive central red clock tower, the building remained in function until 2002.

In 2004 a competition was organized to design the new facilities of the local government, which called for the re-use of the station as the project's central building. The winning design, by renowned architect Smiljan Radic, proposed a striking urban intervention, with new buildings to each side of the station, and a public square to its front.

Works to the station itself, however, were carried out without proper consideration of its heritage values. In its new function, the building was 'hypermodernized' and stripped of all characteristic details, leaving it as a strange and sad hybrid of a Modern layout dressed in contemporary materials.

If we consider that active use is one of the most powerful tools to preserve Modern architectural heritage, then conservation as project can be a better way to give heritage a real opportunity to be integrated in the dynamics of the present.

Adaptive Rehabilitation of the Riachuelo Building in the Historical Centre of São Paulo

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As was the case in many Latin American cities, the old city centre of São Paulo fell into decay following the end of the World War II. Notwithstanding two new underground lines, the conversion of many streets to pedestrian zones, the presence of numerous bank headquarters, and excellent infrastructure facilities, a considerable number of office blocks built in the first half of the twentieth century are today empty and abandoned. Marta Suplicy, former mayor of São Paulo (2000-2004) started the programme "To live in the centre," aimed at encouraging the reoccupation of the historic centre. Suplicy moved the Town Hall to the old Matarazzo building, as well as a large number of public departments, and the programme was followed by the acquisition of several empty office blocks to be converted to social housing. COHAB-SP, a municipal housing company was in charge of this experimental programme, and the conversion of the Riachuelo Building provides an interesting case study of issues around flexibility and conservation.

Built at the periphery of the historic centre in the Riachuelo Street on a triangular site with steep slopes, this building of 17 floors was designed and built between 1942 and 1945 by Lindenberg & Assumpção, Civil Engineers. The floor plan is similar to a huge 'A', with a rounded vertex opening to the valleys beyond. At the time, commercial blocks were designed with offices of 45-50 sqm, opening to a central corridor, and the Riachuelo Building is no exception. Restrooms were placed at the end of these central corridors, and between the two arms of the 'A' there was a ventilation shaft, staircase, hall and three lifts. For the duration of World War II, and in the years immediately following, building materials were scarce, particularly reinforcement bars, which were imported from the USA. As a result, the building's concrete structure was designed with a large number of columns in order to reduce span width, and therefore the need for internal reinforcement. These columns were placed inside the solid brick walls between offices. The building had a typical early Modern façade, with long horizontal windows and numerous balconies. Only the facade of the Riachuelo building was given protective listing, and by two different agencies: the CONPRESP (Municipal) and the CONDEPHAAT (State of São Paulo).

Paulo Bruna Arquitetos Associados was hired by COHAB-SP to rehabilitate the office block into a rental condominium of social housing. The brick walls with columns were retained and each office was converted into a small apartment, some with two bedrooms. A small kitchen with adjacent space for a washing machine and a bathroom were built in each of the 120 apartments. The balconies were retained and restored as well as the glazed doors and steel sash windows.

Large Scale Projects of the Modern Movement: Changing or Developing Architectural Genius?

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The Great Market Hall in Frankfurt-am-Main, designed by Martin Elsässer and built 1926-1928, was the city's largest building at the time and full of technological innovations. Measuring some 220m long and 50m wide, the huge inner space of 13,000sq.m was roofed by an impressive and very thin monocoque construction. This consisted of a series of fifteen barrel vaults of reinforced concrete shells only 6-8cm thick, and glazing panels. The facades were formed by glass membranes covering a sophisticated concrete frame, and both facade and roof structure were intended to allow daylight inside the market hall. Located near the east bank of the river Main, this impressive megastructure is a landmark that, together with its adjacent service buildings and infrastructural connections, is successfully integrated in the townscape.

In 2004, twenty years after its listing as a protected monument, the complex lost its original function when the food market was moved to the outskirts of the town. At the same time, the European Central Bank (ECB) was looking for a new accommodation and it seemed a perfect match to convert the obsolete Hall into the new Bank headquarters. The re-use programme implied that the building's open internal spaces would be sacrificed for the construction of offices to house, ultimately, 3,500 employees. To this end, a sensational competition was held in November 2002. The outcome of this major challenge of change has revealed the difficult interrelations between historical forms and new functions, and gives cause to discuss the tensions arising between policy, economic, cultural and architectural values, as well as the ethics of the architect.

Some 300 architects from around the world participated in the competition, many with spectacular proposals, but few respected the outstanding architectural value of the Great Market Hall. After various adaptations, the design of Coop Himmelb(l)au was selected as the winner. Their project seeks to cut off a part of the western roof to accommodate a new wing as a connection between the former Market Hall and two new 180m 'twin towers' at the river front. To allow for this radical intervention, the building was withdrawn from the list of protected monuments in 2006 by the city council, despite many protests.

Designing the ECB headquarters while integrating the Great Market Hall is an entirely unique case for the creative power of architecture. The responsibility for interfacing with the architectural genius of Elsässer, the values of heritage and the challenge of the new, have and continue to provide for ample professional discussions and criticism.

Restoring the 20th century

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Commentaries and analyses of post-World War II architecture are frequently produced in quantitative terms. The preface to a book, dedicated to France's twentieth-century legacy, stated that '[c]ontemporary French architecture is first and foremost a question of figures'. However, while thirteen million homes were built in France during the four decades following World War II, quantity is not the only interesting aspect of the architecture of that period. During these years of economic growth, centralized procedures were put in place that met the requirements of a political and social project, as well as unusual forms of land occupation, and architecture that corresponded to new and specific programmes. These programmes gave rise to an architecture that emphasised such values as modernity, industry and economy; principles which rapidly spread across France. The investment in processes and systems which led to effective new industrial techniques; the research undertaken by industry and architects; and the typological innovations and their aesthetic contributions, remain largely ignored or underestimated.

Changes to function and programme, and the resulting obsolescence of much of post-war architecture, has placed this building stock at the heart of present-day social issues. However, among the values of the new programmes for post-war architecture, flexibility of use, functional mobility, spatial dynamism, adaptability, and programmatic unpredictability appear particularly difficult to reproduce.

This paper examines some recent examples of the reconstruction, restoration and transformation of post-war buildings such as the Museum of Le Havre and the Maisons de Culture in Grenoble, Amiens and Reims. These sites were reconstructed at a time when the heritage institution acknowledged their interest, yet paradoxically, their transformation has contributed to a blurring of their legibility, at times even destroying what gave them their architectural quality and specificity in the first place. In certain cases, after the reconstruction of the formal external appearance, the restored buildings offer the public a travesty of what they once were.

Such situations should incite us to reconsider historic architectural methods such as the concept of heritage, so that we no longer base our analyses on the mediatization effects of the building – the values of beauty, monumentality and age – and instead promote an understanding of the values that were at the origin of post-war forms.

Bolgatanga Library: Adaptive Modernism in Ghana 40 Years on

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In Africa, the legacy of Modernist buildings is everywhere. Cities, towns, and villages throughout post-colonial regions in West Africa and beyond are littered with familiar, forgotten and anonymous examples of tropical Modernism. Many of these buildings have now been adapted to new uses, and in some cases have been structurally transformed to accommodate functional changes. Often, however, this transformation has taken place over a period of time and is simply a continuing adaptation of the structure to fit its current use.

This paper discusses the seminal library designed by the American architect, J. Max Bond, Jr., in Bolgatanga, Ghana, in the 1960s. Designed as a prototype for the library service in Ghana, it accommodated a range of library and public functions. Forty years later, the building's use has been transformed, but not its structure. It is now home to an evangelical church that uses part of the structure on a weekly basis, and which is responsible for the upkeep of that part. The remainder of the building, however, retains its status and original function as a local library, although these areas of the structure require conservation and maintenance.

This paper considers the background to the initial design of the Bolgatanga library. It examines whether the context in which the library was designed enabled the structure to better adapt to its current use. The paper also explores the ways in which Modernist theories permeated the concept and programme of the library, and other development projects commissioned in this early period of post-colonial transition in West African history.

The paper also discusses the tensions between the desire to conserve, and the critical need for new space – a force that drives the transformation of Modernist buildings in developing regions such as West Africa, and which challenges new design to respond to both historic and contemporary realities. Lastly, the paper considers the immediate need to conserve the Bolgatanga Library, in order to best respond to the needs of all users.



Education in Transformation
chair: Changmo Ahn

Lessons on Architecture for the Future of the Past

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The work presented here concerns a successful pedagogic experiment on introducing and teaching Modern Brazilian architecture to students at the Faculty of Architecture and Urbanism of the Federal University of Rio de Janeiro, Brazil, lead by research into Brazilian Houses in the 20th Century. This research in the Post-Graduate Programme on Architecture establishes three investigation modules that are complementary: Publications Database; Documents on Architecture's Memory through Scale Models; and Audiovisual Database. In each of these modules, FAU graduation students' participation is intense through programmes of scientific Initiation, and artistic and cultural Initiation of the UFRJ.

The second of the modules, which we focus on here, was bound to the graduation course, thus introducing investigation within the discipline's objective - Scale Model, of the Analysis and Representation of Form Department. From the point of view of this initiative's didactic dimensions, our aim was to make the exercise on scale models not only an occasion to learn new representation techniques but mainly a tool for the analysis and understanding of the architectonic work. Another objective had a highly relevant institutional dimension, that is, the selection and documentation of the work of Modern Brazilian architecture masters and the production of models of the studied work in order to assemble pieces for the FAU-UFRJ Comparative Architecture Museum.

Physical model construction became a rigorous means for investigating important iconic projects in Brazilian residential architecture of the Modern period which, in the main, lacks precise documentation and substantial data on its history and original methods of construction. In this case, the method of model-making proved extremely effective, both for the architectural investigation as well as for the teaching of History of Architecture and Design. The method was effective because the necessary investigation procedures precedent to the construction of models demanded a profound knowledge of the project, and this gives - to the student - a verification of its obscure points which are at risk of not being able to be correctly executed.

The two cases presented here, Nordschild House (G. Nordschild, Rio de Janeiro, 1930-31) and Canoas House (Oscar Niemeyer, Rio de Janeiro, 1952-54) illustrate the method applied to research both demolished and preserved houses.

Likewise, while producing knowledge and stimulating care for Modern patrimony, this research method, by producing models, was an opportunity for initiating the creation of an asset that will be useful for teaching several other disciplines that make up the architecture course, extending the reach of the Modern message.

Preventative Conservation of Modern Architectural Heritage Study Programme

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In contrast to other cities in which Modern architecture appears as a disruption of an historical context, in Caracas, modernity has been constructed transversally, being, at the same time urban fabric, infrastructure and landmarks. Due to the government's goal of modernizing the country, in the 1950s Caracas gained an important modern profile of a unique character that attempts to accommodate Modern architectural precepts to the local cultural and environmental conditions. Even though this 'Modern' spirit made possible a new city for the 20th century, it also inaugurated an always transforming and changing appearance. This paradoxical logic of building and rebuilding a modern city has contributed to the establishment of a kind of social forgetfulness of its recent past.

On the other hand, the most recent architecture does not have the same values found in our Modern architecture and most of the remaining buildings have deteriorated from overuse or changes to their original function, the poor quality of some of the construction or ornamental materials, and vandalism or abandonment. However, these important issues, despite having been studied and appreciated by specialists, have not been taken into account by the formal architectural conservation study programmes existing in our country. Some attention has been given recently, but there are a lack of trained professionals who can coordinate Modern architectural conservation projects, and there is little involvement in building codes and standards at the governmental level.

In this regard, we are proposing a study programme with diploma in Preventive Conservation of Modern Architectural Heritage, in an attempt to engage high level academic institutions with non-profit and non-governmental organizations, community associations, national and local governments and international organizations that standardize and help implement universal building codes. This architectural heritage programme is being developed by the Unit for Sciences in Heritage Conservation in the Instituto de Estudios Avanzados IDEA, which is a part of the Ministry of Science and Technology, with the support of the Metropolitan Government through its Caracas Cultural Heritage Office. The Institute of Advanced Studies is linked to international institutions such as UNESCO-ICCROM and some of the neighbourhood citizens' associations in Caracas.

The diploma is designed as an interdisciplinary programme based on both theoretical and practical courses. Through seven lines of study, the courses will be intertwined to give a wide range of topics. These are: Theories (theories of the Modern Movement), Preventive Conservation (theory and practice of preventative conservation) Heritage and community (heritage theory and social evaluation) Architecture and design (Constructive materials and techniques) Sciences applied to conservation, Methodology and documentation, and Security, sustainability and environment.

How Should We Teach the Conservation of Modern and Contemporary Architecture?

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In what way does a new-build project differ from a project within an existing structure? Do they belong to the same discipline or do we have to use radically differing conceptual processes? These days over half the volume of professional work handled by an architectural practice involves designing for existing structures, so why is it that architectural training institutions – universities, technical colleges, polytechnic schools – do not teach it to the same standard as they do design for new-build?

It is roughly fifteen years since these questions were critically posed, and they have made possible the existence of what we might well call a mode for producing both architecture and the self-reflective thinking that goes with it; a system disseminated through publications and international meetings in which DOCOMOMO has certainly been a leader. The restructuring of the Van Nelle factory, in all its rich and complex progression, is a marvellous example.

We can see, in the special issues of journals and in the coordinated actions aimed at preserving buildings on a vast scale, how our knowledge of modern and contemporary heritage and the means of conserving it are continually expanding. Yet the teaching of conservation continues to lag behind.

This essay tries to examine the origins of conservation teaching at two institutions renowned for the quality of their architectural education in Switzerland: the Academy of Architecture at Mendrisio and the École Polytechnique Fédérale at Lausanne. The aim is to understand how they go about questioning and formulating the categories within the discipline of architecture: from field survey to stratigraphic analysis; from knowledge of materials and their production technologies to construction as tectonics; from architectural history as an object of theory to questioning and building in ways that do more than re-hash the structures of the past; from the cross-cutting, multi-disciplinary know-how spanning economics, materials science, building physics, the history of architecture, arts and techniques, the roles of client, civil engineer, and building services specialist, to the skills of a conservation professional.

This study will need to illustrate project practice in reverse, starting with the work itself and interpreting and defending it with all the resources of the smartest lawyer, the pertinence of whose inquiry will determine the fate of the object itself.

Experiencing the Modern in Lisbon

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Considering that:

- Lisbon possesses important heritage of post-war Modern architecture ranging from everyday modernity to monumental modernity;
- most of this modernity is seen in public buildings such as churches, museums, schools, collective housing compounds and large urban complexes, which have become familiar landmarks in the urban landscape and continue to be used in the city-dwellers' daily collective life;
- although some of these buildings have been listed, they have been under-appreciated by local authorities and academic communities.
- one of the reasons leading to this may lie in the fact that these Modern works still bear the connotations of a recent past rupturing with history; and because of that they have not been regarded as part of the city's heritage worthy of protection, altering their original forms and meanings;
- these buildings bear unmistakable architectural qualities; they show a remarkable ability to relate to the surrounding city and its changes.

On the other hand we believe:

- that, to be acquainted with architecture one has to visit and experience buildings, re-enhancing a sensory and tangible relationship with the built environment;
- that this may be better taken advantage of if done in groups, where memories and experiences are shared, consolidating the idea of the collective, and giving rise to a heritage based on common references;
- drawing is the best way to promote a deep perception of architecture because it ensures a more attentive and more intense appropriation of the built environment, leading to what we call 'clarity of the hand'.
- We have implemented a study programme whereby our students visit and observe these Modern buildings scattered around the city. The students take into account not merely the visible architectural dimension but, above all, their intelligible dimensions. The historical background, a critical assessment of the buildings and open discussions support these sessions.

Our first aim is to introduce the students to a set of notable Modern buildings. We want them to study the buildings not merely as tokens of the recent past but as the basis for analyzing and understanding architecture. The recognition of inherent qualities of these buildings makes them an active, stimulating, living working matter, because their extraordinary pedagogical and didactic possibilities create an enormous potential for change.

Modern Education and the Education in Transformation of the Modern

The Experience of the Masters Degree in “Rehabilitation of the Built Environment”

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University courses of Architecture are nowadays adapting their curricula and teaching methods to the Bologna Process, trying simultaneously to organize the education of an architect in the field of the rehabilitation of built space. Hypothetically, we propose that the issue of teaching the rehabilitation of modern buildings should be equated with a reflection on modern architectural education, trying to find similar teaching methodologies.

In Portugal, the modern teaching of architecture has been gradually introduced at Escola Superior de Belas Artes do Porto (ESBAP) since 1940 when the architect Carlos Ramos was invited to teach the subject “Architectural Design”. The teaching framework, put forward by Ramos, follows Walter Gropius’s proposal for the architecture course at Harvard in 1938 and which Ramos implemented when he started teaching. This same pattern was established in the teaching reform of 1957 and reinforced until 1967, the year of Carlos Ramos’s jubilee, by his assistant professors, especially Fernando Távora.

We are, therefore, interested in understanding how this teaching method has been a part of the current frame of architectural education and, even more precisely, of “education in transformation”. To achieve that we will use, as an example, the two year experience of the Masters Degree in “Rehabilitation of the built space”, which was commenced in 2005 at the University of Coimbra.

Carlos Ramos put forward a kind of teaching based on emphasising the project method, on coordinating several areas of knowledge, on the relationship between project and building, on urbanism, on teamwork and on studying the history of architecture. This program was synthesized by Távora when, in his classes and in his work, he suggested that Knowledge and Circumstance should be assumed as the method of the project. It is upon these premises that the Masters Degree in “Rehabilitation of the built space” incorporates a subject of Architectural Rehabilitation Design where teams of architects and engineers work on rehabilitation case studies (generally 20th century buildings), synthesizing the acquired knowledge both in architectural and engineering areas.

We will analyse the performance of ESBAP between 1940 and 1969 through the curriculum and the students’ work. At the same time, we will get together the activity of the Master.

In this context we consider that the method proposed by Ramos which was improved on by Távora in Porto and later adopted by the Department of Architecture at the University of Coimbra is reflected, even nowadays, in the teaching reform that the Architecture courses have been proposing inside the Bologna Process and mainly in post-graduation courses on rehabilitation.



Change and Continuity: Buildings and Ideologies

chair: Dirk van den Heuvel

Anatole Kopp: the Engaged Historian and the Concept of Modern Architecture

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The issues of conservation, renovation and transformation of modern buildings, imply the revisiting of the ideals and key concepts of the Modern Movement.

This text discusses Modern Movement ideals from the perspective of Anatole Kopp's writings. Kopp (1915-1990) was both an architect, an historian and an educator. From Jewish Russian origins his family arrived in Paris after the Revolution. During the 1930s Kopp studied at the École Speciale d'Architecture and at MIT. Being a member of the PCF, the French Communist Party, building for social housing programmes, teaching and writing about architecture Kopp embodied the position of the engaged intellectual in many different ways.

Kopp's historiographical narrative, and his understanding of the contemporary issues of architecture were based on his conviction of architecture as one of the expressions of the transformation of society or the 'reconstruction of the way of life.' His comprehension of the ties connecting architecture and society's structures, allows one to grasp the latent existence of a possible contradiction within the modern monument concept.

Kopp forged his historiographical discourse not only as a tool to face the crisis of the Modern Movement, but also as a personal re-evaluation of his ideas against the background of the ideological turbulence of the time and PCF policies. His publications 'Ville et revolution' (1967), and 'Changer la vie, changer la ville' (1975) focused on the social and economic relations underlying the planning, design and building production prior to and after the October Revolution of 1917. During the subsequent years Kopp also researched French Reconstruction architecture, and the architecture and planning of the New Deal period in the USA.

His last book, 'Quand le Moderne n'était pas un style mais une cause' (1988), seems to be his final statement following 'L'Architecture de la période stalinienne' (1978) to the double attack on Modern urbanism and architecture by postmodernist critics of the 1970s. While the functionalists were deemed responsible for the monotony and inadequacy of contemporaneous architecture, or seen as representatives of the ideology that perpetuated the dominant power structure and class division, Kopp the engaged historian, and architect, still defended his belief that although the questions of his time couldn't be solved based on the same thesis and methods used in the 1920s or 1930s, the Modern approach had not exhausted its possibilities. To him the Modern approach remained the rational core of all architectural creation being able to 'transform itself once again into a living language, a cause – as it has been between the two world wars – and not a style...'

The Cubanacán Art Schools Rehabilitated

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The Cubanacán Art Schools make up a complex of five architectural masterpieces of the revolutionary period in Cuba. In 1961 the Cuban leader Fidel Castro commissioned this project as the most appropriate to replace the upper class Havana Country Club. The Cuban architect Ricardo Porro (1925-), together with his Italian colleagues Roberto Gottardi (1927-) and Vittorio Garatti (1927-), developed the projects into a singular landscape. The characteristic structures of local clay vaults were intended to symbolize the Revolution itself in a dynamic and organic coalition between architecture, sculpture and landscape.

However, at the time some architects and engineers in the Ministry of Construction were of the opinion that the architects were working in an elitist way detached from national social reality. The budgets surpassed the financial possibilities of the country, which was being effected by the US embargo. Yet, probably the biggest damage was caused as the art schools fell under ideological attack and were seen as bourgeois leading to the project being 'ignored', causing a rupture in the creation of an architectural avant-garde tradition. Construction wound to a halt in 1965, leaving the buildings in various states of completion, and the schools became an example of the contradiction inherent in the social expression of the arts in the ideological context of the Cuban Revolution. The buildings survived almost 35 years of neglect, suffering from serious maintenance problems. Despite these conditions, artistic teaching continued in most of the spaces, where our more noted artists of the vanguard were formed.

In 1999 Fidel Castro decided to restore and complete the schools in accordance with the original idea, an action which was requested by Cuban artists and intellectuals. The Cuban government now aims to rescue the architecture and culture of this unique artistic education institution to satisfy its architects, arts students and teachers, and supporters. This decision acquired a special dimension considering the three architects were still alive and professionally active. To involve them in the project was deserved recognition after all those years of neglect.

For the restoration plan the project team followed the original, harmonious conception as much as possible, while allowing for several interior changes necessary for functional requirements. A innovative scientific method of investigation and analysis was deployed, evaluating the architecture of each school building. Solutions were based on this method while defining safest restoration procedures and using durable construction materials. The renovation of the buildings of Ricardo Porro is almost completed and constitutes the first phase of the restoration plan. Now it continues with the schools of Roberto Gottardi and Vittorio Garatti. This project re-affirms the belief in the possibility of rescuing our recent architectural inheritance, and the outstanding examples of the Modern Movement built in Cuba in the twentieth century.

The Evolution of Intervention Criteria in MoMo Restoration: Essential and Conjunctural Problems

GATCPAC Conservation Projects as a Case Study

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GATCPAC heritage is usually considered in relation to its historical context of the Second Republic and the Spanish Civil War (1936-39). We propose to also review the reconstruction and preservation of the group's work in light of the international reevaluation of Modern Movement projects.

The Group of Catalan Architects and Technicians for the Progress of Contemporary Architecture, which was headed by Sert and Torres Clavé, broke up towards the end of the Civil War. Some members died on the front and some were forced into exile, whereas others joined the "Nationalists" side. During the Franco dictatorship (1939-75), repression was exercised not only on these architect-militants, who were expelled from the Architectural Association and had their professional licences revoked, but also on the work and projects built by the group, especially those which most directly represented the political platform of the Second Republic such as the Casa Bloc, prototypical worker's housing; the Dispensari Central Antituberculòs of Barcelona, a model clinic for the democratization of health care or the Pavilion of the Republic, political and cultural manifesto.

Vindication of GATCPAC work through historic research had already started in the 1960s, but became most prominent after Franco's death and the re-instatement of the Generalitat of Catalonia in 1977. This new political context turned out to be most favourable towards furthering the early vindications. A series of reconstruction and preservation intervention projects were undertaken on these GATCPAC masterpieces during the period stretching from the early 1980s to the late 1990s. This stage coincided with a growing number of intervention projects to restore and conserve Modern Architecture heritage in various other countries. At this point, specific problems common to the restoration of Modern Architecture started to become evident.

So, despite having overcome the conjunctural problems related to the political and social value of the GATCPAC work, such intervention projects have to be understood within an international context of a new discipline specific to Modern Movement architectural restoration. Hence, it is currently relevant to analyze the intervention criteria applied, distinguish between essential and conjunctural problems, and understand their consequences for long-term preservation. If we conceive preservation as a process, and not as a finished work itself, it is necessary to examine how earlier intervention actions have been carried out up to now by using the experience gained in the restoration of works from previous stages as a conceptual reference. Fundamentally it involves reversibility, use of non-destructive methods, or the durability of these interventions.

Modern Movement Conservation as Progressive Practice: Byker and British Welfare State Housing

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The conservation of the legacy of post-war modernist architecture has prompted renewed concerns about the imposition of elite values on those forced to live in or with protected structures. Modernist architecture, and particularly post-war modernism, has long been criticised for its elitist imposition of impractical and inhumane environments, with working class populations bearing the brunt of modernist experimentation. Conversely, left-wing commentators have highlighted the social contribution of aspects of modernism and its contribution to progressive values. The debate about modernism and elitist imposition has continued to be a central theme in modern movement conservation.

In this paper we argue that modern movement conservation needs to engage more sensitively with questions of rights, values and the meaning of 'progressive practice'. At one level, this is about engaging with narratives of modernist failure in the past, but it is also about engaging with concerns about rights, values and alternatives when approaching conservation in the present. Getting this right, it is argued, is important in overcoming potential resistance to modern movement conservation and engaging in positive debate with residents and local stakeholders about continuity and change.

In many respects, the focus of this paper reflects the specificity of the UK context. Our focus is deliberately on 'modernist' urbanism rather than modern movement architecture; in other words, we are concerned with design and planning that reflected a commitment to modern movement principles. We also focus deliberately on public housing because of the particular issues it raises about rights and values, though again this has a specific UK dimension because of the particular history of social housing provision in the UK, as well as the UK's distinctive approach to the conservation of modern buildings.

The paper is grounded on a case-study of the conservation of welfare state housing schemes in the UK, and in particular the Byker housing estate in Newcastle upon Tyne, whose principal designer was Ralph Erskine. The buildings of the redevelopment, with over 2000 dwellings, were 'listed' in their entirety in January 2007 and the paper will draw from interviews undertaken in Byker, in anticipation of listing, with residents, conservationists and housing managers. Byker largely continues to function as social housing and plans for the conservation of the development can be counter-pointed with the dominant tendency towards the gentrification of welfare state housing schemes.

Rewriting the Past: the Demolition of Modern Buildings and Monuments in Post-communist Poland

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This paper analyzes the situation of the Monument of the Revolutionary Struggle in Rzeszów, Poland, which is under threat of destruction. Together with another important modern landmark of the city of the same period, the Hotel Rzeszów, it helped form a well-considered pairing, which was broken by the demolition of the hotel in 2007. The monument's fragility and the uncertainty over its future may be further evidenced by the widespread and easy demolition of buildings and monuments from the communist period currently taking place in Poland, by the lack of a preservation policy, and by the private possession of the land on which the monument sits.

It is remarkable how the political changes due to the transition to capitalism, which started in 1989 and which have been well consolidated, among others, through the entrance of Poland into the European Union, resulted in a will to break with the recent past and to construct a new contemporary identity. The negligence in the preservation of Modern buildings and monuments from the communist era and their destruction are part of this ideological rupture and the pursuit of a new identity and modernity. Economic reasons and the increased influence of private parties over the course of urban development play a fundamental role in this process, too. Are the political and economic changes incompatible with the existence of former historic symbols? Is the preservation of these icons incompatible with the building of a new contemporary identity?

In order to analyze this process and these questions, this paper focuses on the specific case of the Monument of the Revolutionary Struggle. The paper highlights the inherent dichotomy of the monument. On the one hand, the monument is testimony of the communist years, reminding a large number of people of the period of suffering they wish to be erased from their memory. On the other hand, it also testifies to Polish history, is part of the collective memory of the citizens of Rzeszów and a heritage asset for future generations, the link between past and future. The 'new monumentality' as proposed by Sert and Giedion, as well as the approach of Kevin Lynch to urban visual studies, and the recent debates on heritage are important keys to analyze the monument's importance and to defend its preservation as a polysemic object of the Polish cultural heritage of the recent past.



**Shifts in Programme and Flexibility: Meandering on Modern
Ensembles**

chair: Hugo Segawa

The Curves of Time: Pampulha, 65 Years of Change

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'Form follows function,' the most famous slogan of Modern architecture seems to be strongly challenged by the work of Oscar Niemeyer, who turned 100 last year. According to Niemeyer, it was the Pampulha Complex (1942-44), his first major project, that provided the opportunity to 'challenge the monotony of contemporary architecture, the wave of misinterpreted functionalism that hindered it, and the dogmas of form and function that had emerged, counteracting the plastic freedom that reinforced concrete introduced.'

Commissioned by another key figure of Brazilian Modernism, Juscelino Kubitschek (the then mayor of Belo Horizonte, and later the President who commissioned Brasília), the Pampulha ensemble comprised a series of buildings in a new, eponymous suburb to the north of the city. The programme was ambitious but simple, and included a casino, dance hall and restaurant, yacht club, church, and 100-room hotel (unbuilt), distributed around an artificial lake. A weekend retreat for the Mayor was also constructed nearby, intended as an example for the upper classes.

This paper examines how the Pampulha Complex, one of the first Modern ensembles worldwide to be built with governmental support, has been transformed in its 65-year history. Several categories of change are discussed: changes to the very process of the implementation of the project; changes brought about by technical problems; fundamental social changes that resulted in a markedly different urban context; and changes in programme. In this respect, the paper illustrates how the use of the buildings was changed from the very beginning with the prohibition of gambling in the country, and the refusal of the Catholic Church to consecrate the polemical Niemeyer's Pampulha Church of São Francisco de Assis.

The Pampulha Complex represents an interesting case by which to study the question of flexibility in Modern architecture. In this discussion, complex questions arise: are buildings which are designed in response to a programme more or less flexible to change than those such as Niemeyer's, which are much more formal experiments? How flexible are these curvilinear buildings, which instead of deriving from function, seem to emerge primarily from form? To what benefit do they deliberately disregard 'the right angle and rationalist architecture designed with ruler and square to boldly enter the world of curves and straight lines offered by reinforced concrete'?

Moroccan Modernism Revamped

Flexing between Infrastructural Opportunism and Heritage Commodification

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Morocco possesses a rich and diverse Modern architectural heritage. Produced during the French colonial area and the first two decades after independence in 1956, much is due to the influence of Mourad Ben Mbarek, a young, French-educated, Moroccan architect and disciple of Le Corbusier. The backbone of this dual cultural heritage is expressed by major public buildings such as train stations and airports, but also innovative domestic architecture through which a unique and daring formal vocabulary was developed. Following a nationalist upsurge in the 1970s and the subsequent promotion of regionalist architecture, the Moroccan Modern was abandoned as it was perceived as reminiscent of both a repressive imperialist past and of enduring western domination. While the destruction and dilapidation of Modern buildings increased from this time, Morocco's population and urban centres doubled in size without the concomitant development of sufficient public infrastructure.

Such shortages – coupled with the emergence of cultural preservation and awareness groups such as Docomomo Maroc and Casa Mémoire – have led to recent re-investment in Modern buildings in response to the pressing developmental and infrastructural needs of Moroccan cities. To this end, some interventions have targeted modern buildings which offered significant infrastructural assets, such as the airport at Tit Mellil (1949) or the Sidi Harazem Thermal Bath (1965), both designed by Jean-Francois Zevaco.

Such cases of re-use, where Modern structures have long since been discarded, were achieved by maintaining the original architectural programme and physical structure, yet introducing updated technical facilities. A second, contemporary approach has involved the 're-programming' of iconic Modernist villas into public institutions that often require conspicuous exposure. These grand mansions and their extensive gardens are converted by private entities and NGOs into art museums or galleries with public gardens, such as the case of the Villa des Arts in Rabat, originally designed in 1929 and rehabilitated by Mustapha Alaloui in 2006.

Based on the analysis of the aforementioned cases and their unpublished rehabilitation documentation, this paper seeks to study the relationship between the flexible re-use of Modern heritage and the needs of contemporary Moroccan cities. The paper will highlight, with respect to both approaches to re-use outlined above, how meagre funds and a lack of preservation training generate challenges for both the technical updating or the refurbishment of Modern buildings. Through the assessment of these examples, the paper will demonstrate that within a developing world context with stringent economic pressures and growing political disengagement from the local urban public arena, the inherent flexibility of Modern buildings provides an efficient means to alleviate ongoing pressures in the provision of public facilities and infrastructure.

Conservation Development Strategy for the University of East Anglia

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The University of East Anglia at Norwich (UEA) was one of six New Universities founded by the British Government around 1960. They were probably the most prestigious architectural commissions of the entire post-war Welfare State building programme.

Denys Lasdun designed UEA's masterplan and first buildings. About one-third of the masterplan was completed by 1972. Although no further Lasdun buildings were added and the masterplan was significantly altered in later developments, Lasdun's work at UEA still forms an exceptionally powerful architectural and landscape statement. In 2003 most of the Lasdun designs were listed as historic buildings, causing the University considerable anxiety. To minimise the risk of conflict between listing and the need for change, the University commissioned a Conservation Development Strategy (CDS) from Cambridge Architectural Research Ltd.

The CDS became a case study in a Government review of the listing process. Proposals for listing reform were published in 2007 and the Government has announced that it will introduce new legislation in 2008.

The CDS illustrates many aspects of conservation for important Modern buildings that are still in active use. This paper highlights four issues:

Esteem: The listed UEA buildings were built of concrete on tight budgets, and are not highly esteemed by the general public. A CDS survey indicated that younger people respond more positively, an encouraging trend. The CDS itself helped make the case for conservation within the University community.

Original vision: Lasdun's masterplan was unfinished, and unbuilt areas of the campus have become familiar as open space. The CDS made the case for reconsidering the original vision for the campus and landscape.

Refurbishment: After forty years of use the striking Ziggurats of residential accommodation were in need of thorough refurbishment. The CDS indicated how they could be sympathetically modified to meet current expectations and regulations.

Evolving needs – The original teaching space was in a long, multi-disciplinary Teaching Wall that was designed to be flexible. Using the CDS, the University has established a working relationship with the local planning authority to facilitate on-going change that respects the original design intentions.

The Conservation Development Strategy for UEA illustrates a successful approach to conservation management for a complex of Modern buildings, where recognised architectural significance must be reconciled with evolving user needs. With the backing of new legislation, this approach could be widely adopted in the UK.

Modernist Housing for Contemporary Families: The arrival of the Athens Charter in Lisbon

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A few years after the translation of the Athens Charter into Portuguese in 1944, a new generation of architects sustained it as a solution to the Portuguese housing problem. In the 1950s and 60s, several housing estates were built under the influence of Modernist principles, which were contrary to the official housing policy that preferred the single family housing model. The intense population growth of Lisbon in those decades, has transformed the city in a privileged laboratory of the application of modern principles to different housing contexts, from social housing to bourgeois dwellings.

This study brings together three pioneering urban and architectural applications of the Athens Charter to Lisbon's housing. The process of implementing the Charter, and its ongoing evaluation of this process by the residents, is analysed through the reading of coeval journals and recent surveys. The relation between the case studies and international references is also taken into consideration, in order to understand the specificities of the Portuguese case. Finally, conservation possibilities and advantages are discussed.

The case studies illustrate an ideological shift that occurred in Portuguese public policy for housing. New models emerged, such as large-scale multi-family buildings and high-rise constructions. New urban paradigms also appeared, in particular the idea of the housing estate as a green park. The majority of residents surveyed considered the characteristics of the housing unit and its environment as positive, although some criticism was made of specific issues related with each case. When analysed with comparison to international references and dogmatic principles, the case studies reveal an heterodox application of the Athens Charter propositions and its pragmatic use in Portuguese social and political contexts.

This study challenges certain criticisms of the Athens Charter and presents Modernist housing as an important building stock that is capable of impeding the process of suburbanization in metropolitan areas. Three conditions are presented as arguments in favour of the preservation of Modernist housing estates. Firstly, the contemporary process of decreasing household sizes is suggested as an opportunity to solve the stigma of the reduced areas typically associated with the Modernist housing unit. Secondly, the ecological footprint of the suburbanization process can be reduced with investment in the rehabilitation of Modern housing estates instead of new build constructions. Finally, the case studies demonstrate that the lack of identity claimed as a problem of Modernist propositions can be mitigated by an heterodox integration of modernist principles, among other models.

Facing the Future: Five Residential Buildings in Santiago and the Challenge of Flexibility

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Change has been a permanent condition in the economic and political scene of Chile, yet continuity has been elusive amidst a conservative society. This paradox is represented in the residential buildings of central Santiago, where economic pragmatism, real estate speculation, the preservation of urban heritage and functionalist experiments have taken place during the twentieth century. Modern high-rise apartments first appeared in the context of urban regulation plans, available technical resources and economic growth. Working and middle-class populations grew during the 1930s, driving governmental action and private speculation towards a wide variety of housing programmes in major cities.

Today residential buildings in central Santiago face a variety of challenges to their social and physical integrity. Changes in function have deprived many of them of their original social role, while the adverse impact of recent physical alterations is often emphasized by the low cost of original materials and lack of flexible spaces. The capacity of these buildings to deal with cultural and economic change was not a major issue during the time they were conceived. Experimental housing projects that were built by government organisations are today confronted by conditions of economic growth and social change, particularly as caused by urban migration and the disintegration of social communities. Where no significant change has been made to the buildings' original function, changes made to their relations with their urban context approaches the 'ghettoisation' created by contemporary high-density speculative projects and official land-use policies.

The paper discusses different approaches to flexibility in four modern apartment buildings in Santiago. Speculative buildings and a public housing complex are used as exemplary case studies, which include the Santa Lucía apartments (Jorge Arteaga and Sergio Larraín, 1932-1936), the Plaza de Armas building (Duhart, Larraín G.M., Larraín, Larraín and Sanfuentes, 1952-1957) and the Parque Forestal (Emilio Duhart with Infante and Stevenson, 1957-1959). These sites show different degrees of potential flexibility which impacts their ability to be preserved as valuable residential spaces. In addition, the Remodelación República complex (Bruna, Calvo, Perelman and Sepúlveda, 1958-1966) represents public housing experiment confronted by economic growth and social mobility.

Private and public housing programmes in Chile gave cities an urban appeal that remained almost unchanged for decades. In Santiago, Modern ideas such as flexibility were partially adopted. Social evolution is clearly the most challenging issue for the survival of residential use in Santiago's Modern buildings, and the examples shown here provide some hints on how different buildings can cope with future change. Increasing flexibility, as a design strategy to be implemented in cases like these, can assist in the value and preservation of such buildings.



Change and Continuity: Monuments and Icons

chair: Nancy Stieber

The Trojan Horse: Contemporary 'Iconic' Architecture and the Falsification of Modernism

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In his pioneering mid-nineteenth century polemics against the 'restoration' of medieval buildings, John Ruskin's chief complaint was that the contemporary world was dishonestly appropriating and corrupting the heritage of the past for its own purposes – nationalism, tourism, religion, or architectural 'historicism'. Subsequently, Modernism came to boast that it had banished this unhealthy confusion, through its love of the future and its highlighting of the 'otherness' of the past – a stance that is echoed in twentieth century conservation manifestoes such as the Venice Charter, which demands restoration work be legible and separate.

Recently, however, this disease has re-emerged in a more virulent form, targeting not musty old cathedrals but the architecture of our beloved Modern Movement for infiltration. A new, aggressively capitalist architecture – addicted to the competitive individualism of Bilbao-style city-competitions, and attention-grabbing 'iconic' buildings – has seized on the Modern Movement's formal and spatial freedom as a vehicle for branding and image-making. Further, this capitalist architecture has selectively begun to appropriate our Modern Movement's heritage, cherry-picking commodifiable elements and lionising elite signature architects, while further stigmatising the vast legacy of the 'real' Modern Movement's social collectivism, such as its troubled grands ensembles of mass housing.

This appropriation of the recent past is more insidious than the nineteenth century's 'revivals' of a more distant past, precisely because the new 'Iconic Modernists' audaciously trumpet themselves as a continuation of the futurist Modern Movement – even as they corrupt it into something as false and empty as their own digital world.

For DOCOMOMO, this new conflation of 'modernisms' poses a special danger. It threatens to divide our traditional alliance of practising architects and historians, and potentially pits rival 'American capitalist' and 'European socialist' genealogies of Modernism against one another. And it risks, by association, a fresh wave of public alienation against our Historic Modern Movement, when Iconic Pseudo-Modernism eventually falls from fashion. Yet hitherto, DOCOMOMO's response has been to ignore the problem, or even to bask in the reflected glory of Koolhaas, Gehry et al.

This passive stance cannot be sustained any longer, especially with the growing public questioning of iconic excesses. Only an aggressive distancing of heritage from contemporary architecture can decisively safeguard our Modern Movement. Potential ways of proselytising this divorce include a determined focus on the recording and research of collectivist, 'everyday' Modernism rather than the showcasing of iconic gestures such as Sydney Opera House. In that way, hopefully, once Iconic Modernism crashes from fashion, the public reputation of 'our' Modernism will be left intact, and perhaps even enhanced.

Transformations of a Suburban Estate Designed by Gregory Ain

Preservation of the Mar Vista Tract After 60 years

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The Mar Vista Tract is a suburban subdivided housing development of single-family residences located in Los Angeles. The housing units and site planning were designed by Gregory Ain in 1948 in collaboration with architects Joseph Johnson and Alfred Day and landscape designer Garret Eckbo. Sixty years since its inception, only one out of a total of 52 houses has been rebuilt and alterations have been limited to one storey, without any extensions to a second level. As such, the original appearance of the development has been almost entirely preserved.

In 2003, the Tract was designated an Historic Preservation Overlay Zone (HPOZ) of the City of Los Angeles. For this report, a survey of 41 of the 52 houses was conducted through site visits and the collection of on-site measurements, and 45 households were surveyed through in-person interviews and/or questionnaires.

Although extensions and alterations have been made to 35 out of the 41 units surveyed, the development overall has retained its original external appearance. Three defining characteristics of the housing plans—spatial flexibility, the consistent application of a four-foot module, and the distinction between front and rear sides of the unit—were designed to respond to the needs of the residents, and they continue to allow a variety of lifestyles with minimal alteration.

The city council's drive to develop HPOZ guidelines in order to protect the tract as cultural heritage is sensitizing residents to the architectural and historic values of the area. However, the stance of the inhabitants is divided: some seek to uphold the value of preservation, while others place importance on meeting their lifestyle requirements.

The former position favors the preservation of Ain's plan as it was originally conceived, while the latter favors change according to the concepts of Ain's design. Such differences of opinion are reflected in the alterations made to the units. Moreover, the varying degrees of the understanding of Ain's work have created some disparity in the quality and level of maintenance and preservation of the units. Since unit modifications are essentially implemented at the discretion of the residents, and according to their designs, it is crucial that each inhabitant fully appreciates the significance of living in the Mar Vista Tract, and makes efforts toward its ongoing maintenance and preservation.

Neglectfulness in the Preservation and Continuity of Late-modern Architecture

The Case of Saint Peter's Seminary by Gillespie, Kidd & Coia

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Manfredo Tafuri's critiques in the 1960's challenged perceptions of Modernism as absolutist, and argued for a redefinition of Modernism as a non-monolithic system. Within today's 'culture of congestion', which accepts the hybridisation, ambiguity and continuity of contemporary space, how are the values of late Modernism now defined? Can accepting hybridisation and ambiguity permit late Modernist values to gain continuity, whilst offering new programmatic interpretations?

Such questions are under scrutiny at Gillespie, Kidd & Coia's St Peter's Seminary in Cardross, Scotland. Originally an ambitious programme for the training of Roman Catholic priests in the grounds of Kilmahew House, 33 kilometres from the centre of Glasgow, the complex was inhabited for only fourteen years before its de-consecration and abandonment. The Archdiocese, as owner, views the complex as uninhabitable, and has adopted an attitude of *laissez-faire* over the past two decades. Now a weather-damaged and heavily vandalized ruin in an overgrown forest, the complex has attained a mythical and iconic status, achieving an 'A' inventory as an historical structure; inclusion within a list of the world's 100 most endangered buildings; and first place in a 2008 list of the best 100 Modern buildings in Scotland. Seemingly uninhabitable and yet passionately defended, debates as to its future have intensified in the last decade. Various proposals for ongoing dereliction as archaeological ruin, preservation as icon, or continuity through re-use, the fate of Cardross Seminary challenges redefinitions of late Modernism. Following Tafuri's critiques, what should be preserved at St Peter's Seminary: frame or function, text or context? Should this modernist ruin be treated as an historically accurate archive or should its latent frame be consolidated and its function and image reinterpreted?

This paper argues in favour of Tafuri's challenge of hybridity and continuity, and reviews St Peter's Seminary as an architectural myth that has been fossilized by passive neglect and utopian ideals. Neither an archaeological ruin nor an icon, the complex had a spectacularly short life in its intended use. The success and failure of its project lies within the collision of visionary forces on the brink of ideologies, resulting in a rigid, mono-functional and isolated structure that retains value through the permissiveness of conviction. Valuing the structure as a myth or icon hinders its functional continuity. This paper argues for redefinitions in favour of hybridity and ambiguity in order to facilitate the meaningful re-use of Cardross Seminary.

The Obsolescence of the Monument, the Future of Airport Icons

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As modern societies entered the age of mass transportation, airport terminals came to shape new architectural and structural questions, and shifted the location of urban gateways. Through airports, air conquest transformed places into urban scenes of the future. Some indeed became cultural icons, embodying both an optimistic faith in progress and the revival of an aerial imaginary.

These buildings also faced obsolescence or a permanent change of function, due as much to technical advances as to the fading of the futuristic visions they supported. Since the advent of airfields, numerous facilities have been destroyed. Recently threatened, in spite of its registration as a National Landmark, the TWA Terminal of the John F. Kennedy Airport in New York, designed by Eero Saarinen and completed in 1962, was saved in extremis by architects who mobilized international attention. Since October 2001, following the bankruptcy of its operating company, the terminal has been closed.

Two perspectives summarize the lively controversy over the future of the TWA Terminal. On the one hand, the advent of the “Megaterminal” presumes the need for a general renewal of the airport. On the other hand, the iconic status of the terminal requires the preservation of its architectural integrity. These two approaches to the Terminal – one criticizing it as obsolete, the other defending it as an icon of a paradise lost – are, however, insufficient for the debate at hand. The modernity of the TWA terminal also results from numerous contemporary design issues that pervaded Eero Saarinen’s perspective: design for process, for spatial fluidity and flexibility, and for corporate identity. These innovations, in addition to the spectacle of the iconic image, constitute the ‘software’ through which the architecture has been imagined.

While contemporary discourse warns us about the diffusion of airports’ signs into the physical urban environment, apparently leading to the relative uniformity of our cities, the ‘TWA affair’, by contrast, demonstrates more complex and fertile perspectives. Once again, urban debate enters into aerial matters, and representations of the future crystallise in this heavily media-driven conflict. Whether a monument to past ideals or utopia of the future, the iconic status of the TWA Terminal reframes the challenge of obsolescence in modern buildings. From this point of view, the immaterial dimension of the imaginary, which has occupied a large part in the design, could illuminate new directions. Airports have always been material and cultural artefacts which translate the prospective view on the city and mobility. We are undoubtedly entering a new era, where the future and urban matters could have a new projective and regenerative power.

Reconstructing the Philips Pavilion, Brussels 1958: Elements for a Critical Assessment

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Exhibition pavilions are short-lived by nature. Their promotional and ephemeral character allows for broader margins of experimentation than 'normal' buildings, often resulting in radical designs based on state of the art techniques. As they die young, such temporary structures survive in the collective memory as perfect and pure images, without degradation, decay or defects. This image can become so obsessive that the need is felt to reconstruct such a pavilion both physically and permanently, as if its mythological status needs to be verified in reality. This has been the case with Mies' Barcelona Pavilion (rebuilt on its original site in 1986) and others. Fifty years after its demolition, the legendary Philips Pavilion, designed by Le Corbusier and Iannis Xenakis for the 1958 Brussels World Fair, is also about to join this list.

Commissioned by the Dutch Philips Company, the Philips Pavilion housed the *Poème Electronique*, a multimedia collage about mankind and its ambivalent relationship with technology, which was conceived in collaboration with the composer Edgar Varèse. Today, the Pavilion continues to fascinate architects, researchers and the general public. Several attempts have been made to recreate the effect of the *Poème Electronique*, but only now is the effort being made to reassemble the entirety of this total work of art. Initiated by the Alice Foundation of Eindhoven, the reconstructed Pavilion is to become a permanent construction with a flexible use as part of the conversion of the former Philips site in Eindhoven.

This paper addresses two fundamental issues: the authenticity of the Pavilion as a permanent structure, and the relevance of its physical reconstruction. If one agrees that recreating the structural idea of a former exhibition pavilion with new techniques is also a form of authenticity – albeit conceptual rather than material – the question is no longer whether we are capable of rebuilding it, but rather which pavilion we wish to build. This leads us to consider the pavilion's contemporary relevance. We argue that although the ideas embodied by the Philips Pavilion are still relevant to contemporary artistic creation, this is not necessarily true for the building itself. How then does the Pavilion's prophetic aura as an early prototype of time-based architecture and media arts relate to its physical and permanent reconstruction? Will it continue to provoke the imagination or become an altar for nostalgia and curiosity? Finally, we ask whether an archeologically correct reconstruction of this legendary Pavilion will live up to its own myth.



Restructuring Cities and Landscapes: Landscapes

chair: Louise Noelle

Modern Urban Landscape to Sustainable Urban Landscape

A Challenge for Chandigarh

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The second half of the Twentieth Century witnessed the creation of urban landscapes that bore little resemblance to those of the preceding century. The Modern urban landscape was a product of urban planning principles which sought to correct the profound imbalances generated by the transformations of the Industrial Revolution.

The city of Chandigarh introduced the Modern urban landscape to India; as Pandit Jawahar Lal Nehru, first Prime Minister of India, stated, 'Let this be the City unfettered by the past'. Chandigarh served the needs of its time, fulfilling the aspirations of a newly independent and divided India, and providing a demonstration project of a Modern urban landscape.

The significance of Chandigarh lies in its embodiment of the various concepts of urban planning propagated in Europe and America in the early years of the twentieth century. The city's open space and circulation system are clearly legible in its landscape, as demonstrated by few other Indian cities. Grid roads intersect with green spaces, and a large, naturally eroded channel called the 'leisure valley' passes through the city centre.

Chandigarh acquired its historical distinction by virtue of Le Corbusier's town planning scheme and architecture. The defining element of Chandigarh's urban landscape – which allowed for its declaration as an 'historical urban landscape' as defined by the Vienna Memorandum – is its open space structure and circulation system.

The city, designed to accommodate a population of 500,000, now holds one million. Population growth, and the city's strategic regional location, are bringing developmental pressures to bear on the city's fabric and infrastructure, and as a result, the urban landscape is changing. The grid of open spaces in particular is under immense pressure, and increasing vehicular traffic is changing the circulation system. Chandigarh's system of open space was a product of Le Corbusier's concept of landscape, which sought to increase space and liberate areas for nature and the continuity of landscape, reflecting the needs of Le Corbusier's time – 'sun, space, and greenery,' as he had stated.

Today, there is a need to preserve the urban open space system through appropriate conservation management.. At the same time, the city should maintain those aspects which gave Chandigarh's urban landscape its unique historical character. The present problem can be transcended by looking to the future. The objective and scope of this paper is to meet the challenge of change faced by Chandigarh by implementing planning concepts such as Green Infrastructure (Benedict McMahon), Landscape Urbanism (Ignacio Bunster-Ossa) and the Eco-Cyborg (Dushko Bogunovich).

Landscapes of the Recent Past: Identifying Key Problems Regarding the Conservation of Designed Landscapes

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In recent years several new publications focused on gardens and parks created after World War II. In addition, the works of several prominent designers of this time have been researched and published. From this it appears that post-war landscape design, including designs of the Modern Movement, is receiving more recognition as a significant form of heritage. On the other hand, several iconic sites have also made headlines over the past years for less optimistic reasons, with magazines frequently declaring sites as condemned, endangered, or demolished. Understandably, prominent post-war landscape designers are frustrated at the lack of recognition for their masterpieces. They see their designs altered or destroyed, and are rarely consulted when the time for change and planning arrives.

Several initiatives to address and improve the conservation of recent landscape heritage have been launched in recent years. Nevertheless, it remains very difficult to engender recognition for many of the finest examples of post-war landscape design, and accordingly these sites remain at risk. Despite more landscape design occurring in the post-war period than ever before, very few sites are listed in the UK. Many of these sites are too recent to have won popular recognition, attachment and appreciation, and their use of sophisticated designs, and/or experimental technologies, makes them vulnerable as heritage items (potential or otherwise). The pace of change in our current society increases the chance of inappropriate alterations to, or the destruction of, these sites.

This paper highlights the outcomes of doctoral research which set out, firstly, to identify key problems regarding the conservation of designed landscapes of the recent past, and secondly, to assess current conditions for their protection, management and stewardship. To understand the present situation, research investigated examples of various site types, in the UK and beyond. Documentation and evidence was gathered through site visits, published sources, and desktop research.

Key problems regarding conservation and change management at selected sites were ascertained in a survey, conducted by interview and questionnaires. Case study sites included Gibberd's Garden, Little Sparta, Cumbernauld New Town, Bannockburn Battlefield Site Heritage Centre, and Portrack; and respondents were involved in the conservation and management of sites. Original designers of the selected sites included Dame Sylvia Crowe, Percy Cane, Sir Robert Matthew, Ian Hamilton Finlay, Charles Jencks, and Sir Frederick Gibberd. A review of international examples provided a better understanding of wider perspectives, allowing a comprehensive comparative analysis of issues, methods and approaches. Key organisations that play – or should play – a role in the conservation of recent designed landscapes were also studied, including Docomomo.

Healthy Bodies, Healthy Minds: Everyday Modernism in Australian Suburban Communities

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Suburbanisation changed the shape of Australian cities and regions and its affects are integral to the understanding of everyday Modern Architecture in this country. While there have been studies on Modern Australian housing, there has been little consideration of the myriad of often unassuming public buildings that serviced the ever-expanding frontiers of towns and cities, and endeavoured to foster a sense of community therein. These public buildings, often co-located around municipal parks and incidental landscaping, have, by and large, endured since their inception but are at present fading from view. This is in part due to the waning of formerly expansive governmental visions for the provision of public space, and in part to the demands for denser housing developments, alongside changing expectations of how public and private services should be delivered. Consequently, today these buildings and spaces are often not valued, whether because of their style, or the socio-political ideologies they are perceived to represent, or their very ordinariness.

This paper reflects upon an ongoing research programme that is creating a significant body of documentation on Australian public, Modern buildings and sites. The project 'Healthy Bodies, Healthy Minds: Designing Everyday Modernism for Australian Communities, 1920-1970' is the result of collaboration between architecture, planning and social historians. We are constructing an account of the interconnections between government policies and community initiatives that endeavoured to promote a healthy and educated citizenry, and the design, reception and use of Modern, municipal suburban architecture to realise these agendas. This nexus between community and design is being interrogated through a series of thematic studies of building types and longitudinal place-studies. Our selection of types reflects governmental priorities that targeted children, families and the elderly, and the facilities that serviced these stages of life including child-health centres and kindergartens; recreational buildings, civic centres and libraries; and senior citizens and bowling clubs.

Despite their ongoing role in the shaping the routines of daily life, these sites are today often ignored or regarded with a lack of fondness. Perhaps this is the inevitable and proper fate for ordinary places. Yet we argue that, however modest, they are deeply complicit in the larger project of building civic modernism, as played out in the suburban environment of Australia. The paper will reflect upon the methodology of the research and the compiling of an extensive database of building types. Through these findings we discuss the shifting status of these public sites and highlight the dilemmas posed by their conservation.

Ecological Crisis and the Modernist Residential Landscape: Pontchartrain Park, New Orleans, Louisiana

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This paper focuses on the challenge of restructuring certain aspects of the Modernist residential landscape in the United States. The subject of the paper is Pontchartrain Park, a unique, historically critical neighborhood that was planned and built in New Orleans between 1947 and 1958, and the viability of which is in question today, as the city recovers from the flooding caused by Hurricane Katrina. Our proposals for the rehabilitation of Pontchartrain Park are linked to current theory and practice in the field of landscape urbanism, and we argue that our proposals have general ecological currency beyond the particular conditions of New Orleans.

Significant changes to the physical fabric of New Orleans in the mid-twentieth century are largely unstudied. They were the principal creation of Mayor de Lesseps S. Morrison (1946-1961), who served four terms in office as a progressive, reformist politician dedicated to the city's modernization. Morrison, like Robert Moses in New York, made big plans. His ideas ranged from the creation of a civic center downtown, to residential enclaves on the recently drained areas at the edges of Orleans Parish.

Morrison's significant contribution to New Orleans' Modernist residential landscape was the subdivision of Pontchartrain Park, constructed to benefit African Americans in the segregated city. For the first time, middle-class blacks were offered a planned, residential area with modern infrastructural amenities, including drainage, sewerage, lighting and paved and planted streets. Single-family homes on relatively generous lots (a minimum of 60 x 110/120 feet) surrounded a large urban park (180 acres), which featured an 18-hole golf course and additional recreational facilities. While maintaining segregationist policies, Pontchartrain Park also offered blacks a literal 'home base' of self-respect.

Both the image and the surface of Pontchartrain Park's landscape represented Modernist agendas. Spaced at distances that guaranteed light and air to residents, repetitive dwellings were distributed across a benign, generic, homogeneous green ground. That ground was itself a modern artifact; its existence depended on the infrastructural network of canals, pipes, and pumps that drained the back swamps of New Orleans. Moreover, it represented the idea that the natural environment could, and should, be rationalized and produced by technology.

Our paper presents an ongoing, collaborative, and multidisciplinary project for the redesign of Pontchartrain Park. This plan is historically and politically responsible, as it maintains the area's hygienic, open, democratic character, while simultaneously developing an ecological, heterogeneous sensitivity that was absent from original the Modernist landscape.

Mountains and Modernity

Bernese Modernist Buildings in its Environment

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In the recent book, *Switzerland, a portrait of urban development* (Basel, 2006), architects of the ETH Studio Basel present Switzerland as an unsatisfying model of decentralised urbanism (the 'Metropole Suisse'). Their challenge of change suggests a new hierarchic segregation of Swiss regions: from metropolitan regions over urban networks and silent areas to derelict land in the central Alps. This hierarchic model, however, misconceives the decentralised structure of the country itself, and the balanced relation between urban and rural regions, tourist areas and natural resorts. Yet the most glaring oversight of the work is its ignorance of the evolution of modern Switzerland: since 1850, while constructing a romantic image as tourist resort and 'playground of the world', the country passed through a strong process of modernisation and nation building, firstly in terms of modern infrastructure and its buildings, and secondly, since the 1920s and 1930s, with the emergence of Modern architecture itself.

This paper addresses the issue of the Modern cultural landscape of Switzerland as an integrative model, and one which is still valid. It also examines the influence of Modern architecture in environments known for their strong historical or romantic connotations. On the one hand, Swiss Modern architecture of the 1920s and 1930s made visible the new lifestyle of modern society, as it was claimed by Sigfried Giedion and others. On the other hand, Modernist buildings embodied a new relation between people, and introduced a notion of nature that became part of an active and healthy leisure culture to this day.

These aspects will be examined through the consideration of different buildings in the Bernese Alps region (the Bernese Oberland), with its hotel resorts and infrastructure such as the Jungfrau-railway line. The paper firstly considers the ground-breaking high-technology buildings of the early of the 20th century, modified up to the present, which provided new standards in engineering architecture and represented a specific moment in the drive to modernisation. The paper then considers two building types: public swimming baths, which combined architectural elegance and high technology with environmental considerations, and the contemporary architecture of the high Alps (mountain stations, mountain hotels, etc.). Such architecture formed a new image of traditional rural landscapes, and prepared it for a modern leisure society driven by two apparently conflicting forces: that of 'individual mass-tourism' on the one hand, with all its comforts, and the image of an environment overlaid with romantic connotations on the other hand. This represents a challenge to modern Swiss society, and a process which continues to this day.



Change and Continuity: Myth, Authenticity and Lived Practices

chair: Hilde Heynen

Beyond Oscar Niemeyer: Authorities, Remodellings, Paradoxes and Peculiarities in the Preservation of Modern Buildings in Brazil

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The designation of Modern buildings as monuments is fairly recent everywhere. Yet, more often than not, their preservation implies remodelling, the design for which must be reviewed by preservation agencies. It makes sense in some cases - considering author's rights - to ask the original designer to carry on the remodelling job, causing architects to come across their younger, brighter or just different selves.

We see three feasible formal strategies when remodelling affects the building's outer shell. Repair is the circumscribed intervention that generates side-by-side formal dissonances, as in Testa's adding a ramp to the entrance of his Bank of London in Buenos Aires. Restoration is the intervention that closely follows the original design as in Siza's recent completion of his Bouça housing in Porto. And recreation is the intervention that overwrites the existing building, as if the architect travelled back in time to manipulate his past- as would be the case if preservation agencies accepted Niemeyer's proposals for completing his Ibirapuera Park complex in São Paulo and for his Grand Hotel at Ouro Preto.

Even though repair denotes a Romantic sensibility for the composition of fragmentary elements welded by time and restoration attends to a Classical unity of form and time, neither is problematic for preservation agencies. Recreation is harder to absorb, because it is felt to falsify the testimony of the past. We should however accept multiple strategies of preservation of the Modern heritage.

Nevertheless, to accept a strategy on principle does not mean one has to condone every move made in its name. Examining the rationales behind Niemeyer's proposals we find them faulty, though for slightly different reasons than those of the competent preservation agencies. Their triumph seems to us inconsequential. The Ibirapuera complex is still incomplete; the Hotel remains defiled. The architect can propose whatever pleases him. Preservation agencies should remember that the appreciation of any remodelling of a designated building entails discussing its program and alternative architectural solutions for that program. It requires the combination of critical assessment with design consultancy that was a hallmark once of the Brazilian Instituto do Patrimônio Histórico e Artístico, when, for instance, dealing with the ruins of São Miguel das Missões, or the design of the Ouro Preto Hotel itself. Not everything needs to be preserved or restored according to an original design, but preservation always has a design dimension.

Myth, History and Conservation in Tel Aviv

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In 2004 a section of Tel Aviv of the 1930s, the so-called White City, was declared by UNESCO a world heritage centre. Today Tel Aviv is known worldwide as a landmark of the Modern Movement, an early and singular example of homogenous modernist urban fabric. UNESCO's declaration, however, was only a single, internationally celebrated, moment in a decades-long process through which the city itself constructed, discovered and rediscovered its own architecture, and, more generally, its own self-image. Myth building - the creation of a self-told narrative that sums up a community's values and aspirations – may be said to have been taking place.

The construction of the 'myth' of Tel Aviv has a history of its own, unfolding alongside with the history of the city itself. It began almost with the inception of the city in 1909, and was elaborated by the modern Jewish community of Mandate Palestine (1917 - 1948), and then in Israeli society, and at instances, also within international discourse. It went through various phases of admiration, neglect, renewed admiration and disapproving attacks, all finding representation in text and images. Eventually it inspired actual interventions in the existing fabric, ranging in scale from public sculpture to urban design and conservation projects. Myth turns out to be a powerful force, since it tends to project itself back into the real townscape.

This power of myth is what makes it a concern of the planner and the conservationist. Myth may be regarded a positive factor, encouraging conservation, but it may have a dark side as well: it may prove politically charged, or open to commercial exploitation, or simply historically untenable. Consequently, it may lead to such abuses as banalization, distortion of history, or erasing of alternative narratives. The conscientious designer, who attempts - as he must - a critique of myth, would encounter, therefore, a series of historiographical as well ethical questions.

The paper proposes to present a short outline of the history of the White City 'myth', and to point out some of its positive and negative implications for conservation and design. It will enlarge on a few of specific cases such as the evolution of Dizengoff Square, and of Patrick Geddes' and Richard Kauffmann's town-planning schemes for Tel Aviv.

Rietveld at Bergeijk

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The important 'De Ploeg' - buildings, the textile mill and the showroom, have been abandoned and sold together with the surrounding land, urging the question what to do with these listed monuments.

Architect Gerrit Rietveld designed 'De Ploeg' in 1957 in collaboration with architect Beltman in the small village of Bergeijk. The meeting between architecture and landscaping, between Rietveld's factory and Mien Ruys's landscape design - gardening, art and special trees - represent the ideals of 'cooperative production and consumer's association' and lead us to treat the future of this factory with urgency. The real question has to do with the nature of what we are actually preserving. Is it the buildings of Gerrit Rietveld - the textile mill and the two houses - or is it the important social-economic and cultural heritage which is represented by the 'De Ploeg' community?

'De Ploeg' became associated with Bergeijk in 1923. The village became famous for the textiles produced by the mill, and, in the nineteen fifties, for the furniture designs that were produced by the 'De Ploeg' under the brand name 't Spectrum'. One of the most famous products produced by 't Spectrum is the sofa-bed of Martin Visser, a modern classic which is still in production. The designer Martin Visser was responsible for the 't Spectrum' furniture collection from 1954-1974, contributing his own designs and inviting other designers. In the same period Visser, together with his brother Geertjan Visser, his former wife Mia Visser (+1977) and his second wife Joke van der Heijden, founded a famous art collection.

The director of 'De Ploeg', Piet Blijenburg (1896-1967) moreover organized conferences in the sixties, inviting speakers such as prof. F.T. Ph. A. Tellegen and prof. John Habraken to talk about various themes such as 'Housing in the future' and 'The Individual and Industrialization in Supports-Housing'. The conferences took place in the showroom of Rietveld's mill. Rietveld's buildings in Bergeijk; the textile mill and the Visser house - with Aldo van Eyck's extension - thus became important centers for modern art and design.

The paper will discuss whether it is the buildings we want to preserve or the ideology that generated them. I will do this by examining the essence of Rietveld's 'De Ploeg' and its regional significance in Bergeijk and by following the more personal route of my dialogue with Martin Visser and my research into the Bergeijk/'De Ploeg' community.

Viva Stirling's Florey building

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Most architectural connoisseurs are unanimous in agreeing on the significance of the early university projects designed by James Stirling in England. Considered masterpieces by the architectural profession, the Engineering building at the University of Leicester, 1959-63 by Stirling and Gowan and the History Faculty building at the University of Cambridge, 1964-67 by Stirling are Grade II listed. They are important symbolic, cultural capital for the architectural profession.

In addition to these, Stirling designed a third lesser known university project in Oxford using the same glass and red tile palette. The Florey building at The Queen's College, 1966-71 is the last building he designed using that particular formula. Unlike the other two it is not listed. An application by the Twentieth Century Society made in 1999 has still not been decided upon.

Mindful is that two of the three buildings are unsatisfactory for their clients. Gavin Stamp wrote in the Cambridge Review (30 January 1976) of the dissatisfaction of the users of the History Faculty building who complained it failed functionally, thermally and acoustically. Not known is that The Queen's College users were, for similar reasons, unhappy with the Florey building. Referring mainly to material from The Queens College Archive, this paper will focus on the Florey building and elaborate the unpleasant history of its procurement. The history reveals how The Queen's College successfully sued Stirling for design negligence. Setting out this historical background sheds light on why The Queen's College have made significant changes to the building and why they are hopeful to continue doing so.

The paper will also discuss the politics surrounding the application by the Twentieth Century Society to list The Florey building. It aims to show that any endeavours to halt further modification of The Florey building relies on redeeming the failed relationship Stirling had with his commissioning client, The Queen's College. The important symbolic role the Florey building has in the collective memory of architects and architectural conservationists contrasts the memories and practical lived experience of client and users who have questioned and continue to question to this day the significance of The Florey building.

Questioning Material/Conceptual Authenticity

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Docomomo International has rarely taken a stance on matters of doctrine. However, there have been two occasions when the organisation has laid down guidelines. The first was just after Docomomo was set up, when it specified evaluation criteria with a view to compiling an inventory of architecture from the Modern Movement. The second occasion, at ICOMOS's request, was when Docomomo stated its position on the place the Modern Movement has on the World Heritage List. In the report presented by the DOCOMOMO's International Specialist Committee on Registers in 1997, it advised putting modern buildings and complexes to the test of conceptual rather than material authenticity, without arguing in favour of this preference except to offer a technical justification for it, citing the fragility and rapid obsolescence of modern constructions. I have always felt uncomfortable about this stance, given the weakness of the arguments supporting it. Therefore I am proposing exploring the validity of the two main competing principles in conservation presented by material authenticity and conceptual authenticity. My argument is based on ongoing conversations with Céline Poisson (École de design, UQAM).

The two versions of authenticity involve implementing different methods for ensuring cultural continuity: the first principle insists on continuity in terms of the "architectured" material, the second seeks to preserve the idea or the architectural concept on which the construction is based, thereby allowing more latitude for modifying the built landscape and for change. To explore the validity of these strategies, I will be developing a critical reflection with heritage seen as semiosis, i.e. the production, reproduction and interpretation of signs. Beyond the material and the concept, isn't heritage – whether recent or old – the actualisation of collective meaning, rather than the preservation of an idea or message from the past?



**Technology, Progress and Sustainability: Materials -
Conservation Strategies and Methodologies**

chair: Kyle Normandin

Pirelli skyscraper in Milan, Italy

Modern and Contemporary Technologies

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The experimental use of new materials in modern architecture has often experienced short term durability. While the use of these new materials was necessary to the innovation and technological advancement of modern architecture, rapid obsolescence is well known.

Based on the innovative spirit of modernity, recovery through restoration projects can utilize advanced technology and new products that have a proven effectiveness and which are able to prevent decay deterioration and to improve performance though maintaining the original architectural integrity of the building. Great attention has been paid lately to the improvement of building performance, considering the new regulations which include environmental sustainability and energy efficiency.

This paper presents meaningful case studies which show how technological innovations achieve a necessary balance between maintenance and transformation which comply with current building codes and regulations.

For example, in the 1950's, has recently been restored. It represents one of the most significant architectural expressions of the last century, which provides a perfect integration of art, technology and architectural detail and construction. Some micro- innovative technologies which were introduced in the restoration of the Pirelli Skyscraper will be discussed:

- the employment of Fibre-Reinforced (FRP) bands for the structural reinforcement.
- the replacement of the previous glass of the curtain wall with more efficient Insulating Glass Units (IGUs).
- the replacement of the rubber or neoprene gaskets between the glass panels and aluminum curtain wall or window frames with continuous silicone joints.
- the introduction of dynamometric processes (derived from aerospace technology) into curtain wall transparent and blind panels, to ensure homogeneous and constant pressure with the possibility of future inspection to allow monitoring and maintenance.
- slight modifications to the original aluminum tubes to weep water from interior space cavities.

The new products and redesign of the smaller details of curtain wall has enabled the Pirelli skyscraper to retain their original appearance and at the same time improve the quality of technology (wind resistance, permeability to water, air permeability, thermal insulation and acoustic insulation, maintainability). This study allows for consideration of the cultural approach related to the adaptation of modern architecture to contemporary exigencies through technical innovations.

Dalle de Verre: Modern Stained Glass

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Dalle de verre, also known as faceted glass, is a type of stained glass with one inch-thick (2.5 cm) chunks of colored slab glass placed in a specific pattern and set with concrete or epoxy poured around the glass to produce panes that fit into a larger design. Although it is often mislabeled simply as stained glass in many modern buildings, dalle de verre is very much a modern material that generally offers a richer variation of colors and deeper hues, and a more complex three-dimensional interplay of voids and solids in typical abstract or geometric designs that can be larger in scale than traditional lead-came stained glass.

Developed during a period of experimentation with glass arts in Europe in the 1920s and 1930s, dalle de verre was utilized primarily in post-World War II structures as a recognizable link to traditional buildings, particularly religious ones. Because lesser skilled labor was needed, and the materials of glass and concrete were available, large spans could be produced affordably when compared to leaded stained glass. However, problems with water infiltration sometimes occurred either between the glass pieces and the concrete or the concrete panes set into concrete or metal frames or both. In the early 1960s, American stained glass manufacturers adopted newly available epoxy matrix that significantly reduced the failures.

Hundreds of epoxy dalle de verre installations are found in mid-twentieth century buildings in the United States. Most seem to have held up well thus far but how or when epoxy will deteriorate is not known yet. The standard practice in the United States has been to replace failed concrete panes with epoxy ones, which raises questions about design and material authenticity. The subtlety of the original design can easily be lost when epoxy's different visual texture is installed, even if aggregate placed on the epoxy surface attempt to match the original concrete.

The initial experimental use of concrete and faceted glass was replaced with the even more experimental epoxy resin over the first 30 to 40 years of this glass art's development. Now, the questions of appropriate use, acceptable replacement, and future failure confront preservationists as dalle de verre windows, and the modern structures in which they are found, increasingly become the subject of rehabilitation and restoration.

Securing Ornamental Design in Modern Havana Heritage

Architectural High Rise Building

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Great progress has been made in the design and service life of building construction based on the introduction of advanced technologies, including new materials and the adoption of repair stabilization factors. While these building systems are available, they still not spread into the actual design and practice of conservation of the built modern architectural heritage with respect to durability of ornamental building finishes including interventions for their restoration, principally buildings which are exposed to tropical and aggressive marine environments.

In this paper, case study results spanning over 45 years, regarding the failure and degradation of ornamental mortars and renders, ceramic tile veneers, corrosion of reinforced concrete exposed in tall buildings to marine environment will be discussed. Main causes originate based on different mechanical actions, like bond failure and thermal dilation stresses, crystallization of salts including permeability characteristics in mortar and concrete, silica-alkali reactions in ceramic tile veneers and other bio-degradation actions. Sometimes, these causes and actions are not foreseen in the original design and it is necessary, to investigate and take into account, successful intervention of modern architectural building ornamentation including costs for their repair.

Experimental Test Methods regarding the behaviour of degradation mechanisms of mortars and veneers will also be discussed. Results are discussed for proposed specifications for material requirements and techniques in the application of sustainable intervention for modern heritage restoration in providing an increase in the repair and stabilization of tall iconic heritage modern buildings in Havana littoral.

The Original Intention - Intention of the Original?

Remarks on the Importance of Materiality Regarding the Preservation of the Tugendhat House and Other Buildings of Modernism

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Project designs in the field of restoration of Modern Movement buildings aims to recover a materiality that is referred to as the 'original intention' of the architectural design. This includes the idea of the architect including the 'original' appearance of the structure, its surface and its colour. But how do we know, what the original intention is? How do we know what the original architecture is? What is the importance of the original fabric including the aesthetic and functional intention of the architectural design?

One must be aware of materials and the techniques applied, and their importance in the aesthetic concept of architecture. Modern art historical discourse does not refer much - if at all - to materials and colours in their interpretation of historic architecture. A piece of art is much more than the conscious intention of the artist. Conceptual statements of architects can also be misleading. A basic source of knowledge of original aesthetic intention is the monument itself, its fabric and the materiality of its surface. During the transformation of a building to a monument of cultural heritage, its fabric, its materiality and its surface becomes part of the authenticity which must be protected.

The stereotype of the 'white cubes' created in the landmark 1932 MoMA exhibition of Hitchcock and Johnson is somewhat abstract to the material reality. The façade of Tugendhat House of Ludwig Mies van der Rohe (built in 1928-30) e.g. was painted with a yellowish tone similar to Travertine stone. Here, Mies does not use colour as decoration. Different to the traditional manner, Mies van der Rohe presented - in an especially pronounced way - possibly 'natural' colours of materials. This shows not only in the valuable materials and their elaborate surface, but also in the ones which are often neglected as mere crafts of work.

To avoid further destruction of original surfaces through current renovation practices, one must enforce the application of methods and techniques which maintains the historic fabric and applied techniques. As part of this, one must develop a stronger awareness of the importance of the surface materiality through a interdisciplinary cooperation of architects, scientists, technicians, conservators, restorers and craftsmen. Interventions on the original surfaces cannot be left to the intention of renewal, which is inherent to the work of craftsmen and their modern methods.

Concrete Repairs and Coatings for Frank Lloyd Wright's Solomon R. Guggenheim Museum

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Frank Lloyd Wright's Solomon R. Guggenheim Museum in New York is an icon of modern architecture known for its large smooth curvilinear walls. The curvilinear walls, however, are very textured due to the material and method of construction: gunite, or spray-applied concrete, against plywood formwork. The repair of this material and its coating were issues addressed by Integrated Conservation Resources, Inc. (ICR) in its laboratory and in situ testing programs. The replication of the gunite texture was equally as important as the mechanical performance of the repair materials which led to the investigation of constructability and technique.

The preservation philosophy of the project was also a topic of interest in the approach of the work. There is evidence that Wright disliked the formwork marks that were apparent in the gunite surface, but was told that his vision of smooth walls was not able to be actualized with gunite. Today, despite the existence of repair materials able to create the vision Wright had, the design team deemed the gunite texture as historic evidence of the technique and material of the original construction worthy of preserving and not concealing. However, the original color of the museum, though documented and recommended by ICR, was not restored.

To investigate the substrate conditions and select repair materials, the museum was stripped of all its coatings. The conditions were found to consist of cracks, spalls, and failed previous repairs for which repair materials were subjected to a multi-part testing program.

The number of substrate samples necessary for laboratory testing precluded the option of using the original gunite. Thus, a replication formulation compositionally representative of the gunite had to be developed. Samples were then made and allowed to cure in a high relative humidity environment for 28 days. These customized samples were then treated with patching compounds, crack fillers, and coatings.

To study the performance of these materials in the laboratory, the testing program included accelerated weathering in a QUV-Spray machine, freeze-thaw cycling, and water vapor transmission rate testing.

The best performing materials from the laboratory testing were then used for in situ mock ups to investigate constructability and technique. Through dozens of

mock ups ICR explored options of creating a repair that was not visible beneath the coating while mimicking, and allowing to radiate through the coating, the formwork marks in the gunite.

Structural intervention was also conducted during this restoration employing carbon fiber reinforcement at the interior face of the gunite wall.



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Change and Continuity

- 1. André Augusto de Almeida Alves**
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THE CASE OF THE GYMNASIUM OF ITAHAÉM
- 2. Katerina Chatzikonstantinou**
Preserving the Body in Greek Modern Architecture
THE SANATORIUM "SOTIRIA" IN ATHENS
- 3. Elias Constantopoulos**
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THE CASE OF TAKIS ZENETOS
- 4. Luis Maldonado Ramos, David Rivera Gámez, Fernando Vela Cossío**
Paradoxes in the Rebuilding of Casto Fernández-Shaw's Porto Pi Petroleum Station
- 5. Sangeeta Bagga Mehta^a, Rajiv Mehta^b**
Chandigarh: Managing the Challenge of Change in an Icon of the Modern Movement
- 6. Inge Podbrecky**
A Roof over One's Head: Luxury for Everybody
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- 9. Rajiv Wanasundera**
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10. Cecilia Alemagna

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14. Jon Buono

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Modern Architecture goes on Holiday
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Building Restoration in Bacu Abis

Shifts in Programme and Flexibility

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The Case Study of Politecnico di Milano's Heritage

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