



Alberto Pessoa, Pedro Cid, Ruy Alhoughia, Calouste Gulbenkian Foundation buildings, Lisbon, Portugal, 1969, Main auditorium. Restoration and renovation by Teresa Nunes da Ponte, 2014. © AFCC, Mária Lessa, 2014.

Reuse, Renovation and Restoration (the 3 R's)

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The theme of this 52nd **docomomo** Journal is Reuse, Renovation and Restoration. The aim is to discuss approaches of intervening in Modern Movement architecture, revealing exemplar processes that go from restoration and renovation to deeper transformations and reuse interventions. The goal is to answer one of **docomomo**'s main tasks: how to formulate new ideas for the future of the built environment based on past experiences of the Modern Movement.

The Modern Movement has demonstrated its long term legitimacy, as a concept endowed with an extraordinary and lasting longevity. Either way, it becomes increasingly important to acknowledge and value this heritage, in order to enable a skilled, informed and enlightened intervention. Such matters as materials and technology reuse, spatial and functional transformations as well as updating legislation, are part of the contemporary agenda. Knowing that many modern architects sought new heights of functionality and changeability, the challenge for today is how to deal with the heritage in relation to its continuously changing context, physical, economic and functional, as well as socio-cultural, political and scientific. I consider that the *reuse* project is starting to "make history" and I share the idea that heritage transforms itself with us. Therefore, modern architecture can be a resource that asks for our attention in terms of quality, economy and sustainability. It was based on this broad meaning of *reuse* that Hubert-Jan Henket and I established the ISC/Sustainability. Deeply grounded by the Essay "When the Oppressive New and the Vulnerable Old Meet" by Hubert-Jan Henket, we invite you to "Join Our Plea for Sustainable Modernity" (p. 11).

I wish to thank Hubert-Jan Henket who has accepted to write the introduction to this edition of the **docomomo** Journal, using his wide knowledge on the reuse concepts, which contains contributions from a broad range of experts who contribute their knowledge and dedicated work. It is with great pleasure that we present this Journal.

A large variety of intervention types and points-of-view are presented, showing the cross-section of subjects that restoration and reuse of MoMo architecture raises, worldwide: from Japan to Chile and Mexico, from Quebec to New Zealand. While cases of change of use are presented, such as the Church of Sainte-Germaine-Cousin (Gérard Notebaert, 1962) and the Mies Gas Station (M.V.D. Rohe, 1968) in Montreal, other contributions document restoration projects whose main goal was to reproduce the original building as much as possible, such as the Country Club Clubhouse

(T. Amano, 1961) near Tokyo, and a house by L. Barragán (1950), in Pedregal, contributing to the debate on the question of authenticity. In between, essays about the CEPAL Building (E. Duhart, 1960, in Chile), and the I-House in Tokyo (K. Maekawa, J. Sakakura and J. Yoshimura, 1955) speak to us about the different forces that could be involved in a process of preservation and how to find the balance between them. A project combining the updating of functional, social and technical requirements to current demands with fidelity to the principles of the original design, is the conservation and renovation of the Hizuchi E. School (M. Masatsune, 1958), internationally acknowledged by the WMF/Knoll Modernism Prize, in 2012. Finally, the Governor of Kagawa Prefecture, Mr. Keizo Hamada, shows us the efforts to improve the earthquake resistance of the Kagawa Prefectural Government Office (K. Tange, 1958), the struggle to gain the support and understanding of the prefecture, in order to pursue the best solution for the structural retrofit which is absolutely essential to preserve such a masterpiece for future generations.

The "Documentation Issue" chapter presents some examples dealing with the current struggle to use modern architecture, such as *Cap Ducal*, in Chile, which has been subjected to successive changes that ignore the potential of the original building and Auckland's Civic Building which is scheduled for demolition due to its owner's unwillingness to recognize its significance.

The contributions to this discussion combine modernity and modern heritage, economy and energy saving, the social mission and the responsibility of architects towards the future, relating themes to be discussed both as MoMo concepts, on a documentation level, and as MoMo intervention nowadays, on an intervention level.

The depth and the breadth of the subject have challenged **docomomo** International to host the 14th International **docomomo** Conference on the theme of *Adaptive Reuse*. This issue of the Journal and the International Seminar *Rehabilitation and Reuse of MoMo Architecture* that **docomomo** held in March 2015, in Lisbon, are the starting points that will lead us to the 2016 conference! Both the seminar and the conference are being held in the Calouste Gulbenkian Foundation (architects: R. Athouguia, P. Cid, A. Pessoa, A. V. Barreto and G. R. Telles, 1969), in Lisbon, a MoMo masterpiece whose main auditorium was recently restored and renovated. I take this opportunity to invite you all to participate in the 14th International **docomomo** Conference, in September 2016! The call for papers will be sent out in September 2015.

Reuse, Transformation and Restoration

BY HUBERT-JAN HENKET

In the period I was teaching at the Eindhoven University of Technology, the Netherlands, from 1984–1998, I often had the privilege to welcome our first year students entering the faculty of architecture. After I had paid my compliments to the students for having chosen a fascinating study and future profession I told them that for environmental and climate reasons, it would be best not to build at all any longer. And since this was unrealistic, the next best thing was that we should learn how to renew the world with things that exist already. Laughter was always their response. Didn't the nutty professor notice that outside an enormous boom of new building was going on as a result of the neo-liberal wave that was hitting Europe and North America? Besides, the ambition of most of them was to become the future Rem Koolhaas or Norman Foster. So please don't spoil the party. Directly after my talk they were embraced by the faculty staff to fulfill their dreams.

In 1998 I transferred to Delft University because they offered me a much more favorable deal for the further development of **docomomo** and our international secretariat. In Delft I encountered a similar mood among staff and students as in Eindhoven. Everything was geared to the design of new buildings and cities with ever more spectacular shapes and dimensions. The architect, not in the role of a craftsman, but as a free and creative artist.

For those who are dedicated to the ideas of the Modern Movement this attitude shouldn't come as a surprise. Isn't one of the driving forces of Modernity, ever since the Enlightenment, the dedication to dynamism and the constant new? And isn't the concept of the constant new the driving force behind scientific innovation and the market economy which together have delivered the spectacular individual and social progress of the last 50 years? And isn't the concept of the constant new still a dominating phenomenon in the arts, architecture and fashion?

At the end of the 18th century another revolution took place in the mind of the Western Man which is relevant to mention. Up until then, there was hardly any distinction between a craftsman and an artist. Quite suddenly this situation changes. Art becomes an autonomous domain, as was already the case with science and religion. For the romantic artist of the time, beauty and utility are perpendicular to each other. Art becomes expression. The famous romantic painting "The walker above the sea of mist", which Caspar David Friedrich painted in 1818, informs us that art is not so much about what you see around you but what you see inside yourself. It tells us that

art comes from within to the outside. The artist inspires the world around him by his expression of his innermost self, the unique.

The conflict between utility (as a result of the rational ideas promoted by the Enlightenment) and art (as a result of the spiritual ideas of Romanticism) have occupied the debate in architecture and architectural education, ever since. And it also plays a role in the discussions about restoration and authenticity.

In the Netherlands, as in most European countries and in North America, the boom of new buildings came to an abrupt end due to the financial crisis of 2008. A vast over-supply of office space, shopping centers, apartments, warehouses etc stared us in the face, the result of greedy developers and public authorities. At the same time, climate change was increasingly demonstrating its ugly face.

Add these two together and one understands why today the curricula at the schools of architecture, in the countries mentioned above, have finally accepted restoration, reuse and the transformation of existing buildings and cities as a reality. Roughly 50% of the commissions in architectural studios and offices in the Netherlands today is related to reuse of the existing stock. It is to be expected that a similar situation will occur in the countries that are still witnessing a building boom. For tempering climate change this would be a blessing.

This issue of the **docomomo** Journal on reuse, with contributions from Japan, Canada, Mexico, Chile and New Zealand, shows a wide variety of original functions. Two civic buildings, a non-governmental organization, a golf-club house, an elementary school, a church, a petrol station and a dwelling. Three buildings are designed by celebrated masters, Mies van der Rohe, Kenzo Tange and Luis Baragán. The other buildings are designed by nationally well-respected architects. Three contributions deal with transformation of the original function to a new function, in the other contributions the original function remains.

In the essays several key topics of reuse are presented. Various contributors show the importance of public awareness, because Modern Movement buildings are often not communally all that much appreciated, leave alone that they are not loved by the majority. Certainly if public money is involved a positive attitude of the citizens is key. Traditional and modern social media prove effective vehicles for information.

Another item is the position of the property developer. Auckland's Civic building is a clear example.



01 Hubert-Jan Henket giving the keynote lecture "When the Oppressive New and the Vulnerable Old Meet; a Plea for Sustainable Modernity" at the 13th International docomomo Conference, in Seoul, Korea, 25 September 2014. In the background: René Magritte, 1939. © Joonhwan Yoon, 2014.

The debate concerning demolition *versus* reuse can only be effective if the discussion is based on rational facts. A proper value assessment is essential. In such an assessment the social, cultural, economic and technical values are shown for the current state of the complex and the scenarios of demolition and redevelopment vis-a-vis options of re-use or transformation. The energy embedded in the existing building should form part of the evaluation as well. It is a pity that no author shows us these decision-making tools in any detail.

The interesting essay by Masami Kobayashi is an informative description of the forces at work and the way these were brought together in a balanced way.

The essay about the Muashi-Razan golf club house is an example of the struggle involved to keep the original building, notwithstanding external forces to demolish it.

The influence of accelerated obsolescence is demonstrated in all four Japanese contributions. This happens when — among others — the authorities are forced to change the building requirements, for example to conserve energy, to diminish carbon dioxide emissions, to improve working conditions or equitable access, or when safety is concerned. Due the disastrous results of recent earthquakes in Japan the authorities were forced to implement much stricter requirements concerning existing structures. Keizo Hamada shows the three main earthquake resistance improvement possibilities for existing buildings plus the pros and cons involved. It would be informative for many journal readers if Keizo Hamada would be invited to show us in more detail the technical consequences of the three options in a future issue.

The essay by Marie-Dina Salvione draws our attention to the serious situation of the heritage of Momo churches.

This issue is paramount in many regions in the northern hemisphere and would be very appropriate for a future **docomomo** journal issue.

Whereas most buildings in this issue fit into the category of the more ordinary buildings, Louise Noelle's essay about the house in Pedregal is a small serenade to a poetic house. It is a welcomed ode to the restoration of a small icon.

Another little icon is the petrol station in Montreal by Mies van der Rohe. In her essay France Vanlaethem discusses the issue of authenticity, an important topic that is hardly touched on in the other contributions. She argues that authenticity is a construct, a judgment, a process involving citizens, experts and authorities. Sure, but is it not a fact that the experts are asked to establish the original and existing values? Is it not for the authorities to secure these values and for the citizens to express their minds and feelings as well as to give the authorities their mandate?

The distinction between authenticity of the materials and the authenticity of the original architect's ideas (ie his artistic contribution), makes sense, because they have different influences on the decision-making process.

I agree with France Vanlaethem where she questions the validity of the changes made to Mies' original design by the restoration architect concerned, simply because these changes go against the original intention of Mies van der Rohe. As the author concludes: "Mies proved to be sensitive to context, an aspect neglected" by the architect of the reuse project.

This conclusion hints to the essence of any culturally valuable reuse project. Any transformation should respect the intentions of the original architect, interventions should be in balance with the cultural value of these intentions and these should add to the architectural quality of the new whole.

Enjoy reading **docomomo** Journal number 52. ■

When the Oppressive New and the Vulnerable Old Meet; a Plea for Sustainable Modernity

BY HUBERT-JAN HENKET

The following article is an edited version of the keynote presented at the 13th International docomomo Conference that took place in Seoul, Korea, on September 2014.

The economic miracle, increasing transparency and growing emancipation are some of the striking advantages of modernity. However these meet their opposites in severe conflicts at both global and regional scales. Where the oppressive new meets the vulnerable old the damage is at its heaviest and often non-reversible.

The history of modernity in the Western world, from the European Renaissance, the Enlightenment and the Industrial Revolution to the Machine Age provides information of the root causes of these conflicts, such as the dominance of rationality, fragmentation, the linear and short term mind frame, devotion to constant newness and ever increasing scale.

The history of East Asian civilizations shows the millennia old care for the environment and for dynamic tradition.

Precisely the 14th International **docomomo** Conference in Seoul – for the first time organized entirely in an Asian country – offers the opportunity to widen our scope.

docomomo has four advantages that make it particularly useful to contribute to soften these conflicts in the future. Today it is a global organization with many different cultural backgrounds, it is multidisciplinary, it concentrates on history and on the reuse of what is already existing and it shares communal enthusiasm. Until today we concentrated our efforts mainly on the history of the Modern Movement and the restoration of its icons. We could enlarge our scope to include the reuse and transformation of the ordinary Modern Movement heritage and to research the history of modernity as well in the various cultural regions.

Some proposals will be made how we could change words into structured action, in order to contribute more effectively to a circular mindset of reuse, reduce and recycle, to arrive at a sustainable future for all.

The Chinese philosopher and religious founder of Daoism, Laozi, was born in the 6th century BCE. He was an archivist in the Zhou state library so the legend goes. His life was less important for the future of religious thought than his departure from China and his death. He loathed the spiritual situation of his time so he left “heading West — the direction of enlightenment, just as the East is for Europe — he stopped for the night with the gatekeeper of the pass across the mountains to the West. The gatekeeper asked him to leave a message or guideline for those left behind and the legend tells us that Laozi wrote the Daodejing (formerly written as Tao Te Ching) that night. Handing it over to the gatekeeper, he then departed West and was never seen again”.

Could this legend of Laozi and the West meeting the East be an inspiration to us after some 2500 years? Could we learn and benefit today from millennia-old East Asian wisdoms gathered over the centuries? I think we could. The Daodejing, meaning “Canon of the Way”, tells us about unity and the integration between the universe, the earth, man and nature, between the material and the non-material. Its

does and dont's form the oldest written environmental and ecological guidelines on earth. Taoism has had enormous influence on East Asian cultures and the Daodejing is one of the best sold books in the Western world.

This can't come as a surprise. Whereas the benefit of modernity and its economic miracle in both the East and the West are beyond belief, at the same time modernity creates an ecological and climatic drama and is a serious threat to centuries old, vulnerable cultural traditions.

So it makes sense, when faced with an irreversible environmental disaster to try to find ways to get out before it is too late. If **docomomo** could contribute to solutions for conflicts at regional levels, we should first look at what the idea of modernity is and how it originated. Although this is a highly complex and controversial issue allow me to give you my simple overview, for what it is worth.

The concept of modernity as we know it today originated in Europe in the 14th century CE. The Modern Movement that resulted from this at the beginning of the 20th century is not so much a particular style as it is a way of thinking, an



01 Nils Ole Lund, *The future of architecture*, Collage, 1983.

ongoing process that is a harbinger of contemporary values. You might say it is the endeavor to increase the living conditions of all through the development and implementation of inventions in science and technology. Hope, emancipation and optimism make the Modern Movement distinct from other movements.

During the last hundred years modernity has expanded to all corners of the world, not leaving even the remotest culture on the planet untouched.

Supposing that we all know by experience what the benefits of modernity are, permit me to concentrate on some of the conflicts.

- Climate and environmental change;
- Addiction to constant newness;
- A linear and short term mind set;
- Fragmentation;
- The loss of tradition and cultural identity.

In the fascinating book *Soul Mountain*, written by the Chinese Nobel Prize winner, Gao Xingjian, almost every page radiates both the wisdoms of Confucius, Buddha and Laozi

— which are still today incorporated in much of everyday living — and the confrontation of these traditions with the violent faces of modernity.

If we want to find contributions to divert the conflicts mentioned before, we should first look at the origins of modernity to understand where these conflicts come from.

After the collapse of the Roman Empire in Europe in the 5th century CE a period of roughly a thousand years followed in which God All Mighty provided the answers to all phenomena man could not explain. In this task God was seconded by The King, the Church hierarchy and the monasteries. The unconditional acceptance of suffering and of injustice guaranteed a better life after death. This concept started to change during the Renaissance in the 14th century CE, first in Italy and later on in the rest of Europe. Philosophers began to reason that man had a free will without limits and that he himself could create a happier future on earth. The feudal system started to wane, the discovery of new continents took place, the introduction of the printing press and of paper occurred, etc.



02 Johannes Vermeer, *De Soldaat en het Lachende Meisje*, Painting, approx. 1660. Friek Collection, New York.

Just look for a while at this 17th century Dutch painting by Johannes Vermeer (figure 2). Here the Humanist spirit is made extremely clear. You don't look at a King, a saint, a martyr or an important member of the elite as you mostly saw on paintings of previous centuries. No, you see an everyday scene of a liberated girl having an emancipated and jolly conversation with her lover.

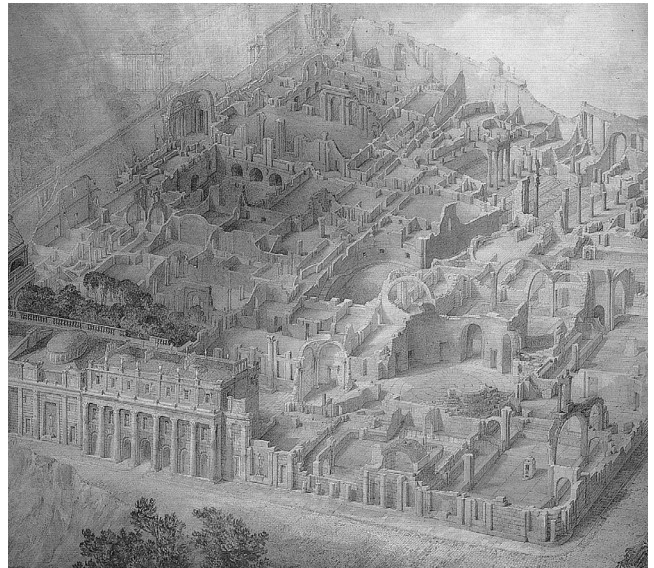
Around the time that this painting was made, the Portuguese Dutch philosopher Baruch Spinoza argued that if there was no proof that one existed before one's birth, how could there be any rationale for life after death? The *here* and the *now* were the only reality.

In the meantime the Dutch scientist Constantijn Huygens invented the pendulum which made the clock a common everyday object. Up to then man had lived in a circular concept of time: day and night, summer and winter, sowing and harvesting, year in year out. Slowly that was replaced by accurate time measurement in seconds, minutes and hours. *Tick, tack, tick, tack*, said the clock and the seconds disappeared into thin air, never to return. The linear time concept came into being. And when you combine this with Spinoza's reasoning that there was no life after death you will understand that Western man became in a hurry to make the best of the short here and now. The short term mindset entered the stage.

Simultaneously a concept emerged, that everything could be understood through the implementation of reason, because the cause of everything is hidden in the laws of nature. Enter the 18th century in North West Europe, the century of the Enlightenment, which together with 16th century Humanism form corner stones of modernity.

The philosopher Emanuel Kant wrote the definition which is still most in use: "the Enlightenment is the escape of man from the dependence he is only himself to blame for... Have the courage to use your own brains"².

This new frame of mind not only triggered on an enor-



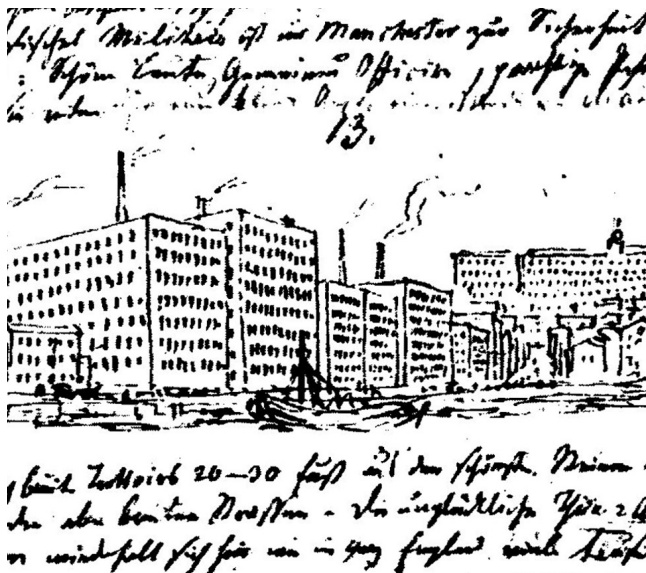
03 Joseph Gandy, *A Bird's-eye View of the Bank of England* (coll. title, *The Bank in Ruins*), pen and colored washes on paper, 1830. Sir John Soane's Museum, London.

mous progress in science and technology. It also gave birth to a drastic modernization of society, the universal declaration of Human Rights, the American Revolution and the ideals of the French Revolution of freedom, equality and brotherhood. Also liberalism and socialism resulted from it. However these drastic changes did not happen without violently conflicting points of view.

Figures 3 and 4 are important in understanding how differently two architects at the same time looked at the here and now. The first painting was painted in 1830 by Joseph Gandy and shows the Bank of England as it would look after a thousand years. The complex was designed by the famous architect Sir John Soane. He wasn't a conservative at all. He introduced many innovative building techniques and state of the art functional planning. Yet his architectural creation is meant for eternity. Thus we see parts of the building still in use and parts in ruin. The message of the painting is that even after a thousand years the complex is still present and through the beauty of its composition we become aware that the continuity — in other words the connection with history and tradition — is a value that is of vital importance to a community.

Diametrically opposite to this message is a sketch by the German architect Karl Friedrich Schinkel made in 1828, which is part of a letter he wrote to the Prussian King informing him about an excursion to Manchester, to learn about the effects of the successful Industrial Revolution in England. Here Schinkel experienced what the English Poet Thomas Carlyle had written a year before: "We are living in the age of the machine in every inward and outward sense of the word". The Industrial Revolution was at its peak, the result was not only of technological innovation but also of the mood of its time.

In 1714 the Anglo Dutchman Bernard Mandeville published a pamphlet. He argued that up to then thrift and uprightness were traditionally considered the pillars of an



04 Karl Friedrich Schinkel, Factories of Manchester, Sketch, 1828.



05 Jan Duiker, Sanatorium Zonnestraal, Hilversum, Netherlands, 1928. © Sybalt Voeten.

honest Christian society. “Nonsense” he said. Look around and you see how sin does produce profit. Gentlemen, it is greed what it is all about, because if you want more than you can obtain it will lead to consumption, consumption will lead to increase in production, increase in production will result in more work and more work is profitable for all³. The commercial revolution was starting, the consumption society and the Industrial Revolution made their entrance on the world theatre.

Adam Smith, the father of capitalism went further⁴. He said that if one would not apply a division of labor, in other words specialization, one would not get an increase in production. And without an increase in production there would be no rise no raise in the standard of living and thus no increase in individualization. This is, he argued, because individualization and independence develop in proportion with the income per head of the population.

Economic reason dictated that mass production for the benefit of mass consumption is only possible through constant innovation of new products and new production processes. The devotion to the constantly new was born.

And that was precisely what made the German architect Schinkel so excited. He wrote about buildings he saw in Manchester of six to eight stories high, with paper-thin elevations, efficiently made and assembled, and easy to transform in order that the buildings could adapt rapidly to ever changing requirements. These buildings were not aesthetic providers of status with an everlasting message and meaning, like the Bank of England by Sir John Soane. These were flexible and rational containers responding to the needs of a world in rapid change.

In 1835 the French philosopher Alexis de Toqueville also visited the city of Manchester. Opposite to Karl Friedrich Schinkel, he was stunned by what he experienced. He wrote: “here civilization demonstrates its wonders, yet civilized man has almost been reduced to a savage”⁵.

Country folk, looking for work in the new industrial cities, were here degraded to a miserable and anonymous proletariat. Obviously they could not handle the dynamics of rapid change and fragmentation, because their histories, traditions and habits that had provided strong and long-lasting bonds with agrarian communities did not count any longer in these anonymous environments. Even today we recognize this as a global problem. As a reaction to this Karl Marx wrote his Communist Manifesto in 1848. Uprisings and revolutions broke out all over Europe.

In the meantime a growing middle class emerged, that had managed to liberate themselves from the grip of the old elites, thanks to the ideas of the Enlightenment and the financial successes the Industrial Revolution had brought them. To protect their new status for themselves and for their children, many adopted the conventions and the conservative outlook of the old aristocracy.

In literature, painting and architecture a social reaction against this conservatism emerged which culminated in the beginning of the 20th century. *Tabula rasa* was the new idea of the young intelligentsia and progressive artists, an unconditional new beginning without the strangle hold of traditions and old habits. Emancipation and freedom for everybody was from now on the goal. Devotion to invention and to the constantly new entered the realm of architecture. History and tradition disappeared into the dustbin of progress. Many different approaches within the Modern Movement in architecture appeared. Take for example the Zonnestraal Sanatorium in the Netherlands designed by architect Jan Duiker in 1928 (figure 5). Duiker — a functionalist — believed in what he called spiritual economy. By this he meant that everything, both material and non-material, should be realized with as little means and energy as possible. By the way, Duiker’s approach of doing more with less and taking the responsibility for environmental harmony in one’s own hand echoes the intentions of Daoism.



06 Eduard Louis de Coninck, Museum de Fundatie, Zwolle, Netherlands, 1838.
© Michel Kievits.

Back to the cradle of the Modern Movement in the early days of the 20th century: as I mentioned many different interpretations emerged in Europe as to why, how and what the Modern Movement was to be. Via the European colonial powers and much more so through the modern media, the idea of modernity in architecture and local interpretations mushroomed all over the world. Architects like Oscar Niemeyer in Brazil, Luis Barragán in Mexico, Charles Correa in India, Kenzo Tange in Japan and Kyu Sung Wu in Korea all developed a distinctly different approach to modernity.

A question is: due to its unscrupulous and dynamic force, can the icons they and many others have produced, mask the reality that modernity has created serious conflicts. Isn't it so that these conflicts multiplied in the last fifty or so years, due to the ever increasing scale of what we are doing?

Two of the main global problems we are facing today — climate change and violent clashes between old cultures and Modernity — have their roots in the history of modernity.

Fragmentation, for example, was promoted by Adam Smith in 1776 as the rational engine of progress. In 1911 F.W. Taylor published the principles of scientific management promoting standardization and the division of labor into separate, scientifically researched tasks. Henry Ford successfully implemented the Taylor principles and from then on they were adopted in the building industry, in urban design, and, in all levels of the market economy. As I showed you before, linear and short-term decision making, the addiction to the constantly new, the ever increasing scale and the dominance of rationality all originated from the Enlightenment and the European Industrial Revolution of the 18th century; in other words in the cradle of modernity.

The next question is: can we — as self-appointed caretakers of the heritage of the Modern Movement contribute to soften these conflicts? I surely think we can and we should.

In 2012 at our 12th International **docomomo** Conference in Helsinki, John Allen gave a stimulating key note

titled: “From Sentiment to Science; **docomomo** Comes of Age”. In it he argued that a shared love of the most precious achievements of the heroic period of Modernism had brought us together, with the Zonnestraal Sanatorium as the seed for **docomomo**'s birth. He put the question to us: “isn't it time to redefine our mission?”. He continued, “the conditions of our time have surely taught us that progress must now consist in learning how to renew the world with things that exist already”⁶. Next he stretched the concept of heritage by saying “the materials we are dealing with in Modern Movement buildings — cement, steel, aluminium, copper, oil based products — have some of the highest embodied energy values of any building materials. We must begin to appreciate this investment in energy and material as another kind of heritage”. John Allen concluded his presentation with these extremely relevant questions: “If — as the slogan has it — the greenest building is the one already built — then the question, I put to **docomomo** is whether it is willing to venture into this territory and master the science and politics of sustainability and embodied energy in the cause of keeping modern buildings? Or would we rather stay in our comfort zone, immersed in history and culture and carrying on lovingly restoring our favorite icons?”⁷.

In 2008 we started the debate concerning sustainability. Today in 2014 it is about time that we exchange words for action here in Seoul. Thus my proposal is twofold. In the Council Meeting we should agree to adjust the Eindhoven statement in which we establish our (revised) commitment. My personal response to John's clear appeal is that we should do both.

Besides we should make a serious start with the science and politics of sustainability at this conference, by establishing a new **docomomo** International Specialist Committee on Sustainability. Its task should be to prepare a framework how we will respond to this challenge. Part of this endeavor might be to establish our strategy of care not only towards the older stock but also as regards the vast quantity of modern architecture manifestations of the last 20 years. These environmentally destructive buildings for which competition who is the biggest, the tallest and the most expressive seems to be the yard sticks of architectural success and stardom.

Simultaneous with this endeavor we should surely continue with our attention to the histories of the Modern Movement and the restoration of its icons and the renovation of the more mundane remnants. Why? Not only to contribute to a more green society but also because science and technology in themselves are useless without the combination with the power of imagination, historical facts and philosophy.

Let me quote Antonio Damasio, a famous brain researcher from Portugal and author of international bestsellers such as *Descartes's Error* and *Looking for Spinoza*. He writes: “Our lives for a large part are driven by the guidelines of our individual biological structure stored in our brains and for an important part by the guidelines from a culture outside our brains, as the historical contribution of enormous amounts

of similar brains. To that culture belong art objects, buildings instruments, rules and regulations, habits, traditions, rituals, courtesies, peculiarities and what not. We live within that opaque, misty past, that dependant on the spot on the planet we find ourselves or where we grew up, that always adopts completely different forms”⁸. Also the Finnish architect Juhani Pallasmaa in his keynote lecture entitled *Newness, Tradition and Identity*, at the previous International **docomomo** Conference in Helsinki, stressed the importance of tradition and continuity compared to the obsessive search for the constantly new and uniqueness. “Cultural identity, a sense of rootedness and belonging is an irreplaceable ground of our very humanity” he said. Juhani talked about tradition as something dynamic that has to be re-invented and re-created by each new generation.

He said: “Tradition maintains and safeguards the collective and accumulated existential wisdom of countless generations. It also gives a reliable direction to the new and maintains the comprehensibility and meaning of the new”⁹.

As the French physicist Blaise Pascal said: “the past and the present are our measure, the future our goal”.

If you combine the two phenomena of care for historical fact and tradition together with the green necessity of reusing what is already there, both in order to soften some of the conflicts we are facing globally, than you are right at the core of what **docomomo** could be in the future.

One of the most crucial characteristics of **docomomo** is that we are a global family of architects, historians, conservation specialists and landscape architects all interested in how the new and the old can meet.

So why don't we adjust ourselves to the new global situation? We are perfectly suited for it because of our focus and the integration of our various backgrounds.

This is why I make this urgent appeal to you all. Because our survival is at stake let us join forces by making use of the incredible advantages of modernity, to conquer the serious conflicts modernity is delivering in an ever increasing scale as well.

Let us contribute to the model where economic growth is developing in harmony with the principles of reuse, reduce and recycle. In other words leave the principles of the linear economy — brought about by modernity — behind and embrace a circular economy of sustainable modernity.

In concrete terms this could involve the following plan of action:

- Explain to the public in general and politicians in particular what the benefits are of reusing existing buildings and of continuity and tradition, in order to create harmony between the economic, social and environmental demands.
- Change the curricula at the schools and faculties of architecture to include history of modernity as well as the conservation and adaptive reuse of what is there already as a standard part of the education of all students involved in the building industry.
- Stimulate architects to design appropriate buildings which are sustainable, in other words, which are based on the principles of reuse, reduce and recycle. Buildings that create love and care rather than awe and hatred.

Indeed love and care for our environment and the cultures of the communities we serve are the main ingredients in making a better world for all. And a better world for all will remain the main goal of the Modern Movement.

Our real challenge is to bring the new and the old together in such an inventive and harmonious way that the results are both inspiring and sustainable.

May the wisdom from the Daodejing be our guide in this endeavor: “The earth is a sacred vessel” and cannot be owned or improved. If you try to possess it, you will destroy it; if you try to hold on to it — you will lose it”¹⁰. ■

Notes

- 1 Allerd Stikker, *Sacred Mountain*, London, Bene Factum Publishing, 2014.
- 2 See Immanuel Kant, *Wat is de Verlichting*, Kampen, Kok, 1988.
- 3 Bernard Mandeville, *Fabel van de Bijen Particuliere Zonden, Algemeen Profijt*, 1714.
- 4 Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, 1776.
- 5 Alexis de Toqueville, *Journeys to England and Ireland*, Chapter Manchester, 1835.
- 6 John Allen, “From Sentiment to Science — **docomomo** Comes of Age”, *Proceedings of the 12th International **docomomo** Conference*, Espoo, Finland, 2012.
- 7 *Idem*.
- 8 Antonio Damasio, “Twee Culturen, één Brein”, *Nexus*, vol. 66, 2014.
- 9 Juhani Pallasmaa, “Newness, Tradition and Identity — Existential Meaning in Architecture”, *Proceedings of the 12th International **docomomo** Conference*, Espoo, Finland, 2012.
- 10 Daodejing, chapter 29.

Hubert-Jan Henket

(b. 1940, Netherlands). Hubert-Jan Henket is a practicing architect in the Netherlands, professor emeritus of the Eindhoven and Delft Universities and Honorary President of **docomomo** International. He graduated cum laude in 1969 at the Faculty of Architecture at the Delft University of Technology Afterwards and he studied Urban Design at the Otaniemi University in Helsinki Finland. From 1971 he worked in London until 1976 when he started Hubert-Jan Henket architects in the Netherlands. Since 2010 the practice is known as Bierman Henket architects. He held the chair of building technology at Eindhoven University from 1984 till 1998 and one of the chairs in architecture at Delft University from 1998 till 2005. In 1988, together with Wessel de Jonge, he founded **docomomo**. He is the chairman of the Rietveld Schröder House Foundation and the Theo van Doesburg House Foundation. Together with Hilde Heynen he edited the book *Back from Utopia, the Challenge of the Modern Movement*. Recently he published a book in Dutch: *Where New and Old Meet, a Plea for Sustainable Modernity in Architecture*. His architectural work, which mainly concentrates on the relationship between new and old, received wide coverage. He is involved in the restoration of buildings by Rietveld, Dudok and Duiker. He designed among others 11 museums, such as the extension to the Teylers Museum in Haarlem and recently the Museum de Fundatie in Zwolle, for which he received the Dutch Design Award 2013. Together with Wessel de Jonge he received the World Monuments Fund, Knoll Modernism Prize for the restoration of the Zonnestraal Sanatorium in Hilversum, the Netherlands. Hubert-Jan Henket was awarded the *Bernhard Cultuurfonds Prijs* for his complete oeuvre and the Kubus of the Dutch Institute of Architects. He is a Knight of the Order of the Dutch Lion.



Matsumara Masatsure, Hizuchi Elementary School, Yawatahama, Japan, 1958. View from the river after renovation. © Architectural Institute Japan Shikoku Chapter, Toru Kitamura, 2009.

Conservation and Renovation Project of Hizuchi Elementary School: First Challenge to Treat a Post-war Wooden Architecture as a Cultural Property

BY YOSHIAKI HANADA

Hizuchi Elementary School is an example of timber modern architecture completed between 1956 and 1958. It was recognized as one of the twenty representative modern buildings in Japan by **docomomo** in 1999, and from 2006 to 2009 it was meticulously restored. The consortium members for its conservation and renovation were awarded the Annual Award of the Architectural Institute of Japan and World Monuments Fund/Knoll Modernism Prize in 2012. This paper outlines the project of the Hizuchi Elementary School and the architect Matsumura Masatsune who designed it.

Hizuchi Elementary School is located in Yawatahama City, Ehime Prefecture, which is about 725 kilometres south-west of Tokyo on the western shores of Shikoku Island. It was designed by the municipal architect Masatsune Matsumura (1913–1993)¹ and completed between 1956 and 1958.

Hizuchi Elementary School is such an important example of timber modern architecture that it was selected as one of **docomomo** Japan's 20 Selections in 1999.

However, despite this recognition, it did not meet modern seismic protection standards. Also, due to the advanced deterioration of the structure over its fifty-year life, it had suffered from many functional problems. The extended debate over these matters was finally resolved when a consortium of experts, through working closely with the Yawatahama City Board of Education, developed a plan that would restore the structure whilst adapting it to meet modern safety and educational requirements.

The consortium was formed in 2005, after Yawatahama City established a planning committee for Hizuchi Elementary School's renovation. Six experts, who were architects and university professors, came together to work on the project with city officials. In addition to the City, the individual members of the consortium were: Hiroyuki Suzuki², from Aoyama Gakuin University, Kiyotada Magata from Ehime University Yoshiaki Hanada from Kobe Design University, Kouichi Wada, president of Wada Architectural Design Atelier, Kazutomi Takechi, CEO of Atelier A&A Ltd, and Mikio Koshihara, from the University of Tokyo.

The conservation and renovation project of Hizuchi Elementary School is believed to be Japan's first case of the restoration of an architecturally significant modern timber building. The consortium members won the Annual Award of the Architectural Institute of Japan, the World Monuments Fund/Knoll Modernism Prize in 2012, and

docomomo Japan's 2013 Architectural Heritage Conservation Award. Furthermore, Hizuchi Elementary School was designated as a Japanese national cultural property in 2012.

Architect: Masatsune Matsumura

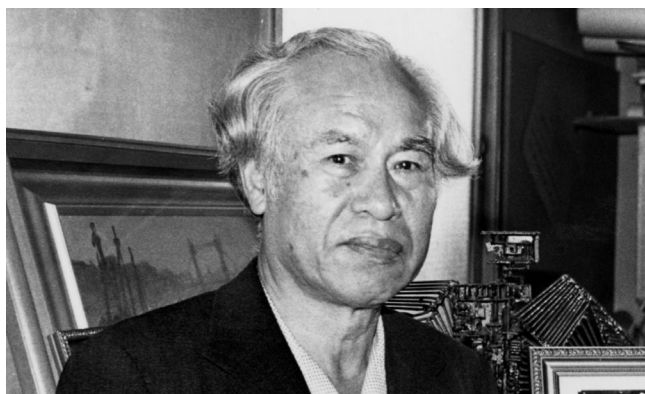
The architect who designed Hizuchi Elementary School is Masatsune Matsumura. He was born in 1913 to a prominent samurai family in Ozu, a small town near Yawatahama in Ehime Prefecture. While his family was wealthy, Matsumura had a hard childhood. His father died when Matsumura was 2 years old and he was raised by his grandmother separated from his mother. This painful experience must have been hidden behind the graceful atmosphere of Matsumura's architecture.

Matsumura entered Musashi Senior Technology School (the current Tokyo City University) in 1932 and trained under Chikatada Kurata who had traveled in Europe and studied in Germany with Bauhaus founder Walter Gropius.

After graduating from Musashi Senior Technology School in 1935, Matsumura landed on a job at the office of Kameki Tsuchiura by recommendation of Kurata. Tsuchiura Kameki was an apprentice of Frank L. Wright. There, Matsumura designed private international style residences for rich modern Tokyo families. After the office moved to Manchuria he experienced a hard life in the colony.

In 1941, Matsumura, having some doubts about Tsuchiura's trendy thinking of architecture, left the Tsuchiura Architectural Firm and joined the Agricultural Land Development Authority and was engaged in the investigation of housing in poor farm villages in Japan.

Matsumura was self-taught and acquired the latest architectural planning knowledge from many English books and Japanese architecture magazines published in the 1930's about new buildings in Europe. *Kokusai Kenchiku*



01 Matsumura Masatsune in his later years. © Architectural Institute Japan Shikoku Chapter / Former property of Matsumura family.

(“International Architecture”) was one such influential Japanese magazine. Enjoying the favor of the chief editor of this magazine, Masakazu Koyama, Matsumura translated many English articles into Japanese for the magazine.

Thus, it was through his mentor, Kurata and the many magazine articles and books published before the Second World War that familiarized Matsumura with Gropius’ ideas and those of the evolving Modern Movement in Europe. I found in his house three handwritten files full of the latest architectural planning knowledge which Matsumura made before the World War 2. They are indeed proof of his effort.

When the World War 2 was over, Matsumura moved back to his hometown Ozu and served as a municipal architect for Yawatahama City for 13 years from 1947 to 1960. During these 13 years, he designed about 37 buildings. They are what should be referred to as modernist architecture. However, by employing a timber-steel hybrid structural form and a gable roof, he succeeded in embodying architecture that is neither so-called “white box” International Style nor Le Corbusier like concrete style.

In 1960, Matsumura was recognized as one of the top ten architects in Japan by the influential magazine *Bungei Shunjyu* along with Togo Murano, Kunio Maekawa and Kenzo Tange. But even the jurors who recommended Matsumura had not met him and had not seen his works including the Hizuchi Elementary School at the time.

In the same year, Matsumura left Yawatahama municipal office before retirement age, and he started his own architectural design office in Matsuyama city which is the prefectural capital of Ehime Prefecture.

His career lasted until his death in 1993, and he designed more than 400 buildings, including private residences, apartment buildings, private schools, and private hospitals.

In the meantime, he loved calligraphy and classical comic theater “kyogen”, and also spent a lot of effort in preserving modern architecture.

His words and writing delivered at every opportunity were Confucian-like in their critique of what architecture or architects ought to be like. In other words, Matsumura, whilst being based in the philosophy of modern architecture, never had a dogmatic attitude. Rather, he made what he considered the ideal form of education or life

into a space by using a tool called architecture. The ethical architectural view he had exhibited still covers the effective range of envisioning what a society should be like.

Architectural Characteristics of Hizuchi Elementary School

Hizuchi Elementary School is located in a canyon surrounded by tangerine orchards in Yawatahama City.

Looking from the playground, the right-hand building, the so-called “Middle Building”, was constructed in 1956 and the left-hand building, the “East Building”, was constructed in 1958. The river side elevation is very dramatic, including a suspended outdoor balcony and floating staircases that protrude over the Kiki River. The Middle Building contained teachers’ rooms and other specific rooms. The East Building contained six classrooms in a so-called “cluster style”, which means that the classrooms are separated from the corridor by a “daylight garden” or small atrium.

Hizuchi Elementary School has a number of architectural characteristics. They are summarized in the following six points.

Important example of a cluster-style school

Its classrooms are arranged in the cluster-style where the classrooms and corridor are separated from one another and two classrooms as one unit lead to a corridor via a front room that branches out. And this created an extremely rich space rather than schematic view. This format of the cluster plan was researched and implemented by the Yoshitake Laboratory at Tokyo University after World War 2. But it was only a theoretical experiment, whereas at Hizuchi Elementary School it was completely designed and implemented.

Fenestration on two facades which allows natural light into classrooms throughout the day

The cluster-style made it possible to enhance the penetration of light and flow of air throughout the building with the daylight garden. When Hizuchi Elementary School was completed, it did not have any light fittings and the fenestration on two facades of each classroom was the only source of light within the classrooms.

Hybrid structural system which combines timber and steel
Hizuchi Elementary School is often said to be a timber building, but in fact it is made of a hybrid structure in which steel is incorporated effectively into the timber structure. For instance, in the East Building, circular steel rod braces are used to resist the lateral forces so that the outside wall on the river side turns into a curtain wall, opening the classrooms to the expansive exterior view.

Rich spatiality which contemporary architecture lacks
The “remarkable spatiality” of the school’s architectural character is immediately observable. Every single space in the school is a comfortable place for children. Staircases, hallway, library, the terrace on the river side and the outside staircases were all carefully detailed.

02 Matsumura Masatsure, Hizuchi Elementary School, Yawatahama, Japan, 1958. Shortly after its construction. The right-hand building, the so-called "Middle Building", was constructed in 1956 and the left-hand building, the so-called "East Building", was constructed in 1958. © Architectural Institute Japan Shikoku Chapter / Former property of Matsumura family.



03 Matsumura Masatsure, Hizuchi Elementary School, Yawatahama, Japan, 1958. A suspended outdoor balcony and floating staircases protrude over the river. © Architectural Institute Japan Shikoku Chapter / Former property of Matsumura family, 1958.

Spatial embodiment of democratic thought of education
after World War 2 in Japan

Hizuchi Elementary School has neither an overbearing porch nor a symmetrical elevation. Children search out comfortable spaces by themselves and have a dialogue with others, themselves and the environment. Its delightful and liberal spatial atmosphere is a concrete example of democratic educational thought in post-war Japan.

Original interpretation of western modern architecture

The combination of horizontal continuous windows and gable roofs in Hizuchi Elementary School is unique because the horizontal continuous window is a symbol of the International Style and the gable roof is that of the local traditional architecture. This co-existence of internationality and locality is the essence of Hizuchi Elementary School and Matsumura's design. Modern architecture was brought into Japan from the West and entered the country in two phases. During the first phase, before the Second World War, the ideas of modern architecture were largely imported from Europe and followed the designs and ideas of the International Style. During the second phase, following the war, a new type of modern architecture began to emerge in Japan and evolved under master architects such as Jyunzo Sakakura, Kunio Maekawa and Kenzo Tange. Masatsune Matsumura, however, diverged from the mainstream ideas of his peers. But his distinctive interpretations might be characterized best as a localization of modern architecture rather than a wholesale importation.

These architectural lexicons or compositions are not something that was invented all in one step in the Hizuchi Elementary School. The cluster-style classroom arrangement and the two facade fenestration started out by being applied through small ingenuities to a common, one-sided hallway format, and the design evolved in an extremely analytical manner every time Matsumura worked on a new building. Detailed design was also continuously refined in response to experiments conducted at hospital-related facilities he designed in the Yawatahama Municipal Office at the time.

There is, however, no evidence of him having been bound by some type of ideology there either. Matsumura skillfully managed to use his knowledge and techniques from a variety of areas encompassing architectural planning, design, structure and environmental engineering. He simply turned his own philosophy concerning schools or architecture and furthermore, what public architecture should be like, into spaces. Hizuchi Elementary School is truly the culmination of Matsumura's philosophy in the Yawatahama Municipal Office.

Process of Restoration³

As stated above, Hizuchi Elementary School has both historical value and contemporary value. Therefore, we, consortium members, concluded that it should be restored and kept being used as an active school.

But having passed 50 years since completion, Hizuchi Elementary School was badly deteriorated. **docomomo**

Japan's selection was the beginning of the restoration efforts. Hizuchi Elementary School was selected as one of the twenty most representative modern buildings in Japan by **docomomo** Japan in 1999.

At first, we held several symposiums and a kind of summer school in Hizuchi Elementary School. At the summer school we gave classes regarding the school and modern architecture. But an unexpected incident happened in 2004. A strong typhoon heavily damaged the school.

After this typhoon, a two-year stalemate over whether to demolish and replace or preserve Hizuchi was resolved only after concerted city efforts and the creation of an architectural consortium planning group in 2006.

In 2006 a detailed survey of the then current situation was undertaken. Based on the result of this survey, the consortium developed a concrete plan for renovation. As a result, the school was meticulously restored from 2008 to 2009. Its basic principles are summarized in the following 7 points.

To restore the whole of the building to the original design,
respecting its value as a cultural property

Original materials were preserved where possible or replicated; 207 of 209 original wooden pillars were reused in the Middle Building; 252 of 253 original wooden pillars were reused in the East Building; about 50% of floor, wall and ceiling finishes were reused; about 90% of fittings were repaired and reused; paint colors were restored through paint scrapes; damaged tiles were reproduced using original molds.

To seismically retrofit to satisfy the current Building Standards Act
Seismic retrofitting was installed inside the walls, ceilings, and floors, so as to keep the building's value as a cultural property. The only structural elements added you can see are the double steel braces of the glass curtain wall in the East Building. But we could reduce damage to the cultural significance to a minimum here by keeping the same number of braces as before.

To restore original classrooms into specific rooms
and specific rooms into classrooms

In the East Building, accepting the demand of those who advocated demolition and replacement, original general classrooms were converted into rooms with specific uses, such as a home economics room, arts & craft room and music room. But damage to the cultural significance could be kept to a minimum in these instances by putting kitchen counters or desks on the floor of classrooms which were otherwise restored to their original state. In Middle Building, two functionally specific rooms were restored into two general classrooms and a corridor which leads to the new West Building.

To improve the student security

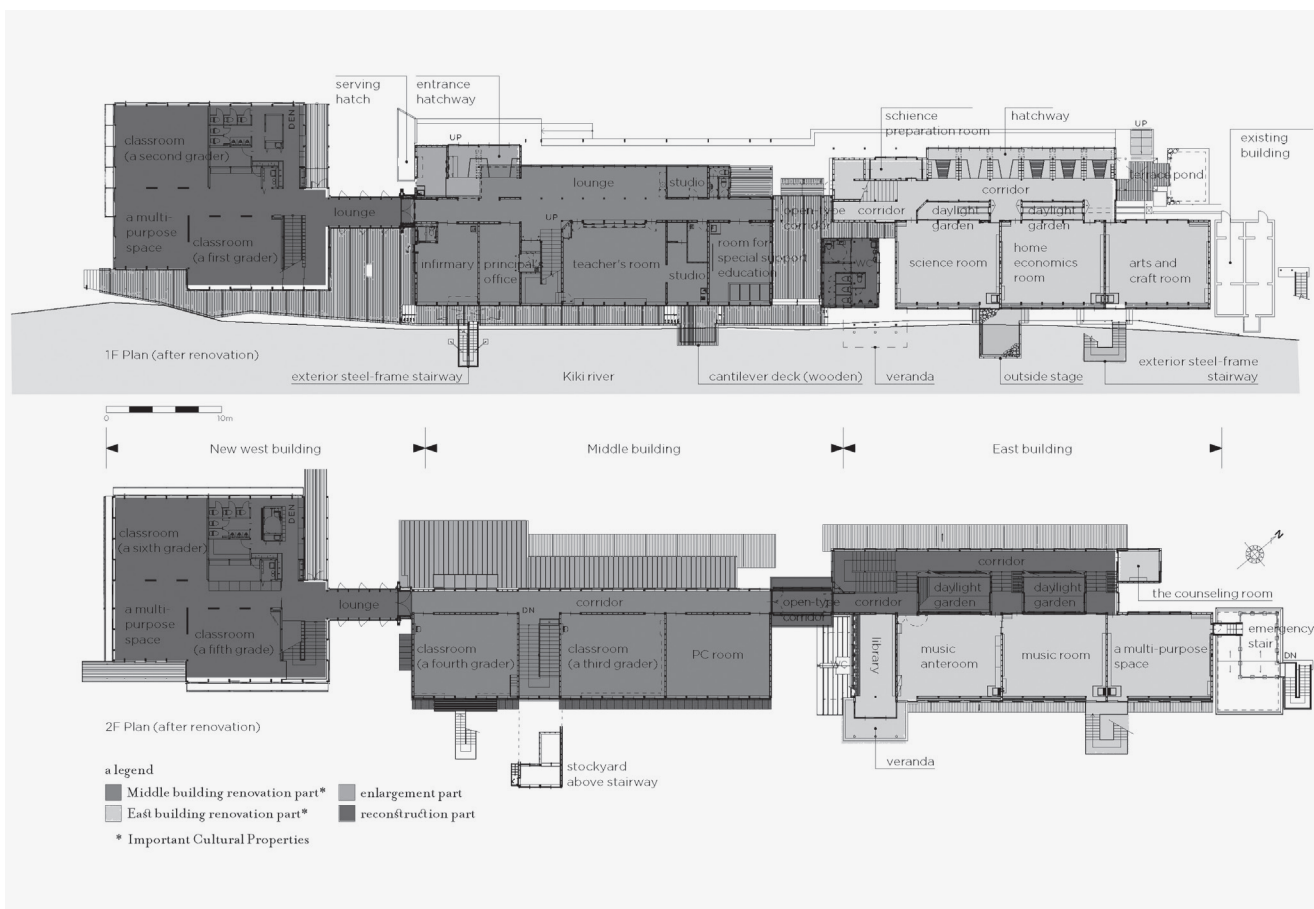
In the Middle Building, also responding to those who advocated demolition, the wall between teachers' room and the corridor was made more transparent for greater student security.



04 Matsumura Masatsune, Hizuchi Elementary School, Yawatahama, Japan, 1958. Roof of the corridor of the East Building was blown away by a typhoon in 2004.



05 Matsumura Masatsune, Hizuchi Elementary School, Yawatahama, Japan, 1958. Restoration work in progress. Timber structures were strengthened to meet the earthquake resistance requirements under the current Building Standard Act. © Yoshiaki Hanada, 2008.



06 Matsumura Masatsune, Hizuchi Elementary School, Yawatahama, Japan, 1958. Ground floor plan (above) and first floor plan (below) after renovation. New West wing, Middle Building and East Building from the left. © Board of education of Yawatahama City.



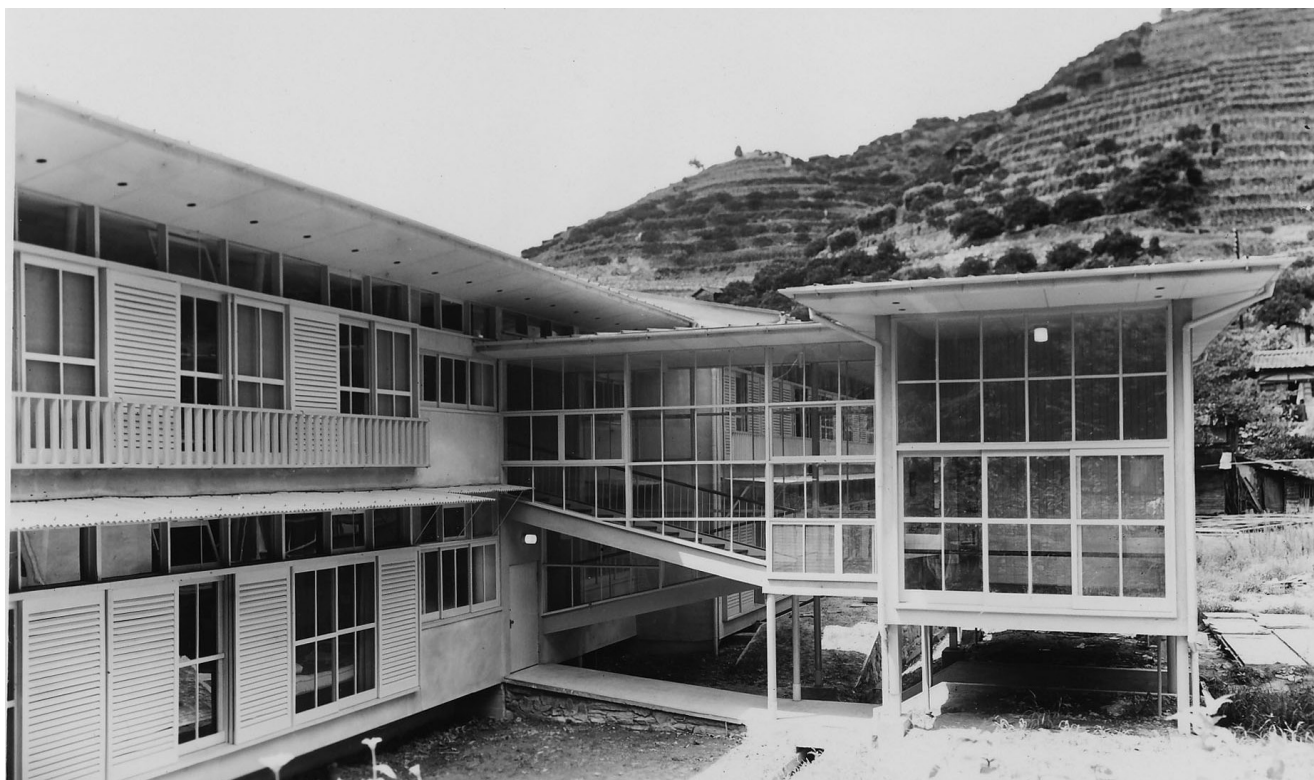
07 Matsumura Masatsune, Hizuchi Elementary School, Yawatahama, Japan, 1958. General view from north after renovation. East Building, Middle Building and New West wing from the left. They are in harmony with each other and the surrounding landscape. © Architectural Institute Japan Shikoku Chapter, Toru Kitamura, 2009.



08 Matsumura Masatsune, Hizuchi Elementary School, Yawatahama, Japan, 1958. Entrance hall returned to the original design with the restoration of the luminous ceiling. © Architectural Institute Japan Shikoku Chapter, Toru Kitamura, 2009.



09 Matsumura Masatsune, Hizuchi Elementary School, Yawatahama, Japan, 1958. Library after renovation. The interesting design combines Japanese and Western architectural elements including paper-paneled sliding doors, hand-adzed beams, ceiling covered with silver-colored paper, and unpainted columns looking like Japanese-type alcove posts. The bookshelves and furniture, too, were designed by Matsumura. The constellation depicted with sliced bamboo rings decorates the walls over the bookshelves. © Architectural Institute Japan Shikoku Chapter, 2012.



10 Matsumura Masatsune, Tuberculosis Ward of Yawatahama City General Hospital, 1953. Matsumura designed many hospital related facilities in the Yawatahama municipal office. Their design was characterized by large openings, shading eaves, hopper windows, hybrid structure of timber and steel, carefully selected furniture and partition details, and pastel coloring. They reflect Matsumura's concept of modern living. © Architectural Institute Japan Shikoku Chapter / Former property of Matsumura family.

To improve the functional performance
To secure the environment for continuous use of the building, the functional performance of the building also had to be improved, including modern toilets and sound insulated floors.

To build a new classroom wing
to create four additional classrooms

To make four additional classrooms, a new west wing was built. It was a big challenge to design a new building next to Matsumura's masterpiece. We designed the "complex and contradiction" relation between the new building and the existing East and Middle Buildings, transforming the architectural vocabularies abstracted only from the existing buildings. That is, we maintained many of the hallmark features of the original buildings, primarily the timber architecture, abundant natural light, and harmony with the river.

Hizuchi Elementary School as a Carrying Device of Memory

The space of the rejuvenated Hizuchi Elementary School is filled with a specific atmosphere. I think it can be explained from the viewpoint of time. For example, in the East Building, putting furniture temporarily in the original space, "past" and "present" are coexisting, but in terms of architectural elements, the percentage of "past" is higher than "present". Meanwhile, in the Middle Building, remodeling many places to satisfy new functions, "present" and "past" are coexisting, but in this case the percentage of "present" is

higher than "past". Also, in the West Building, incorporating "past" into "future" like DNA, "future" and "past" are coexisting, but the percentage of "future" is higher than "past". In this way, it has become possible for plural time periods to coexist in the space of the school. Consequently the Hizuchi Elementary School has become a carrying device of memory inherited by children, their parents, teachers and local people who had spent time there.

The rejuvenated Hizuchi Elementary School has begun its new life as a school loved by children, blending harmoniously with the local community and the environment, as Matsumura Masatsune hoped. ■

Notes

- 1 For more details about Masatsune Matsumura, please refer to Yoshiaki Hanada, *Architect MATSUMURA MASATSUNE and Another Modernism*, Kajima Institute Publishing Co., Ltd, 2011.
- 2 Hiroyuki Suzuki, former Chair of **docomomo** Japan, passed away on February 2, 2014. I along with all other members of the Consortium wish to convey our deepest condolences.
- 3 You can see many photos of rejuvenated Hizuchi Elementary School on the web site of *World Monuments Fund* and its video on YouTube [<https://www.youtube.com/watch?v=NdrXMBYdyul>].

Yoshiaki Hanada

(b. Ehime Pref., Japan, 1956). Dr. of Engineering, University of Tokyo. Professor of Environmental Design at Kobe Design University. Expert in architectural theory and history of modern architecture. Yoshiaki Hanada has made a wide and deep research on Masatsune Matsumura and his works since 1994, which contributed to obtain precise images of the original design of Hizuchi Elementary School in its conservation and renovation project.



Luis Barragán, *Casa Barragán*, Pedregal, México, 1950. Restoration by Jorge Covarrubias and Benjamín González Henze, 2014. Facade to the garden. © Louise Noelle, 2014.

Luis Barragán's House in Pedregal A Successful Restoration

BY LOUISE NOELLE

Luis Barragán (1902–1988) produced few works in his prime, among which, other than his own house, in the *Jardines de Pedregal* only the *Casa Prieto López* (1950) has been preserved intact. It was successfully restored when Cesar Cervantes purchased it in early 2014 and hired architects Jorge Covarrubias and Benjamín González Henze. After extensive research, the architects, respecting the context and simplicity of design, eliminated additions and carefully conserved architectural details and furnishings; the color of the walls was restored based on stratigraphic findings that revealed surprising tones very different from the traditional Mexican palette.

The work of Luis Barragán (1902–1988)¹ has acquired great importance in spite of the small number of projects he produced in his prime — a dozen, mostly residences —, but the fact that his own house (1948–1949) has been declared a World Heritage Site by UNESCO² supports this contention. Much has been written about this period of Barragán's life and the great richness of expression in his work, from mysticism to the reclamation of that which is Mexican, thus engendering the birth of a new architectural language. Suffice it to mention some of its characteristics such as an exploration of vernacular roots; affirmation of the emotional; the search for the mystical and aesthetic; the exaltation of beauty and harmony with nature which is translated into massive structures, thick walls with small openings; a usage of local materials with textures and bold colors; the dosing and extolling of light; an expressive employment of water; and an emphasis on landscaping.

In his life's work we also find a tendency toward the field of urban and landscape architecture. In particular, we refer to the *Jardines del Pedregal de San Angel*, a development that he started in 1945, which marks a milestone in his professional development with a new concept of the urban in Mexico³. His landscaping work, which was widely influential, is epitomized in the "Showcase Garden"⁴, designed around a large pond that featured an unusual rock formation; the idea was to highlight the special characteristics of the site with endemic and local plants.

Barragán produced a number of works in the area, such as two showcase houses, in collaboration with Max Cetto, which have since been altered. There were also others, such as the transformation of an existing structure into a private home with a large surrounding garden, but that too has been lost. Therefore, the residence that Barragán built for Eduardo Prieto López in 1951 and its successful restoration has special importance⁵. This house was purchased at the beginning of 2014 by the entrepreneur Cesar Cervantes,

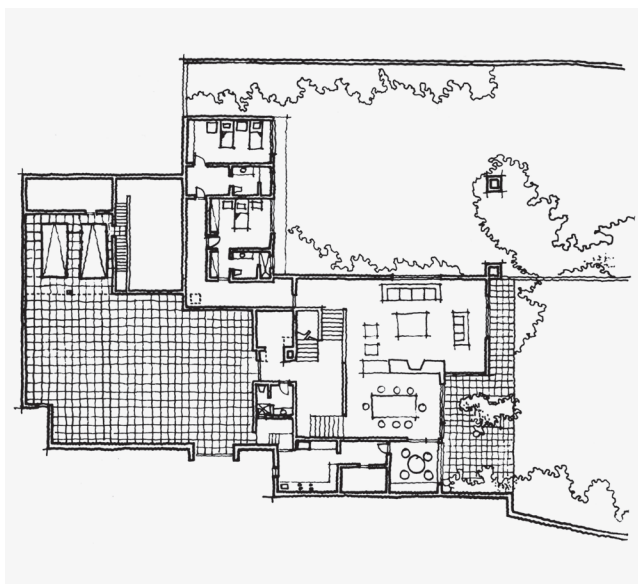
who undertook the task of restoration with the architects Jorge Covarrubias and Benjamin Gonzales Henze of the architectural firm *Parque Humano*⁶.

The Casa Prieto López

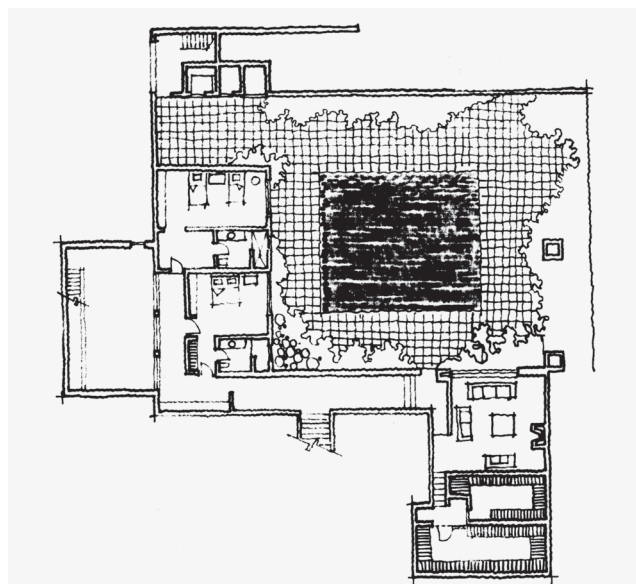
The building known as *Casa Prieto López*, which in deference to the new owner we can also call *Casa Pedregal*, represents a process of aesthetic and emotional experimentation which the architects sought to recover⁷. This home, which was conceived based on the requirements of a client with a large family, emphasized the idea of adapting the structure to the land, particularly taking into account the force of volcanic rock. The design, in spite of its simplicity, belies the fact that we are dealing with dwelling spaces for a wealthy family, with ample and spacious common areas which are respected and emphasized.

Here it is necessary to underscore the theme of color and its embodiment in the work of this singular artist, who gave special attention to the surface finish and the selection of hues. It must be remembered that most of modern architecture practically excluded the use of color. In the case of Barragán, much has been said about rescuing colorful popular architecture, in conjunction with and influenced by Jesus Reyes Ferreira⁸. This antiquarian and self-taught painter on various occasions collaborated as a color consultant. However, it is also necessary to note the friendship and consequent influence of other artists such as Josef Albers, whose treatise *Interaction of Colors* we find in Barragán's library, as well as one of his "square" paintings⁹.

Finally, it is indispensable to note that this architect, from his earliest projects in Guadalajara, always paid special attention to the plaster or whitewash that covers the walls¹⁰, and furthermore, he always tried to apply lime-based paint, and only with the passage of time did he begin to use commercial color materials. Furthermore, it is known that in order to decide what color to apply to any given wall,



01 Luis Barragán, *Casa Pietro Lopez*, Pedregal, Mexico, 1950. Plan, main floor. Drawing by Claudia Mereles, from the book: Louise Noelle, *Luis Barragán, Búsqueda y Creatividad*, UNAM, México, 1996.



02 Luis Barragán, *Casa Pietro Lopez*, Pedregal, Mexico, 1950. Plan, lower floor. Drawing by Claudia Mereles, from the book: Louise Noelle, *Luis Barragán, Búsqueda y Creatividad*, UNAM, México, 1996.

he would have it painted in its entirety in order to be able to make a decision with certainty, sometimes changing the tone before reaching a final color¹¹. These changes made by the architect, along with the chromatic variations caused by sun and rain, make it difficult to determine the original color in a stratigraphic study¹². However, in the case of the *Casa Pedregal*, it seems that there were not many tonal permutations, so that in all instances the architects were able to follow the evidence revealed by the analysis and thus recover the surprising original shades.

The Restoration Works

The architects Jorge Covarrubias and Benjamin Gonzales Henze engaged in preparatory research work in May 2014. On the one hand, they studied various publications and photographs from the 1950s, seeking to understand the spirit of the work by Barragán at that time; in addition, they visited the Barragán Foundation in Birsfelden, Switzerland in order to examine photographs and other documents about the former *Casa Prieto López*, and to substantiate various decisions.

As they started on-site work, they carefully analyzed how to eliminate some latter additions, in particular the one to the household entry; finally they decided to reconstruct it in a manner most closely resembling the original design in both structure and coloring. The elongated window by the main entrance recovered its original shape, reclaiming also the illumination in the vestibule, with a very dramatic effect. I has to be added that for the original designer it is of utmost meaning the play of light in the interior spaces and walls; for this the restaurateurs observed with exceptional care the original graphic materials, to convey the same meaning to the light, its effect, as well as with the artificial illumination.

At this time their research also led to the discovery of a system of proportion, constant in Barragán's design that is

used throughout this house; the module employed corresponds to squares and rectangles organized in the ratio of 4 by 3, which conveys a balanced and orderly structure, where the walls and openings have a poised organization and, furthermore, where the play of inside light can reach its maximum effect. This breakthrough helped the architects in taking many decisions in the restoration process.

In addition, the care invested by Barragán in the solution of various architectural details was taken into consideration by the architects of *Parque Humano*, following as much as possible his diverse solutions. Thus they retained the original furnishings, some designed by Clara Porset¹³, but the interior spaces regained the purity and starkness of the first times.

Indeed, the simplicity, both spatial as well as in terms of adornment of those spaces, noticeable in the 1950s photographs of Armando Salas Portugal, has been recovered; but probably the replacement of the lost colors, both interior and exterior, is the most striking aspect. It is not only the visual and sensory impression that these colors give us, but the realization that in this case, traditional Mexican colors are not used; on the contrary, I dare to propose that that we are dealing with a range of tones and shades emanating from a Renaissance spirit. To this we add a particular attention to the conservation of the plaster — by simply removing the various layers of paint the original texture is restored.

Also various elements such as wardrobes and chests, were kept in the original format, and the new ones followed in their design. Finally the ironwork of the outside doors and windows was kept, avoiding the use of materials as aluminum, to preserve the integrity of the original design. It is interesting to underline that in the family room adjacent to the swimming pool, the exterior volcanic formation continues inside; this piece of lava so dear to Barragán, was discovered behind a false wall and left untouched, as an homage of the designer of these rocky landscapes.



03 Luis Barragán, *Casa Pietro Lopez*, Pedregal, Mexico, 1950. Restoration by Jorge Covarrubias and Benjamín González Henze, 2014. View from the poolside during restoration. © Archive *Parque Humano*, 2014.



04 Luis Barragán, *Casa Pietro Lopez*, Pedregal, Mexico, 1950. Restoration by Jorge Covarrubias and Benjamín González Henze, 2014. Pool and back facade. © Louise Noelle, 2014.



05 Luis Barragán, *Casa Pietro Lopez*, Pedregal, Mexico, 1950. Restoration by Jorge Covarrubias and Benjamín González Henze, 2014. Living room and dining room. © Archive *Parque Humano*, 2014.

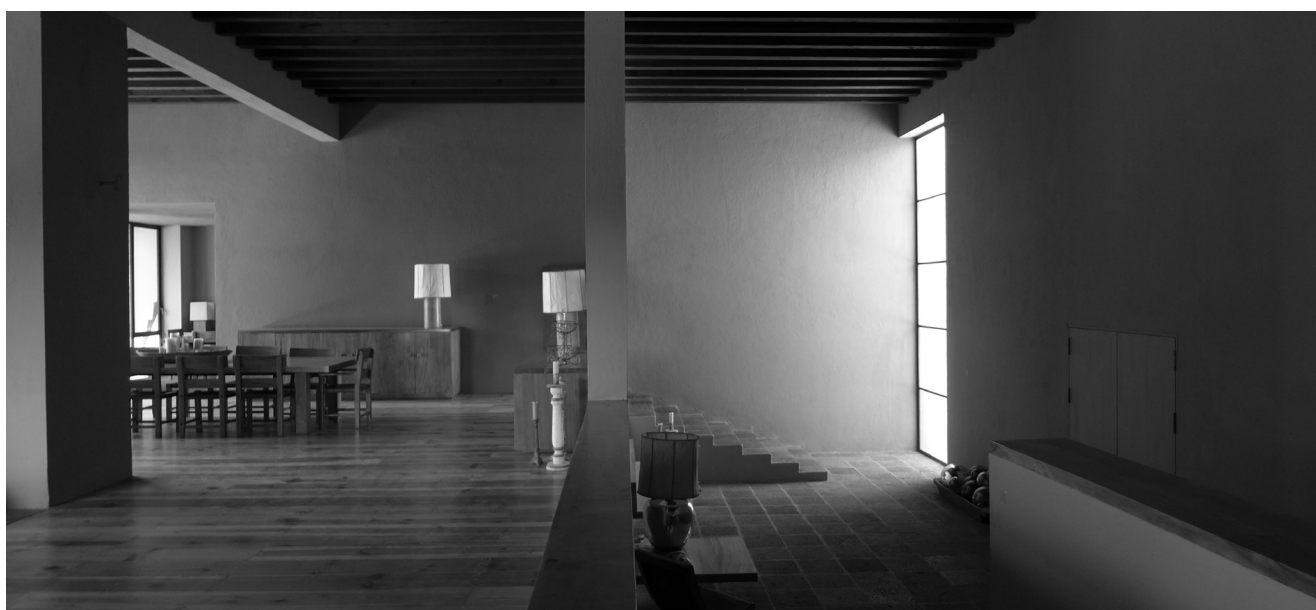


06 Luis Barragán, *Casa Pietro Lopez*, Pedregal, Mexico, 1950. Restoration by Jorge Covarrubias and Benjamín González Henze, 2014. Family room with the rock that continues from outside. © Archive *Parque Humano*, 2014.



07 Luis Barragán, *Casa Pietro Lopez*, Pedregal, Mexico, 1950. © Photo by Armando Salas Portugal from the book: *Barragán. Obra Completa*, Tanais Ediciones, Madrid, 1995.

08 Luis Barragán, *Casa Pietro Lopez*, Pedregal, Mexico, 1950. Restoration by Jorge Covarrubias and Benjamín González Henze, 2014. Main entrance. © Archive *Parque Humano*, 2014.



09 Luis Barragán, *Casa Pietro Lopez*, Pedregal, Mexico, 1950. Restoration by Jorge Covarrubias and Benjamín González Henze, 2014. The access. © Archive *Parque Humano*, 2014.



10 Luis Barragán, *Casa Pietro Lopez*, Pedregal, Mexico, 1950. Restoration by Jorge Covarrubias and Benjamín González Henze, 2014. View from the garden, with a stratigraphic evidence. © Archive *Parque Humano*, 2014.



11 Luis Barragán, *Casa Pietro Lopez*, Pedregal, Mexico, 1950. Restoration by Jorge Covarrubias and Benjamín González Henze, 2014. Facade to the garden. © Louise Noelle, 2014.

Of special note is the swimming pool, which was rebuilt close to its original size after it had been reduced when the first owner divided and alienated part of a very large garden; the same colored cement with which the pool was originally covered was also replaced. In this sense, the recovery of the finish and color of the swimming pool is not only a major accomplishment, it also provides a special meaning to the element of water, knowing how much it fascinated Barragán.

It is necessary to add that a restoration work with this quality and precision, owes not only to the careful intervention of Covarrubias and González Henze, but to the privilege they had in being able to rely on an excellent, conscientious and accountable team of workers, including masons, carpenters, blacksmiths and painters. These builders had been part of former teams that had worked for Legorreta + Legorreta, and in some cases even with Barragán himself. One can say that they are workmen faithful to the tradition of craftsmanship in building, with a longstanding wisdom and knowledge that allowed the architects to achieve a recuperation of the house to its original condition and liveliness¹⁴.

It is then appropriate to recall the *Nara Document on Authenticity* (1994) that calls upon the values attributed to the cultural diversity and their appropriate conservation; in this case, not only the house continues with its original use, reinforcing the meaning of its domestic vocation; also, the conservation works took into account the material elements, but it also contemplated the spiritual and local components, studying the architecture and the ideas of Barragán, to take informed decisions to achieve a comprehensive result.

In short, we can say that this renovation, that concluded in November 2014, was a felicitous intervention in one of the paradigmatic houses of the *Jardines del Pedregal de San Angel* and the work of Luis Barragán. This exemplary work of architectural modernity is combined with a language that revitalizes the vernacular in a personal quest for the emotional and spiritual. In this instance, both the architects and client were aware of these circumstances and have achieved a full and exciting recovery of the dwelling spaces worthy of commendation. ■

Notes

- 1 See, among others, Barragán. *Obra Completa*, Tanais Ediciones, Madrid, 1995; Louise Noelle, *Luis Barragán, Búsqueda y Creatividad*, Mexico, UNAM, 1996; Antonio Riggen Martínez, *Luis Barragán. Mexico's Modern Master, 1902–1988*, New York, The Monacelli Press, 1996; and *Luis Barragán: The Quiet Revolution*, Milano, Skira, Editora Federica Zanco, 2001.
- 2 In July, 2004.
- 3 Keith L. Eggner, *Luis Barragán's Gardens of El Pedregal*, New York, Princeton Architectural Press, 2001.
- 4 This garden, originally property of Jose Topete, was subdivided and lost.
- 5 The restoration work was approved by the Office of Architecture of the National Fine Arts Institute (*Dirección de Arquitectura y Conservación del Patrimonio Inmueble, of the INBA*), the institution in charge of safeguarding our 20th century heritage.
- 6 Jorge Covarrubias, with Benjamin Gonzales Henze, is the founder of the architectural firm Parque Humano. Among their various projects it is important to mention the design of the museum exhibit "Luis Barragán: The Silent Revolution" in 2002.
- 7 To write this article, I visited the Casa Pedregal on November 19, 2014, and interviewed the architects on January 12, 2015.
- 8 Jesús "Chucho" Reyes Ferreira, 1882–1977; see Lily S. de Kassner, *Jesús Reyes Ferreira. Su Universo Pictórico*, Mexico, UNAM, 1978.
- 9 See a thank-you note to Joseph Albers from Luis Barragán for this painting in Antonio Riggen, *Luis Barragán. Escritos y Conversaciones*, El Escorial, El Croquis Editorial, 2000.
- 10 The worker who did this type of finishing work in Mexico City was known as "maestro pianito" and Barragán always trusted in him.
- 11 See Paolo Mora, Laura Mora y Paul Philippot, *Conservation of Wall Paintings*, London, Butterworth-ICROM, 1984 on the subject of these types of applications and materials, as well as the studies to determine the original colors.
- 12 See Louise Noelle, "The Public Spaces of Luis Barragán: Losses and Recovery", *Restoring Postwar Heritage*, New York, **docomomo** US, 2008.
- 13 See Louise Noelle, "Clara Porset, A Modern Designer for Mexico", **docomomo** Journal, No 46, Barcelona, 2012.
- 14 Interview of January 12, 2015.

Louise Noelle

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Gérard Notebaert, Church Sainte-Germaine-Cousin, Montreal, 1960–1962. The church as seen in 2008, surrounded by a security perimeter, awaiting a new use. © Marie-Dina Salvione, 2008.

Conversion of the Church of *Sainte-Germaine-Cousin* Reaching out to the Community

BY MARIE-DINA SALVIONE

This essay synthesizes a serious concern related to built ecclesiastical heritage in Quebec. Most of all, it intends to present the recent conversion of the church of *Sainte-Germaine-Cousin* in Montreal, built between 1960 and 1962 by architect Gérard Notebaert into a community center related to social housing and child care. Today, after a decade and as the project is nearly complete, it recounts a modern heritage tale that led to an exceptional outcome from social and cultural perspectives and, of course, from an architectural angle. On a larger scale, this project responded sensitively to fundamental issues by creating awareness and a sense of belonging toward modern built heritage.

What happens when churches are closed? In Quebec this has been a matter of serious concern in the last decades. According to the *Conseil du Patrimoine Religieux du Québec* (CPRQ)¹, the facts are indeed alarming. The situation is rapidly deteriorating, as more ecclesiastical buildings are either closed, sold, or demolished. A recent survey by that organization² revealed the mounting difficulty of finding a new life for these places of worship that are closing at an increasing speed.

These statistics represent a real challenge for built heritage, be it ancient or modern. Still, since the years following World War 2, modern church architecture has been one of the most important typologies in the province of Quebec, both in number and quality. From an inventory of 2,751 buildings of worship across Quebec (2003)³, the CPRQ identified that 1070 (39%) were built between 1945 and 1975. In 2013, according to their statistics, 209 of these modern places of worship have been closed and are awaiting a new community, cultural, or residential use, or even demolition.

As in all of occidental culture during the liturgical renewal period, church commissions were considered as structural, material, and artistic laboratories and were highly prized by architects. In some parts of the province, in the *Saguenay-Lac-Saint-Jean* region for instance, some of the concrete slabs and paraboloid buildings were considered most innovative and earned the characteristic title of *églises blanches*. Nevertheless, although closely related to the parish's health, these buildings are in a precarious condition⁴. Most importantly, their distinctive architecture leads to specific conservation issues related to their formal and aesthetic qualities. Structural expression, spatiality, and natural lighting are some of the attributes that must be recognized and preserved in order to sustain an architectural memory of these exceptional buildings. This statement might seem obvious in restoration cases, but how can intrinsic

architectural qualities that characterize church architecture be preserved and conjured up in a reuse project? From a sociological point of view, these churches represent significant landmarks for the community and benefit from a strong sense of belonging. They should remain part of a lively social environment, and a founding place of the neighborhood. An exemplary church conversion project should therefore consider the needs of the community, the financial possibilities, and the architectural constraints brought by the particular typology of modern churches.

The purpose of this article is to present the recent conversion of the church of *Sainte-Germaine-Cousin* in Montreal. This whole project was led by three community-based companies: Construction Mainbourg, Rayside Labossière architectes, and *Bâtir son Quartier*. In addition, seven organizations and citizens concerned with the development of the district and the historical value of the existing church joined that committee. As this project is almost completed, after almost a decade, this article wishes to salute the rare attitude of the protagonists of the whole project that resulted in an exceptional outcome from social and cultural points of view, and of course from an architectural perspective.

The *Sainte-Germaine-Cousin* conversion project integrated the consensual work of all the parties in order to respect the heritage value of a significant building for the neighborhood as well as the province's built heritage. Ecological concerns were also central to this project. Finally, it cherishes the social and cultural values of this lively neighborhood.

The Church

The church of *Sainte-Germaine-Cousin* was erected in *Pointe-aux-Trembles*, an east-end district of the city of Montreal that experienced a rapid urban development period, starting in 1950. The parish was founded in response to that expansion. The church was designed and built between 1960 and 1962 by architect Gerard Notebaert (1927–1979), who

realized four other churches in the province of Quebec, including the *Christ-Roi Cathedral* in Gaspé (1968–1969), added in 2012 to the *Built Heritage List* by the *Ministère de la Culture du Québec*.

The church of *Sainte-Germaine-Cousin* stands out both technically and aesthetically in the architectural production of the liturgical renewal period in Quebec. Its striking shape makes it a rare example of the *Églises Blanches* movement in Montreal. The building is clearly outstanding because of its monumental size and shape which recall both St. Mary's cathedrals: Kenzo Tange's in Tokyo (1961–1964) and Pietro Belluschi's in San Francisco (1963–1970).

The church building suggests paraboloid forms but is the result of the combination of two simple volumes: a square-based pyramid and a Greek cross crowned with a cylindrical bell tower. At the time, this volumetric proposal was unique in Montreal. The church is implanted obliquely on the lot and was originally continued by the lower building of the presbytery.

The main volume of the church is surrounded by a circular brick wall that creates a quiet space between the building and the busy *Notre-Dame Street*. From the outside, the volume of the church seems opaque and monolithic, although the inside used to be very open and luminous. The soaring vault is 17 metres high. It is formed by continuous reinforced concrete slabs and raised 3.50 metres from the floor. This opening was entirely infilled with clear windows that opened the view on the intramural garden and provided the nave with an introspective quality. The main volume covered the central space while the Greek cross traced the principal axis of the centered-plan nave and also provided striking natural lighting that punctuated the axi-ality. Zenithal light penetrated from twelve round skylights that were distributed on the arms of the cross, while warm colored daylight was provided by stained glass that infilled its vertical ends.

Twelve round columns punctuated the perimeter of the church. Structurally they supported part of the base volume, but the main support came from the sidewalls of the Greek cross. All the concrete slabs of the church were 20 cm thick and the walls were coated with asbestos insulation, as was the custom at that time. The interior plan had two brick walls (which echoed the one at the exterior). They enclosed the sanctuary, containing the tabernacle and the bible. Combined with the angle of the slabs, they delimited the chapel and baptistery, creating lower and more intimate spaces. Finally, all the timber furniture was conceived by Notebaert.

Preservation

The church *Sainte-Germaine-Cousin* was closed in March 2004 due to a decrease in the congregation, the presence of asbestos, and the Parish's inability to absorb the maintenance costs of the building. During the first years following its permanent closure, the church was vandalized and its organ and original furniture plundered. After two arsons, it was barricaded and surrounded by a security perimeter. In 2005 the investors presented a new building project

that included the maintenance of the parish hall and the demolition of the church. The investors applied to the municipality for a demolition permit. This motion rapidly alarmed preservation groups as well as the city's heritage authorities⁵ and closer attention was paid to the patrimonial study of the building and its surroundings⁶. The demolition permit was denied due to the patrimonial interest of the church. The ensuing project propositions thus had to take the existing building in consideration.

Stakeholders

As the heritage process imposed many modifications to the project and numerous delays, the investors showed patience, creativity, and respect towards the existing church. Corporation Mainbourg, *Bâtir son Quartier*, and Rayside Labossière architectes mainly invested in the *Sainte-Germaine-Cousin*'s project. Corporation Mainbourg acted as the promoter and was also very much involved in the development of the district; *Bâtir son Quartier* coordinated the implementation project; and Rayside Labossière was greatly involved from the very beginning in all aspects of the project and mostly in the architectural conception. This agency is dedicated to social sustainable architecture. Founded in 2000, the multidisciplinary team now employs 40 specialists in architecture, design, built heritage, and urbanism that aim to promote social and community development. The group is committed to community networks and creates numerous projects for underprivileged populations. Among them many were conceived to reuse closed ancient and modern churches. The *Chic Resto Pop*⁷ in Montreal is one of these original conversions. Since 2011, it has occupied the reused *Saint-Matbias* modern church. The community kitchen is installed in the basement while the former nave constitutes the open and luminous dining hall.

Back to the Project

The project of *Sainte-Germaine-Cousin* was intended as a multigenerational environment that brings community support to its inhabitants. Social dwellings for the elderly and the disabled were to be located in a new building, while the existing church would accommodate a day-care centre for 80 children as well as community spaces.

Between 2007 and 2009 two projects were proposed to the many stakeholders involved in the project⁸, but no consensus was reached. Both proposals included two or more buildings that surrounded the church and increased the density of the site. Therefore, in 2009, a design *charrette* was organized and grouped all the participants, from which the idea of the actual main building emerged: its S-shape would integrate the church rather than conceal it and would not divide the lot.

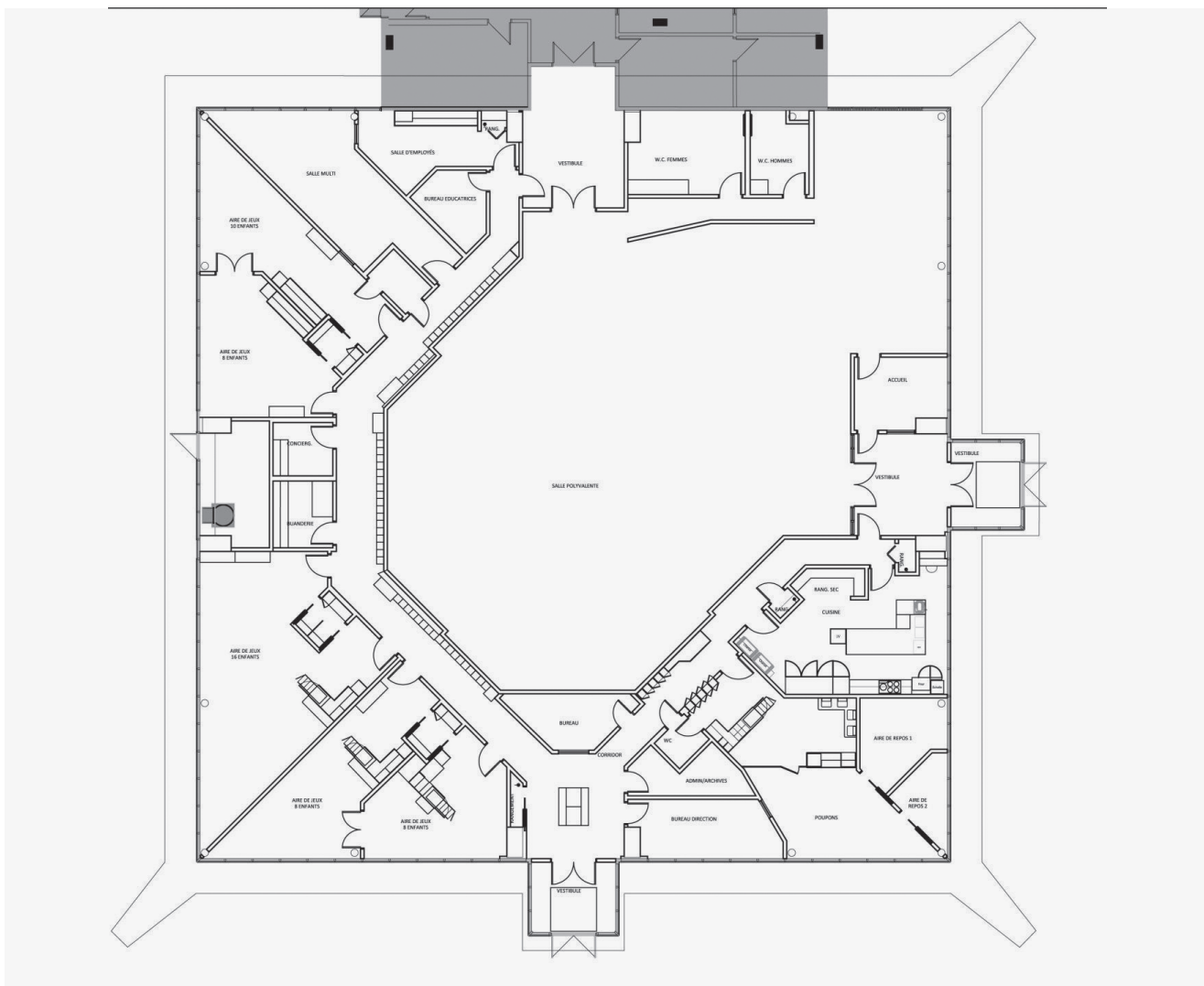
Meanwhile, between 2009 and 2011, due to the delay required for heritage designation, the project was suspended. Nonetheless, no time was lost as during this delay, the investors met with an *ad hoc* committee⁹ and identified the main directions to consider for the project¹⁰ regarding the heritage designation. Firstly the church restoration had to be achieved before or during the project. Secondly, the



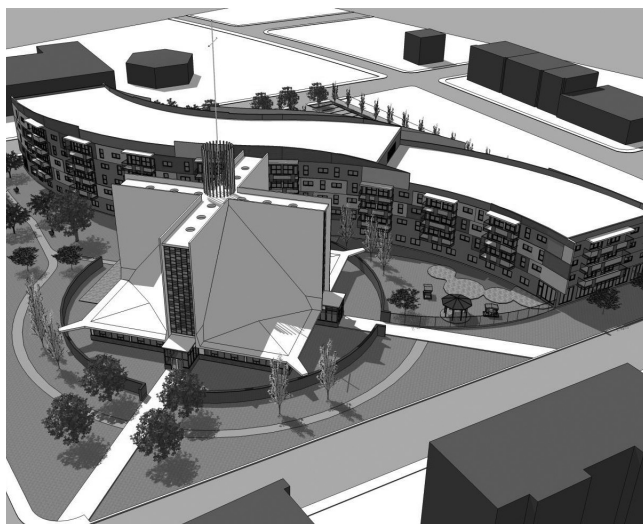
01 Gérard Notebaert, Church *Sainte-Germaine-Cousin*, Montreal, 1960–1962. View of the church interior. © Conseil du Patrimoine Religieux du Québec, 2003.



02 Rayside Labossière Architectes, Chic Resto Pop (former Saint-Mathias church), Montréal, 2001–2013. View of the dinner hall. © Saul Rosales, Rayside Labossière Architectes, 2013.



03 Gérard Notebaert, Church *Sainte-Germaine-Cousin*, Montreal, 1960–1962. Plan of the reuse project of the church building as a daycare center. © Rayside Labossière Architectes, 2014.



04 Rayside Labossière Architectes, *Sainte-Germaine-Cousin* dwellings, Montreal, 2005-2014. Rendering of the project. © Rayside Labossière architectes, 2014.



05 Gérard Notebaert, Church *Sainte-Germaine-Cousin*, Montreal, 1960-1962 and Rayside Labossière Architectes, *Sainte-Germaine-Cousin* dwellings, Montreal, 2005-2014. Outside view of the building site as the new building is almost completed. © Saul Rosales, Rayside Labossière Architectes, 2014.

characteristic elements that embodied the heritage value of the built ensemble had to be considered. Therefore, the project had to respect a *non-aedificandi* zone around the church, mostly on the front part of the site. The new buildings could not exceed five stories in height to maintain the predominance of the church volume as well as its formal and material characteristics. The new project had to be integrated in the diagonal implantation of the site, it had to preserve the mature trees and original landscaping, and finally improve the open spaces on the front part of the lot (toward *Notre-Dame* Street) in order to increase its value.

In the spring of 2012, the project officially started with the decontamination of the site and demolition of certain components of the church: the presbytery and the circular church hall. The construction phase started in December 2012 and, two years later, the first residents moved into their new apartments. The four-story building has a timber rooftop terrace. It comprises 126 adapted apartments, 48 rooms, common spaces, and offices. It connects with the church, which for the moment has been decontaminated, restored, and adapted to its new vocation. The asbestos was entirely removed and a technical floor created to hide the mechanical components in order to preserve the purity of the central vault.

Among the challenges, the architects had to combine the new usage with the existing structure of the church. This was realized by planning the day-care spaces in playful volumes that occupy the circumference of the nave, leaving the centre open for a multifunctional space.

All this time, the main attitude of the *Sainte-Germaine-Cousin* project has been to find creative and simple architectural solutions to face and overcome the technical and financial constraints. During the building project, a website was created to inform the public about the development¹. This innovative and rare attitude helped create a link between citizens (be they new residents or old

residents of the parish concerned about their living environment) and modern heritage experts. The website gives information, provides many original documents regarding the church and the actual project (heritage study, news articles, designation act, etc.), but most of all, it follows the project both through images and articles that use accessible language and define the technical terms when necessary. Our personal favorite: a chapter dedicated to explain the removal of asbestos as it is notorious for being the actual massive argument to justify the demolition of modern buildings. Since the investors had to incur extra costs for the removal of this demonized material, they decided to simply reach toward the community and explain what it was all about, from the description of the material, its common usage in the architecture of the 1950s through the 1970s, and finally the description of the main steps of this delicate task.

Conclusion

From our point of view, the *Sainte-Germaine-Cousin* project responds to fundamental issues of preservation. Among technical considerations, it promotes the acceptance and awareness of modern architecture among citizens and experts. It also values the reuse of architecture as a responsible contemporary approach. In the longer term, it will be interesting to observe how this new project will be adopted and appropriated by its residents. Hopefully this positive process will inspire others and be copied as a good example of sustainable architecture with a cultural twist. Finally, this project responds sensitively to the issue of closing churches by handing over these central buildings to their community. ■

Notes

- 1 The CPRQ is a not-for-profit organization which supports and promotes the preservation of the built ecclesiastical heritage at the provincial level.
- 2 Conseil du Patrimoine Religieux du Québec, "Situation des lieux de culte en



06 Gérard Notebaert, Church *Sainte-Germaine-Cousin*, Montreal, 1960–1962. View of the church's interior while the asbestos removal. © Saul Rosales, Rayside Labossière Architectes, 2014.

- mutation au Québec,” 2014, [www.patrimoine-religieux.qc.ca/fichiers/FIC141107122812_communique.pdf], consulted on January 8, 2015.
- 3 Conseil du Patrimoine Religieux du Québec, “Inventaire des lieux de culte du Québec”, 2003 [www.patrimoine-religieux.qc.ca] [January 8, 2015].
- 4 Marie-Dina Salvione, “Trop tard pour Notre-Dame-de-Fatima?”, *Architecture Moderne au Québec et Ailleurs*, **docomomo** Québec, 2014 [docomomoquebec.ca/patrimoine-menace/170-trop-tard-pour-notre-dame-de-fatima-.html] [January 8, 2015].
- 5 These groups were: Conseil du Patrimoine Religieux du Québec, *Atelier d'Histoire de Pointe-aux-Trembles*, **docomomo** Québec, DESS Architecture Moderne et Patrimoine of the Université du Québec à Montréal, and Conseil du Patrimoine de Montréal.
- 6 Éric Millette (Con_text_ure), *Étude d'Intérêt Patrimonial. Église Sainte-Germaine-Cousin*, presented to the Sainte-Germaine-Cousin Parish, December 13, 2005.
- 7 This integration and social economy organization has been established since 1989 in the Hochelaga-Maisonneuve district in Montréal. In addition to offering affordable meals to more than 1300 persons every day, the Chic Resto Pop helps both the unemployed to integrate into the labor market, and society through a variety of training services and employability development activities.
- 8 The future owners, the Archbishop, the District or the Division of Housing of the city center.
- 9 This ad hoc committee gathered people from the Direction de l'Habitation, the Bureau du patrimoine de la toponymie et de l'expertise de la ville de Montréal, Corporation Mainbourg, Ron Rayside architecte, the Archbishop of Montréal, and the *Atelier d'histoire de Pointe-aux-Trembles*.
- 10 Marie Lessard (ed.), *Avis Conjoint du Conseil du Patrimoine de Montréal et du Comité Ad Hoc d'Architecture et d'Urbanisme. Église Sainte-Germaine-Cousin — Redéveloppement de la Propriété*. AC11-RDPPAT-01, Conseil du Patrimoine de Montréal, 2011.

- 11 Sainte-Germaine-Cousin. Un Projet pour la Communauté [stegermainecousin.com] [January 8, 2015].

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Taro Amano, Musashi-Ranzan Country Club clubhouse, Koutou, Tokyo, Japan, 1961. © Shiraishi Kensetsu K.K. 1962.

Progress Report on the Musashi-Ranzan Country Club Clubhouse Conservation and Repair Work

BY MITSURU HIRAI

This is a progress report on the plan to conserve and repair the Musashi-Ranzan Country Club clubhouse designed by architect Taro Amano. It is a valuable example of the conservation and repair of private company-owned modern reinforced concrete architecture without the use of subsidies. Project planning commenced in 2009, and minor construction has been carried out each year, with the third installment of work carried out in 2014. For carrying out the construction, the design content and course of construction are based on the results of an analysis and survey of the original building. The clubhouse, together with the conservation and repair work currently being carried out, was selected as one of the works in the *docomomo Japan* 174 in 2014.

Historical Background

The Tokyo Golf Club clubhouse, which was designed by Antonin Raymond and completed in 1932, is a well-known example of a golf clubhouse in Japan designed by a prominent architect. This building was designed in the International Style, and was a pioneering work of architecture in pre-war Japan. Pre-war golf clubs were the scene of leisure-time amusement for foreigners or the Japanese bourgeoisie, so there were not many golf clubs. However, after the war, the economic resurgence gave rise to an unprecedented golfing boom, and golf courses were built one after the other all over Japan.

Ranzan Country Club had its beginnings when it opened as *Shinonome* Golf Course in Koutou City, Tokyo in 1952. People from political and business circles and prominent public figures gathered there. Due to the development of the city center which took place from the mid-1950s, the club was forced to relocate. It was relocated to Kamagata in the Hiki District, Saitama Prefecture, near Tokyo, and opened as Ranzan Country Club in 1962. Further, at the stage when it was announced in an architectural magazine, it was called *Musashi-Ranzan* Country Club, but when it was opened the name was changed to Ranzan Country Club.

In 1961 when Ranzan Country Club was built, an example of a well-known building that had been completed was Kunio Maekawa's Tokyo *Bunka Kaikan*. This was the height of the post-war Modern Movement, when architecture was maturing. Further, in the same year, Kenzou Tange announced "The Tokyo Plan — 1960". It was a time when Japan faced urban expansion, due to the high level of economic growth. The golfing boom of that time was stimulated by lifestyles in which people who lived in cities, which were becoming overcrowded, sought nature in areas near the cities in their leisure time.

The golfing boom in Japan peaked during the bubble economy. During the time of the high level of economic growth and up to the time of the bubble economy, because the golfing population increased explosively, many clubhouses designed in the style of the Modern Movement were demolished and rebuilt into luxurious clubhouses on a large scale. Therefore, many old clubhouses based on ideas from the early years in Japan no longer remain, and even if they do, they have been extended and reconstructed on a large scale, and there are few clubhouses which have preserved elements of architecture from the early years.

In recent years, the club house of the Fuji Country Club, which was designed by Antonin Raymond and completed in 1958, was the first golf clubhouse in Japan to be registered as a structure of cultural importance. Fuji Country Club is an architectural work which clearly demonstrates the characteristics of timber golf clubhouses designed by Raymond after the war. The fact that this clubhouse was registered shows that the cultural value of golf clubhouses that were constructed one after the other in the 1960s is being recognized.

The clubhouse of Ranzan Country Club reached its half-century anniversary in 2012. Compared with when it was first constructed, the needs the clubhouse must meet and the way the clubhouse is used have varied according to the times, and in order to respond to these changes, the clubhouse has been extended and reconstructed several times up until now. As a result, the clubhouse, which people have continued to use while its functions and area have been expanded, has accumulated deterioration due to aging as a structure, and issues due to the extensions and reconstruction, such as issues with facilities.

The Architect

Taro Amano (1918–1990), the architect of the club house, was one of Japan's leading post-war architects, and is known

for having studied under Frank Lloyd Wright. He graduated from Waseda University in 1945, and joined Kajima Corporation. In 1952 he studied under Frank Lloyd Wright as a Taliesin Apprentice. Then in 1955 he became an assistant professor at Kogakuin University. During this period he established an architect's office and began architectural work. In 1961 he spent one year as a visiting professor at Ankara University in Turkey. *Ranzan Country Club* is an architectural work that was completed during this period. Further, from 1962 he taught at Tokyo University of the Arts, and two years later became a professor there. At that time, he made Tadashi Yoshiwara a partner in his office. Yoshiwara had been assisting Amano in his architectural work. The office name was changed to Amano Yoshiwara and Partners, Architects.

Amano left behind many architectural works, with a central focus on houses. The campus of the fine arts department at Tokyo University of the Arts (library, painting building, sculpture building) is known as his masterpiece. It was selected as one of the works in the **docomomo Japan 145** Sen, which selected fine examples of Japanese Modern Movement architecture. In Amano's early works, the influence of Wright is strongly apparent, but from the time he designed the *Ranzan Country Club*, a change can be seen in his architectural style. He created refined works which display more awareness of Japan's climate and natural features. Similar changes can be seen in the residence of the movie director Akira Kurosawa, which he designed during the same period. Further, two years previous to that, he designed the *Shin-Hanayashiki* Golf Clubhouse in the Kansai Region. This work was designed when the influence of Wright on Amano's work was the strongest. Amano only designed these two golf clubhouses, but they are masterpieces which made him well-known.

Amano is also well-known as an educator. His research office and architectural firm have produced many architects, including Akira Mutou, who was a staff member at Amano's office when it was established. After assisting Amano in the work on *Shin-Hanayashiki* Golf Clubhouse, Mutou went to Finland and studied under Alvar Aalto. Later, Mutou once again assisted Amano in his architectural work. After Amano started teaching at Tokyo University of the Arts, Mutou took over work in the research office at Kogakuin University, and eventually became a professor there. It is said that the illuminated top lights at *Ranzan Country Club* were added to the clubhouse's design soon after Amano was introduced to Alvar Aalto through Mutou, and was inspired by him.

Features of the Clubhouse

The clubhouse is a two-story reinforced concrete building with a total floor area of about 2,000 m². The basis is a design which emphasizes horizontal lines through deep eaves and balconies. Seen floating above the undulating lawn of the golf course, the clubhouse appears like a ship. On the floor plan, centering on a core to which semicircles are incorporated, the building is divided into a one-story north part with a basement level, and a two-story south part. Firstly, in the one-story section on the north side, the first floor has an office, and the basement level has a ladies' lock-

er room, a ladies' bathroom, and an employees' room. Next, the two-story section on the south side, which is long from east to west, has a men's locker room and bathroom on the first floor, and a lounge and restaurant on the second floor, forming a clearly defined floor plan. Further, rooms which have wet areas, such as the kitchen, toilets, and bathrooms, are in the core of the semicircles provided in each section.

Concerning the structure, the curved walls of the effectively arranged semicircle cores support the overall horizontal force; therefore, the columns only support the vertical load, and are slender. This feature is most evident on the second floor, where concrete columns in a rhythmical row are interrupted at a height of 2280 mm from the floor, and H-sections of 200 mm × 150 mm form the part above that which supports the ceiling, giving the second floor a sense of openness that extends upwards. Therefore, the ceiling extends out to the back of the eaves, giving the appearance of a large surface lightly floating. Many top lights pierce this large roof, so during the day, natural light pours into the room, while at night, the room is illuminated from light that pours in from lights set up outside. Further, the curved walls lend dynamic changes to the space, creating multiple places for people to be.

Viewed like this, it can be seen that the framework which creates the space is as one body with the structure, and thus is the building formed. Further, the proportions which emphasize horizontal lines and the fact that the core lends dynamic change to the open space are probably due to the influence of Frank Lloyd Wright. In Japan, a land of strong undulations, golf courses may have been the most suited to the Prairie Style which Amano learned from Wright, in the sense of practical application as well.

State of the Clubhouse before the Conservation and Repair Work

The half-century-old clubhouse has greatly changed in appearance since it was first built, due to frequent extensions and reconstructions. As documents for gathering information about the history of changes to the clubhouse, I used plans and construction completion photos relating to *Ranzan Country Club* that have been kept at the architectural design office of Yoshiwara, the office which continues on from the office Amano ran with Yoshiwara during his lifetime, as well as contracts which remain at *Ranzan Country Club*. Further, I organized the documents with reference to newspaper articles, books, photos, and documents regarding *Ranzan Country Club* company history and so on, and clarified the changes that have taken place since the clubhouse was first completed. In addition, I used on-site surveys involving actual measurements to understand the present state of the clubhouse, and clarify the process of change.

The documents show that extension and reconstruction work has been carried out five times, in 1978, 1981, 1985, 1993, and 2005. In 1978, the meeting room and men's bathroom were added to the northwest side using concrete construction. In 1981, the toilets on the first and second floors were repaired, and at that time the lounge on the second floor was turned into the ladies' toilets. Further,

01 Taro Amano, Musashi-Ranzan Country Club clubhouse, Koutou, Tokyo, Japan, 1961. Exterior view. © Shiraishi Kenseitsu K.K, 1962.



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Essays



02 Taro Amano, Musashi-Ranzan Country Club clubhouse, Koutou, Tokyo, Japan, 1961. Lounge. © Amano Yoshiwara and Partners Architects, 1962.

at that time, the corridor in front of the ladies' toilets on the second floor was extended by one span. In 1985, the outdoor cart storage area on the east side was added. In 1993, the kitchen was added north of the center, using steel construction. In 2005, the interiors of the reception area, the toilets, the lounge, and the dining room were repaired. I was unable to identify when the outdoor grand staircase south of the center, the caddie master room on the southern side of the first floor, and the entrance canopy were added.

Following are the main details of the comparison of the clubhouse when it was first built with the state of the clubhouse as it was before the repairs that are being carried out. Concerning the basement level, there have been large changes in the way the rooms are used. Due to the increase in female players in recent years, the area of the ladies' locker room and the ladies' bathroom has been increased, and the area for employees has decreased. Following the addition of the men's bathroom on the first floor, the former men's bathroom was converted into the men's locker room. Further, due to the addition of a doorway leading from the men's locker room to the golf course, a new line of flow to the exterior was created. On the second floor, a grand staircase was added to the center of the balcony on the southern side, creating a main line of flow giving access from the exterior of the first floor directly to the dining room on the second floor. The meeting room and kitchen were added to the northern side, and along with that, the old kitchen was converted into a memorial room. Compared to the first floor, there were fewer additions and changes to the way rooms were used. In particular, the added sections greatly marred the external appearance of the original.

Examples of things common throughout the interior are that the flooring material was changed from flooring blocks to carpet, and dark coating was applied to timber parts, leading to a change in the atmosphere. Also, most of the original light fixtures were replaced with different ones. Further, air conditioners which the original clubhouse did not have were installed, and plumbing and wiring was exposed. Concerning the flooring, the metal shoe spikes prevalent at the time the clubhouse was built damaged the flooring blocks, so the flooring blocks were replaced by carpet soon after the club was constructed.

Conservation and Repair Work Policy

The Ranzan Country Club clubhouse conservation and repair project began in 2012. Based on the ideas of the current president, we came up with a policy that stated that this traditional golf club should endeavor to reproduce the original building as much as possible, and continue to use the charming building with care. Firstly, in the first year, a survey was conducted, an overall repair plan was devised, and a report on the plan was created. Also, an investigation of earthquake resistance was carried out. Next, from the second year onwards, in line with the overall plan, items listed for repair were considered one by one, while observing the reaction of members. At first, repairs were carried out starting with conspicuous parts that members use on an everyday basis. We are advancing work while gradually

gaining understanding of the merits of the original building, and creating a consensus. Further, details of the work are being considered in three separate phases: safety; work necessary from a legal perspective/work necessary from a business management perspective/aesthetics; and work necessary for comfort. These phases do not necessarily determine the order in which work is carried out. Presentations are held at meetings of several committees set up within the club, and work is advanced after gaining agreement. Work is mainly carried out in the golf off-season in February. Golf club closure for the work is limited to 12 days at a time, and other work is carried out intermittently, on days when the club is closed. We are repeating this pattern each year. Work focusing on the interior has already been carried out three times, and the plan is to carry out work for the fourth time in February 2015.

As the design method, we are advancing work based on the idea of preserving original sections which still remain, and reproducing original parts which have already been removed to the extent possible, while adapting them to the new ways in which the clubhouse is used. Further, concerning parts that have been added since the clubhouse was first built and are not original parts, a design that allows them to be removed later, without damaging the existing timber framework, has been created.

Report on the Present State of the Clubhouse

Presently, compared to the time when the clubhouse was built, several situations affecting construction have changed. Due to the decline in the golfing population, the locker rooms and kitchen which were added or enlarged before are now not so necessary, and it is possible to reduce their area. Further, in terms of how rooms are used, as a consequence of the increase in female players in recent years, the current ladies' locker room and ladies' bathroom are no longer sufficient, and it has been realized that this should be addressed. Further, the clubhouse's main spaces, the lounge and the dining room, were not being used efficiently, and a plan to address this was required. Up until now, work has been conducted three times, and improvements have been made to the area around the reception, the staircase, the store on the second floor, the lounge, and the dining room. Further, seismic reinforcement work has been finished except for one section of work. Tis & Partners are assisting with the earthquake resistance inquiry and the seismic reinforcement work.

In the first stage, the store on the second floor was relocated to the area in front of reception on the first floor, and by turning the space where the store had been into a chat corner, a larger variety of spaces for players to spend time in was created. Together with this, the orientation of the reception counter on the first floor was changed, space was made for the store, and the place for settling payments for the store was changed to the reception desk. At the same time, part of the ceiling which had been blocked after the clubhouse was built was removed, and the original section was restored, along with the top lights.

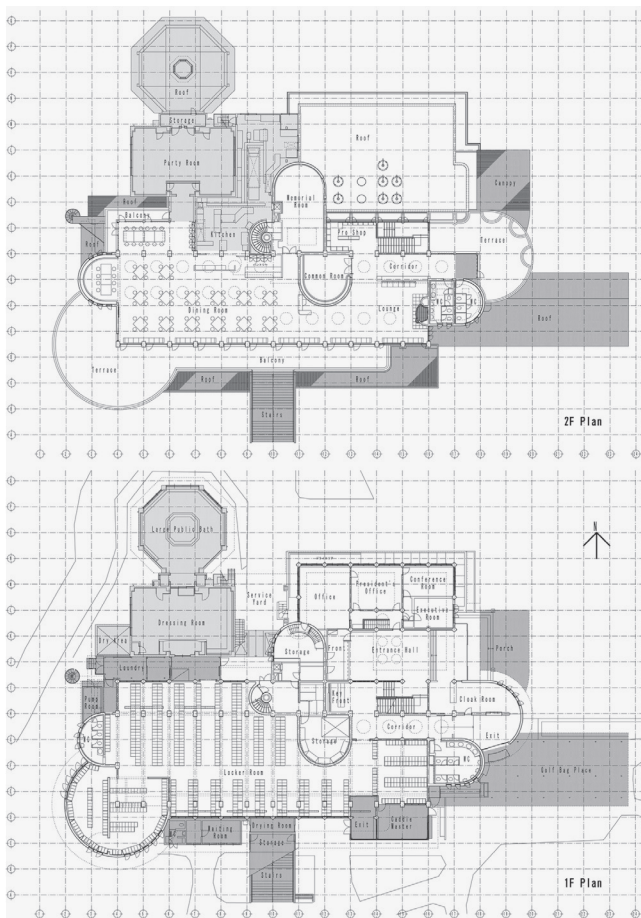
In the second stage, the benches which were made for the



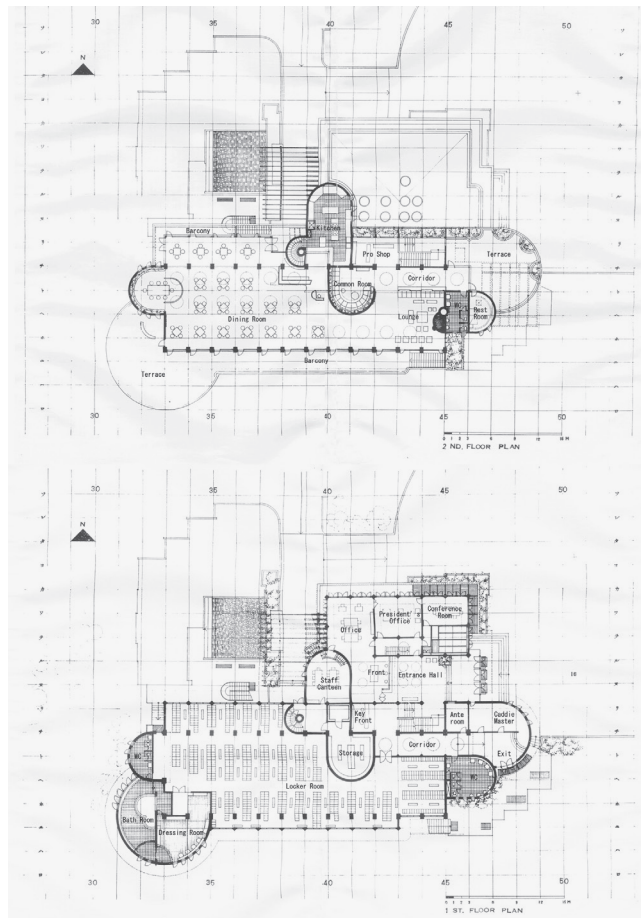
03 Taro Amano, Musashi-Ranzan Country Club clubhouse, Koutou, Tokyo, Japan, 1961. Lounge. © Drawing notes, 2011.



04 Taro Amano, Musashi-Ranzan Country Club clubhouse, Koutou, Tokyo, Japan, 1961. Conservation and repair project by Drawing notes. Dining room. © Koichi Torimura, 2014.



05 Taro Amano, Musashi-Ranzan Country Club clubhouse, Koutou, Tokyo, Japan, 1961. Floor original plan. © Amano Yoshiwara and Partners Architects, 1962.



06 Taro Amano, Musashi-Ranzan Country Club clubhouse, Koutou, Tokyo, Japan, 1961. First and second plan showing the current state of building in 2011. © Drawing notes, 2011.

03 Taro Amano, Musashi-Ranzan Country Club clubhouse, Koutou, Tokyo, Japan, 1961. Exterior view. © Drawing notes, 2011.



04 Taro Amano, the Musashi-Ranzan Country Club clubhouse, Koutou, Tokyo, Japan, 1961. © Shiraiishi Kensetsu K.K., 1962.

lounge after the clubhouse was first built were removed, and chairs and tables which suited the enlarged space were designed. Further, the entrance of the conversation lounge was removed, the original state of the room was reproduced, and it was converted into a memorial room displaying the club's history. Further, at this time, two experiments were conducted. Firstly, the dark coating that was applied to timber parts after the clubhouse was constructed was removed, and the original clear coating was restored. Next, since current golf shoes mainly have soft spikes, the floor of the memorial room was changed from carpet back to flooring blocks, and members' reactions were observed. These experiments were performed well technically and reaction from members was favorable, so it was decided to make similar changes throughout the clubhouse in the third stage of work. At this time, the memorial plates which had covered the surface of walls all through the second floor were all removed, and a design which organized them into smaller spaces in the chat corner and the memorial room was created.

In the third stage, work was carried out on a large scale. Details of the work carried out include flooring, coating of timber parts, and reproduction of the original ceiling. Further, seismic reinforcement work was carried out. Firstly, the flooring all through the second floor was removed, together with the mortar foundation. As a method for raising the floor, while making sure there were routes for wiring, flooring blocks were reproduced as in the original construction, at the level of the original floor. Doing this enabled cracks in the concrete slab to be injected with epoxy, and in addition, removing the mortar reduced the weight of the floor. Further, coating was removed from timber parts, including those around window frames, and a clear finish was restored. Lighting fixtures such as chandeliers which were added at times after the building was first constructed were removed from the ceiling, and the original lighting fixture design was reproduced. At this time, there was a problem in that the original lighting fixtures had a low level of illumination. However, this was solved by inserting small LED downlights into the holes left after the chandeliers had been removed. As a result, the interior of the second floor brightened overall, and received a favorable reaction. The original tables that remained were reused. Also, the dining chairs which were not original were removed, and new ones were designed.

Results of the earthquake resistance inquiry showed that there was a structural problem in that the core of the large space on the second floor was positioned a little to the east of the center, so seismic reinforcement work was necessary to correct the eccentricity. Concerning the state of the concrete, the coating mixture containing mortar, pulverized stone, cement, and plaster had been sprayed on thickly, so not much neutralization had occurred, and there was no definite problem. In the seismic reinforcement work, steel frames which did not change the original cross-section of the materials were made, and were inserted in two places in the timber sashes of the south-side openings of the dining room. However, concerning the quake-resisting wall on the north side of the dining room, with the additions to

the building in mind, it was decided that work would be conducted when the kitchen section was demolished and removed. Further, epoxy resin was injected into cracks in the concrete throughout the building.

Summary

The work so far has been well-received by the members and the plan has progressed smoothly. Further, an idea to build a new annex in order to allow the present clubhouse to be closed long-term so work can be advanced has also been raised, but carrying out this idea would be costly, so the various committees are considering it cautiously, and a definite decision on it has not been made. In a private sector clubhouse, decisions on the way work will be advanced are based on business conditions, so the situation is not favorable in the way it is for cases that involve public cultural properties which may receive grants from grant-allocating projects and so on. However, there are many valuable examples of modern architecture owned by private enterprises, and in the midst of these being demolished one after the other, it is thought that this project will be a case study that gives hope to the private sector owners. Therefore, the process of this project is being recorded in my office and the *Kumagai* laboratory of the Tokyo University of Science, and we are advancing the work while carrying out study. What I have keenly realized while advancing this work is that the clubhouse structure itself creates the framework of the space, so there are no sections which will conceal facilities and wiring added later, and it is difficult to organize exposed elements. We are advancing the work while dealing with each of these exposed elements as the occasion demands, but this is also a challenge for the future. ■

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A New Future for the Montréal Mies Gaz Station

BY FRANCE VANLAETHEM

When it comes to ensuring the authenticity of an architectural conservation project, is an architect's interpretation of the original sufficient in itself? Or should the architect's largely intuitive understanding of a site be complemented by the knowledge of the architectural historian? The adaptive reuse of the *Île des Soeurs* service station, designed by Ludwig Mies van der Rohe in 1967 and renovated by architect Éric Gauthier in 2011, raises such questions. The unique value of this small facility is recognized by its designation as a historic monument. Today, it is a multigenerational activity centre where youth and seniors can gather to learn, play, and socialize.

Ludwig Mies van der Rohe designed a surprising number of projects for Montreal — seven in all, of which five were built¹. **docomomo** Québec offers a tour of them in its guide to modern Montreal². Like many North American cities, Montreal experienced rapid growth and renewal in the 1960s. Though no longer the metropolis of Canada, it attracted cross-border real estate developers from the mid-1950s on, including the flamboyant New Yorker William Zeckendorf, who responded to the challenge of filling the “Central Station pit” with *Place Ville-Marie*, inaugurated in 1962. Less well known is the contribution of Chicago's Metropolitan Structures, Inc., a successor to the Herbert Realty Co. Founded by Herbert S. Greenwald, the firm gave new impetus to Mies' career by commissioning him to design the Promontory Apartment Building in 1946. A number of residential projects followed, including 860–880 North Lake Shore Drive, also in Chicago, and Lafayette Park in Detroit.

In 1965, Mies became involved in the planning and construction of a community with 15,000 residential units that the Canadian subsidiary of Metropolitan Structures planned to develop over a 15-year period on *Île des Soeurs* (or Nun's Island). Following the construction of the Champlain Bridge, which crosses the Saint Lawrence River at the height of the island, this 400-hectare insular agricultural area became an attractive site for the development of a garden suburb, thanks to its proximity to downtown Montreal. Metropolitan Structures signed an emphyteutic lease³ with the owner of the island, who had purchased it a decade earlier from the Catholic sisters of the Congregation of *Notre-Dame*. In addition to consulting on the project, Mies van der Rohe designed the first three apartment buildings of the planned ensemble, as well as the first gas station. Shut down in 2008, the small service station, located on the island's main *boulevard*, was converted into an intergenerational community centre through the initiative of the municipal council, which proved exceptionally vigilant in the matter, and under the direction of architect Éric Gauthier of the

firm FABG⁴. Gauthier originally established his credentials in the preservation of modern architecture with his renovation, in the early 1990s, of the geodesic dome designed by Buckminster Fuller and Shoji Sadao to house the US pavilion at the 1967 World's Fair in Montreal.

The Mies van der Rohe Service Station

The *Île des Soeurs* service station occupies a unique place in Mies' oeuvre. Throughout his long career, the architect had no other project of its kind, although the automobile was no stranger to his reflections on the development of architecture in the Machine Age. The project is iconic. Its sobriety distinguishes it from the standard gas station designs of the 1930s, which treat the building itself as an advertising billboard. Here, the brand is not the pretext for the project. Instead, its presence is subdued: the company sign is modest in size and placed discreetly out of the way, by the sidewalk. The structure is a pavilion, one of two generic building types privileged by Mies in his North American career, the other being the tower. As such, the *Île des Soeurs* service station can be considered alongside such diverse projects as the Illinois Institute of Technology, the Cantor Drive-In Restaurant, the Chicago Convention Hall, and the *Neue Nationalgalerie* in Berlin, among others.

The facility, commissioned in 1966 by Imperial Oil limited (now Esso Canada), was intended as a prototype. It was the first in a series of six service stations proposed in the master plan developed by landscape architects Johnson, Johnson & Roy of Ann Arbor, it was also meant to be a model for the others. In order to ensure the supply of fuel on *Île des Soeurs*, Metropolitan Structures signed an exclusive agreement with the petroleum company which, in return, agreed to adhere to the promoter's standards of architectural excellence. To carry out the project, Mies partnered with Paul H. Lapointe, a Montreal architect and regular Imperial Oil collaborator.

Located at the corner of the *boulevard* and a residential street, the service station pavilion imparts a sense of great



01 Mies van der Rohe (consultant architect, Chicago), Paul H. Lapointe (architect, Montreal), Esso Gas station, *Île des Soeurs*, Montreal, 1967-1968. © Michel Brunelle, 2007.

spatial fluidity, thanks in part to the cantilevered roof, carried by a double row of columns set on either side of the pump island, and to the transparency of the service areas it houses. The original design featured three enclosed volumes, with the cashier booth in the middle, flanked by a customer service office on the street side of the structure and a service garage on the other. The latter is more opaque, with buff-coloured brick walls obstructing the view of passersby. In their commitment to excellence, the designers even devised custom-made gas pumps for the project⁵.

The Reuse Project

Today, *Île des Soeurs* is a prime residential area for affluent *Montrealers*. Its overall appearance, however, differs from that imagined by Johnson, Johnson & Roy, as several real estate developers succeeded Metropolitan Structures of Canada in 1978 in the context of changing economic and political conditions. In fifty years, additional service station capacity was created, though not on the scale initially planned. Esso opened only one other station, located at the entrance to the island, near the Champlain Bridge access road. With residents preferring the new location, business slowed at the site on *boulevard de l'Île des Soeurs*. In the early 2000s, some worried that the station designed by Mies would be shut down and demolished, given the conditions of the emphyteutic lease between the petroleum company and the island's owner. The concerns attracted the attention of heritage groups and municipal authorities. In 2005, the urban planning department of the borough of Verdun initiated discussions on the future of the structure by requesting advice from the *Conseil du Patrimoine de Montreal* (the city's heritage council) and consulting with specialists and citizens. All expressed support for the preservation of the building. The borough thus proceeded to file a request for heritage protection with the city in 2008⁶.

Meanwhile, steps taken to determine a new use for the building yielded a proposal for the creation of an activity centre for youth and seniors. Once the building was granted recognition under the *Loi sur le biens culturels du Québec* (the provincial cultural property act) and acquired by the city in 2009, a call for tenders for the conversion of the service station into an intergenerational centre was made to Québec architects and won by the firm FABG. It should be mentioned that the service station's historic monument status is linked to a municipal by-law that, in addition to stating the reasons for the designation by listing the cultural values attributed to the station, also identifies characteristic elements of the structure and site that are to be maintained. In sum, it aims to ensure the consolidation or restoration of the original architectural aspect and layout, and requires all modifications to be compatible with the qualities and features of the building⁷.

The architect Éric Gauthier describes his project as an "interpretation", not a "restoration". His intention in its design was to convey the artistic vision that gave rise to the structure, although the world has changed considerably since the 1960s. Guided by Mies' lesson in simplicity, Gauthier's interventions fall into three categories: the restoration of the skeleton and envelope of the building, the renovation of its interiors, and a thermal upgrade.

The envelope of the building was meticulously restored without much difficulty. The anodised aluminum frames were dismantled and repaired in a workshop. Corroded parts were replaced, as the type of extrusions used were still in production. The buff yellow brick walls were repointed and the flat roof was resurfaced with no change to its profile. The steel structure was painted the original black.

The adaptation of the interior spaces proved more problematic. The borough had commissioned a preliminary study to explore the building's reuse potential. It led to the choice of a new program to inhabit the existing spaces, at

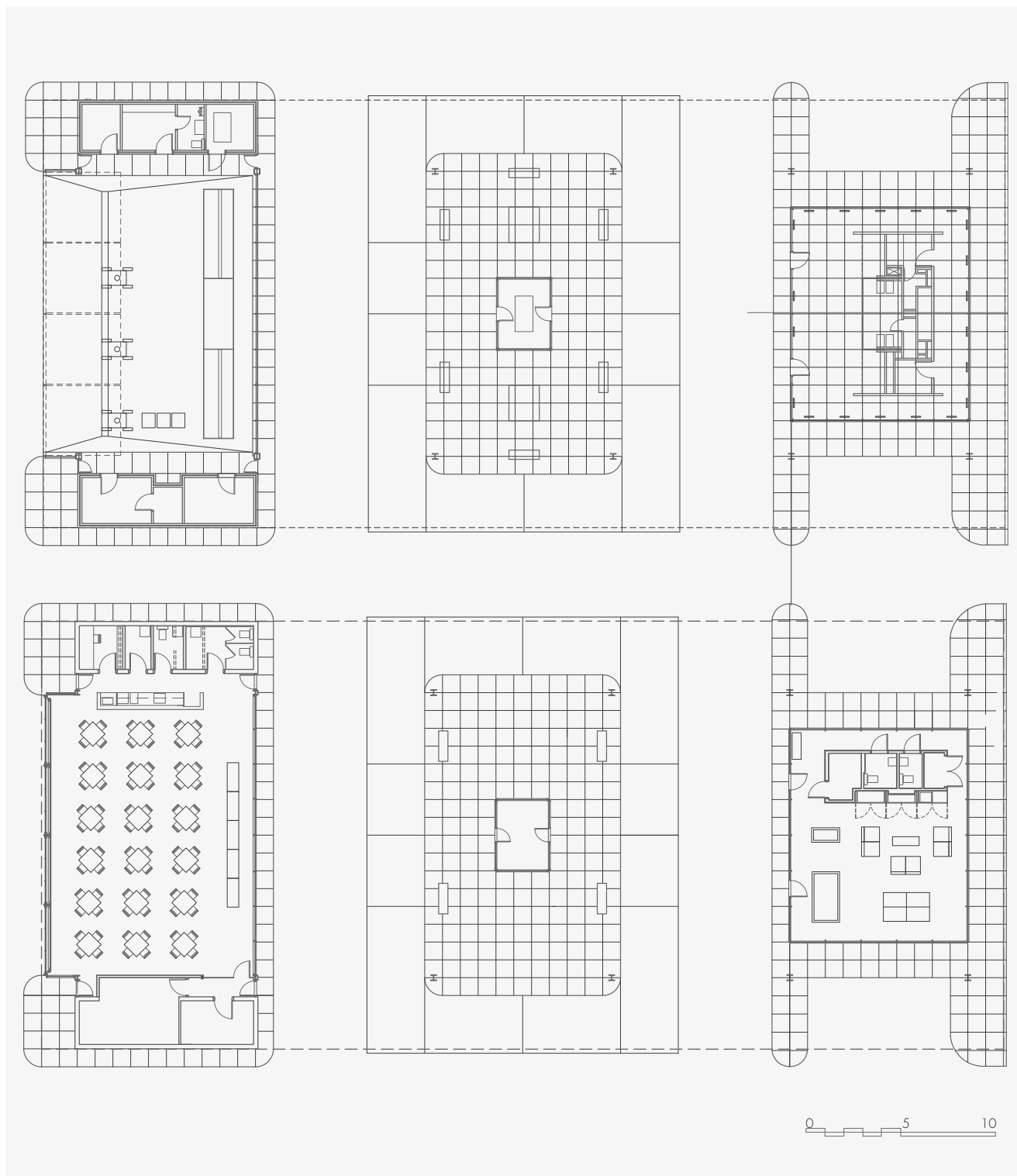


02 Éric Gauthier (projet architect, FABG), *Maison Intergénérationnel - La Station, Île des Soeurs*, Montreal, 2011-2012. © Michel Brunelle, 2012.

03-04 Éric Gauthier (projet architect, FABG), *Maison Intergénérationnel - La Station, Île des Soeurs*, Montreal, 2011-2012. © Michel Brunelle, 2012.



- 05** Mies van der Rohe (consultant architect, Chicago), Paul H. Lapointe (architect, Montreal), Esso Gas station, *Île des Soeurs*, Montreal, 1967–1968. © France Vanlaethem, *Patrimoine en Devenir: l'Architecture Moderne du Québec*, Québec, Les Publications du Québec, 2012, p. 193.



- 06** Éric Gauthier (projet architect, FABG), *Maison Intergénérationnel — La Station, Île des Soeurs*, Montreal, 2011–2012. © France Vanlaethem, *Patrimoine en Devenir: l'Architecture Moderne du Québec*, Québec, Les Publications du Québec, 2012, p. 193.

least in terms of the square footage available. During the development of the project, it was decided that the former service garage would be dedicated to seniors, providing a social space for educational and recreational activities, and the customer service area to youth, allowing them to get together in a supervised setting. To maintain the transparency of the enclosed spaces, all equipment (group kitchen facilities, computer stations, game consoles, washrooms, etc.) was grouped together and hidden from view in built-in cabinets, a deviation from the previous layout. In the former service station, all functional equipment—the storage shelf in the garage, the gas pumps, and the volume of the washrooms in the customer service area—was placed perpendicular to the boulevard, not parallel. Through this new parallel placement, Gauthier sought to “favor transparency in the longitudinal axis”⁸, an orientation suggested by the configuration of the roof and the alignment of the fluorescent ceiling lights, whose placement remained unchanged.

The building’s thermal upgrade was an opportunity to preserve the memory of its original function. Ventilation ducts were set in the spaces previously occupied by the gas pumps to take in air and heat or cool it via a geothermal system before redistributing it to the rooms. This sustainable technology thus helped minimize the impact of the new mechanical equipment.

What about Authenticity

In a recent article, Gauthier explains his approach to the conservation of modern structures, noting the importance of emphasizing “what is fundamentally unique to the artistic vision of the creator”. In contrast to older heritage, “whose value lies mostly in conformity with traditional know-how that needs to be preserved and emphasized, the modern oeuvre is distinguished by an architectural intention that needs to be identified and underscored”. This is consistent with the position taken by **docomomo** International in its 1997 report, *The MoMo and the WHL*, which states that changes to modern buildings with heritage value are acceptable “as long as the original intentions of the architect’s concept (idea) in the present form, space and appearance of a building or site are still recognizable”⁹. Conceptual authenticity is thus granted precedence over material authenticity in consideration of the functional and technical obsolescence of modern architecture.

Since the **docomomo** report, the issue of authenticity in modern heritage has been at the center of my reflections. Authenticity is neither a quality of the artifact, as assumed by the notion of material authenticity, nor is it assured by respect for a creator’s idea (to the extent that such an idea can be distinguished, which many dispute). Authenticity is a judgment, a semiotic construct arising from a dynamic in-

volving identity, truth, and authority, a process that involves citizens, experts, and authorities. As a citizen calling for the preservation of modern heritage, I am pleased by the legal protection granted to Mies’ service station in recognition of its value and by its conversion. However, as a historian of modern architecture, I question the validity of the changes made to the layout of the functional equipment. In the service station, longitudinal transparency was blocked and lateral transparency partially open. But was the spatiality of the building simply geometric by nature and its transparency only real, “literal”? Were these characteristics not articulated in response to the urban morphology? Did the longitudinal visual obstructions, parallel to the boulevard, not contribute to the “virtual” transparency of the building, as understood by Rowe, which suggests depth and frontality? In *Île des Soeurs*, as in Westmount, Mies proved sensitive to context, an aspect neglected by the reuse project. ■

Notes

This text was translated from French by Helge Dascher.

The project was granted a 2014 Governor General’s Medal for Architecture and a 2013 Award of Excellence from the Ordre des Architectes du Québec.

- 1 **docomomo** Québec came into being following an initiative in 1988 to oppose the renovation of Westmount Square, designed by Mies in 1964. Mies’ Montréal projects were first documented in the journal *Architecture Québec*, No. 71, 1993.
- 2 France Vanlaethem and Sophie Mankowski (dir.), *Sur les Traces du Montréal Moderne et du Domaine de l’Estérel au Québec / Discovering Modern Montréal and the Estérel Resort in Québec*, Bruxelles, CIVA, Montréal, **docomomo** Québec, 2007, p. 137–147.
- 3 An emphyteutic lease is one which obliges the lessee to improve the leased property with construction.
- 4 *Les architectes FABG* [<http://www.arch-fabg.com/fabg.html>].
- 5 Jean-François Bedard, “La Station-Service de l’île des Soeurs”, *Architecture Québec*, *ibid.*, p. 20–21.
- 6 Benoît Malette, “Une Démarche Consensuelle”, in France Vanlaethem and Marie-Josée Therrien (dir.), *La Sauvegarde de l’Architecture Moderne*, Québec, Presses de l’Université du Québec, 2014, p. 147–153.
- 7 Ville de Montréal, “Règlement sur la citation à titre de monument historique de la station-service de Mies van der Rohe, située au 2001, rue Berlioz (arrondissement de Verdun)”, [http://ville.montreal.qc.ca/pls/portal/docs/PAGE/CONS_PAT_MTL_FR/MEDIA/DOCUMENTS/REGLEMENT_09-034_ESSO.pdf].
- 8 From the manuscript of the article on the service station published in *Continuité*, No. 143, Winter 2014, 26–29.
- 9 International Specialist Committees/Registers, **docomomo** International, “The Modern Movement and the World Heritage List. Advisory Report to ICOMOS”, Zeist, 30 Novembre 1997, p. 10.

France Vanlaethem

Chair of **docomomo** Québec. Graduated as an architect from the *École Nationale Supérieure d’Architecture et des Arts Visuels – La Cambre* in Brussels. Professor Emeritus at the *Université du Québec à Montréal (UQAM)*. France Vanlaethem has published numerous articles and books on the history of modern architecture in Belgium and Québec and on the preservation of modern heritage.



Kunio Maekawa, Junzo Sakakura and Junzo Yoshimura, International House, Tokyo, Japan, 1953–1955. Preservation and restoration by the Architectural Institute of Japan. Plan B with approach drive-way. © Masami Kobayashi, 2004.

Preservation and Restoration of the International House of Japan

BY MASAMI KOBAYASHI

The International House of Japan (I-House) in Tokyo is a non-governmental organization that has promoted rich international intellectual exchanges. Designed by three young, up-and-coming architects Kunio Maekawa, Junzo Sakakura, and Junzo Yoshimura, the building of I-House in an exquisite modern Japanese style was built in 1955, but due to financial difficulties, the building was threatened with demolition. The Architectural Institute of Japan scrambled to assemble a special panel to present a conservation plan in 2004. Ultimately, the Board of Trustees decided to follow the panel's proposal. This paper introduces the process of the restoration activities, discusses what were the driving forces of the preservation and restoration actions, and gives some lessons from the project.

History of the Site and Organization

The building of I-House cannot be thought of as being separate from the surrounding garden, but several historical transformations of the site of I-House experienced over the years since the Edo Period have contributed to its particular *genius loci* (power of place). In the 18th century, many Daimyo (Feudal Lord) estates were located in the Toriizaka area, with the I-House's site registered as the Edo residence of the Kyogoku Ikinokami family from the Tadotsu domain. The landowner changed several times from the Meiji Period (1867–1912) onward, with a new residence constructed by the politician Kaoru Inoue in the second Meiji decade, and a new estate added in the third decade. Records exist of imperial visitations during which performances of Kabuki were performed for the Emperor. Afterwards, the estate came into the ownership of Tetsuma Akaboshi, a businessman of the Mitsubishi group.

In 1924, the year after the large Kanto earthquake, the property was purchased by Koyata Iwasaki of the Mitsubishi family, who commissioned architect, Shintaro Oe, to design his residence, and a Kyoto landscape architect, Jihei (Ueji) Ogawa, to design the garden. The building, completed in 1929–30 was constructed in a design blending Western with Japanese elements.

During World War 2, this exquisite house was completely burned down, after which it became the property of the government in conjunction with the settlement of property taxes. Looking back on the history of the estate from the Edo to the Showa Periods, one can see how, despite transformation throughout the ages, this site in the Toriizaka area exudes a certain “power of place,” appealing to the hearts of many and building up a unique dignity and sense of place.

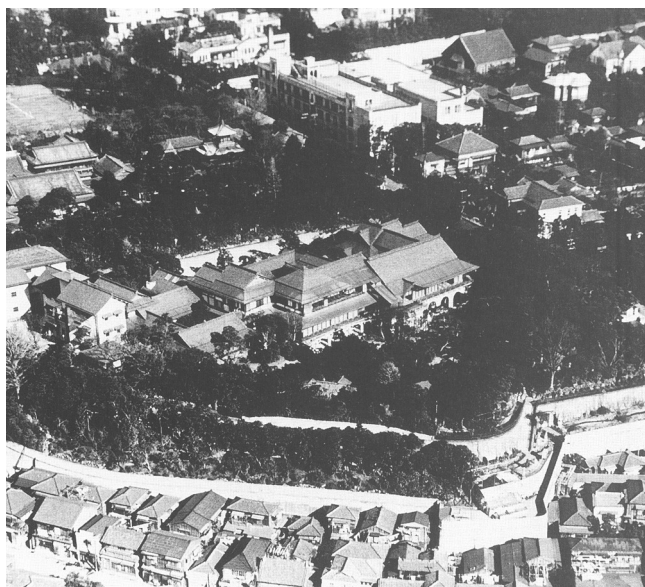
It is well known that the establishment of I-House is strongly linked to the Institute of Pacific Relations (IPR),

a private organization founded in 1925 to foster peace in the Pacific area. Among its members, a young research assistant, Shigeharu Matsumoto met John D. Rockefeller III in 1929, which was the beginning of a long-lasting friendship between these two persons that proved to be a driving force in the establishment of the I-House. After Rockefeller's several visits to Japan, the idea of setting up some sort of Cultural Center for facilitating exchange and intellectual collaboration going beyond national and cultural differences with a House as the venue of for such interaction, was discussed eagerly.

The I-House was incorporated as a foundation in August, 1952, and the painful fundraising campaign was started in both Japan and the USA, being completed by August 31, 1953. In such way, the I-House was founded upon the passionate efforts of individuals, leaving just building the actual house itself as the final step in bringing the I-House to reality.

Architectural Design of I-House

After the World War 2, the I-House foundation managed to purchase the land of the ex-Iwasaki residence from the government, and it started selecting a suitable design. Matsumoto, then director of the foundation, called upon three young, up-and-coming architects Kunio Maekawa, Junzo Sakakura, and Junzo Yoshimura to each submit a plan for consideration in a closed design competition, in which the best proposal would be selected. As it turns out, excellent proposals from each of the three defied attempts to select a winner, so it was decided to build the I-House based on a collaborative design of these three architects, a rare occurrence in the history of modern Japanese architecture. Following roughly one year of design work from 1953, the construction work was commenced



01 Aerial View of Iwasaki's House. © International House of Japan, 1930.



02 Kunio Maekawa, Junzo Sakakura and Junzo Yoshimura, International House, Tokyo, Japan, 1953-1955. © Shin Kenchiku, 1955

by the Shimizu Corporation, and it was safely completed in 1955. In the years that followed, several additions and repairs were made to the building: a dining room was added in 1958 designed by Junzo Yoshimura; a coffee shop was built above the banquet rooms in 1959; the central inner court was covered; and additional flooring was installed in the basement in 1969.

In the 1970s, the building was significantly remodeled and expanded by Maekawa Associates to add more functionality, in what is now the “annex”. In essence, these are the events that contributed to the main building’s construction seen today.

Preservation Process

After the remodeling in the 1970s, there was a rise in membership and a revitalization of I-House activities, but from the 1990s I-House was struggling with severe budgetary difficulties as well as aging facilities. After considering a joint-project in the area, in 2003, a general consensus was reached to sell the property and airspace rights to a developer, and to demolish the building for reconstruction. This triggered the organization of the “Committee for the International House of Japan, 21st Century” in May of 2004, comprising concerned I-House members and neighboring residents, and a symposium was held on the matter. Personally, my family and I had a deep connection with I-House, and as an architect I was asked to prepare an alternative plan for the building’s preservation for the committee. Unfortunately, the plan I drafted at the time did not win the favor of the persons concerned.

The Architectural Institute of Japan (AIJ) had already requested in 2003 that I-House consider conservation, but the heads of both AIJ and I-House had changed, the new Director of AIJ, Hiroshi Akiyama, resubmitted a written request for the preservation of I-House to the new House Chairman, Tasuku Takagaki. The decision to dispose of a

portion of the I-House assets was made soon afterwards, at the Board of Trustees meeting on June 22. Chairman Takagaki sent a response to the AIJ on July 9, which contained the following phrase:

“With regards to rebuilding the International House of Japan, our first priority is to maintain a harmonious relationship between the new I-House and the surrounding garden to preserve the garden as is; we would like to preserve the current atmosphere of the property as much as possible.... it would be greatly appreciated if the Architectural Institute of Japan could furnish any advice or suggestions by the end of August.”

Hence, in facing the prospect of the building’s complete demolition and reconstruction, the AIJ was given the tight schedule of no more than 2 months to produce its own position paper.

Preservation and Restoration Strategy

AIJ scrambled to assemble a special panel under the chair of Hiroyuki Suzuki of Tokyo University to look into alternative proposals. Given the previous submission of my own alternative proposal, I was placed in charge of the planning. With several experts asked to join the panel to look into the history, structure and facilities of I-House, we made an all-out effort to come up with a workable alternative.

The first task that lay before us was to provide an objective assessment of the current building. All blueprints of the I-House were obtained and professional assessments conducted with regard to the building’s structural integrity and degree of aging. These assessments concluded that the building did not satisfy earthquake resistance standards, and that regrettably most of the facility would have to be renovated.

Secondly, intense debate was given to whether the AIJ should even consider restoring the I-House. Within the panel, the opinion was overwhelming that the AIJ could not consid-



03 Kunio Maekawa, Junzo Sakakura and Junzo Yoshimura, International House, Tokyo, Japan, 1953–1955. Exterior view of the original house. © Shin Kenchiku, 1955.

er demolishing a building that it had once presented with an architectural award, and that the first and foremost obligation of the panel should be to preserve the current building.

Thirdly, serious thought was given to a proposal to renovate the annex portion added by Maekawa Associates into office space. Since the building itself is rather recessed from the road nearby, we looked into whether demolishing and rebuilding this part was even physically possible, and determined it was at least technically feasible.

Our fourth task was to determine what method to use to increase the earthquake resistance of I-House, and structurally reinforcing the skeleton was rejected since it was decided to that it would alter the appearance of the building too drastically. Upon hearing that earthquake-proofing retrofits performed at the Mie Prefectural Office Building succeeded while it was largely still in use, a group visited the site for further study, and we came up with a proposal minimizing the amount of downtime for I-House.

Lastly, we had to estimate the final construction costs and draft a plan of action. Ultimately, the panel came up with two proposals: Plan A that followed the original plan to sell the property, and Plan B, which minimized the amount of property for sale, and kept the approaching drive-way.

Without a moment to spare during the summer vacation, the panel engaged in a colossal undertaking in July and August of 2004. Looking back on panel records, opinions were exchanged at a flurried pace over several meetings of panel members with I-House Chairman Takagaki and other executives. In retrospect, going through this process allowed us to build up a mutual trust, which had a significant impact on overall decision making. We managed to finalize the details by the end of August and submit a hundred-page report to the I-House by September 3.

Prior to the report's actual submission, I myself made a solo presentation of the contents of the report to the I-House executives on August 27. Chairman Takagaki

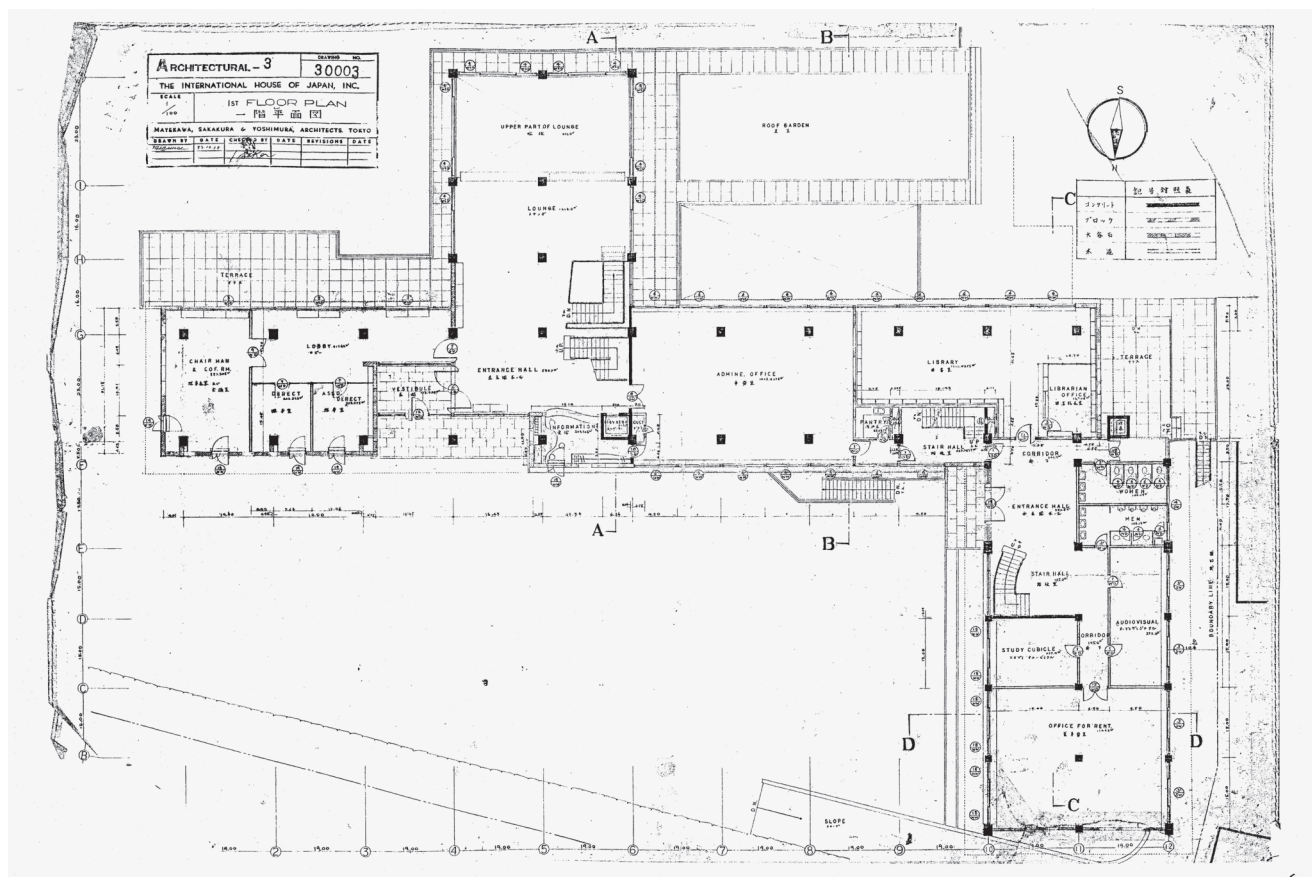
was furious that our final plan completely preserving the I-House main building was a far cry from the request of the Board of Trustees for a plan to rebuild the House preserving the garden. However, a careful explanation of the proposal including the financial merits seemed to at least partially win over the House Chairman. In the end, the I-House Committee gave a good look at the proposal, and approved it on the following grounds: (1) downtime during construction would be short; (2) there would be no relocating or removal costs; and (3) construction costs would be low. Consequently, Plan B was approved during an I-House Construction Committee held on September 6.

Preservation Debate on "Authenticity"

Following approval by the I-House Board of Trustees, an I-House Construction Advisory Committee was newly established and a Working Group was set up. In particular, this Group intensely debated several times about what exactly the authenticity of the building meant. The debate essentially centered on bridging the gap between a group of historians espousing a strict conservationism returning the building to its original state in 1950s and another group stressing the wishes of the current occupants for a more flexible restoration and renovation. Personally, I emphasized there should be no problem with additions or renovations to the extent they did not deviate from the overall design of the building and the era clearly expressed, similar to the gradual evolution of a gothic cathedral. In due course, a policy course of renewing functionality, and renovating the I-House was decided upon: a new hall with two-story high ceiling would be added in what used to be the Kabayama room, and the lobby would be expanded to prevent crowding in the entrance area.

Construction with Tight Budget and Time

Following the preliminary studies described above, in



04 Kunio Maekawa, Junzo Sakakura and Junzo Yoshimura, International House, Tokyo, Japan, 1953-1955. Original Plan.© Mitsubishi Jisho Sekkei, Inc, 1955.



03 Kunio Maekawa, Junzo Sakakura and Junzo Yoshimura, International House, Tokyo, Japan, 1953-1955. Preservation and restoration by the Architectural Institute of Japan. © Masami Kobayashi, 2006.

December 2004 the Board of Trustees of I-House approved final plans for the first phase of construction. Next, the staff from Mitsubishi Jisho Sekkei, Inc, that was in charge of the working drawings, took on the difficult tasks of fine-tuning quotes based on a more detailed design; negotiating with public authorities; looking into recycling existing building materials; and verifying the newly discovered architectural artifacts of Koyata Iwasaki's house, all within a limited time frame. However, we managed to break ground in April 2005, with the original construction company that built the I-House, the Shimizu Corporation. The addition of the new hall involved several complex construction tasks, such as excavating into the ground while suspending the existing building on posts, but construction of the non-hall areas finished successfully without incident in March 2006, when part of the I-House was opened once again to the public.

That following July 1, a grand opening was held on schedule unveiling the new hall and holding a symposium. Several days later on July 7, the Emperor and Empress of Japan were invited to a formal reception commemorating the I-House's 50th anniversary. Regardless of how well the new I-House was received, the truth of the matter is that those involved in the construction were treading on thin ice in order to meet the demands of a rigorous schedule. In retrospect, it is obvious that throughout this preservation and restoration project of I-House, the I-House staff and the design and construction personnel, went above and beyond the call of duty. One must give special appreciation to the hard work and workmanship that went into renovating the I-House: without everyone's meticulous teamwork, this complicated Preservation and Restoration Project could not have been successfully completed.

Conclusion as Lessons Learned

As described above, opinions were exchanged several times between panel members and I-House management while alternative proposals were being explored. Those involved were thus able to develop a certain level of trust by looking at the situation from each other's viewpoint, which no doubt helped in gaining final approval from the Board of Trustees. Such a dramatic policy reversal in which a building slated for the wrecking ball was instead preserved and restored is unparalleled in Japan.

The lessons learned here were:

- The whole orientation largely depended on a property owner that was open-minded towards both the voices of its own members and of AIJ.
- Moreover, rational understanding that choosing to preserve and restore the property, not simply for the cultural or nostalgic value but also made economic sense, played a significant role in the property's fate.
- Lastly, the most crucial seemed AIJ's decision to go beyond simply requesting the I-House's preservation and to play a more active role by coming up with an actual preservation and restoration strategy taking into account the owner's point of view.

The debate about a building's *authenticity* has just begun to get underway in Japan. As an architect, I believe we should attempt to clarify the architectural aspects that retain our historical DNA and the new aspects that express the modernity of a new era, and use that contrast as an opportunity to emphasize time, memory and authenticity. I also feel that when preserving modern architecture in pursuit of the functional beauty, restoring architecture so that it complies with the needs of the age is a more realistic approach.

Finding ways to preserve modern architecture, our social heritage which is now a half-century old, is set to be a major challenge facing us in the years to come, as can be seen in the worldwide *docomomo* movement. In order to prepare for that time, it is up to us today to develop and promote widely strategic arguments that outline how architectural preservation and restoration initiatives can result in living buildings that simultaneously uphold the history and memory of the past.

Needless to say, educating and training those with the occupational skills necessary for preserving and restoring our architectural and cultural heritage is also important. Actually, general preservation and restoration strategy requires a high level of comprehensive understanding of architectural engineering and artistic aesthetics. Thus, we need to provide for a well-balanced educational program for the coming era of a preservation and restoration oriented society. Within such programs, the case of the "Preservation and Restoration of the International House of Japan" might stand as a useful precedent. ■

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06 Symposium hosted by International House members. © Masami Kobayashi, 2004.



Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Detail of the column and suspended office floor during construction. © AUCA No. 3, March-April 1966.

Reuse and Transformation of a Modern Movement Masterpiece: UN-CEPAL-ECLAC Building, Santiago de Chile

BY HORACIO TORRENT

Recent interventions in modern oeuvres of high cultural significance have set new challenges, opening discussion on the various positions associated with their preservation and sustainability. In particular, the relationship between newly conceived architecture and modern heritage, for which the analysis of the design in the original building, the ideas promoted in terms of its significance and the results obtained in material terms, become the key features in each case. The experience of the United Nations ECLAC (Economic Commission for Latin America and the Caribbean) building in Santiago, Chile, may, in this sense, be of special interest in order to verify possibilities of sustainability that assume both the contingencies among which the rehabilitation process takes place and the values recognized in the building as monument.

On Modern Heritage Sustainability

Active sustainability of modern heritage often requires assuming the cultural challenges posed by the values that reside both in the original conception of buildings and in the vicissitudes of their individual lifetime. Contemporary intervention can become crucial for future preservation of modern architecture, in its material and physical condition but also primarily in its cultural status, as it endures or renews initially proposed meanings or as it provides the necessary validation of its public use and enjoyment.

Modern architecture proposed itself from the beginning as renewing, both of forms of construction and modes of inhabiting buildings, sites and complexes. Because of the strong experimental nature of the construction of modern buildings they suffer from important material degradation and obsolescence. That same initial experimental nature can encourage openness to incorporating new material options when facing reuse and rehabilitation. Moreover, modern architecture itself encouraged, on countless occasions, the possibility of replacement or renovation, either completely or in part, making it possible to face its current condition as heritage through actions that consolidate their primary features, as through interventions that — staying close to original concepts — propose themselves as being different from pre-existing architecture.

The ECLAC Building

Opened on August 29th, 1966, the United Nations (UN) building in Santiago, Chile, houses the Economic Commission for Latin America and the Caribbean (ECLAC), an institution created in 1948 to promote the region's economic and social development. Donated by the Chilean government in 1958, the complex is located on the banks of the

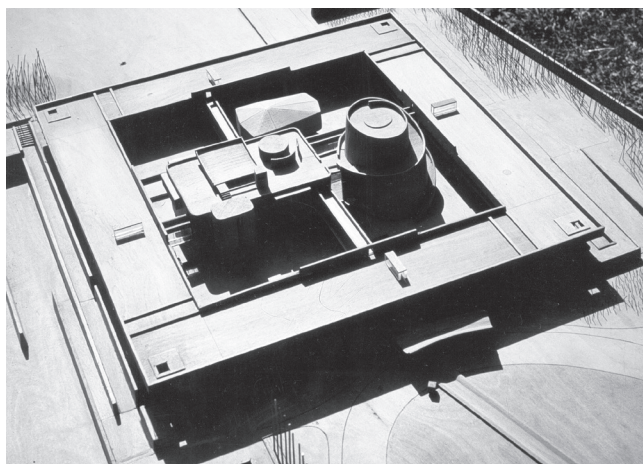
Mapocho River, which runs through the valley of Santiago by the Andes.

The project was originated in an open national competition, held in Santiago in November 1960. On that occasion the selection was sent to New York, where the UN Secretary-General, Dag Hammarskjöld himself — advised by Wallace Harrison and Philip Johnson, among others — ruled in favor of the proposal submitted by Chilean architect Emilio Duhart. The designers' team was composed of the latter, as chief architect, together with Cristian de Groote and Roberto Goycoolea as collaborating partners, and Oscar Santelices.

Duhart had graduated as an architect from the *Pontificia Universidad Católica de Chile* (1941) and obtained a Master's degree in Architecture at Harvard University (1943), collaborating in Walter Gropius' office and Le Corbusier's atelier, where he took part in the series of projects for India. Back in Chile, he assumed works of greater urban dimension, such as the University Campus on Concepción, among others.

At 42-years old, Duhart won the competition that would allow the realization of his masterpiece. It would be his intention to overcome the conditions of mere professionalism, leading him to conceive a transcendent building: "The United Nations building for Santiago is set up as a House and as a Monument. The House for nations in community. The Monument, a visible expression of its spiritual and social aspirations. House and Monument rise in a plastic and functional Unity, understood by all. A Monument for nations and for their meeting place, Chile (...)".

The submission conceived a set of buildings, where a central piece assumed the task of monumental representation. The building's plan is based on a 96 by 96 meters quadrangle.



01 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Model of the project submitted to the Competition, 1960. © Emilio Duhart Archives. *Archivo de Originales, Centro de Información y Documentación Sergio Larraín García-Moreno. Facultad de Arquitectura, Diseño y Estudios Urbanos. Pontificia Universidad Católica de Chile.*



02 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Competition Rendering, 1960. © Emilio Duhart Archives. *Archivo de Originales, Centro de Información y Documentación Sergio Larraín García-Moreno. Facultad de Arquitectura, Diseño y Estudios Urbanos. Pontificia Universidad Católica de Chile.*

gle, in clear reference to the urban dimension that confronts the vast space of American geography². Destined to house the offices, the quadrangle or Ring — in the author's definition — encloses a vast inner space where common buildings are set: the *Caracol* (snail shell), a conical helicoid containing the Assembly Rooms; the Diamond-shaped volume, which housed a conference room, and the services *Núcleo*, linked to the quadrangle by a series of pedestrian bridges. Both bridges and buildings qualify the inner void in four courtyards or *patios*.

The Ring is an autonomous, single unit; a continuous pavilion suspended over ground level, hanging from a structure above. This structure consists of a succession of post-tensioned concrete elements supported on two continuous lateral main beams; the latter rest on four columns aligned on each side of the quadrangle, cantilevered at the corners.

An essentially solid volume, the *Núcleo* contains five indoor levels — two of which establish the connections on the underground level — concentrating services, equipment and facilities. But it also constitutes the “core” of the ensemble, reuniting the four bridges that connect to the quadrangle and the entrance halls to both Assembly rooms on the *Caracol*. On its roof, a lookout terrace encompassed a folded slab — providing an outdoor auditorium — and two cylindrical shapes — one corresponding to the vents and the other to the main staircase that led to the terrace.

Never executed, the Diamond was a polyhedron — hence the name — that hung high over one of the courtyards on a folded structure cantilevered from only four structural points.

The *Caracol* is however the most important element of the complex. “The form of the *Caracol* is intended to symbolize its function — a place for discussion leading to the establishment of the future pattern of development for Latin America”³. A conical helicoid contained in a truncated cone, shaped by a double skin of concrete that shifts to accommodate an external staircase, culminating in a look-out terrace.

Inside, it houses two overlapping Assembly Rooms for the Commission; the main one, with a magnificent spatiality generated by its 15-meters height. “The great space within the cone is capped by a white fiberglass, inverted saucer dome known as the *Luna* (moon), which can be raised or lowered as required acts as a sound deflector, and [...] is used as a striking lighting feature”⁴.

The completion of the building involved numerous technical challenges⁵. Constructional audacity, structural boldness and material prowess comprised in the design were in close connection with the work's visual expression and its monumental significance. The architect himself acknowledged that the structure represented “a major effort in design, analysis, calculation and execution in construction”, still “it was only during a project like the United Nations one that we could and ought to build an architectural and technical complex with the structural characteristics of this building”⁶.

Modern Movement Masterpiece

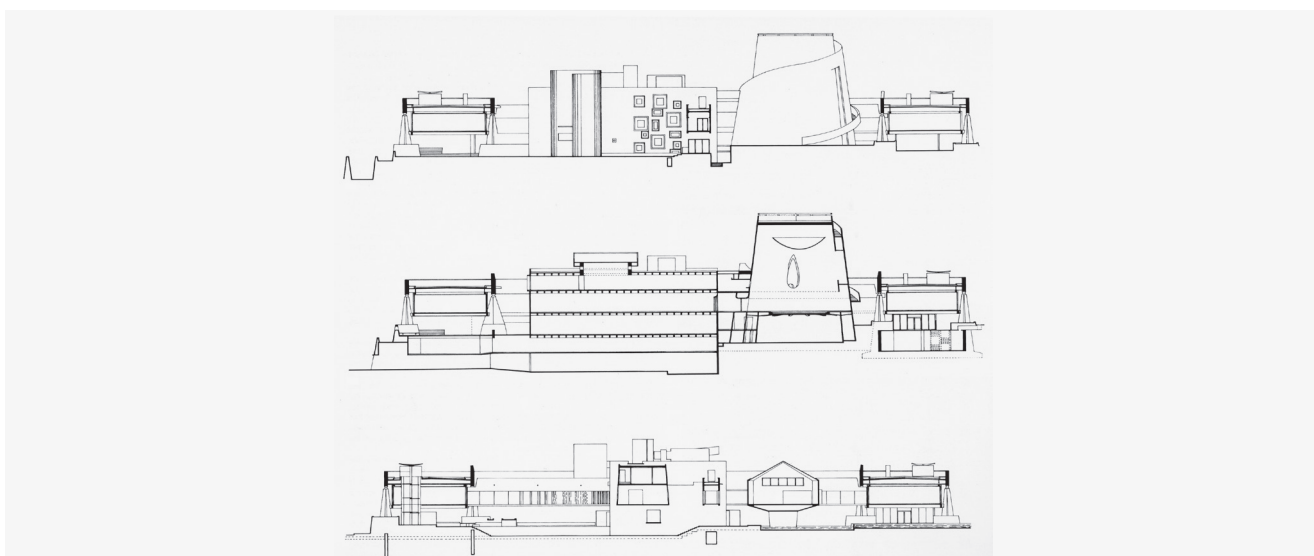
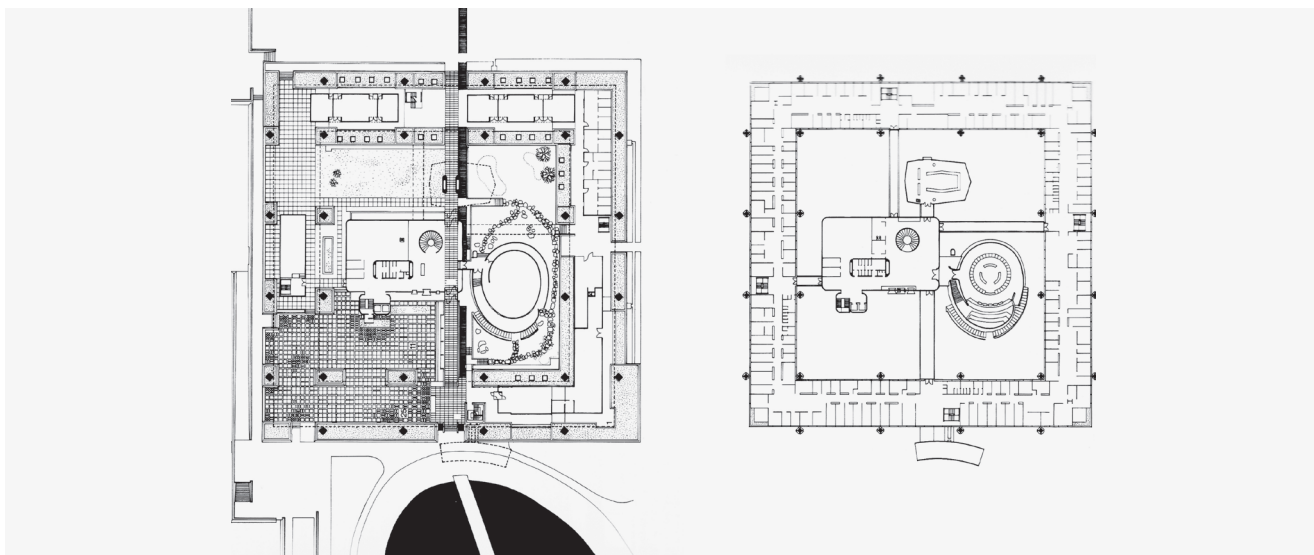
The relevance of the ECLAC building in the context of architectural production worldwide lies possibly in the distance that separates it from other expressions of the time, in Duhart's uniqueness for knowing how to situate this work given the conceptual density that conceived it.

The project moved away with strength and determination from the guidelines that modern architecture was assuming in Latin America by the time. In 1955 — only five years before the competition — Russell Hitchcock had considered Chilean work still not up to other Latin American architectural manifestations such as those coming from Brazil or Mexico⁷. During the journey prior to the exhibition *Latin American Architecture since 1945* — organized by the Museum of Modern Art —, the stay in Chile has lasted only one day. In the words of Rollie Mackenna, from the point of view of existing (and completed) buildings, the time allot-



03 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. View on the axis of the access road over the reflecting pool. © Emilio Duhart Archives. *Archivo de Originales, Centro de Información y Documentación Sergio Larraín García-Moreno. Facultad de Arquitectura, Diseño y Estudios Urbanos. Pontificia Universidad Católica de Chile.*

04 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Plans. © Alberto Montealegre, *Emilio Dubart Arquitecto*, Santiago de Chile, *Ediciones ARQ- Pontificia Universidad Católica de Chile*, 1994.



05 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Sections. © Alberto Montealegre, *Emilio Dubart Arquitecto*, Santiago de Chile, *Ediciones ARQ- Pontificia Universidad Católica de Chile*, 1994.

ted was completely accurate; “in 5 to 10 years I think they’ll have some good things”⁸.

It is known that Duhart dedicated his design of the UN building to Le Corbusier. Still, he was also aware of his detachment from the master:

“It was good, however, that I had back then sufficient autonomy so as to receive the impact of such a great creative mind without being ‘irradiated’, as it happened to some of his youngest assistants. With “Corbu” I learned many things about architecture, reinforcing with his example my own will not to falter before hardships of life as an architect and not letting commitments invade me”⁹.

Although being referred on numerous occasions as a building close to Le Corbusier’s oeuvre — for its formal approach — careful analysis verifies a number of dissimilarities that make it a unique work of architecture.

The Chilean architect had a clear awareness of the existence of a new dimension in architecture, in line with the ideas of a new monumentality that had surely recognized on his stay in Harvard. As he would state years later, “twentieth-century architecture shows, since post-war years, a natural evolution towards increasing incorporation of the expression of geographical and historical values, specific to each cultural region”¹⁰. The achievements of his building are evident; a kind of modernism that already contrasted and surpassed clearly the abstract schemes of previous UN buildings¹¹. On the one hand, the UN building in New York (1947–52) — completed nearly 12 years earlier — had been questioned by Lewis Mumford because of the significance the Secretariat tower acquired over the Assembly building. On the other, with the UNESCO headquarters in Paris (1952–58) — opened only two years before the competition held in Santiago — controversy had arisen because of its successive projects and the all-pervasive temptation of appealing to academicism in the Parisian context.

It was time to generate a new approach, filled with significance. Duhart assigned then a number of key references to understanding the building.

The first one rested in its metric definition: the quadrangle matched the size of the *manzana fundacional* — the block that characterized Spanish-foundation cities in America — in a clear allusion to urban tradition having to face the colossal dimension of landscape in the Andes. It assumed also a precise scale — adjusted to that of the colonial city — where horizontality prevailed; so did the presence of the wall, punctured only with one entrance along the entire lateral side. Finally, it scaled the inner landscape according to that customary dimension of the courtyards belonging to Chile’s traditional houses.

But at the same time, the building conveyed a conception of space that was eagerly modern. Unlike the traditional confinement given by the adobe walls of traditional houses, the free plan allowed by the hanging volume permitted continuity of the space in enclosure and transparency between the inner courtyards and the outside.

The choice of forms referred to pre-Columbian American monumentality, but with the necessary autonomy not to

replicate any specific formula: the truncated cone with its helical path could be a remembrance of both pyramid and observatory, but it remained at the same time a novel concept emerging from its function. Its height and presence in the complex highlighted the dominance of the Assembly over bureaucracy, reversing the functionalist scheme that Mumford criticized.

A number of details proposed a “vocabulary” consistent with these greater definitions. The square-based columns with its pyramidal aspect anticipated a distant relation to those proposed by Mies in the Bacardi project, while expressing formal autonomy. The main entrance featured a marquee in the shape of a cantilevered tile, supported by two beams projecting from the facade. Once again, a sculptural shape associated with traditional forms of Latin American construction — in an unexpected situation —, building with elegance the main point of the facade.

Retaining walls assumed their structural function of containing the land along the river, recalling the building’s horizontality by extending themselves over the site while acting as a plinth upon which the structure rises — an operation destined to monumentalize the composition — reaching finally a more immediate, tactile dimension by incorporating in its concrete textures the boulders that lay in the immediate riverbed.

Already, even in 1960, Duhart assumed in an extraordinary manner the exposure of building’s material qualities; hence the use of rough, *in-situ* concrete as main construction material for the massive volumes of the *Núcleo* and the *Caracol*, for the beams on the quadrangle’s ring, the exposed concrete in the columns or the discreet presence of prefabricated beams in the ceiling above the suspended floor. All these features contrast with fine, clear-cut details such as the travertine sheets set on the façade, the precise resolution of the breeze-catchers or the exquisite wood and copper accents on the conference room interior.

No doubt his experience with Le Corbusier approached the brutalist condition that was being discussed in global architectural culture at the time, imposing an aesthetic dimension accompanied by an unorthodox integration of works of art — as the symbolic narration of mankind’s history in the bas-relief or the workers’ handprints on the walls of the main façade: traits of symbolic significance strongly distanced from similar architectural approaches in Latin America.

Duhart claimed that “the relative hermetic quality of the building, not presenting fully or immediately its content, was consonant with the deep Latin American temperament, reserved and austere, which is not a synonym of poverty but rather perhaps of the consciousness that there exist enormous contained forces not yet delivered, but given as potential and promise”. This hermetic quality of the exteriors, he maintained “combines best with the majesty of the continent’s cosmic environment, rather than a straight-forward, slightly wrong expression, judged as typical for those who do not deeply feel the South American phenomenon”¹².

06 Emilio Duhart on the *Núcleo* terrace, c.1968. © Emilio Duhart Archives. *Archivo de Originales, Centro de Información y Documentación Sergio Larraín García-Moreno. Facultad de Arquitectura, Diseño y Estudios Urbanos. Pontificia Universidad Católica de Chile.*



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Essays



07 Emilio Duhart, ECLAC building, Santiago, Chile, 1966. Main entrance canopy. © Emilio Duhart Archives. *Archivo de Originales, Centro de Información y Documentación Sergio Larraín García-Moreno. Facultad de Arquitectura, Diseño y Estudios Urbanos. Pontificia Universidad Católica de Chile.*

Lost Decade

Between the initial proposal and the project's development, the expansion of the original program tested Duhart's design ideas. In his own words, "after the call-for-projects, [the original program] expanded almost 100%, without losing still the coherence of the initial concept" and once again, "flexibility of the plan was tested with numerous changes in program that took place during construction (...)"¹³.

However in the original proposal future extensions were considered by the addition of new volumes within the grounds, once the complex was inaugurated the Commission's functions continued to expand. During the 1980s, the large open areas that characterized the free plan below the quadrangle were gradually invaded with workplaces, generating a solid bulk that made any continuity and transparency disappear.

Two occasions of further deterioration were defined by natural phenomena. In 1982, the Mapocho River alluvial flood surpassed the dam walls, invading the *piano nobile* with mud. The 1985 earthquake would also cause destruction, mainly because of the collapse of one of the bridges.

This mistreatment would reach its highest point in 1993 with the construction of a conference room on the *Núcleo's* rooftop. Fulfilling the absence of the one the Diamond would have housed, it obliterated a quasi-metaphysical space characterized only by two cylindrical volumes and the folded ground of the auditorium, which allowed one to perform ceremonies in the context of the Andes' landscape.

Gradually, these years would be for the building the period of greatest abuse and restriction of the possibilities to appreciate both the quality of life and the spatial richness that the initial design proposed.

The "lost decade" was the expression that ECLAC coined for referring to the link between economic growth and social development in the eighties in Latin America; paradoxically, it would mean a "lost decade" for the building too.

Partly because of the controversy raised by the construction of the rooftop conference room¹⁴, since the mid-nineties the significance of the building took on a new impetus in Chile, along with the development of academic studies on modern heritage, incorporating it as a symbol of local architecture and signifying it as a heritage site. In the last decade, a rehabilitation program has been undertaken, intended to consolidate the building's architectural value, by reversing damaging interventions, demolishing minor structures and recovering *piano nobile's* open spaces¹⁵.

At the same time, a process was launched to re-equip the building by fitting new needs and practices, and to preserve the building's original design concept while meeting accessibility, sustainability and international safety standards.

The Earthquake and the Opportunity

At 3:34 am on February 27th 2010, a 4-minute earthquake rating 8.8 on the Richter scale devastated a large part of the country. With its epicenter on the coast, it directly affected an area about 640 km long, an area where 80% of the country's population lives.

A considerable part of the country's urban and architectural heritage collapsed; 20th century buildings — roughly more resistant because of technology employed in their construction — still suffered severe damage. **docomomo** Chile mobilized its resources, performing tasks of diagnosis and corroboration of the status of damage on countless housing developments and significant buildings.

Among others, the ECLAC headquarters had suffered severe damage; both in the office quadrangle and in the structure built during the eighties above the *Núcleo*. **docomomo** offered to collaborate with the General Secretariat in the building's repairs and transformation. Among other actions, **docomomo** suggested organizing a seminar to discuss proposals, as it had already been implemented on a previous occasion - while building the Cultural Center at the Embassy of Chile in Argentina¹⁶.

UN ECLAC's administration emphasized that the area that had been completely destroyed would be rebuilt with the exact same program, for institutional reasons: veiling of the financial assets contributed by 187 countries members of the Economic Commission and specially because of the restrictions imposed by insurance involved. ECLAC accepted the proposal by **docomomo** Chile in July 2010 as an opportunity to qualify the significance of the building.

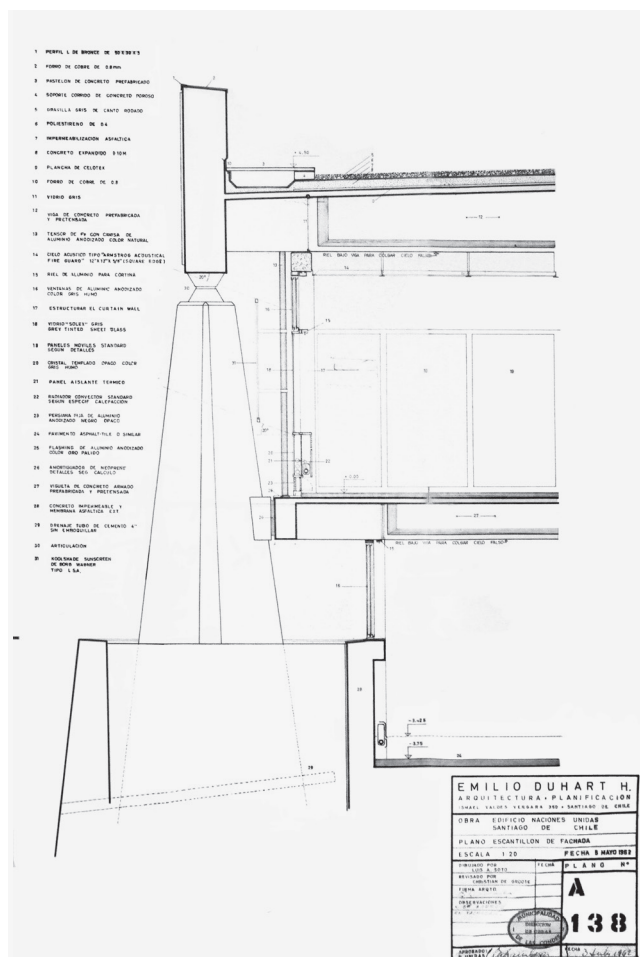
Strategies for Intervention on Modern Heritage

The seminar was convened to discuss and explore design ideas and to identify strategies of intervention in the existing building, considering its heritage features. The seminar would propose a set of ideas from which ECLAC could subsequently select to implement, through the proper mechanisms of the UN¹⁷.

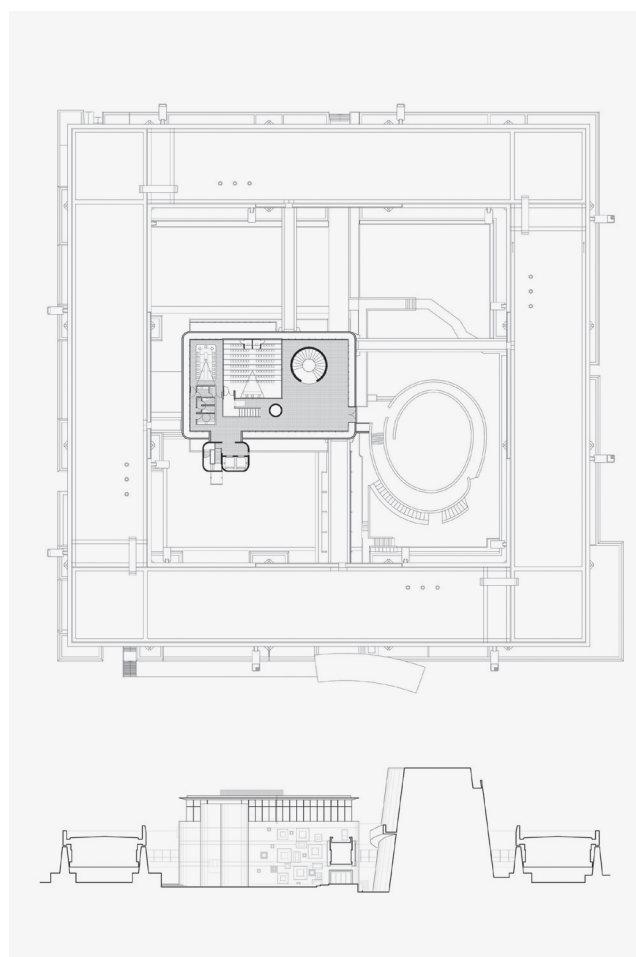
The main aspect considered in the development of the project was the height of the proposal in relation to the other elements of the ensemble: the quadrangle's strong horizontality *versus* the presence of the *Caracol*. Certainly, this feature was the previous proposal's most controversial one, given its strong presence both in the whole and in the perception from the building's entrance. Furthermore, the need for an intervention that made explicit the criteria of reversibility and the possibility of returning to the building's original state at some point in the near future was also considered. Finally, connection with the rest of the building was also important, as well as the flexibility of the interior space and the possibility of establishing the relation between interior and exterior, both physical — with the rest of the building — and visual — with the surrounding landscape.

There were ten responses to the international call for submissions. Some of them indicated clearly the possibility of a change of direction in decisions, proposing the roof's restoration, while others had a more pragmatic attitude towards the problem.

Among the strategies that intended not to intervene in the rooftop, two assumed the possibility of concealing the program underground — in the inner courtyards — clearly positioned among building preservation arguments. A third



08 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Section detail, showing the suspended office floor. © Emilio Duhart Archives. *Archivo de Originales, Centro de Información y Documentación Sergio Larraín García-Moreno. Facultad de Arquitectura, Diseño y Estudios Urbanos. Pontificia Universidad Católica de Chile.*



09 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Reuse design by O1ARQ, Pablo Saric, Cristian Winckler, Felipe Fritz, 2011. General plan and section, showing the position of the new Pavilion and Fajnzylber Conference Room. © Lucia Galaretto, 2015.



10 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Reuse design by O1ARQ, Pablo Saric, Cristian Winckler, Felipe Fritz, 2011. The new Pavilion, as seen from the base of the *Caracol*. © Horacio Torrent, 2014.



11 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Reuse design by O1ARQ, Pablo Saric, Cristian Winckler, Felipe Fritz, 2011. New Pavilion, interior. Outside, the presence of the *Caracol*. © Horacio Torrent, 2014.

one considered that the building had not yet been completed, proposing therefore the construction of the piece still missing from the original project: the Diamond. The proposal considered both location and size of the original design, reformulating the program with new materials.

Among the proposed strategies, responding to the need for intervention, it is possible to recognize four distinctive attitudes. An exceptional position of radical contrast, shown in a scattered arrangement of boxes gathered under a green roof of irregular geometry. A second one, however in continuity with existing geometry, distant in form: setting a fuselage with a concrete-like appearance and color, therefore close to pre-existing materials. Two proposals offered continuity with the existing form, but accentuated the difference through the elected materials: one, a box of reflective glass with a strong concern for the interior, the other, a horizontal slab made of laminated wood. Finally, a fourth strategy that considered and retrieved the pre-existing modulation in Duhart's design, applying it in terms of composition in a construction defined by the presence of a curtain wall.

docomomo's recommendation to ECLAC was initially to favor proposals that suggested erecting the new structure elsewhere, restoring the building's original condition. But, considering institutional reasons to persevere in the idea of re-constructing the Room in the exact same location (on top of the *Caracol*) highlighted two possible alternatives. One clearly defined its height regarding the rest of the building, assuming mimesis through the use of vegetation. Other that, while incorporating all the necessary surfaces in an enclosed volume, generated at the same time on its roof a new terrace, recalling that pre-existent one, only now one level above.

Finally, as stated on another occasion,

"The singularity of the call for ideas lay in the paradoxical fact of responding to the recovery of the square meters of a largely criticized intervention - over the original roof terrace and visible from the exterior - while at the same time recognizing the characteristics and formal repertoire of the original building of 1966"¹⁸.

New Architecture and Building Pre-Existences

The proposal selected by UN-ECLAC was the one assuming an attitude of respect towards the main building components as heritage. The presence of this new structure regarding the whole, and mainly the *Caracol*, is solved by adopting a height that is lower than the latter, displaying a difference in materials and a low profile, merging among the vegetation already existing in the *Núcleo*.

The scheme covers the entire deck surface with a lightweight steel structure that prefigures the possibility of its potential removal. On the inside, the body of the auditorium is differentiated by detaching itself from the ground, recalling the arrangement of the folded slab originally proposed by Duhart as an outdoor amphitheatre.

The definition of the volume's height is given by the minimum internal height of the auditorium's entrance, which occupies the pre-existing elevated platform. A smaller volume covered in painted glass, enclosing bathrooms and a

kitchen-office, is placed separately from the structure's skin, surrounded by a perimeter passage; the rest of the facilities — conference room and foyer — recall the fluency of the plan, where spatiality is defined by the existing cylindrical volumes of the main staircase and vents.

A double-skin perimeter encloses the space. Assembled with glass in the inner side and a green cover on the outside, it contrasts the predominant concrete structure of the building. Once it grows, the green skin will act as a passive climate-control agent, taking advantage of pre-existing planters to camouflage with the rest of the *Núcleo*, already spontaneously covered by vegetation. The aim of the project is then to differentiate itself from the heritage components while harmonizing with the conditions the building has assumed in time.

Modern Heritage Challenges

The Pavilion opened in December 2012. Its presence in the building, however does not go unnoticed, is sufficiently neutral so as to show itself different from Duhart's work.

One of the most extensively discussed criteria was the relationship that the proposal was supposed to have — in formal terms — with the existing building, in an attempt not to compete with the elements that the original design proposed as the basis for its monumental significance. This was mainly because the intervention was upon the *Núcleo*, of a limited importance compared to the other two components presented in the ensemble. A second one was the presence of a new volume where the original project had particularly cared for: the fifth facade. Finally, the connection that the new intervention was supposed to establish with the building's original materials: concrete, treated "as found", responded to crafted wooden cases, appealing to a rhetoric of its own verified in the contrast established with the figurative bas-reliefs present in the *Caracol* or in the taskforce's handprints - a tribute to the workmen who built it. Faced with this rhetorical materiality, the new intervention had to take a stand: it seems to have the will to gradually disappear.

The ECLAC building has often been considered one of the seminal works of Latin American architecture, although its significance is still partially ignored worldwide. The author was clear that the building should transcend its direct reference to an institution representing the ideals of the contemporary world and the hopes of Latin American people: "in this work we have tried to contribute to define the very expression of both the continent and the time we live in."¹⁹ Any intervention properly made and lacking of presumption can measure itself with the multiple dimensions of quality encompassed in works that become Modern Movement masterpieces, such as the ECLAC building.

The ostensible contradiction between original forms and contemporary creativity — usually at stake on projects concerning antique heritage and present intervention — does not arise with the same intensity in those regarding modern architecture. What in other fields emerges as a clear and definite conflict — allowing even to operate, in terms of design, in a positive sense — presents a more complex dimen-



12 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Reuse design by O1ARQ, Pablo Saric, Cristian Winckler, Felipe Fritz, 2011. General view front entrance. © Aryeh Kornfeld, 2013.



13 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Reuse design by O1ARQ, Pablo Saric, Cristian Winckler, Felipe Fritz, 2011. New Pavilion, view from the north-west patio. © Aryeh Kornfeld, 2013.



14 Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Reuse design by O1ARQ, Pablo Saric, Cristian Winckler, Felipe Fritz, 2011. Interior of the New pavilion, Fajnzylber Conference Room. © Aryeh Kornfeld, 2013.

- 15** Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Reuse design by O1ARQ, Pablo Saric, Cristian Winckler, Felipe Fritz, 2011. New Pavilion, view from the stairs of the *Caracol*. © Horacio Torrent, 2014.



- 16** Emilio Dubart, ECLAC building, Santiago, Chile, 1966. Reuse design by O1ARQ, Pablo Saric, Cristian Winckler, Felipe Fritz, 2011. The *Caracol* and the new Pavilion, as seen from the back patio (courtyard). © Horacio Torrent, 2014.

sion when it comes to modern buildings, sites and neighborhoods. Partly, because creativity was almost an ethical imperative of modern architecture, now revealed as a likely opponent from the past. Certainly, it's about assuming the condition of difference that today's propositional attitude can afford, with due respect for the forms and aesthetic approaches developed during the twentieth century.

Indeed, it existed in modern architecture — and still exists among its built evidence — a collective dimension, expressed in the development of a shared aesthetic. This search for representation overcomes and even exceeds individual creativity. It is in that dimension where the recognition as heritage largely resides.

For the same reason, all contemporary intervention to be performed on modern architecture will find, as a main contender, the sheer quality of its original resolution. To overcome it, contemporary architects need to be as creative as the original modern architects — such as Emilio Duhart. Thus, the main task for active sustainability of a modern monument lies in assessing its material dimension and decoding its opportunities for design in a contemporary key, keeping at the same time its original significance. ■

Notes

- 1 Emilio Duhart, document Presenting the Preliminary Design to the Competition, 1960 in “Edificio de las Naciones Unidas en Vitacura: un Diálogo Crítico con el Arquitecto”, *AUCA* No. 3, April-May 1966, p. 29.
- 2 This work has been done as part of the Project FONDECYT N° 1140964 “La Arquitectura de la Gran Ciudad, Chile 1930–1970”. The author thanks Fondecyt for the financial support. The work on the original documentation and the reproduction of photographs at the Archives SLGM-FADEU-PUC, was conducted with support from the grant fund DIRIP 20–2014 from the Facultad de Arquitectura, Diseño y Estudios Urbanos, Pontificia Universidad Católica de Chile.
- 3 Emilio Duhart, “United Nations Building, Santiago, Chile”, *Architectural Design*, vol. xxxvii, No. 1, January 1967, p. 36.
- 4 *Idem*, p. 37.
- 5 See Jeannette Plaut, Marcelo Sarovic, “Between Imagining and Building: the Construction of the ECLAC United Nations Building, 1961–66”, in Sarovic Plaut, *Cepal 1962_1966, United Nations Building, Emilio Duhart Arquitecto*, Santiago de Chile, Editorial Constructo, 2012.
- 6 Emilio Duhart, *idem*, p. 45.
- 7 Henry-Russell Hitchcock, *Latin American Architecture since 1945*, New York, MoMA, 1955.
- 8 Rollie McKenna, *Letter to Porter McCray*, 1954. CE 11.1.69.1.2. The Museum of Modern Art Archives NY.
- 9 Emilio Duhart, “Acceptance Speech upon Receiving the National Prize in Architecture”, in Alberto Montealegre, *Emilio Duhart Arquitecto*, Santiago de Chile, Ediciones ARQ - Pontificia Universidad Católica de Chile, 1994.
- 10 Emilio Duhart, “A Look at the Current State of Architecture”, in Alberto Montealegre, *Emilio Duhart Arquitecto*, Santiago de Chile, Ediciones ARQ - Pontificia Universidad Católica de Chile, 1994, p. 26.
- 11 Barry Bergdoll, “Duhart and the Transcontinental Architecture of the United Nations”, in Sarovic Plaut, *Cepal 1962_1966, United Nations Building, Emilio Duhart Arquitecto*, Santiago de Chile, Editorial Constructo, 2012.
- 12 Emilio Duhart, document Presenting the Preliminary Design to the Competition, 1960, in *Edificio de Las Naciones Unidas en Vitacura: un Diálogo Crítico con el Arquitecto*, *AUCA* No. 3, April-May 1966, p. 37.
- 13 *Idem*, p. 37.
- 14 “Sobre la Terraza del Edificio de las Naciones Unidas Diseñado por Emilio Duhart (Extractos de Prensa)”, *ARQ* No. 23, Santiago de Chile, May 1993, p. 48.
- 15 Since mid-2000s, the work carried out by of a new group of experts such as Andrea Henrichsen, Chief, General Services Section and Eduardo Lyon PhD, Chief, Architectural and Engineering Unit,

- allowed to gradually revert informal structures and recover spaces.
- 16 See Elisa Gil Serrano, Hugo Mondragón, “Conservation through Modern Architecture Intervention. Embassy of Chile in Argentina. 1966–2009”, *docomomo Journal*, No. 43, 2010, p. 82–84.
- 17 The Seminar was held in the Main Hall — Raúl Prebisch Room — on January 2011. It was co-organized by Horacio Torrent, Macarena Cortes, Gisela Frick and Fernando Carvajal from **docomomo** Chile, and Eduardo Lyon and Andrea Henrichsen from ECLAC. Recommendations subsequent to the discussion on proposals were made by a second committee, comprising Horacio Torrent, President of **docomomo** Chile; Hugo Mondragón from the *Programa Magister en Arquitectura*, PUC — home of **docomomo** Chile — and Carlos Eduardo Dias Comas, then Chair of **docomomo** Brazil, on behalf of **docomomo** International.
- 18 Horacio Torrent, Macarena Cortés, Gisela Frick, “The Limits of Reality: Conservation and Design Strategies for a Damaged Heritage: ECLAC Building 2012”, in Timo Tuomi, Tommi Lindh, Miia Perkkio, Jenni Sahramaa (eds.), *The Survival of Modern: From Coffee Cup to Plan*, Porvoo, Finland, Bookwell Oy, 2014, p. 56.
- 19 Emilio Duhart, document presenting the preliminary design to the competition, 1960, in “Edificio de las Naciones Unidas en Vitacura: un Diálogo Crítico con el Arquitecto”, *AUCA* No. 3, April-May 1966, p. 29.

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Kenzo Tange, The Kagawa Prefectural Government Office East building, Kagawa, Japan, 1958. The East building (in front) and the main building, completed in 2000 (to the rear). © Toshihiro Misaki, 2009.

Efforts to Improve the Earthquake Resistance of the Kagawa Prefectural Government Office East Building

BY KEIZO HAMADA

The Kagawa Prefectural Government Office East Building, designed by Kenzo Tange, was completed in 1958, and in addition to acting as an important disaster prevention base facility, it possesses a cultural value through its many spaces open to the public and its expression of traditional Japanese architectural ideas in concrete. It is part of the current government offices, and while the concrete itself is expected to be viable for over 50 years, it will require substantial improvements in order to meet the most recent earthquake resistance standards.

As such, Kagawa Prefecture, through advice from specialists and discussion in the Prefectural Assembly, has considered the possible earthquake resistance improvements that could be made, including reconstruction, seismic isolation retrofitting, and seismic strengthening. It was concluded that in consideration of earthquake resistance, its office functions, costs involved, and the cultural value of the building, it would be appropriate to preserve the building and improve its earthquake resistance through base isolation construction methods, and efforts are being made to gain the support and understanding of the people of the prefecture and pursue this policy going forward.

Kagawa Prefecture¹ is located in the northeastern area of Shikoku and while it is the smallest prefecture in Japan by land area, it is blessed with abundant nature which displays the beauty of the four seasons, including verdant mountains and the Seto Inland Sea. In fact, the Seto Inland Sea was the first national park established in Japan, and when the German geographer Ferdinand Freiherr von Richthofen visited, he proclaimed, “Could there be anywhere in the world more beautiful than this?”². With the natural gems, a temperate climate, and relatively little rainfall, Kagawa flourished historically as an important location in maritime transport, with unique industries and culture that developed as a result.

The area is well endowed culturally, with Ritsurin Garden, the *daimyō* garden that has been awarded three stars by the *Michelin Green Guide Japan*; local crafts including Kagawa lacquerware, and many museums including the Chichu Art Museum on the internationally renowned island of Naoshima, the Garden Museum of the international sculptor Isamu Noguchi³, and the Museum of Contemporary Art of Genichiro Inokuma⁴, who was born in Kagawa. The *Setouchi Triennale*⁵, an international art festival that takes place across the many islands of the Seto Inland Sea, welcomes a large number of international patrons and has received high praise. Kagawa continues in its efforts to establish itself as the “Art Prefecture” and utilize its many cultural resources.

The Kagawa Prefectural Government Office East building (referred to as “East building”) (essay cover) was completed in 1958 in the “Art Prefecture” and is symbolic of the

post-World War 2 modernist architecture found in Japan which Kenzo Tange⁶ worked on. More than half a century has passed and it still functions as the government offices of Kagawa Prefecture and is well liked as offices that are open to local people.

Kagawa is currently pursuing a number of ways to improve the earthquake resistance of the East building, considering a number of aspects including disaster prevention, and financial and cultural elements. I would like to give an overview of these efforts here.

The Importance of Improving Earthquake Resistance

In the seismic occurrence assessment issued by the Japanese government, there is a 70% chance of a large scale (Magnitude 8–9) earthquake occurring in the next 30 years with its epicenter in the Nankai Trough region, which would affect a wide area including Kagawa⁷. In the *Basic Guidelines for Earthquake Resistance Improvement of Facilities Owned by the Prefecture* Kagawa has designated the East building as an important disaster prevention base facility, which will provide direction of emergency measures, and transmit information during a large scale disaster.

However, the earthquake resistance of the East building is less than 0.30 on the Seismic Index of Structure⁸, which means that it is within the range where there is a high risk of collapse or destruction following the shock a large scale earthquake of 6 to 7 on the Japanese seismic intensity scale. For example, there were many instances following

the Great East Japan Earthquake in 2011 of government offices which were less than 0.30 on the Seismic Index of Structure that were rendered unfit for use after damage from the earthquake. It is for this reason that improving the earthquake resistance of the East building has become such a pressing issue, as it does not reach 0.90 on the Seismic Index of Structure that is the current standard required in Japan for disaster prevention base facilities.

With regards to the concrete of the structure, test results in 2012 of the strength and carbonation of the concrete showed that considering its thickness, the state of carbonation, and its sufficient strength, with appropriate management, it would be possible to maintain it for more than the next 50 years.

Cultural Value

Masanori Kaneko⁹, the Governor of Kagawa Prefecture at the time of construction, developed a clear concept for the building, one of utilizing resources from within the prefecture, and expressing the period of democracy following the Second World War, which was in line with his vision for the future of Kagawa and Takamatsu as an area of tourism. It was this concept that Kenzo Tange produced in the East building (the Main building at the time). The building is highly regarded as possessing cultural value through its realization of traditional Japanese wooden architectural designs with concrete, its positive use of space made open to the public, cooperation with artists in construction, and its central core system.

In the period after the World War 2 where authoritarian styles were widely used in government buildings, the East building established the democratic “open offices” that allowed local people to enter freely and relax. It became the model for government buildings in Japan from then on.

The East building has been presented with the first building Contractors Society Award, was selected as one of the Public Architecture 100¹⁰ and was included in the **docomomo** Japan 20¹¹.

The main elements of its cultural value are the following:

- Open spaces for the people of the prefecture: the plentiful open spaces of the *pilotis* and lobby connect to the south garden and its artificial hills (figure 2).
- Creation from tradition: a combination of pillars and beams that are reminiscent of wooden buildings express traditional Japanese wooden architectural ideas using concrete. In front of the building is the south garden, a Japanese garden (figure 1).
- Integration of art: the wall painting “Wa-Kei-Sei-Jaku”¹² produced by Genichiro Inokuma works in harmony with the glass windows of the lobby (figure 4). The furniture was designed by the interior designer Isamu Kenmochi¹³, who combined traditional Japanese designs with modern materials and techniques.
- The center core system: the structural “spinal cord” is the anti-seismic wall placed at the center of the building, and was the first of its kind in Japan. The public facilities including the stairs, elevator, and toilets, are centered on the core, and an open office space is realized utilizing partitions (figure 5).

- Space rich with local influence: the floor tiles and garden stones are made using material from Kagawa, including *Aji* stones (a well-known kind of granite). Doors are made using the traditional Kagawa *gotōnurī*¹⁴ lacquerware. The handsome concrete surfaces were handmade by local artisans.

The Basic Approach

In order to hold wide ranging deliberations that examine the improvement of earthquake resistance for the East building from a specialist vantage, Kagawa convened the “Preservation and Earthquake Resistance Improvement of the East building Review Committee”, consisting of a number of experts from various fields including earthquake-proofing, the history of design and architecture, culture, economics, and mass communication. The committee decided on a basic approach for preservation and strengthening.

The chairman of the Review Committee was Tsuneo Okada (Emeritus Professor of the University of Tokyo) and the members were Hiroshi Matusukuma (Professor at the Kyoto Institute of Technology, Representative of **docomomo** Japan), and 5 others.

In February 2014, the review committee produced a report¹⁵ which made the following statements:

*“The East building was a building selected in the **docomomo** Japan 20, and its value is internationally recognized. The cultural value of the building has been confirmed at this time, and we should act to preserve it for the future. (...) With regards to the preservation and improvement of earthquake resistance (...) more examination of further details regarding the anti-seismic construction methods is desirable, mainly considering base isolation construction methods that are widely used for earthquake resistance improvement in government offices and buildings of cultural worth. (...) We suggest careful examination of the available methods, with a comparative cost evaluation of reconstruction and earthquake resistance improvement, keeping in mind the desire to limit costs.”*

Detailed Investigation into Methods for Earthquake Resistance Improvement

In 2014 following the report produced by the review committee, Kagawa Prefecture undertook a detailed technological investigation with the help of two of the committee members, Tsuneo Okada, Emeritus Professor at The University of Tokyo, and Hiroshi Matsukuma, Professor at the Kyoto Institute of Technology, and other specialists in the areas of earthquake-proofing, architecture, and culture.

In September 2014, the results of the comparative review of the earthquake resistance improvement proposals, including reconstruction, seismic isolation retrofitting, and seismic strengthening were presented to the Kagawa Prefectural Assembly. This produced a lively debate on the issues, and the following points were raised during question and answer sessions. There is a need to address the life cycle costs of the various proposals, including management costs and reconstruction costs in the medium to long term, not simply the construction and transfer costs in the short

01 Kenzo Tange, The Kagawa Prefectural Government Office East building, Kagawa, Japan, 1958. Outer view of the East building which shows the expression of traditional Japanese wooden architectural ideas. © Toshihiro Misaki, 2009.



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Essays



02 Kenzo Tange, The Kagawa Prefectural Government Office East building, Kagawa, Japan, 1958. The open-plan piloti which connect the lobby and the south garden. © Kagawa Prefecture, 2014.

term. In the reconstruction proposals would it be possible to improve the building's office function by increasing floor space in line with current regulations on floor area ratio? If the quality of the concrete continues to degrade, what is the expected lifespan of the East building and to when can we expect to preserve it? What policies have been considered to gain the support of local people, convincing them of the cultural worth of the building and importance of strengthening the East building? What does the committee think of the proposal to refine and narrow the scope of the improvements?

The Main Earthquake Resistance Improvement Proposals Reviewed

Seismic Strengthening

(Construction period: around 1.5 years, Construction costs: US \$31.5 million, Construction and management costs over 100 years (life cycle costs): US \$153.30 million).

This proposal aimed to improve resistance through strengthening the building with the use of support pillars and expansion of the anti-seismic wall made of reinforced concrete. While this proposal has the advantage of having the least expensive construction and life cycle costs, it would be necessary to relocate to temporary offices during construction, and with the expansion of the anti-seismic wall around the central pillar, the offices, lobby, and piloti would be divided, and its functionality as an office drastically reduced, while also introducing many changes to the inner and outer appearance.

Seismic Isolation Retrofitting

(Construction period: around 2 years, Construction costs: US \$31.5 million, Life cycle costs: US \$158.4 million).

This proposal would make it so that the shaking of earthquakes was not directly transferred to the upper sections of the building through the separation of the foundations from its upper structure, and affixing the seismic base isolation system in between. Construction would be possible while continuing to use the building, office space and functionality would be maintained, and there would be little change to the inner and outer appearance.

Reconstruction

(Construction period: around 3.5 years, Construction costs: US \$63.87 million, Life cycle costs US \$166–204 million).

This proposal would reconstitute the building into a steel construction using base isolation of the foundation. While this proposal has the strength of preserving (and increasing) office space, it has the highest life cycle costs of all the options, and would require large scale changes to the inner and outer appearance of the building.

Selection of the Improvement Method

Based on the advice received from specialists, and the discussion from the Prefectural Assembly, the evaluation criteria were marked A–C based on importance in order to proceed with selection. The seismic resistance as a disaster

prevention base facility, preservation of its function as a government office building, and costs such as life cycle costs were all determined to be of the highest importance, and given the rank A. Next, limitations on usage during construction, construction period, and impact on cultural worth were given rank B. The other considerations of environment impact, and technological practicality were given rank C. As a result of this evaluation, the seismic isolation retrofitting proposal, which would strengthen both the high-rise and low-rise buildings, in addition to seismic strengthening of the roof tower, which contains no office space, was seen to have the highest rank in each of the important areas, and was deemed the most appropriate method of earthquake resistance improvement. I announced these results to the Prefectural Assembly in November 2014 (figure 3).

Specifically, the seismic isolation retrofitting proposal would ensure the seismic resistance of the building as a disaster prevention base facility, would preserve the office function without dividing the offices with the anti-seismic wall, would require life cycle costs less than the reconstruction proposal, would not require temporary offices during construction, would not alter the inner and outer appearance of the building, would have little impact on the cultural value of the building, and would produce the lowest level of disturbance, noise, and waste during construction.

As I have stated, this strengthening of the East building is a pressing issue, and I intend to implement these renovations at the earliest possible time.

- 03 (Next page) © Excerpted from Kagawa Prefectural Assembly General Affairs Committee "Kagawa Prefectural Government Office East Building Earthquake-proofing Construction" (English version), December 1, 2014. Written by Kagawa Prefectural General Affairs Department.

Notes (Figure 03)

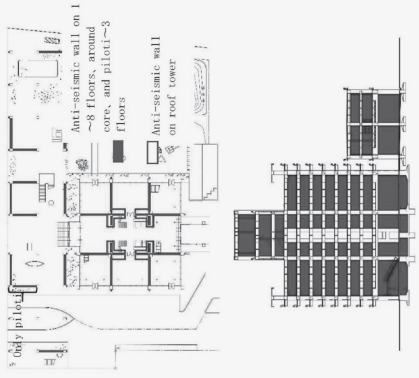
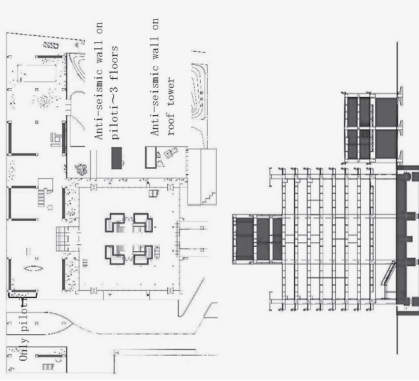
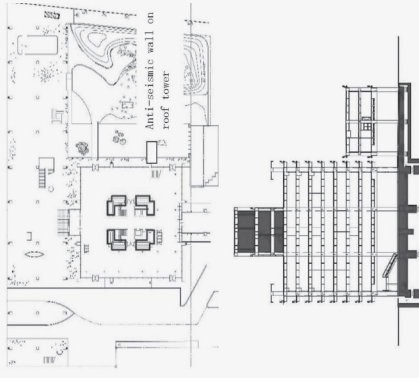
* 1: In the Basic Guidelines for Earthquake Resistance Improvement of Facilities Owned by the Prefecture, this is the structural anti-seismic function as defined in the "Evaluation, Renovation Standards, and General Examination of Earthquake Resistance Standards of Government Buildings" that is necessary each time facilities are divided. Disaster prevention base facility (emergency response facility), relief facility: Category I The building must be able to be used without support after a large earthquake, maintaining its functionality in addition to its ability to ensure safety. Evacuation facility, schools, multipurpose facility: Category II The building must be able to be used without support after a large earthquake, maintaining its functionality in addition to its ability to ensure safety.

Other: Category III The building will be able to ensure safety, with little degradation of its overall earthquake resistance, even after sustaining minor damage in a large earthquake.

* 2: Regarding the limitations of the Building Standards Act (for public spaces), examination with the special administration offices will be required.

* 3: Life Cycle Costs (LCC) refer to the costs calculated over the 100 years from the present if the earthquake resistance improvement plan will last 100 years with reconstruction after 50 years, and the reconstruction plan will last 100 years with improvements after 50 years or with re-construction after 50 years.

The difference shows comparison between the reconstruction plan and other plans.

		Method			
		Earthquake Resistance Improvement Plans			
Field	Overview Diagram	Plan 1	Plan 2	Plan 3	Reconstruction Plan
		High rise: Seismic strengthening Low rise: Seismic strengthening	High rise: Base isolation + Seismic strengthening Low rise: Seismic strengthening	High rise: Base isolation + Seismic strengthening Low rise: Base isolation	
A	Overview of the plan				Reconstruction of offices on the same scale as the East Building Same design as present Main Building Steel structure, base isolation
		High rise Anti-seismic wall would be placed around central pillar on floors 1-8, around core, and roof tower Low rise Anti-seismic wall on piloti floors 2,3&2	High rise New base isolation in foundation Anti-seismic wall on roof tower Low rise Anti-seismic wall on piloti floors 2-3&2	High rise New base isolation in foundation Anti-seismic wall on roof tower Low rise New base isolation in foundation	
		++ Maintains function as disaster prevention base facility Structure category I	++ Maintains function as disaster prevention base facility Structure category I	++ Maintains function as disaster prevention base facility Structure category I	
		- The anti-seismic wall around central pillar would require partition of the lobby and office areas, greatly decreasing functionality. The function of the piloti would also decline.	- The office space and function in the high rise building would not change, but office space would be reduced in the low rise building because of the anti-seismic wall. The function of the piloti would also decline.	- The office space and function would not change	
		++ Around 3.7bil (Construction: 3.4bil ¥ Temporary offices: 300mil) [CC around 18bil (▲1.5 ≈ ▲6bil)] ¹³	++ Around 3.6bil (Construction: 3.5bil ¥ Temporary offices: 100mil) [CC around 18bil (▲1.5 ≈ ▲6bil)]	+ Around 4.2bil (Construction: 4.2bil) [CC around 18.6bil (▲900mil ≈ ▲5.4bil)]	
B	Limitations on Use During Construction	- Temporary offices necessary during construction	+ Use of high rise building will be able to continue, but temporary offices will be necessary for low rise building and part of high rise, which connects to the low rise.	++ Construction will not affect the use of either buildings.	Deconstruction and reconstruction of East Building Evaluation ++ Maintains function as disaster prevention base facility Structure category I ++ With reconstruction office space and function would be maintained (and increased) - Around 7.5bil (Construction: 600mil ¥ Reconstruction 6.2bil ¥ Temporary offices 700mil) [CC around 19.5 ≈ 24 bil] - Temporary offices necessary from deconstruction to completion. - Around 3 and a half years - Large scale changes to appearance during reconstruction.
		++ Around 1 and a half years	+ Around 2 years	+ Around 2 years	
		- The outer appearance of the high rise building will not change, however, the inner appearance will dramatically change with the loss of the lobby, as will the inner and outer appearance of the low rise building as a result of the anti-seismic wall.	- The outer appearance of the high rise building will not change. The anti-seismic wall will result in drastic change to the inner and outer appearance of the low rise building.	++ No changes to the inner and outer appearance of the low and high rise buildings.	
C	Workability	- More than base isolation, consideration of impact of noise, dust, and vibrations will be necessary.	+ Less need to consider impact of noise, dust, and vibrations in comparison to only seismic strengthening.	++ Smallest impact of noise, dust, and vibrations.	Deconstruction will produce the most noise, dust, and vibrations. ++ Many examples of new construction on the same scale as the present Main Building. - Will produce the largest amount of industrial waste as a result of deconstruction.
		++ Many cases of seismic strengthening. Construction is standard.	+ Base isolation provides fewer examples compared to seismic strengthening, but is an established method.	+ Base isolation provides fewer examples compared to seismic strengthening, but is an established method.	
		- Will produce a large amount of industrial waste compared to base isolation.	+ Will produce a smaller amount of industrial waste than only seismic strengthening.	+ Will produce a smaller amount of industrial waste than only seismic strengthening.	
Overall Rating		+	+	++	-



04 Kenzo Tange, The Kagawa Prefectural Government Office East building, Kagawa, Japan, 1958. The “Wa-Kei-Sei-Jaku” wall of Genichiro Inokuma which greets you in the lobby. © Kagawa Prefecture, 2014.



05 Kenzo Tange, The Kagawa Prefectural Government Office East building, Kagawa, Japan, 1958. An open office space. © Seiji Izumi, 2014.

Efforts to Gain the Understanding of Local People

In proceeding with the earthquake resistance improvement of the East building, ensuring the support and understanding of the people of the prefecture is of the highest importance. In the course of discussions, the point was raised that local people may not view the building as one of cultural worth that must be preserved despite costs because it should only play a vital role as the government offices even if it is the architecture of Kenzo Tange.

Seismic isolation retrofitting was selected as the improvement method having been evaluated from many different perspectives, including the importance of its earthquake resistance in terms of disaster prevention, and this method, without considering cultural value, is widely used throughout the country. In terms of its cultural worth, we consider it important to convey to local people that this is their building, and that it has historical and cultural worth as the realization of beginning of the democratic period after World War 2 in Japan as a building open to local people, and is not merely valued because it is the work of an internationally renowned architect, the authority or “the Starchitect”.

For this reason, Kagawa Prefecture has opened the Prefectural Offices Gallery on the first floor of the East building (figure 6), which exhibits the history and properties of the building. Guided tours by government officials have been running year-round as of September 2014, and have received more than 200 participants in the three months since commencement. In addition, the prefecture has produced a website, pamphlets,¹⁶ and other promotional materials, and I intend to continue these efforts going forward to ensure the support and participation of local people in the improvement of earthquake resistance.

Conclusion

In Japan, over 100 years has passed since reinforced concrete first came to be used in construction, and as we are faced with the issue of improving earthquake resistance to cope with predicted large scale earthquakes, the state of modern architecture going forward is being debated from a number of perspectives, including economic, cultural, and historical.

In light of this, I am very aware of my duty to pass on to successive generations this important building through improving the earthquake resistance of the East building, to preserve and utilize its cultural worth, and ensure it is able to continue in its main function as a government office building. I hope that the efforts of Kagawa to improve the earthquake resistance of the East building will be of some use to others seeking to utilize and pass on other modern buildings, and I hope that readers will visit Kagawa, to explore the many attractions of the “Art Prefecture”, beginning with the East building.

Finally, I would like to extend my deepest thanks to the Chair of **docomomo** International, Ana Tostões, whose visit to Kagawa was the driving force behind this article, and to everyone else involved. ■

Notes

- 1 Population: 980,582 (Dec. 2012), Area: 1,875.92km², Annual Rainfall (Takamatsu): 1082.3mm (1981–2010 average), Average Annual Temperature: 16.3°C (figure 7).
- 2 “Tagebucher aus China”, Ferdinand Freiherr von Richthofen
- 3 Isamu Noguchi (1904–1988) was born in Los Angeles, USA. After he spent his younger days in Japan he went to America hoping to become a sculptor. After taking up residence in New York, he worked on a wide range of projects, including portrait sculpture, performing arts, and landscape architecture. His later years he spent in Mure Town (present day Takamatsu City) in Kagawa Prefecture where he had a



06 Kenzo Tange, The Kagawa Prefectural Government Office East building, Kagawa, Japan, 1958. The Prefectural offices gallery. © Kagawa Prefecture, 2015.



07 Overview: The Seto Inland Sea and Islands, the East Building, and Ritsurin Garden in Takamatsu, Kagawa. © Kagawa Prefecture Tourism Association.

base studio, and he continued to work in the USA and Japan. His representative works include the Paris UNESCO Headquarters garden.

4 Genichiro Inokuma (1902–1993) was born in Kagawa Prefecture. After graduating from the Tokyo University of Fine Arts (currently the Tokyo University of the Arts) he founded the New Creation Group with Ryohei Koiso. In 1938, he moved to France where he met Matisse and Picasso who greatly influenced him. After the war, he worked in New York and Hawaii, bonding with a wide range of artists. His representative works include the mural “Jiyu – Freedom” in JR East Japan Ueno Station.

5 This art festival, with a theme of the “revival of the sea” has taken place every three years from its commencement in 2010, and places artwork across the islands of the Seto Inland Sea, which is bordered by Kagawa. 2013 marked its second opening, with over 200 artists from 26 countries participating to produce 207 artworks over 12 islands that drew 1.07 million visitors during 108 days of exhibition.

6 Kenzo Tange (1913–2005) was born in Osaka. Following his graduation from Tokyo Imperial University (currently the University of Tokyo) where he studied engineering, he worked at the Maekawa Kunio Associates Office, he then opened the Tange Research Lab at the Tokyo Imperial University, and worked on a number of projects. In 1987, he was awarded the Pritzker Architecture Prize, which marked the first time it went to a Japanese person. He has worked on over 300 buildings and city plans in 31 countries around the world. Representative works of his include the East Building of the Kagawa Prefectural Government Offices, the Hiroshima Peace Memorial Park and Museum, and the Yoyogi National Gymnasium.

7 Earthquake Research Committee URL: <http://www.jishin.go.jp/main/choukihyoka/kaikou.htm> (in Japanese)

8 Produced by the Japan Seismic Diagnosis Association.

9 Masanori Kaneko (1907–1996) was born in Kagawa. After graduating from the Tokyo Imperial University where he studied law he became a judge; he retired as Chair of the Tokyo Court of Appeals in 1946. He became Governor of Kagawa Prefecture in 1947, a role he maintained over 6 terms, and 24 years. He is known as the “Architecture Governor” and the “Design Governor” through his connection to many artists and architects, including Kenzo Tange and Isamu Noguchi, and through his work in promoting the construction of many unique public buildings.

10 A list of 100 buildings deemed excellent by the national government

to commemorate the 50th anniversary of the Ministry of Construction.

11 **docomomo** Japan, Selection 20 (2000).

12 This word comes from the tea ceremony. The four characters, “Wa”, “Kei”, “Sei” and “Jaku” mean “harmony”, “respect”, “purity” and “tranquility”, respectively, and the word has the meaning of harmoniously respecting one’s partner. With this abstract piece, Genichiro Inokuma sought to express the spirit of tea, which is found in *Wa-Kei-Sei-Jaku*, and democracy which he felt Japan should embrace, which is also found in the tea ceremony.

13 Isamu Kenmochi (1912–1971) was born in Tokyo. After graduation from what is now Chiba University in the engineering department, he joined the Ministry of Commerce and Industry (now the Ministry of Economy, Trade, and Industry), where he studied under Bruno Taut. Following this he developed the fundamentals of the design which is known as “Japanese Modern”. His works include, the rattan chair, which is in permanent display at the Museum of Modern Art in New York City.

14 This is one technique of Kagawa lacquerware that can be compared to the *Wajimanuri* lacquerware. It was developed in Kagawa in the Meiji Period (1868–1912) by Taihei Gotō. It was used for tea utensils, but because of its elegance and durability, it also came to be used for small boxes and delicate trays.

15 Report of the Review Committee for the Preservation and Earthquake Resistance Improvement of the East Building, Kagawa Prefecture, February 2014.

16 <http://www.pref.kagawa.lg.jp/zaisankeiei/higashikan/18eng2.pdf>

Keizo Hamada

(b. 1952, Japan). Governor of Kagawa Prefecture. After graduating from the University of Tokyo in 1975 where he studied law, he entered the Ministry of Finance in April of the same year. He assumed his current position as Governor in September 2010 after serving as the Director of the National Debt Division, Financial Bureau, Ministry of Finance, Director-General of the Tokai Local Finance Bureau, and Director-General of Tokyo Customs. He is currently serving his second term as Governor.

Modern Architecture in the Promotion of National Tourism, the *Cap Ducal*, an Emblematic Work in *Viña del Mar*

BY MACARENA CORTÉS

This article proposes analyzing the *Cap Ducal* restaurant, a work by architect Roberto Dávila Carson in 1936, as an emblematic construction in Chile's favorite summer resort city, *Viña del Mar*. The proposal is to place the relevance and value of this pioneer work of modernity in a wide context of promotion, in which it represents the changes in social and cultural practices related to the resort. From the realm of architecture where, this work establishes the beginning of a new formal language, as well as a part of the new urban configuration of the city as one of the then new tourist infrastructure works.

The *Restaurante Cap Ducal* was built at the mouth of the Marga-Marga estuary that crosses the city of *Viña del Mar*, in a residual site between the *Avenida Marina* and the sea, on the foundations of an old tea shop originally in that place. Urban development left the construction surrounded by water, like other neighboring buildings on the coast. This condition and the triangular shape of the site determined a volume loaded with naval aesthetics, making it seem a ship stranded on the coastal border.

The building was light and the maritime aesthetics accompanied the sculptural type decisions, by means of various elements; the keel on *Avenida Marina*, a series of bull's eye windows, large picture windows over the terraces and tubular railings. Finally, several trans Atlantic liner-type funnels crowned the back of the building, towards the street.

The building had two entrances, one from the street and the other, by the monumental stairs that led directly to the second level. This would differentiate the first level, formed by a hard base where the services were located, and the second level, where the dining halls extended themselves through the terraces towards the sea horizon. A third level was a wide terrace dominating the environment which allowed access to another smaller terrace on the fourth level.

The *Cap Ducal* was a rather small building, whose terraces were equivalent to the inner space and, through which the whole building could be visited going up the strategically located stairs. Thus, the experience of being on a trans Atlantic liner was dramatized, generating a continuous and peripheral walk on the sea.

Assessment and Valuation of the Modern Project, Innovation of the *Cap Ducal*

The building was undoubtedly an important work in construction and technical terms for various reasons: the use of reinforced concrete that allowed important projections at the second and third levels, the fact that the foundation was directly on the rock and also used the footings of an old mansion.

On the other hand, the *Cap Ducal* was an emblematic construction at the time precisely because it generated, together with other works, spaces for social encounter in the city of *Viña del Mar*, which aspired to become a resort and tourist destination at an international level.

In 1928, Law 4,283 for the development and progress of tourism in the city was passed, after which a Pro-resort Committee was formed that was in charge of managing the work to be done.

Among the most important works is the *Casino de Viña* (inaugurated on 31 December 1930), which greatly upset the most conservative social classes, but represented a work created to complement summer activities, create a source of income for the municipality and a focus of tourist and social attractions. *Hotel O'Higgins* was built with the same aspirations and, in addition to that, it had to accommodate tourists offering maximum comfort.

Another relevant work was the Presidential Palace of Chile (inaugurated by President Carlos Ibáñez del Campo on 19 February 1930), which in some way honored *Viña del Mar*, giving the President a space for summer vacations and leisure in the city.

These three buildings described above were complemented by the swimming pools of 8 Norte Street (1929) and the one in *Recreo* (1930), as well as the implementation of various beaches: *Recreo* (1924), *Las Salinas* (1929), *Caleta Abarca* and *Cochoa* (1935). These works embraced the new relationship with the beach, the sea and the sun, turning the city of *Viña del Mar* into the main urban summer resort in the country.

In this context of city promotion, the *Cap Ducal* was a building that, from the private sector, complemented the social activities typical of the resort, by means of a bar-restaurant program. Moreover, due to its formal expressivity and clear naval reference, it fitted perfectly the festive imagery of the neighboring port of *Valparaíso*.

From the formal and spatial point of view, the *Cap Ducal* was a work that considered exceptional spatial conditions, and related to the public and dynamic nature of the space.

The plan clearly suggests a horizontal spatial sequence, in the relationship between the interior and the exterior, through three types of spaces: a rigid nucleus towards the street, spaces of continuity developed horizontally that were open towards the exterior through a transparency created by the use of a structure of pillars and windows, and, finally, areas of extension by means of projections over the sea.

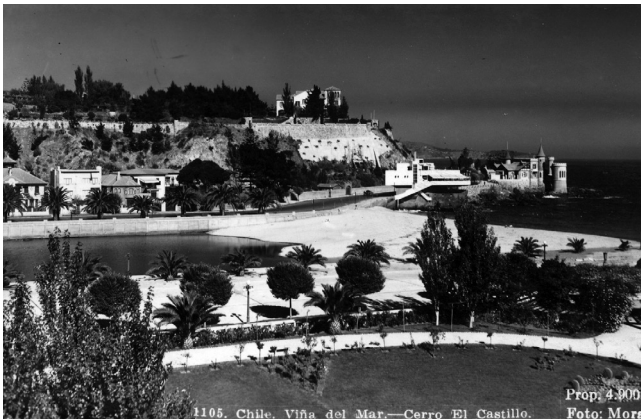
This spatial sequence was reinforced by the building's programs: a hard service border that separated the restaurant from the street, a large dining room spaces and bar and, lastly, the terraces that established a relationship with the view and the sea.

The opening up of the spatial sequence of the building to the exterior horizontally was also reflected in the building's vertical section, through the concrete slabs which were decreasing in size as they got higher, opening up to generate a completely open-air space. Thus, these slabs accommodated more and more extension spaces but smaller in size.

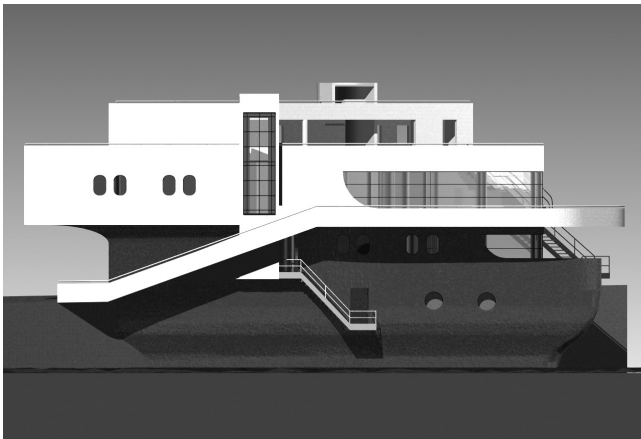
The spaces were connected by means of stairs, which configured a system of continuous routes, ascending and peripheral to the sea. These stairs were placed at the ends of the terraces to force the pedestrian routes through them and give priority to the experience from the exterior of the building.

The project operations of vertical and horizontal spatial reduction, supported by the external pedestrian routes, defined the perimeter of the building and its relationship with the views, configuring a set of complex interventions based on the space and program of the building.

01 Roberto Dávila, Restaurant *Cap Ducal*, *Viña del Mar*, Chile, 1936. © CENFOTO – Universidad Diego Portales. Archivo Mora, Centro del Patrimonio Fotográfico. Photo by Enrique Mora, 1940.



02 Roberto Dávila, Restaurant *Cap Ducal*, *Viña del Mar*, Chile, 1936. © CENFOTO – Universidad Diego Portales. Archivo Mora, Centro del Patrimonio Fotográfico. Photo by Enrique Mora, 1940.



03 Roberto Dávila, Restaurant *Cap Ducal*, *Viña del Mar*, Chile, 1936. Drawing of the original north facade by Francisco Barahona. © Archivo de Obras, Ilustre Municipalidad de Viña del Mar.



MIRAMAR — CAP. DUCAL

04 Roberto Dávila, Restaurant *Cap Ducal*, *Viña del Mar*, Chile, 1936. © *Guía del Veranante, Sección de propaganda de Ferrocarriles del Estado de Chile. Talleres Gráficos*, 1940, p. 37.



05 Roberto Dávila, Restaurant *Cap Ducal*, *Viña del Mar*, Chile, 1936. Image of the present condition of the building. © Macarena Cortés, 2015.



06 Roberto Dávila, Restaurant *Cap Ducal*, *Viña del Mar*, Chile, 1936. Advertising © *Guía del Veranente*, Sección de propaganda de Ferrocarriles del Estado de Chile. Talleres Gráficos, 1939. p. 27.

Historical Conditions of the Assignment

The site where the *Cap Ducal* was located belonged to Dr. Teodoro Von Schroeders, who, in 1884 set up the first public seaside resort, Miramar. At the end of 1907, the land was given to the municipality to build *Avenida Marina* and in 1912, the tea house called *Palacio Ducal* was built there. Later, Mr. Domingo Tocornal Matte purchased the tea house and called upon architects Roberto Dávila, Jorge Arteaga, and Costabal & Garafulic, to participate in a private competition for the building of a new restaurant on the foundations of the old tea house.

In 1936, the competition was won by Roberto Dávila, who presented four proposals with these names: *Vauberge Du Duc*, *Palacio Ducal*, *Il Ducale*, and *Cap Ducal*, of which there are two sketches. Roberto Dávila had returned from Europe after an important stay of two years of study and work, with an outstanding participation in the workshop of Le Corbusier and Peter Behrens in Vienna. Thus, it is not only one of the first modern works of interest in Chile, but also one of the first developed by Dávila. Afterwards, he built a number of houses in *Viña del Mar*, where it is possible to observe a discourse towards validating neo-colonial expressions.

The way in which the project was presented, by means of several sketches in different styles and then the production of the architect, reflect a great contradiction typical of the time. On the other hand, the formal, expressive and spatial clarity of the work makes it present itself as an unexpected paradigm in the context of the architectural field of the time and in the production of Dávila himself.

The Meaning of the *Cap Ducal* as an Emblematic Work of National Modernity

It can be said that the *Cap Ducal* has an architectural value that may be synthesized in three points of view:

- The project strategy that created a route inside the building that was continuous, ascending and peripheral to the sea, decomposed the volume in the vertical as well as the horizontal sense. This project operation created a spatial sequence that embraced the programs and qualified them spatially. In addition, it established a relationship with the scenery in which the building was inserted, from the movement of the spectator through the route system, comparable to the feeling of a vessel's crew member.
- The fact that during the first quarter of the 20th Century, a few years before the construction of the *Cap Ducal*, the development of the modern seaside resort was strongly consolidated in the world and in *Viña del Mar* in particular. This is a fact of radical importance because it implied the generalised emergence of new programme requirements and, therefore, new types of municipalities adapted to the social relationships brought by the summer. The *Cap Ducal* represented one of the architectural ways that tried to satisfy these new spaces for socializing, stimulating the conditions of the resort through its architectural proposal.
- Lastly, the iconographic value acquired by the vessel imagery in modernity is used in the building as a significant and qualifying metaphor. First, because it is an element present in the context of the port of Valparaíso and, second, because it establishes relationships between the playful image represented by the vessel and summer holidays.

Conclusions

The *Cap Ducal* has canonical status as it can be considered one of the first modern buildings in Chile, which formally synthesized the renovations raised in modernity referring to: new leisure time, social encounter, contact with nature and expressivity of resort needs. Thus, the proposal was exceptional since it gave a value to the dynamic space, organized by a perimeter route emphasized by the condition of public space through the extended exterior areas. The formal resolution of such spatial

conditions used maritime imagery as utilitarian for its representation, and through a complex geometrical resolution given by the triangular condition of the site. Thus, the possibilities of hierarchies and symmetries were annulled, choosing a free model that collected the conditions of the context through the building's modes of access and views of the sea.

The present condition of the building is very different from its original condition. The enclosed part of the small building is now double its original area, completely discarding the terraces and exterior pedestrian routes by means of an insensitive transformation that turned the restaurant into a hotel, subdividing its generous interior into smaller rooms. Recent actions of entities such as the College of Architects of Chile did not succeed in stopping the changes. This, added to its strategic location have maintained it as a recurrent image of the city of *Viña del Mar* until now. ■

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The Question of Auckland's Civic Building

BY JULIA GATLEY

This article examines recent and current controversy over the Civic Administration Building (1954–1966) in Auckland, New Zealand. Unoccupied since the end of 2014, the building's future is uncertain. Its heritage value is widely recognized by heritage professionals and commentators. Yet Auckland Council, the building's owner and former occupier, does not recognize its significance and has not scheduled it as a heritage building on its district plan. To the contrary, it has floated the possibility of demolishing it. This article considers the building's history, significance and possible futures.

Over the past two years, New Zealand has seen several well-known modern buildings under threat of demolition: Auckland's Civic Administration Building (1954–1966) and Symonds Street Flats (1941–1947); Wellington's Gordon Wilson Flats (1955–1959); the Lower Hutt Town Hall (1951–1957); and the Christchurch Town Hall (1966–1972). All were purpose-built by either central or local governments.

The Christchurch and Lower Hutt city councils have both taken heed of public opinion in working towards retaining their town halls. Housing New Zealand Corporation has sought the advice of conservation architects Salmond Reed on the repair of the Symonds Street Flats, and last year sold the Gordon Wilson Flats to Victoria University of Wellington. Interested parties await news of the university's intentions for the former public housing complex.

But Auckland Council is reluctant to accept that the Civic Building is of heritage value, or that it is worth keeping and adapting for reuse. The building is empty, pending decision-making processes. At stake here is not only the future of this one significant building, but also the establishment of precedent: how can a local authority expect private owners to use and maintain their modern heritage buildings if it does not do so itself?

History

The Civic Building is a nineteen-storey glass-clad office tower, built to house the Auckland City Council and its staff. It was designed from 1954 by the council's chief architect, Tibor Donner, and his team, and was completed in 1966¹. The council occupied the building from that time until 2014, when it vacated it department by department. Its shift to new premises followed local authority

amalgamations: the Auckland City Council, Auckland Regional Council and six other local authorities united under the banner of Auckland Council, a so-called "super city" with a population in the vicinity of 1.5 million people.

Tibor Donner (1907–1993), the Auckland City Council's chief architect from 1948 to 1967, designed the building. Hungarian-born, he grew up in Romania and moved to New Zealand at age 21. He studied architecture at Auckland University College and worked in private practice (1932–1938) and in the Public Works Department / Ministry of Works (1938–1948). He then joined the council, where he built a strong reputation with key works including the Civic Building, the Parnell Baths (1951–1957) and the Ellen Melville and Pioneer Women's Hall (1958–1962)².

In the late 1940s and early 1950s, central government and council architects produced four designs for a civic centre to be built on Auckland's main commercial boulevard, Queen Street. A tower for council staff only appeared in the fourth of these designs. It became known as Scheme 4, and its tower, a bold gesture signifying ambition and progress, became the building now known as the Civic (figures 2 and 3)³. In developing the design, Donner and structural engineer Vern Coleman enjoyed a research tour of North America and Europe. In California, they met with engineer John A. Blume, who suggested the steel framing system which was ultimately used⁴.

The building is tall and slim, orientated north-south with a footprint measuring 132 × 52 feet (40.2 × 15.8 m). The floor plans are open, with lifts, stairs and toilets located at the north end and a fire stair at the south end. The long east and west façades are divided into six bays. Glass curtain walls have aluminum frames and sunshades. The narrow north and south façades are heavier. Here,

concrete panels were originally clad with mosaic tiles. The north-east corner is differentiated by its glazing details and projecting balconies, in part serving to disguise toilet windows (figure 1)⁵.

The steel-framed structural system is an important part of the building's significance. On Blume's advice, it introduced column-beam moment connectors, with the columns and the principal beams fastened together using high tensile bolts rather than being welded with diagonal braces. This meant that shear walls were not needed for bracing⁶. Construction was also faster than usual because the steel members were prefabricated. Between the main beams, smaller secondary beams help to support the floors, which comprise metal trays topped by a thin layer of concrete.

There have been incremental changes to the building fabric over time. Access to a rooftop viewing platform was closed in the mid-1970s for safety reasons. The main entry was relocated in the mid-to-late 1980s and additional weather protection was added around the new entry. A bridge to the neighboring building, a performance venue, was added in 1989. There have been ongoing issues with asbestos, which had originally been sprayed onto many of the building elements for fire-proofing and insulation. It was later found to be a health hazard and asbestos linings were removed in 1989. In the early 2000s, mosaic tiles were removed from the building's north end as some were starting to fall off⁷.

Heritage

The Civic Building has been well documented, particularly by Dr Robin Skinner, now Dean of the Faculty of Architecture and Design at Victoria University of Wellington. Skinner completed his undergraduate thesis on Tibor Donner in 1994, with a chapter on the Civic. He delivered a conference paper on the building in the Australian city of Perth in 2000. He also wrote the short entry on it for the **docomomo** New Zealand "Top 20", published in Dennis Sharp and Catherine Cooke's 2000 book, *The Modern Movement in Architecture: Selections from the **docomomo** Registers*, and the slightly longer entry for the 2008 book, *Long Live the Modern: New Zealand's New Architecture, 1904–1984*, which identifies and documents 180 of New Zealand's best and most important extant modern buildings⁸.

Skinner's detailed work informs several more recent heritage assessments, including

the **docomomo** fiche that was completed and approved in 2014, and the Heritage New Zealand (former New Zealand Historic Places Trust) listing proposal submitted by **docomomo** New Zealand in 2014 and currently under assessment.

But the Auckland Council does not recognize the Civic's significance and has not scheduled it as a heritage building on its district plan — the only type of heritage listing that would afford any protection over the building, and one that would impinge upon the ease with which the council can demolish it. The council has, though, commissioned a series of reports on it, from the multi-disciplinary firm GHD in 2012 and from conservation architects Salmond Reed in 2012 and Archifact in 2014.

The first of these reports followed the council's purchase of another building to accommodate its city-based staff and public announcements that it was considering demolishing the Civic, with the cost of demolition estimated at \$10 million NZD, compared with \$93 million to repair and refurbish it⁹. Its main reasons for proposing demolition seem to have been that the building would be surplus to its requirements and is not well liked: council staff and members of the general public find it ugly. Council does not, therefore, consider the cost of repair to be warranted.

Under pressure to provide evidence to support these estimates for demolition compared with repair, the council commissioned GHD to prepare a report on the condition of the building and options for the future. This report acknowledged that vacating the building would provide an unprecedented opportunity to remove all remaining asbestos. It also raised the issue of the curtain walling, commenting that it was "old and deteriorated", having moved, leaked and corroded over time, and with the glazing sealants also having "aged and dried"¹⁰. It suggested that rebuilding the façade with a combination of existing and new materials would be possible, with the new components custom-made to match the existing. It nonetheless took the view that "no amount of refurbishment work is going to make the Civic Building a premier office building"¹¹.

Concurrently, the council commissioned Salmond Reed Architects to complete a heritage assessment of the building. Salmond Reed concluded that it "has exceptional overall national, regional and local significance" and recommended that it should be scheduled as a Category A heritage place on the council's district plan¹². They highlighted its importance in design and engineering, as a symbol of local authority aspirations in the post-World War 2 period, as an example of International Style architecture in New

Zealand and an example of Tibor Donner's work in adapting international models to a geographically isolated country.

The council then commissioned Archifact to peer review both earlier reports. Archifact refuted GHD's claim that "no amount of refurbishment work [would] make the Civic Building a premier office building"; agreed that the building's empty state provided an ideal time to remove the remaining asbestos; and emphasized that it would be acceptable from a heritage conservation viewpoint to rebuild the façade using a combination of existing materials and new materials to match¹³.

In its second peer review, Archifact agreed with Salmond Reed's conclusion that the heritage value of the building is such that it warrants being scheduled as a Category A heritage place on the Auckland Council district plan. Indeed, Archifact went one step further than Salmond Reed by suggesting that the building is "exceptional" in several respects, and of international significance in terms of its technological value¹⁴.

Archifact's work was not limited to peer review: council also took the unusual step of commissioning this firm to prepare another heritage assessment; a second full heritage assessment of the one building. This second assessment reiterates the findings from the peer review reports and presents in more detail Archifact's own conclusions that the building is exceptional and of international significance¹⁵. The Archifact report also presents the restoration of New York's Lever House as an instructive precedent: by the 1980s, the steel sub-frame supporting its glass curtain walling had corroded and rusted; and in the 1990s, the sub-frame was replaced using concealed aluminum glazing channels. The glazing too was replaced¹⁶.

There is a range of valuable precedents that could be cited in addition to Lever House: Gropius' Bauhaus Building at Dessau; Mies van der Rohe's Crown Hall at IIT; Frank Lloyd Wright's Guggenheim in New York; and Louis Kahn's Yale University Art Gallery, New Haven¹⁷. All of these important modern buildings have had major conservation/restoration work done on them since the mid-1990s. All had problems with their glazing systems, such as corrosion, moisture and dirt, and in all cases the conservation work included both the repair of existing building materials and the replacement of those elements which were beyond repair, including replacement glazing. In none of these cases has the significance of the building been compromised by the work; to the contrary, all continue to be held in esteem and now also have extended longevity and improved environmental performance.

Possible Futures

In June 2014, Auckland Council made the GHD, Salmond Reed and Archifact reports public¹⁸. In full knowledge of the two independent assessments of the building's heritage significance, it then developed three possible options for the redevelopment of the site. One of the three allows for the repair, refurbishment and reuse of the Civic Building for mixed arts and commercial use; the other two involve its demolition and replacement — one with high-rise development for mixed arts and commercial use and the second comprising low-rise facilities solely for arts use¹⁹.

Council circulated these options as a call for expressions of interest from developers to join a public-private partnership to work on the site, and illustrated them with conceptual designs by Stephenson & Turner. The 24-page call for expressions of interest made no mention of the building's heritage value; to the contrary, it commented that "RFA [Regional Facilities Auckland] could work with any of the three concepts"²⁰.

To summarize, then, a **docomomo** fiche²¹, a Heritage New Zealand listing proposal and two independent heritage assessments — both by reputable firms of conservation architects — all agree on the high significance of the Civic Building, yet still Auckland Council cannot mention the words "heritage value" in its call for expressions of interest to redevelop the place. Council is just as open to demolition as it is to adaptive reuse; in fact, it appears to be twice as open to demolition, given that two of the three illustrated options for its future depict this possibility over and above retention and reuse.

The uncertain future of the Civic Building shows New Zealand to be slow in recognizing the heritage value of its significant modern buildings. It is clear, too, that if the country is to retain the best and most important of its modern buildings long term, then public bodies must lead by example, identifying the exemplars and demonstrating that such buildings are worth spending money on, including adaptation for reuse in favor of demolition and replacement. ■

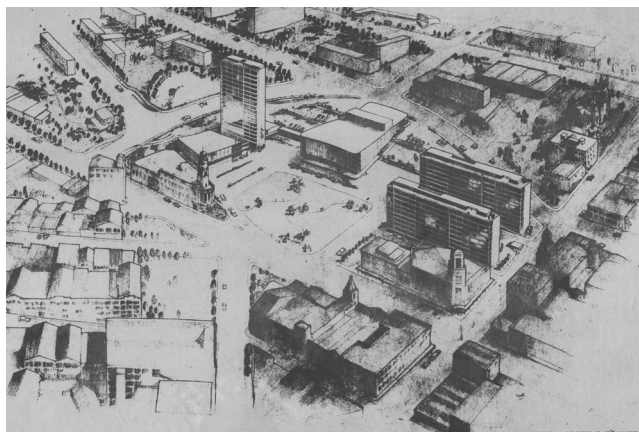
Notes

- 1 "Auckland City Council Administration Building", *Home and Building*, Vol. 29, No. 6, November 1966, pp. 60–63.
- 2 For detailed information on Donner and his buildings, see Robin Skinner, *T. K. Donner: The Architect*, BArch thesis, The University of Auckland, 1994. Briefer but more widely available are Paul Jenkin, "Donner House"; Antony and Jane Matthews, "Parnell Baths"; Antony Matthews, "Ellen Melville Pioneer Women's Hall"; and Robin Skinner, "Auckland City Administration Building (now known as the Civic Building)", in Julia Gatley (ed.), *Long Live the Modern: New Zealand's New Architecture, 1904–1984*, Auckland, Auckland

01 Tibor K. Donner, The Civic Building, Auckland, 1954–1966. View from the north-east. © Simon Devitt, 2008.



02 A model of the developed design of the principal tower, 1956. The low-rise facilities at its base were not realized. © Auckland City Council photographer, Architecture Archive, The University of Auckland Library, Auckland.



03 Tibor K. Donner, "Revised Civic Centre Scheme: Scheme No. 4", prepared by Donner's office for the Auckland City Council, November 1951. © Donner Papers [DO1], Architecture Archive, The University of Auckland Library, Auckland.

- University Press, 2008), p. 47, 78, 117, 149.
- 3 Robin Skinner, "T. K. Donner", p. 50–52.
- 4 *Idem*, p. 55–59.
- 5 A full description of the building is included in S. W. Mitchinson, "Auckland City Council Administration Building", *New Zealand Institute of Architects Journal*, Vol. 35, No. 3, 20 March 1968, p. 80–86.
- 6 Robin Skinner, *idem*, p. 58.
- 7 The changes are documented more fully in the **docomomo** Fiche on the Civic Building, approved in 2014.
- 8 See Robin Skinner, *idem*; Robin Skinner, "Disarticulated High Rise: The Auckland City Administration Building", *Habitus 2000: A Sense of Place*, Perth, 5–9 September 2000, Perth, 2000; "New Zealand", in Dennis Sharp and Catherine Cooke (eds), *The Modern Movement in Architecture: Selections from the docomomo Registers*, Rotterdam, 010 Publishers, 2000, p. 191; and Robin Skinner, "Auckland City Administration Building".
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- 11 *Idem*, p. 9.
- 12 Salmond Reed Architects, "Auckland Council, Civic Administration Building: Heritage Assessment", Report prepared for Auckland Council, December 2012, p. 20.
- 13 Archifact, "Auckland Council, Civic Administration Building, GHD Limited Assessments: Peer Review for Auckland Council", Report prepared for Auckland Council, April 2014, p. 6.
- 14 Archifact, "Auckland Council, Civic Administration Building, Salmond Reed Architects Limited Assessment: Peer Review for Auckland Council", Report prepared for Auckland Council, April 2014, p. 5.
- 15 Archifact, "Civic Administration Building, 1 Greys Avenue, Central Auckland: Heritage Assessment for Auckland Council", Report prepared for Auckland Council, April 2014, particularly, 44–50.
- 16 *Ibidem*, p. 63–64.
- 17 These four projects are among those documented in the special issue "Reinvigorating 20th Century Masterpieces", *a+u*, No. 474, March 2010.
- 18 For links to these reports, see Chris Barton, "The

- Civic Building: Modernist Folly; Architectural Treasure", *Metro*, 10 June 2014, available at: <http://www.metro.co.nz/city-life/urban-design/the-civic-building-auckland-architectural-treasure/>
- 19 Regional Facilities Auckland: An Auckland Council Organisation, "Civic Administration Building: Three Concepts for a Thriving Arts and Cultural Precinct in Aotea Quarter", circulated 18 November 2014.
- 20 *Idem*, p. 3.
- 21 Lauren Speer and Julia Gatley, "Civic Building (also known as the Auckland City Administration Building)", **docomomo** Full Documentation Fiche, Approved by **docomomo** New Zealand on 25 April 2014. [http://www.docomomo.org.nz/wp-content/uploads/2008/09/Civic_Bldg_Aucklandi.pdf].

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Modern Architecture in Setif (Algeria, 1930–1962). Expression of a Plurality of Approaches

BY SAMAÏ BOUADJADJA SETIF AND SAÏD MAZOUZ

The purpose of this paper is to report on the characteristics of modern architecture in Setif, a town in eastern Algeria, created from scratch during the French occupation. It will be of a particular interest to unveil a part of the puzzle that represents the “backdrop” of modern architecture, in this city¹.

The present paper tries to contain and recognize the different forms of expression of this architecture, through a historical perspective, punctuated by major events in order to shed light on the characteristics of modern architecture in Setif (1930–1962) and by which they were motivated.

Introduction

The treaties of philosophy and history of ideas attest the uniqueness of modern thought based on universal values: freedom of spirit, equality, emancipation, rationality, etc. Values whose credibility has grown steadily since the Enlightenment. However, the treaties of modern architecture demonstrate the diversity of its approaches and its formal expressions, indicating the maturity of this movement and the more and more increasing dialectical relationship between theory and empirical evidence related to the site at large, the economy, social data. This article aims to answer the question: “What were the different expressions of modern architecture in Setif between 1930 and 1962 and by what were they motivated?”. It questions the period starting from 1930, the date of Le Corbusier’s arrival in Algiers, which marks the beginning of the modern influence in North Africa, until 1962, corresponding to the end of the French presence in Algeria, which had as a result, the departure of so many professional architects, engineers, contractors, directors and so on. The corpus of this study developed from the urban and architectural history of Setif during this period suggests three registers for the three scenarios that marked the urban dynamics of Setif: returning to the city, bridging the non-aedificandi area fortifications and the various extensions through the suburbs. The projects belong to both public and private sectors, programed through various development plans, supported by new financial and fiscal measures and clutched by the early introduction of new technological

processes. The actors: architects, engineers and contractors, although installed mainly in Algiers, spread out throughout the national territory and beyond to Tunisia and to the metropolitan area. The intramural approach was rather Perretist: consciously urban (alignment, prospect) and with classic reminiscences through new typologies. The unconstructable zone also provides an urban architecture although promoting a modern architectural language. In the suburbs and as we move away from the city center, the Corbusian principles become more obvious; Les Pins neighborhood in the west and that of Bouaaraoua in the east are such witnesses. We can conclude that modern architecture in Setif (1930–1962), evolves with that of the West. Setif like other Algerian cities has even been a real testing ground of the Modern Movement, when the French public has displayed resistance by opposing innovation and condemning change.

Modernity On, the Introduction of Reinforced Concrete

The technical dimension formed alongside the philosophical and plastic ones, a catalyst for the development of modern architecture. It is for this reason, that we are discussing the early introduction of reinforced concrete in Setif, through dealers and agents of the F. Hennebique design agency that, from 1908 enabled the achievement of various architectural works using reinforced concrete: grain silos, banks, multi-story mixed use investment properties, townhouses, among which were Hennebique agent’s own house

(J. Giovannelli (1909)) as well as the home of F. Hennebique in *Bourg-la Reine* (1901), to serve as models. Large spans, pile foundations, expanded concrete, and translucent concrete attest to the level of technology and performance of the protagonists of construction in Setif, from the early 20th century².

Direct and Indirect Involvement of the State in the Production of Social Housing

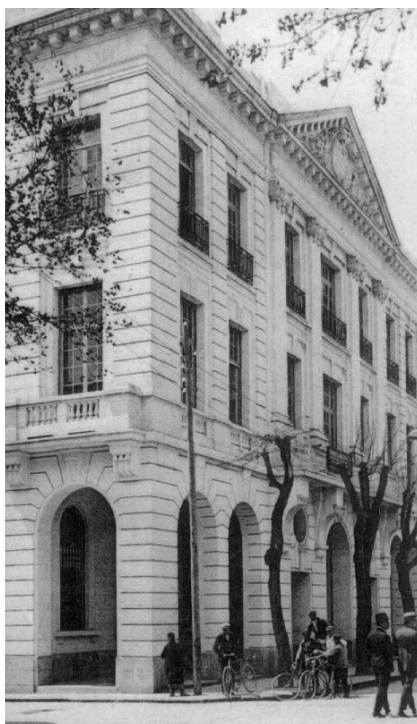
From the beginning of the second decade of the 20th century, the colonial state was involved in social housing programs, initially in collaboration with associations and cooperative movements, then through public offices and HLM (*Habitation à Loyer Modéré*) financial companies. This program was based on a legal arsenal whose application had been extended to Algeria.

We then saw the birth of suburban housing districts, average housing density. The duplex houses are constructed on plots of 300 m², with a front garden, a courtyard and a garden at the back. The first two garden cities, Lévy city (1926), south of the railway, and the railway city (Cheminots) to the east³, are in a checkerboard urban form. The cities are equipped with public buildings at the scale of the district: school, market and worship place. The third, “the city of veterans”⁴, introduced the curved line in the drawing of the islets and *closes*, referring to “the English landscape tradition”. On the *closes* we find secondary entries, while public presentation and main entries open on to the street. As part of the plan of Constantine⁵, the public sector was also pressured to realize workers’ housing schemes. The OPDHLM (Office of Public Moderate Rent Houses), was the owner of several operations, including that of the Ramparts city⁶. Conscious of urban constraints, the three buildings are situated along the ring road that resulted from the dismantling of the fortifications, opting for a rational and minimalist architecture.

Returns to Town

Abandoned by the bourgeoisie in favor of the *Faubourg de la garesuburban* neighborhood, the city center was reinvested twice.

In the 1930s, with public operations that glorified modern architecture, occupying small parcels of land, organizing programs with extreme rationality ensuring compliance with alignments and prospects. We cite as examples: the *Galleries de France* building by



01 P. Ponsard, G. Charbonnière, J. L. Giovanelli Enterprise, Headquarters of the branch of Crédit Foncier Algeria and Tunisia, Setif, Algeria, 1914-1920. Postcard.



02 Ponts et Chaussées building, Sétif, Algeria. Before the height extension (1959). © Archives of the University of Geneva, Archives of architecture J-H Calsat Fund, 1936.



03 X. Salvador, DPG, M. Garnier, Perret Brothers, Civil Hospital, Sétif, Algeria, 1935-1938. Engineering and execution Ch. Tisserand companies. © Chantiers, Archives of the Department of Algiers, 1938.

the Hennebique agent JL Giovanelli (1931), with spans of 16 m, and that of the *Ponts et Chaussées* (Roads and Bridges) (1936), an expressionist asymmetrical building.

In the aftermath of the World War 2, the holders of agricultural capital monopolized the best locations (places) in the old center. Consolidation operations were required to form the base of tall buildings, made with reinforced concrete structures, most of it on piles, with elevators, central heating, a collective water tank, laundry and common terraces, local bins and janitor. We can cite as an example, the Carlone⁷ building, operating on seven levels on top of a ground floor reserved for shops. The first floor is occupied by a birth clinic. The apartments increased from two to five rooms. This set of Perretist inspiration, conceived on the basis of social and functional diversity principles remains, despite its modern aesthetic, devoid of ornament, respectful of urban rules of alignment and prospect and of classical tripartite architectural composition. This building was presented at the exhibition held on the sidelines of the XIII National Housing and Urban Development Congress in 1952⁸.

All investment property buildings (*immeubles de rapport*) downtown conformed to the same Perretist approach. We cite as an example the Brincat building (1950) whose facades are punctuated by bow windows, the Bernabé companies building, the Ugolini building, etc.

The New Modern Urban Form Neighborhood: *The Pines*

We cannot talk about this district, without mentioning the famous public hospital⁹. By its primacy in the northwest part of the city, it is undoubtedly the forerunner of modern architecture. Built by Ch. Tisserand and Perret brothers¹⁰ companies, whose model was presented at the World Expo 1935 in Brussels, this project was classified according Haegelen (Governor General), second in France and fifth in the world by its architecture and modern amenities¹¹. It consists of rectangular buildings, occupying the center of the plot, connected by galleries, including the general configuration, in the form of a comb, corresponding to the typology of hospitals responding both to hygiene concerns and functionality.

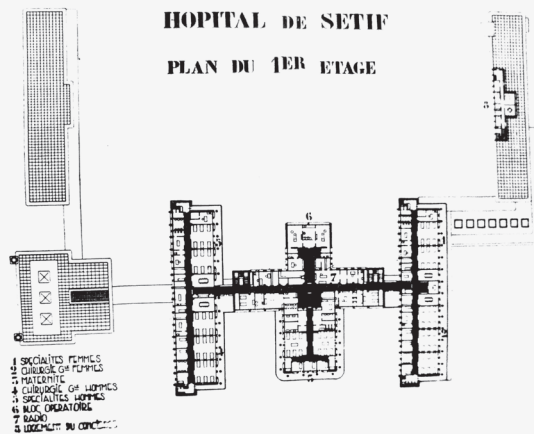
The new modern area, *The Pines*, located at the southern boundary of the civil hospital, was first formed along the roads as a growth axis, before developing on the north side. The first building (*Brincat I*) stands on the alignment of this pathway. The second, *Brincat II*, is set back from the boundaries of the plot down a level, which allows it to gain an additional floor. The remaining part of the neighborhood is in an entirely new urban form. An urban form composed of enclosures in which the buildings are freed

from the constraints that govern the urban design of the old districts. We find towers, having all the elements of comfort at both levels: apartments and common areas. This neighborhood is completed on the west side by the city of Orleans¹², whose buildings have between eight and nine floors above the ground floor. This height corresponds to the optimal standard established by Gropius, to maximize both the structure and equipment: lift, boiler, etc¹³. The ornament there appears to be a "crime" and, in promoting the utilitarian dimension of modern machine aesthetics "art and architecture are seen as neutral and objective, independent of individual taste"¹⁴.

This empty site permitted a combination of a modern typology and a modern morphology. A similar situation occurs in the new district *Bouaroua* located at the eastern end of the city.

Return to the Past

The author of the civil hospital designed the *Penguin* school with a traditionalist style whose facades are finely carved with "rustic" materials, timber, stone and brick. This is also valid for M. Christofle opting for a decidedly modern parti at the Lévy city school stadium (1949) and the Arabist style of the *Hammam Chiab* Turkish Bath (1930) and the central post-office (1930-32). The Arabist style clearly shows the return to the past by



04 G. Barthe & A. Gazalet, DPLG, SEFA company, City of Orleans, Sétif, Algeria, 1958-1959. © Assia Bouadjadja.

05 P. Berardi, Botto, Scognamiglio & Hamelin, Cheminots city, Jules Cutoff, Sétif. © Cheminot Sétif, 1930.

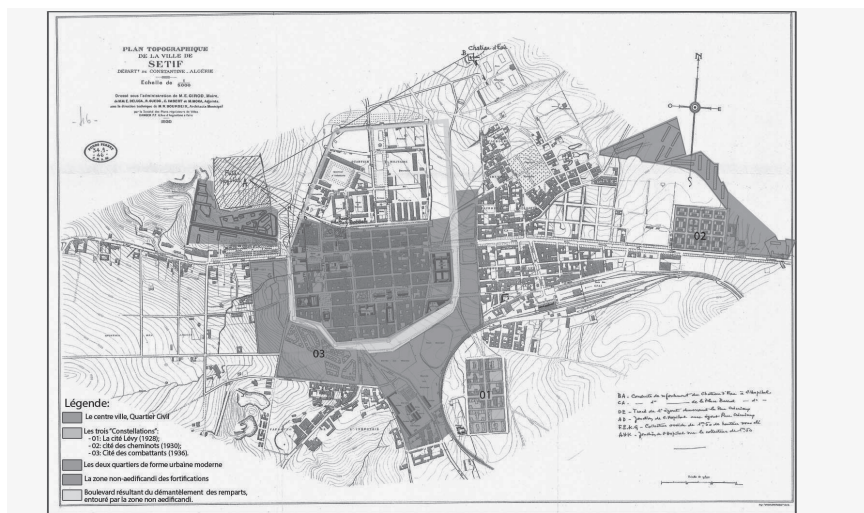


Le nouvel immeuble Carlone, angle de la rue Saint-Augustin et Docteur Henri Gauthier. Clinique de maternité de Mme Collet – Etude Notariale.

06 L. Regeste, DPLG, B. Carlone entreprise, Carlone Building, Sétif, Algeria, 1949-1952. Postcard.



07 Plan of Sétif on which were located urban entities mentioned in the text. © Perret, Auguste et Perret brothers fund. 535 AP, 344(1) / *Cité de l'Architecture et du Patrimoine/Archives d'Architecture du XXe siècle*, 1930.



09 A. Jdanoff, Mun. J. Mauri & D. R. Pons, at the background, the six slab blocks of Palm City, 1958–1959. On the right: Alain Sèbe, A. Daure & H. Berri, building of the "ramparts" city along the Boulevard, 1959–1963. On the left: P. Bourdeix, Mun., Wagner, Botta company, 1934–1938, five blocks of the "veterans" city. © PUD of Setif, 1962.

drawing on the register of what is commonly called "Islamic architecture". *Hammam Chiab* and the central post office are adorned with polylobed horseshoe arches, lowered, twisted columns, stucco and polychrome mosaic, both in front and inside. This return to the past therefore is probably more the result of a Situationist approach than of a doctrine.

The Filling of the Non-Aedificandi area, the Ring Setifois

Setif, like fortified towns, had a strip of land around its wall, which was untouched by urbanization in the late 19th century. Around 1930, the infilling of this area followed the traditional pattern of the dismantling of fortifications and building a ring road.

In the eastern part of the intramural area are several public buildings running from north to south. All these buildings have pure lines and simple volumes generally located at the edges of their plots. The finance building offers elegant and imposing façades; its central hall is illuminated by a canopy of translucent concrete, which counted among the latest innovations of the time. No ornamentation is apparent except some generally monochrome molding details, including a group of window frames whose objective is to meet the interests of composition related to scale. Other public buildings such as the court, the central police station, the officers' building obey the same modern aesthetic.

In the western part of the city, several social housing projects were completed. Palm city (*Cité du Palmier*), a city of 200 dwellings, is representative of them. This is the first Corbusier-inspired major "ensemble" in Setif, meeting the principles of minimum habitat. Unit size goes from two rooms (32 m²) to four rooms (52 m²). This vertical garden city

has six slab blocks of four to seven floors, oriented north-south or east-west, connected by walkways and distributed by a system of walkways and outside stairs with panoramic views of the surrounding landscape. The typology of housing is inspired by the Muslim house, crystallized in the rural model that results in providing a room for guests, cut categorically from inside the apartment, a multipurpose room with a kitchen and a bathroom which is accessed via the loggia.

Conclusion

Setif knew neither the intellectual and social upheaval nor the artistic avant-garde in Europe, it was, however, a field of application and experimentation of the modern movement; first on a technical level then on an aesthetic one.

The use of reinforced concrete and associated technologies in the early 1930s did not cause too much disruption of the original urban form. Whilst the architectural language was considerably simplified, it still maintained the tripartite composition of the classical facade in both public and private development projects.

Garden cities, in the form of satellite neighborhoods, emerged, confirming the involvement of the state and associations in the production of social housing.

A return to the past was also carried out through traditionalist or Arabist approaches referring to records of the past, typological or aesthetic, rural or Muslim, as was the case for the *Cité du Palmier*, the *Peguin* school and the famous *Chiab Hammam*.

Examples of enclosure planning are found in neighborhoods characterized by new towers and slab blocks that display considerable technical skill, bringing together

comfort conditions, including those related to maintenance, are those neighborhoods such as *The Pines* and *Bouaroua*. ■

Notes

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The Legacy of Mies van der Rohe in Modern Movement and the Modern Architecture in Korea

BY JONG SOUNG KIMM

The following article is an edited version of the keynote presented at the 13th International **docomomo** Conference that took place in Seoul, Korea, on September 2014. The paper discusses how “Western” architecture was first introduced to Korean soil: a French Catholic missionary-architect built the Seoul Cathedral at the end of the 19th century. American and Canadian architects built educational buildings for the Protestant missionary-founded colleges in Korea. Japanese civil servant architects built some public buildings during the colonial rule. The work of two prominent Korean architects, Kim Chung-Up and Kim Swoo-Geun are discussed.

The author discusses his education at Mies van der Rohe’s Illinois Institute of Technology (IIT) in mid-1950s, his work for the Master during the 1960s, and his teaching at IIT 1966 and 1978. He describes how his dual position of teaching at IIT and working for Mies gave him the opportunity to work on three projects of importance: the *Mies Retrospective* in Berlin in 1968; the exhibition proposal for the extension of the Museum of Fine Arts in Houston of 1969; the Toronto-Dominion Bank executive floor and Banking Pavilion of 1966–1968.

The author discusses several works of Mies van der Rohe to “demystify” the general perception that Mies was a rigid aesthetician: how Mies van der Rohe would arrive at design decisions not always sticking to the module, grid and geometry, contrary to the conventional reading of his architecture.

The author then discusses five works from his three decades of practice with SAC International in Seoul, highlighting where Mies’ influences might be found in these works: the Korea Military Academy Library of 1982; Seoul Hilton Hotel of 1983; the Weight-lifting Gymnasium for ‘88 Seoul Olympics of 1986; Kyongju Museum of Art of 1991; and the SK Group Office Building in Seoul of 1999. The paper also reflects on its relationship to the main theme of the recent International **docomomo** Conference in Seoul, *Expansion and Conflict*.

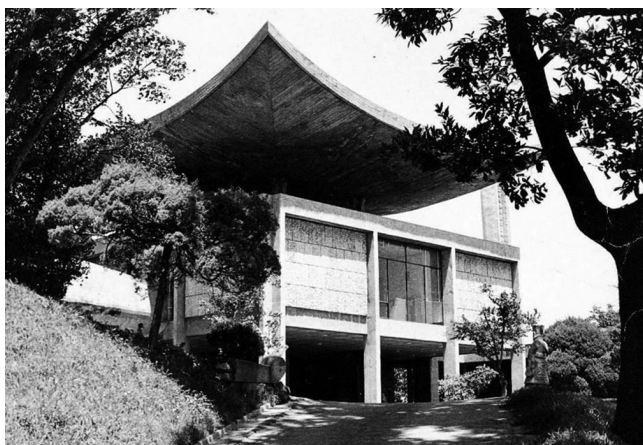
The Modern Movement challenged a millennium of classical values through a collective global revolution in technological, social, political and aesthetic spatial values. The magnitude and complexity of this confrontation between epochs multiplied when modernity’s Western values expanded into the Asian sphere.

The 13th International **docomomo** Conference in Seoul re-measured this expansion of the modern ethos within the wholly different context of Asia. Predictably, modernity in Asia grew and matured through the process of conflict and expansion, and intrinsically took on very distinct identities in different regions.

The theme of *Expansion and Conflict* fundamentally interrogates the values and relevancy of the Modern Movement through the extreme cultural lens of Asia. Conflict is not necessarily a pejorative, but maybe a challenge for the future. It signifies a vigorous recognition of each culture’s robust and intrinsic values — the existing culture’s and Modernism’s *raison d’être*.

Looking back on how “Western” architecture made its appearance on Korean soil, it was a French Catholic missionary-architect, Eugène-J-G Coste, who built Seoul Cathedral at the end of the 19th century. American and Canadian architects built the first group of academic buildings for the Methodist missionary-founded Yonhee College and Ewha Women’s College. Public buildings were built by Japanese colonial government architects during the thirty-five years of Japan’s colonial rule which ended in 1945.

Of the two prominent architects who left significant imprints on the course of contemporary Korean architecture, Kim Chung-Up, born in 1922, was educated at Yokohama Higher Technical School. After teaching in Seoul, and then working in Le Corbusier’s *atelier* for four years in the early 1950s, Kim established his practice, and also taught at Hong Ik University. The French Embassy and Chancery in Seoul (figure 1) of 1960 may be considered Kim Chung-Up’s most important legacy. The second architect, Kim Swoo-Geun was born in 1931, worked in Tange Kenzo’s office



01 Kim Chung-Up, French Embassy and Chancery, Seoul, Korea, 1960.
© Kim Chung-Up Museum, 1969.



02 Kim Swoo-Geun, Space Group Building, Seoul, Korea, 1971.
© J. W. Jung, 1977.

after his education at the Tokyo University of the Arts. In 1961 Kim Swoo Geun established the Space Group, built an impressive body of architecture, and endeavored to promote the general public's awareness of cultural issues through the monthly magazine *Space*. The Space building of 1971 (figure 2) could be singled out as Kim Swoo-Geun's masterpiece. It was my good fortune, indeed my destiny, to begin my architectural education at Mies van der Rohe's IIT when Crown Hall opened in the spring semester of 1956. I arrived in Chicago at night, and the taxi taking me to the IIT campus drove in front of Crown Hall. The first impression of the building, a sharp-edged prism of clear and translucent glass fully lit with eerie fluorescent lights, was unlike any "building" that I had ever seen in my life, and I felt a certain shiver inside me. I undertook the course that Mies had developed, and augmented by the first group of faculty whom Mies had assembled including Ludwig Hilberseimer, Walter Peterhans, James Speyer, Daniel Brenner, Alfred Caldwell, George Danforth, Reginald Malcolmson, Jacques Brownson, Howard Dearstyne and others.

As Mies was no longer teaching undergraduate classes when I began my study at IIT, I had set a goal to work for the Master when I completed my studies. Mies resigned from IIT in 1958. My teacher and mentor Alfred Caldwell recommended me to Mies's office when I finished my junior year at IIT. In early 1961 I began my eleven-year stint at the 5th floor loft office of Mies van der Rohe at 230 East Ohio Street in Chicago.

George Danforth, who succeeded Mies van der Rohe as director of the School of Architecture at IIT, recruited me in 1966 to teach the 4th year design studio. It was my dual position of teaching at IIT and working at Mies's office that eventually led me to three assignments of importance and a source of great personal pride during my work at Mies van der Rohe's office. The most important assignment was to design the exhibition installation of the 1968 Mies van

der Rohe retrospective at the *Akademie der Künste* in Berlin on the occasion of the opening of the *Neue Nationalgalerie*; another was to produce the exhibition proposal for the new extension of the Museum of Fine Arts in Houston in 1969; the third was the Toronto-Dominion Bank executive floor and Main Banking Hall of 1966–68. My teaching encompassed taking students one on one, through the space problematic, one of the key components in Mies's IIT curriculum, prior to setting students independent design projects. The space problematic had evolved from Mies's own interest in exploring the potential in spatial modulation of planes, volumes, juxtaposition of different materials and textures going back to the Barcelona Pavilion, the *Tugendhat House*, the 1931 Berlin Building Exhibition House, series of court house studies and continued through Mies's American phase in the Farnsworth House, Crown Hall at IIT, the Toronto-Dominion Centre Banking Hall, and the *Neue Nationalgalerie* in Berlin.

Now I would like to discuss some aspects of Mies van der Rohe's architecture in a way not usually dealt with, or overlooked by most of the chroniclers of his work. I want to demystify the common perception that Mies van der Rohe was a rigid aesthete, by highlighting some important instances of Mies, the "artist", not allowing himself to be bound by rules he had set up for himself, as well as to illuminate the fact that the essence of Mies van der Rohe's architecture was first and foremost an art of building, *Baukunst*, a spatial art. The conventional reading of Mies van der Rohe's architecture is the grid, module, and a strict adherence to geometry. Many architects who have adopted the Miesian language in their own work in the second half of the 20th century have indeed fallen victims to the trap of slavishly adhering to the module or what they would perceive to be Mies's architectural idiom, while Mies himself never let the module or grids dictate his "artistic" judgments. Mies van der Rohe was an artist of much more



03 Mies van der Rohe, Barcelona Pavilion, Spain, 1929. Reconstructed in 1986.
© Jong Soung Kimm, 2011.



04 Mies van der Rohe, *Neue Nationalgalerie*, Berlin, Germany, 1968.
© Jong Soung Kimm, 2006.

complex and unfathomable intellectual dimension than the clarity of his architecture would indicate.

“One evening as I was working late on the building I made a sketch of a free-standing wall, and I got a shock. I knew it was a new principle”.

The birth of free-standing wall in the Barcelona Pavilion (figure 3) was thus described by Mies van der Rohe. Mies’s final plan for the Barcelona Pavilion called for one by three, 7.70 m square bays of thin, cross-shaped steel columns supporting the roof plate. Only after the excavation of the site progressed far enough, and the 110 cm² dimension of travertine paving slabs had been fixed, was it discovered that the east-west dimension of the site did not yield 23.10 m that was required, but was about 2.00 m short. Mies’s on-site modification was to create 3 bays out of 19 paving grids, or 20.90 m between the outer columns. Had there been a little more time to finish the Pavilion for the opening date, Mies van der Rohe would probably have reversed his earlier decision, and had the travertine pavers cut to 110 cm by 99.50 cm in order to align columns on both longitudinal and transverse grids.

For the Tugendhat House, which was designed concurrently with the Barcelona Pavilion beginning in 1928, Mies again set up squarish bays, but the final dimensions of the structural frame turned out to be 5.50 m north-south, and 4.835 m east-west. It would be reasonable to assume that Mies considered such factors as the visual relationship of a pair of columns to the free-standing onyx wall, as well as that of another pair of columns to the Makassar ebony-paneled half-round wall for the dining area, and finally, the physical distance between the onyx and ebony walls in arriving at the shorter spacing of the columns in the east-west direction.

Not long after he accepted the directorship of the Architecture School at the Armour Institute of Technology, the predecessor of IIT, Mies van der Rohe was commissioned to produce the new campus master plan for the univer-

sity. After an intensive analysis of the academic program requirements, he arrived at 24 × 24 ft, 12 ft high (approximately 7.20 × 7.20 m by 3.60 m high) unit as the planning “module”. However, as he set out to study the actual placement of the first group of three academic buildings, the Chemistry Building, the Chemical Engineering & Metallurgy Building and the Alumni Memorial Hall, Mies found that the distance between the parallel three-story Chemistry Building and the two-story Chemical Engineering & Metallurgy Building would be too far apart at 48 ft, yet too close at 24 ft. His decision was to place the buildings at one-and-a-half “modules”, 36 ft apart.

In planning the Chemical Engineering & Metallurgy Building, Mies’s studies led him to a two-story, rectangular volume 5 bays wide, 12½ bays long, with outer bays accommodating small laboratories and research offices, and the middle three bays given over to the main lobby, an auditorium, and a suite of offices around a courtyard. Mies van der Rohe concluded that the main lobby at the southern end of the building would require a space wider than one 24 ft bay would yield. His decision was to place the columns one and a half “modules”, 36 ft, inwards from the exterior columns, deviating from the “principle” which he himself had established to guide the planning of the IIT campus.

For Crown Hall, the home of the Architecture and City Planning Departments and the Institute of Design at IIT, Mies van der Rohe set out to create a clear-span pavilion above an English basement. The limit in the width of plate glass with which Mies intended to sheath his revolutionary structure led him to a planning and design module of 10 ft, a departure from the 24 ft square module for the campus. The width of Crown Hall at 120 ft still respected the multiple of 24 ft, whereas the length of 220 ft was independent of the campus module.

The design for the week-end house on the Fox River for Dr. Edith Farnsworth was begun in 1945, and was finally



05 Jong Soung Kimm, Seoul Hilton Hotel, Seoul, Korea, 1983. Main lobby. © C. E. Lim, 1983.



06 Jong Soung Kimm, Korea Military Academy Library, Seoul, Korea, 1982. © H. K. Park, 1987.

built in 1950. In the much celebrated Farnsworth House, who would have thought that Mies placed the entrance door slightly off centre in the 28 ft expanse of glass? He did, so that the dining table and chairs would have ample space around than if the door were placed in the exact centre for symmetry's sake.

The 28 ft span Farnsworth House was the first of a series of "pavilion" concepts Mies had investigated during his American phase. He went on to realize the 120 ft span Crown Hall in 1955, and proposed the 80 m (262 ft) span design for the Mannheim National Theatre competition project in 1953. Parallel to his investigation of one-way frame pavilions, Mies had produced designs for a series of two-way frame pavilions, starting with a 50 × 50 ft house of 1951, the 720 ft square Chicago Convention Hall project of 1953, the 54 m (177 ft) square Bacardi Office Building project of 1958, and the 64.80 m (213 ft) square *Neue Nationalgalerie* in Berlin of 1968 (figure 4).

At this point, I would like to turn to my work in Korea. The architectural discourse during the 1970s in Korea was centered on three main themes: *Gestaltung*; exploration on the use of new materials and techniques; and most of all, how to express tradition in contemporary architecture. The annual conference of the Korean Institute of Architects in 1974 was devoted to the theme of "Expression of Tradition in Architecture". An essay I contributed to *Space* magazine in 1975 recorded the general background of the architectural discourse during that period:

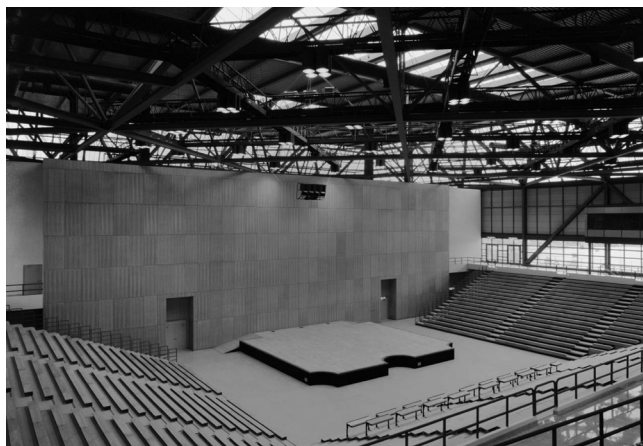
"In my opinion, the discussion on the issue of expression of tradition in contemporary architecture should be given a low priority, and I think concentrating on improving the overall quality of architecture will take us to our goal sooner than any attempt to graft elements of historical architecture, or an anxiety to formulate a 'Korean architecture' in a hurry".

In the midst of this pivotal period in the development of modern architecture in Korea, I set up my practice with

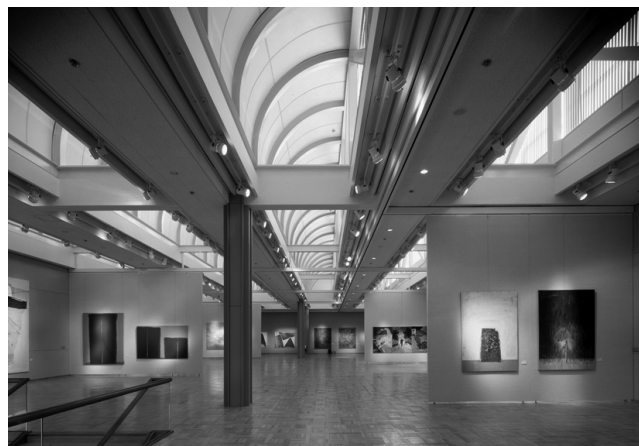
Seoul Architects-Consultants (SAC) International in 1978. The general climate of architectural profession was on the upswing: architects who, until then, could not freely travel outside of Korea due to the government's restriction on converting currency, began to travel abroad to visit important works of architecture; private sector clients, increasingly becoming more knowledgeable and sophisticated, demanded a higher caliber of design from their architects; Korean investors and construction companies who had been working abroad in places like Saudi Arabia and Kuwait created a market for Korean architects in their increasingly complex and large-scale projects. Soon after I began to work in Seoul, I found it necessary to bring the general level of all staff to a higher, common base. I and my colleagues trained the new crop of our young architects almost as an architecture school would. We would engage a new group of entry level staff by assigning a two-week design project, then critiquing their work as if in a graduate design studio. We would also hold weekly lunch-hour lectures and workshops in order to expand architectural awareness of our staff.

Of the architectural output of importance during the last three decades by SAC, I would like to discuss five projects, and highlight where Mies's influences might lie: the Korea Military Academy Library of 1982 (figure 6), Seoul Hilton Hotel of 1983, the Weight-lifting Gymnasium for 1988 Seoul Olympic of 1986, Kyongju Museum of Contemporary Art of 1991, and the SK Group Office Building of 1999.

The Korea Military Academy campus is located on the north-eastern edge of Seoul. The Academy desired an open-stack library with only a limited area of closed stacks for reference books. I seized upon this "open" arrangement to produce a large, open reading room of 42 × 66 m on the upper floor, with the central 12 × 30 m given over to an atrium stair hall. It is based on 3 × 5 bays of 12 m square concrete structure, with a 3 m cantilever on all sides for the upper floor. Transparent ground floor enclosures are



07 Jong Saung Kimm, Weightlifting Gymnasium for '88 Seoul Olympics, Seoul, Korea, 1986. © H. K. Park, 1986.



08 Jong Saung Kimm, Wooyang Art Museum, Kyongju, Korea, 1991. © H. K. Park, 1992.

pulled back from the edges of the upper floor to the outer columns. An acute observer of Mies van der Rohe's oeuvre would notice a certain similarity of the plan organization of the Library to Mies's Bacardi Building in Mexico City. The decisive difference between the two buildings, however, lies in the introduction of daylight from above for the atrium.

The Seoul Hilton Hotel is situated on the western edge of Namsan hill where the Namsan scenic drive completes its loop. As the hotel is entered from the higher frontage of a steeply sloping site, the podium block containing the public functions is placed to the rear, and the pilotis at the ground floor of the tower stand directly on the main entrance level. The tower floor is arranged as a double loaded plan. In order to avoid the visual tedium of a long corridor, and also in order not to create a slab-like mass, the plan is refracted 30 degrees at about 16 m in from both ends, resulting in a triptych-like shape for the tower block. As a visitor enters the building through the main entrance facing east, he or she passes through a relatively shallow entrance zone defined by a mezzanine above, then walks into a 6 m high main lobby. Progressing further inside, a large atrium with grand stairs connecting the lower lobby level below, and a generous opening at second floor level with a skylight at the roof, together create an 18 m high vertical expanse of space (figure 5). The spatial interpenetration of three levels was the object of a concentrated design study for the Seoul Hilton project. My life-long lessons from Mies van der Rohe are not present so much in its spatial organization, but are stamped everywhere in the choice and detailing of the major materials; in how a few expressive materials enhance the architectural character of major spaces. Sometime after the project was finished, I was quoted in a weekly Japanese architectural journal in 1985 thus:

"When the circumstances allow, I want to create a heart-soaring space using good materials and the most advanced technology".

The Weight-lifting Gymnasium for '88 Seoul Olympics is organized within a vast single space measuring 59.40 x 79.20 m. A concrete seating "shell" for 1,000 spectators is placed at one end of the rectangular gymnasium. U-shaped, telescoping bleachers for an additional 2,500 spectators step down from the entrance level to the competition arena 5.40 m below. The main focus of this project was the structural concept for the space. Mies van der Rohe's long-span designs, such as the Chicago Convention Hall and the Mannheim National Theater, projects were dutifully studied, and after some contemplation, it was decided to frame the gymnasium by a skewed-chord space truss, recommended by the late David Geiger. In this structural system, the bottom chords are laid out diagonally to the building axis at 1.4 times the orthogonally placed top chords, rendering them into spider-web like, almost immaterial presence (figure 7).

The Wooyang Art Museum in Kyongju is a private museum for contemporary art, located in the historical ancient capital of the Silla dynasty. It is planned on two levels, one above grade and the other a basement: the upper floor is entirely dedicated to gallery space; the ground floor to main lobby, additional gallery spaces, and support functions. Mies van der Rohe's two important precedents, the Museum of Fine Arts in Houston and the *Neue Nationalgalerie* in Berlin were obvious guide posts for me on this project. In Kyongju, however, the focus was put on the gallery space on the second floor, which was an attempt to fuse the fluidity of a Miesian space and the possibility for an enfilade plan when it was required. The decisive factor which separates the Kyongju Museum from either the Houston or Berlin buildings is, again, the natural light from above (figure 8).

The SK Group Office Building (figure 9) is situated on Chongno, the main east-west axis of the historic core of Seoul. Its landscaped plaza to the south faces the newly resurrected Chung-gyechun stream. The typical floor is



09 Jong Sung Kimm, SK Office Building, Seoul, Korea, 1999. © H. K. Park, 2000.



10 Mies van der Rohe, Seagram Building, New York, USA, 1958. © Jong Sung Kimm, 1967.

planned as 33×51 m rectangle, the middle 9 m accommodating the core, and the outer 12 m, lettable space. The structural concept is based on a tubular steel frame with verticals at 3 m centers. The cladding expresses the tube, as well as the sharp-edged characteristics of steel with “flanges” to enhance its expression. It goes without saying that I carefully studied the Seagram Building (figure 10) and the Toronto-Dominion Center towers when the SK Building assignment was handed to us. The choice of the tubular frame concept as opposed to the rigid frame, and adoption of the 3 m module in the SK project, in contrast to the half-as-wide modules in either the Seagram or Toronto, led to a markedly different proportion of the cladding, and the overall architecture.

I wish to conclude my paper by examining the theme of the paper in relation to the 13th International **docomomo** Conference theme, *Expansion and Conflict*. To be sure, it is a significant measure of “expansion” to build some important structures inspired by Mies van der Rohe at a turning point in the development of modern architecture in Korea. As new designs by “Mies’s student” were built one by one, and became part of the Seoul cityscape, the buildings were met with honor awards, and attracted friendly press⁴.

My graduate seminars at Seoul National University for a decade have also helped me to illuminate in plain words the philosophy and architecture of Mies van der Rohe to a younger generation of future architects and academics. For some of my realized projects, the construction industry provided a hitherto unavailable capability by developing new finish materials, or upgrading its technological knowhow, thereby “expanding” the horizon of modern architecture in Korea. It should be noted, however, that it was not smooth sailing throughout either. It entailed an abundance of “conflict”, not so much on any ideological grounds, but due to the gap between what was available locally and what was possible elsewhere in terms of materials and construction

technique. Even today, many tasks that required resolution of “conflicts” remain unresolved.

It was inevitable, a matter of course in a historical context, that the legacy of Mies van der Rohe should be introduced to the Korean architectural profession. It was a privilege to have played a part in personally illuminating his philosophy. The influence of Mies’s legacy on contemporary Korean architecture would never be easy to quantify. While I do not believe that it could be measured in terms of form, it is my hope that the architectural profession and construction industry have matured over the decades to embrace the principles the Master had set forth, in tune with a renewed interest and reappraisal of the legacy of Mies van der Rohe worldwide. ■

Notes

- 1 Mies van der Rohe: “6 Students Talk with Mies”, *Master Builder*, School of Design, North Carolina State College, Vol. 2, No. 3, Spring 1952.
- 2 “Architecture and Tradition: Viewpoint U.S.A.”, *Space*, May 1975.
- 3 *Nikkei Architecture*, July 1985.
- 4 “Kimm Jong Sung and Evolution of Modernism”, *Space*, June 1985.

Jong Sung Kimm

(b. 1935, Seoul, South Korea). Studied at Seoul National University and IIT in Chicago. Kimm has worked for Mies van der Rohe during the 1960’s, taught at IIT 1966–78. He established SAC International, Architects in Seoul in 1978. Kimm has been a speaker or panelist at UIA Congresses in Montreal, 1990 and Tokyo, 2011; the Getty Research Institute for the History of Art & Humanities, 1998; the CTBUH congresses in Melbourne, 2001 and in Seoul, 2011. Kimm was the jury president for the Grand Egyptian Museum competition in 2002–03, and the Museum of Polish History in Warsaw in 2010.

Tetouan Modern Challenge 1912–2012

Alfonso de Sierra Ochoa and the Housing Question

Exhibition

Spanish colonial architecture in Africa constitutes an expanding field of research. With a variety of cultural activities devoted to disseminating its knowledge to the general public in the last few years, those taking place in former Spanish colonies remain scarce. Among the initiatives to reverse this situation, was the official opening, on Friday, December 12th 2014, of the exhibition *Tetouan Modern Challenge 1912–2012*. Alfonso de Sierra Ochoa and the Housing Question, in Larache (Morocco).

Organized by the Tetouan branch of the Spanish *Instituto Cervantes*, together with the initiative

Tetouan Modern Challenge 1912–1956, the research group GAMUC (African Modern Urban Challenge in Former Spanish Colonies) and with the cooperation of the Ministry of Culture of Morocco, this exhibition showcases an overview of the architecture of Tetouan, the capital of Northern Morocco from 1912 to 1956, through the documentary sources of the architect Alfonso de Sierra Ochoa.

As exhibition curators Alejandro Muchada (Ph.D. Architect and main researcher of

Tetouan Modern Challenge) and Almudena Quintana (Chief Librarian of the *Instituto Cervantes* in Tetouan) explain, this exhibition is the outcome of an extensive digitization project, aiming for the enhancement of historical documentation of Spanish colonial architecture and urbanism in northern Morocco. Among a variety of architects from this period, the exceptional character of Alfonso de Sierra Ochoa is brought to the public for the first time, providing an alternative storyline of the modernization of Morocco.

After having devoted a great part of his career discussing and implementing a theory of the city and the matter of housing in Morocco, De Sierra Ochoa's designs and ideas developed a great respect and deep understanding of the local values and ways of living, with a special commitment to the city of Tetouan, where he lived from 1944 to 1959. Especially significant was his reflection on the impact of modernization in the Moroccan habitat, which was translated into his designs for social housing for indigenous inhabitants, such as the *Moulay Hassan neighborhood* (1955–1956). Built right at the

end of Spanish colonial administration, this constitutes an example of advanced modern housing design, sharing the formal and typological achievements of the famous *Carrières Centrales* neighborhood designed by ATBAT Afrique in Casablanca.

Seen from a post-colonial approach, the exhibition introduces a variety of housing projects, with diverse locations and specific typologies. These also include designs for the urban periphery of Tetouan, where the developers shared both Spanish and Moroccan origin, coming from middle and modest social classes. Complementing the exhibition opening, additional activities examined modern architecture in the city of Larache, where the exhibition was held: a lecture on the matter of housing in the city during the 20th century, as well as an urban walk through the city and its suburbs, casting light on housing projects from the colonial period. ■

Alejandro Muchada
PhD Architect, researcher-consultant

Notes

Funder Institute Cervantes of Tetouan — Official International Spanish Cultural Institute.
Collaborators Ministry of Culture of Morocco.
Organizers Initiative Tetouanmodernchallenge.com and research group Gamuc.org
Research group website <http://gamuc.org>
Exhibition website <http://tetuandesafiomoderno.blogspot.com.es>
Catalogue website (in spanish and arabic) http://tetuan.cervantes.es/imagenes/tetuan_desafio_moderno.pdf



01 Alfonso De Sierra Ochoa, Mulay Hassan, Tetouan, Morocco. © FASO Fondo Alfonso De Sierra Ochoa. Biblioteca Vicente Aleixandre, Instituto Cervantes de Tetuán, 1956.



02 General view during the installation of the Exhibition. © Alejandro Muchada, 2014.

74-14 SAAL and the Architecture# International Colloquium

SAAL (*Serviço de Apoio Ambulatório Local*), Local Ambulatory Support Service, was a program for the construction of houses in poor neighborhoods. It followed the revolutionary process which, in 1974, brought to an end half a century of dictatorship in Portugal. Although properly contextualized in a very specific historical process, nowadays it is still a tool to think, to question and to debate the issues and challenges of housing as well as its ineludible proximity to architecture.

To discuss SAAL, as an historical model, in light of contemporary circumstances, was the goal of the international colloquium *74-14 SAAL and the Architecture #* which took place in the University of Coimbra, between November 14th and November 16th 2014.

Looking back to the recent past, especially to the first three quarters of the 20th century, it is impossible to study the produced architecture without referring to its often direct relation to the Welfare State. In 1974-76, however, the country was convulsing, it was a time when the dictatorship's old social institutions were undergoing a process of substitution and renewal. That was when SAAL appeared as a decentralized service eager to reduce bureaucracy, as an ephemeral process that enabled the tripartite relationship between the state, the poor residents and the architects. SAAL built houses, SAAL accom-

plished serious and conscious reflection on the city and its planning processes, and SAAL accomplished architecture.

That reflection was spread over four converging and indivisible sets of ideas, separated solely by operative reasons, which constitute attributes that qualify *Architecture*, the word displayed in the title.

Therefore, the first one of these sections – *Portuguese* – focused on the importance of SAAL for the future and for the present of Portuguese Architecture. Undertaken in isolation, just as almost every cultural activity, the architectonic production in Portugal became international with SAAL, and at particular moments even gained the attention of European architectural criticism. It was from SAAL onwards that Portuguese architectural activity started to be known worldwide, although it never ceased to have only a residual importance in the political and administrative framework of local governance.

The second section – *Autonomous* – regarded the complex web of relations between architecture and commission, or, in this case, between architecture and power. Given the intertwined interaction between characters — contractor, architect, user — SAAL is an ideal opportunity to reflect on the maintenance of the idea of an autonomy of architecture. The specific matter of architec-

ture — methodological tradition included — resisted even when the political and economic circumstance involving the commission was drastically constrained by the immediate *functionality*. The urge to build new houses for the poorest people, in SAAL's case, or the current obsessive need to profit often called sustainability, were both evaluated in parallel during the course of the Colloquium.

The third section — *Inclusive* — and the fourth section — *Transrelational* — concerned the way SAAL became an essential study subject, regarding both the interaction with the residents, nowadays known as the participatory process, and regarding the dialog with other areas of knowledge, particularly with the social sciences.

The Colloquium was attended by about 70 people, and the main speeches were given by Alexandre Alves Costa (*Universidade do Porto*), Daniele Vitale (*Politecnico di Milano*), James Holston (*University of California Berkeley*), João Arriscado Nunes (*Centro de Estudos Sociais*), José António Bandeirinha (*Centro de Estudos Sociais, Universidade de Coimbra*), Jorge Figueira (*Centro de Estudos Sociais, Universidade de Coimbra*) and Nelson Mota (*Technische Universiteit Delft*). ■

José Bandeirinha
docomomo International member

Notes

Location Departamento de Arquitectura, Colégio das Artes, Coimbra, Portugal.

Dates 14-16 November 2014.

Organization CES, DARQ.FCTUC.

Partners Museu de Serralves, Centro de Documentação 25 de Abril, **docomomo** International.



01 Opening session. © 74-14 SAAL and the Architecture#, 2014.

02 Álvaro Siza, *Operação SAAL de S. Vitor, Bloco da Senhora das Dores, Porto 1974-1975*.
© Alexandre Alves Costa. Acervo do Arquitecto Alexandre Alves Costa — Centro de Documentação 25 de Abril da Universidade de Coimbra.

Photography & Modern Architecture in Spain, 1925–1965

Research Project

The study of architecture, and particularly of the great legacy of modern architecture, has substantially been achieved from its irrefutable documentary sources: the photographs. Since the advent of photography in the mid-19th Century we are witnessing a blissful basis for its pairing with architecture. Once buildings were depicted, they could start to be studied, classified and dated. Later on, the revolutionary character that brought the modernists to the fore found in photography the opportune instrument to undertake its propaganda in mass media that valued these architectural objects as paradigmatic icons that should be emulated. At the same time, and apart from customer's satisfaction, committed architects understood that the photographs of their buildings were the final crystallization of their work and what really remained beyond their personal satisfaction. In these reciprocal needs, the figure of the architectural photographer was consecrated as the technical — and even artistic — specialist in shaping this particular visual story. While at international and national levels this issue is still the subject of general study

and of specific approaches in the analysis of certain photographers and architects, this research project (FAME, 2013–2016) funded by the Government of Spain is intended to establish — within the Spanish case — an irrefutable documentary framework and theoretical background with which to strengthen the specific study of this singular duality. To begin with, a period of study was established: those decades in which the historiography of Spanish architecture links it to the so-called Modern Movement in architecture: from the emergence of *avant-garde* movements until the crisis of the International Style. During these four decades, broken by the Spanish Civil War and carried on by successive generations of architects, there is a significant evolution in Spanish architecture that has been rigorously analyzed, recorded and valued. Yet, this project — conducted by twenty researchers from universities all over Spain — has undertaken an ambitious analysis of this singular stage looking exclusively at the role and significance of photography in its evolution.

The research comprises a comprehensive literature review of the period — books, journals and periodicals — and particularly of original sources, photographic archives and collections, with the aim of generating, at its conclusion, a public online database containing information of many of these photographic sources. This task is determining who were the photographers responsible for this singular commitment and is permitting an inquiry into their careers, legacy and unique contribution to this documentary and visual endeavor, as well as in the relationship between them, the architects, and the architectural media. A major exhibition held in Madrid in the summer 2014 has been a significant preliminary output of FAME's ambition. The diffusion of this aspiring but bounded documentary work — that is also open to the inclusion of the influences within an international context — is enabling a broad, suggestive, paradigmatic and necessary theoretical and multi-disciplinary discourse which reinforces the increasing role of photography within the architectural realm. ■

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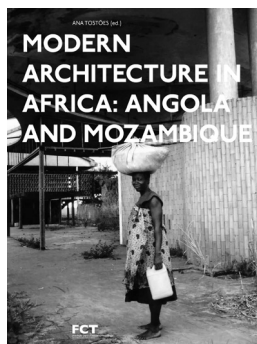
Notes

Research project website <https://blogfame.wordpress.com>



01 José Manuel Aizpúrua, Royal Yacht Club, San Sebastián, Spain, 1930.
© José Manuel Aizpúrua, Joaquín Labayen, AGUN / 203.

02 Fernando Higueras, Board of military housing, Madrid, 1967.
© Fundación Fernando Higueras.



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

Edited by Ana Tostões
 Publisher: Caleidoscópio
 ISBN: 978-989-658-242-5
 Languages: English/Portuguese
 Year: 2014

The book *Modern Architecture in Africa: Angola and Mozambique*, edited by Ana Tostões, adds an important piece to the puzzle of Africa's 20th century architectural history. The book offers a wealth of information on the great architectural achievements in Lusophone Africa¹ during the years between World War 2 and Independence in 1975.

The work is built up around the results of a documentation project on Modern Architecture in Angola and Mozambique. In the book, there is a selection of 25 case studies of individual buildings in Luanda, Lobito, Huambo in Angola, and Maputo, Quelimane, Beira, Chimoyo, and Porto Amélia in Mozambique, as well as one case study on the residential neighborhood of Prenda in Luanda. These cases were studied by various scholars and students of the team through archival research and meticulously redrawn through desktop and field studies by students under the guidance of Vincenzo Riso. Redrawing, as Riso offers, is more than just recording technicalities; the redrawing goes "(...)" through the knowledge of the correspondent design process "(...)" (p. 20) whilst remembering "(...)" that every architectural culture has always adopted its own communication codes, both at the level of interpersonal relationships and at the level of representational and symbolic values." (p. 18). The crisp "computerized" drawings in the book however come close to a true neutral representation.

Further exchange on the "reuse" of the Modern, through identification, documentation and preservation, took place during a workshop conducted by Maria Manuel Oliveira in Maputo in 2012. This workshop

focused on the analytical methodologies and heritage issues in Africa.

The documentation of the cases has been complemented by an annotated and illustrated chronology of the study period (1942–1975) by Ana Tostões and Zara Ferreira, a section with twenty biographies of the key architects by Jessica Bonito and Elisiário Miranda and an invaluable bibliography.

The editorial chapter "Looking both Sides — A Lab on Architecture between Globalism and Localism" is to be seen as the concluding analysis of the work executed by the team set into the broader political and cultural context of its time.

The book is, as stated above, an important contribution to the groundwork that is currently been undertaken to unveil the rich history of modern architecture in Africa. The notion "modern architecture" in this perspective is to be read as "architecture of the Modern Movement of European origin in Africa"; other modern architecture(s) of different origin do not form part of this study.

At the same moment that this work has seen the light, a book on another piece of the puzzle was published by Maristella Casciato and Tom Avermaete: *Casablanca Chandigarh — a Report on Modernization*² which builds up in a similar rich and layered fashion as Tostões' publication, but this time on the British and French axes crossing paths in Africa and India.

An even broader picture, bringing together modern projects in Africa originated from the Global North — Germany, France, Italy, Poland, the United Kingdom, Portugal, the United States of America and others — has been on display at the Triennial of Milan last year³ and covered by the publication *Africa Big Change Big Chance*, edited by Benno Albrecht.

All these works together initiate a mind map of the Modern Movement in Africa within the world, one that consists of long haul connections of individuals — architects, planners, politicians, artists, administrators and other heroes — that have stood at the base of the most unexpected but often incredibly rich monuments of 20th century architecture in Africa.

Modern Architecture in Africa: Angola and Mozambique arguably touches upon possibly the richest collection of post-war modern architecture on the African continent, and Tostões' editorial essay "Looking both Sides — A Lab on Architecture between Globalism and Localism" touches upon a number of crucial issues.

The first, and possibly prickliest issue is the undeniable link between the architecture of

the Modern Movement and colonialism. Luis Lage and Júlio Carrilho, eminent scholars at the University of Maputo, write in their preface "More than a View" about the unfinished business in the former Portuguese colonies. After all, it is just 40 years since Mozambique and Angola gained independence, and the ensuing civil wars and meddling of Cold War interests has been concluded only a few decades ago.

Tostões states that there existed an intrinsic paradox between "(...) Modern Movement architecture [that] contains within the pulsion of an ideological statement of freedom and democratic principles" (p. 65), and the colonial state, which is in principle based on oppression. Yet this paradox was not as such seen as a problem in its time, as the majority of African countries that gained independence between the middle 1950s and early 1960s, seamlessly adopted Modern Movement architecture for the realization of their planning and building projects. However, the situation in the Portuguese colonies in Africa differed considerably from the former colonies, protectorates and mandate territories ruled by the French and the British. Firstly, because they gained independence only in 1975, around the time of the demise of the Modern Movement, and secondly because the Modern Movement was a deliberate reaction to, and escape from, the totalitarian Estado Novo regime of Salazar in the motherland.

Hence, again, it was not so much a perceived paradox between colonial oppression and the democratic intentions of the Modern Movement, but a combination of an internal Portuguese political striving and the global development in the field of architectural principles that defined the position of Modern Movement architecture in Angola and Mozambique.

As Tostões puts it "(...) the African colonies in the southern hemisphere were geographically remote from the repressive control of the metropolis, on the other hand, these territories also constituted a new world, in which the size and need for development promoted a wide range of experimentation and innovation in the field [of] planning and construction. Finally, the lexicon of the architecture of the Modern Movement spurred a creative response and especially suited to respond to the climate and tropical environment" (p. 80). In this statement, Tostões touches upon the second and third crucial issues on the adventures of the Modern Movement in Africa: Africa as a laboratory of the Modern Movement and the issue of Tropicalism.

That Africa was a laboratory or playground of the Modern Movement is a commonly understood and agreed fact, Maxwell Fry and Jane Drew already spoke of the freedom of the architect in Africa in 1956, for them it was a “breath of fresh air” after working in the “claustrophobic culture” of England.⁴

The issue of Tropicalism in relation to the architectural development of the 20th century is an important angle which was introduced by Alexander Tzonis in his book *Tropical Architecture: Critical Regionalism in the Age of Globalization* in 2001.⁵ Tzonis proposes a lateral development and cross-fertilization in modern architecture along the Equator, independent from the domination of the Global North. In Tzonis’ book, this development excludes Africa, for the time being, because Tostões convincingly shows the importance of the relationship between Brazil and Lusophone Africa. Similar relationships, often hinged on personal careers, existed between Brazil and Algeria, through Oscar Niemeyer, between India and Tanzania, through Anthony Almeida and between Ghana and Chandigarh, through Maxwell Fry and Jane Drew.

An eye opener in this respect is Tostões report on the 1st International Congress of African Culture that was held in Salisbury (Harare) in 1961, attended by great names such as William Fagg, Udo Kultermann and Tristan Tzara. This must have been an amazing gathering at that point in time, the first of its kind, in the midst of the great wave of independence yet still within the firm bounds of colonial Africa, as the conference was dominated by the Global North and by African countries that had to wait many years to become independent (Mozambique, 1975, and Zimbabwe, 1980). Next to the organizer of the conference, the Briton Frank McEwen, who was a great promoter of African Art, it was Pancho Guedes⁶ who stole the show in Salisbury.

And it is with Pancho Guedes that we come to possibly the greatest representative of the Modern Movement in Africa. If any architect of European descent may claim that he has been able to escape from the Eurocentric focus that dominated the architectural scene in Africa throughout the whole 20th century, it is Pancho Guedes. As Tostões states, it was Guedes’ creative and intellectual geniality that stood at the base of both a remarkable and highly original opus within the Modern Movement and a sharp critical position within the theoretical deadlock the architectural debate had landed in during the post-war years. Both opus and critical position are truly influenced by African thought and practise, not in the least through the work and thinking of the famous Mozambican artist Malangatana

Ngwenya (1936–2011). Udo Kultermann initially thought little of modern architecture in Portuguese Africa, and he disqualified the work of Pancho Guedes as “(...) a ridiculously exaggerated form of the European Jugendstil”, but in his later work he rehabilitated Guedes and extensively quoted him in his views on the future development of African identity in Modern Architecture. Guedes was connected to Team 10 and met with the Smithsons and Aldo Van Eyck. Inspiration of Structuralist architecture in the Netherlands, as known, is to be found in the Maghreb, or even in the Dogon Valley in Mali, but also the resemblance between the 1958 Pyramidal Kindergarten in Maputo by Pancho Guedes and the 1960 Orphanage in Amsterdam by Aldo van Eyck cannot be coincidental.

In addition to Pancho Guedes, a range of other great architects are included in *Modern Architecture in Africa: Angola and Mozambique*. Vasco Vieira da Costa designed and realized a number of fantastically original buildings in Angola that introduced both new typologies and early examples of Brutalism. Alberto Soeiro’s TAP Montepio building from 1955 is an artistic tour de force and one of the earliest examples of the specifically Maputo typology of multi-purpose tower blocks with a public commercial plinth, offices, apartments and roof garden.

A most interesting example of Corbusian urban design is the Prenda Neighborhood Unit in Luanda by Fernão Simões de Carvalho from 1963. Urban planning and design in Portuguese Africa is possibly a further topic by the authors...

The making of Prenda by Simões and his team is comparable to the history of Carrières Centrales in Casablanca by Michel Ecohard and his Corbusian team consisting of Candilis, Woods and others⁸, and it would be interesting to not only compare the original plans and execution but also the appropriation and (informal) adaptations that consecutively took place in both neighborhoods.

The contemporary use and economic value of buildings of the Modern Movement in Africa is crucial for the fourth and last main issue tackled in Tostões’ “Looking both sides — A Lab on Architecture between Globalism and Localism”.

Tostões states that the buildings of the Modern Movement have so far proven to be robust and resilient through time, which is probably more due to the lack of means to replace old buildings than with being well-adapted to the local climate as suggested by the author. But be it as it may, in the current economic boom in Africa, many great monuments of the Modern Movement are endangered. For Vieira’s Municipal Market of Kinaxixe in Luanda it is already too late, which is a great loss.

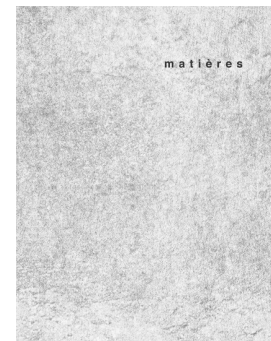
Certainly, listing these buildings would be the ideal situation, but in order to achieve that, the local awareness of the value of this architecture needs to be enhanced. Everything turns on “ownership”, and as the Eritrean architect Naigzy Gebremedhin stated in the case of the Italian Modernist heritage of Asmara: the citizen of Asmara had no argument with the buildings, as they had built them with their own hands.⁹

Dr. Antoni Folkers

Notes

- 1 With the exception of São Tomé and Príncipe, Cape Verde and Guinea Bissau
- 2 Tom Avermaete and Maristella Casciato, *Casablanca Chandigarh — a Report on Modernization*, Chicago Park Books, 2014.
- 3 And consecutively exhibited at the architectural school La Cambre in Brussels.
- 4 Maxwell Fry and Jane, Drew *Tropical Architecture in the Humid Zone*, London, B.T.Batsford, 1956, p. 19–20.
- 5 Alexander Tzonis (et.al.), *Tropical Architecture: Critical Regionalism in the Age of Globalization*, Chichester, Wiley-Academy, 2001.
- 6 Amâncio d’Alpoim Miranda Guedes.
- 7 Udo Kultermann, *New Architecture in Africa*, New York, Universe Books, 1963, p. 20.
- 8 See Avermaete, 2014.
- 9 Naigzy Gebremedhin, “Africa’s Secret Modernist City”, *African Perspectives*, Delft University of Technology, 2007.

Research project website ewv.ist.utl.pt



Matières No. 11
Cahier Annuel du Laboratoire
de Théorie et d'Histoire 2 (LHTH2)
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 Publisher: Presses polytechniques
 et universitaires romandes
 ISBN: 978-2-88915-065-6
 Language: French
 Year: 2014

Whether it is an analysis of the “displacement” in the work of the Smithsons in the 1960s, a reflection on the role attributed to

the Pop Art duet Venturi / Scott Brown, a look at the influence of the postmodern spirit of the Venice Biennale of 1980, a speculation on the role of the central core in the transition of the open plan to the flexible plan, the review of the different moments that have marked the Swedish architecture of the first half of the 20th century, an investigation of the relationship between architecture and natural forms in the contemporary context, or even questioning the complex relationships between organicism and picturesque both detected in several current works, all the contributions presented in this eleventh issue of *Matières* are interested in the concept of transition. Transition: therefore, this term refers to a specific moment where a drawing, a text, a reference or a significant event, generates an inflection in the work of an artist or of an architect, an inflection that is characterized by the emergence, not necessarily yet fully certified, of new linguistic, stylistic (or other) principles, that are going to be affirmed afterwards.

Translated publisher's notes.



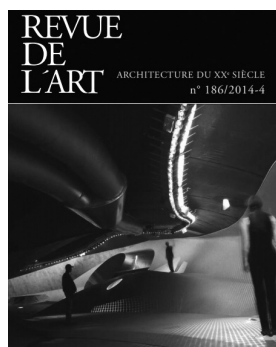
Robert Mallet-Stevens Agir pour l'Architecture Moderne

Edited by Richard Klein
 Publisher: Éditions du Patrimoine/ Centre des Monuments Nationaux
 ISBN: 978-2-7577-0289-5
 Language: French
 Year: 2014

Robert Mallet-Stevens (1886–1945) was one of the main protagonists of the renovation of architecture and the decorative arts in France. Author of major buildings such as Villa Noailles in Hyères, Villa Cavrois in Croix and the houses in the street named after him in Paris, he was also an inexhaustible host of the modern scene. This book offers a new perspective on Mallet-Stevens emphasizing the plurality of his activities. The image of the dandy has indeed overshadowed the worker figure: Mallet-Stevens writes a lot, re-

news architecture through drawings, designs film sets and multiple storefronts; he exhibits ephemeral buildings regularly, he teaches and, in the UAM (Union des Artistes Modernes), Mallet-Stevens aims to democratize modern decorative arts. This study regains his stature as a creator and does not neglect any of his contributions.

Translated publisher's notes.



Revue de l'Art — No. 186/2014–4 Architecture du XXe Siècle (Architecture of the 20th Century)

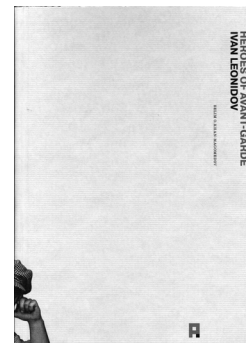
Edited by Richard Klein and Bernard Toulhier
 Publisher: Ophrys
 ISBN: 978-2-7080-1407-7
 Language: French
 Year: 2014

This issue of *Revue de l'Art* is, for the first time, exclusively devoted to the architecture of the 20th century, taking a closer look at the modern architectural legacy. This array of articles aims to stimulate the debate and reflection on modernity, attracting the public's attention to the importance of rapid political change that protects buildings and urban ensembles of interest as "archaeological sets", preventing them from vanishing. The aesthetic, social and technical contributions of the architecture of the 20th century are still substantially unknown or at least undervalued, so it is of utmost importance to promote the value of this heritage for its preservation and also to encourage the complementarity between the architecture's documentary evidence and physical reality.

Furthermore, the editors Richard Klein and Bernard Toulhier draw our attention to the very notion of heritage, still tied to the aesthetic values of the traditional monument, which has been claiming to readjust its outlines since the full renovation of urbanism and architectural forms, particularly after the second half of the 20th century. The relevance of the art history approach and methods to learn contemporary architecture is also questioned, in order to open perspectives on the subject. Architecture,

history and heritage are, therefore, the key concepts epitomized in this edition of *Revue de l'Art*.

José Pedro Cardoso
docomomo International Collaborator



Ivan Leonidov Heroes of Avant-garde

Edited by Selim O. Khan-Magomedov
 Publisher: Sergey Gordeev, Russian
 Avant-Garde Foundation
 ISBN: 978-5-91566-045-7
 Language: English/Russian
 Year: 2011

This monograph, edited by S. O. Khan-Magomedov, an architectural academic, is devoted to the life and art of Ivan Leonidov (1902-1959), a Russian architect who was a representative of the Russian avant-garde and Constructivism, an expert of "paper" architecture.

The book describes the creative work of Leonidov who was one of the most influential Soviet architects of the early 20th century who, as the leader of the young galaxy of Constructivists, made an enormous contribution to forming the architectural artistic Avant-garde.

From the publisher.